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HOARD'S DAIRYMAN

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A

Abbott, J. S., has another view 113, 122
Abortion—...18, 50, 139, ...178, 507, 510, 1056
-Accidental 1096
-Contagious 1146
-control in Wales 40
Account book praised... 491
Accredited herds—in Mississippi 680
-in various states 1094
-in Wisconsin 210
-wanted in McKean Co., Pennsylvania 194
Acid phosphate—New method of extracting, from rock phosphate 1004
Advertise—You get what you 473
Advertising—dairy products 288, 869
-Value of 608
Ad—Advocating the 869
Afterbirth—Removing... 814
Agriculture—Declining.. 434
-Spiritual side of..... 277
Air castles on the farm 999
Aitken, D. D., calls for farm efficiency 1124
Alaska—Cows for 846
Alfalfa—Curing, for dairy and beef cattle 1
-Cutting, in the fall... 920
-Cutting third crop.... 435
-hay—Cutting and curing 161
-hay—Price of, in Ida. vs. Washington 840
-market 425
-pasture—Will, taint milk? 841
-Pasturing 475
-Price of, and dairy cows in the West....1048
-Reseeding 549
-seed—Inoculating 1114
-seeded in corn 92
-Silage corn good nurse crop for 1114
Alfalfas—Hardy, in Ore. 692
Alsberg, Dr. C. L..... 607
Almond growers act like business men 436
Alsike clover 224
American Asso. Creamery Butter Mfg. reduce dues one-third 1087
American Farm Bureau Federation— 336
-by J. R. Howard 1032
-meeting 963
-Planks in, relief program 1082
-secures cheaper rates.. 315
-to meet 842, 890
-U. S. Chamber of Commerce 288
Animals—Preparing dairy, for show ring... 110
Apples—Storing 435
Argentine rural society exhibition 922
Arizona—dairying 953
-State Fair 953
Arkansas—does community dairy work.. 796
-Twelve acres in 477
Athalee of Pataskala... 755
Atkeson, F. W., Jersey fieldman 252
Auto truck—Tires for.. 170
Ayrshire — Advanced Registry 754
-breeders of R. I. have Field Day 235
-breeders of the Northwest organize.....1097
-breeders of Vermont meet 426
-bulls for Cuba 858
-club of New England meets 1086
-club—Rhode Island .. 94
-meeting in Boston.... 890
-quartette on Middlesex Meadows Farms 936
-records—Summary ... 58
-The—type, health, persistent production ... 994
Ayrshires—for export .. 128
-on their native heath.. 952
-win Oregon milking contest. 899

B

Babcock, Dr. S. M.—To, on his 77th birthday 739
Bacteria in milk—Determining by methylene blue test 280
Balance of trade in dairy products 424
Baltzer, A. C., leaves Purdue 723
Bank at Grove City.... 422
Banker in Washington has no money for dairymen 880
Barley—beards 337
-for pigs 180
-Kind to grow 172
Barn—Disinfecting 841
-for bull 1120
-Talking in 797
Barrenness.... 178, 718, 814
Barron Co., Wis., free from tuberculosis in cattle 1070
Becker, A.—Farm 281
Beet—contest-Better ...1037
-pulp—Demand for ... 77
-pulp supply 571
-tops for feed 921
-tops—Storing 880
Beets—Storing tops with 880
Believe in your job..... 486
Bell, J. A., offers trophy 171
Bell's Paragon of Fox Valley 1036
Bloating—Chronic 569
Bill—Sheppard-Towner.. 968
Bills—before Congress..1032
-to be presented to Congress 610
Bishop, R. G., herd 628
Blackie 336
Blackleg 59
Bloat 18
Boiler explodes 1130
Bone meal for cows.... 200
Bonus on milk in Effingham Co., Illinois 1030
Book—Agriculture for Beginners 970
-Condensed Milk and Milk Powder.... 746, 756
-Farm account 1115
-Home-made loose leaf scrap 611
-Hunziker's new... 746, 756
-Price of Milk 794
Bordeaux mixture 747
Bottles— test-Cleaning.. ..... 201, 487
Boy—Future of your, on the farm 529
-succeeds with 5 cents.. 400
Bran—Millet 723
-still too high 738
Bread and milk served by Fleischmann Co... 200
Breed—Choosing a 993
-Choosing, on records 77
-secretaries 77
-Which is the best dairy 993
Breeder—Mayor's view of 220
Brita of Beaver Ridge.. 616
Brockton Fair 664
Brownie of Linwood....1036
Brown Swiss — breeders of Illinois meet 511
-Oldest dairy breed.... 995
Bull—association-Nevada 237
-associations produce results, says Rabild.. 977
-Buy a, now 1042
-Buy a proved 1070
-campaign prizes in Missouri 1125
-Damages for breachy.. 201
-Exercise for 1097
-Handling 1120
-Handling stray... 741, 817
-High flanker 24
-Impotent 937, 1020
-pen—Safe keeper 1120
-reception in Bradford Co., Penn. 895
-Scrub, funeral... 306, 957
-Scrub, legislation in Ontario 429
-selection and management 154
-serves neighbor's cow
-Information wanted on damages 434
-show at Greenwood, S. C. 802
-stable 1120
-Swat the scrub 597
-Tethering 735
-The right dairy 1053
-The trusted 160
Bulls—Grade, traded for pure-breds in Pettis Co., Mo. 95
Bulletin—First aid to the stockman 1003
-on creamery bookkeeping 799
-on farm labor 735
-Wis., on cheese makers save by figuring costs 1044
Bulletins of the week 169, 218, 311, 641, 773, 815, 928, 976, ...1035, 1097, 1146
Butter—and cheese shortage greater than condensed milk surplus 554
-and cheese—Total, prices in 1920.....1140
-Cheese, and Egg Journal—Comment 698
-contest in Spartanburg, S. C.....1147
-crusade in Wash., D. C. 558
-for family of eight.... 548
-Grading 196
-Imports of foreign, for first nine months of 1920 964
-in cold storage..... 403
-made in 1919 by states 246
-Making good, from poor cream 1076
-mfgs. to meet..... 720
Butter prices—for Aug. 440
-for December 1140
-for July 155
-for November 960
-for October 760
-for September 569
-in 1920—Total 1140
-in principal markets 334, 394, 445, 496, 614, 660, 705, 760, 800, 850, 886, 931, ...962, 1040, 1094, 1116
Butter — produced in 6 months 1920 240
-Quality, by parcel post 35
-Quality of, affects consumption 1004
-Renovated, produced in 1920 206
-scoring—Wis. June .. 138
-Shrinkage in weight.. 961
-sold by L. W. English 35
-standards 238
-Supplying large city with 1112
-vs. oleo for children—Results of experiment 548
Buttermakers—Wages for 747
Buttermilk—Fat in 1005
-Protein in 961

C

Calder bill 1002
Calf bloat 18
Calf club—in Ky..... 66
-Mondovi 933
-in Texas 887
-Sheboygan Co..... 932
-Shedd Jersey 114
Calf — clubs-Ia. Holstein 247
-Cost to feed..... 77
-Feeding champion, Chinook Segis Pontiac David 1109
-feeding discussion 1109
-feeding in New Zealand 45
-Fitting, for show ring 212
-Hump-backed 313
-Ills of young 699
-industry — Whitewater 599
-scours 1020
-Young, does best in barn 16
Calves—Blindness in ... 139
-Bull, sold for veal.... 122
-Experiments with warm vs. cold skimmilk for 118
-Feeding 435, 655, 1109, 1119
-Feeding, from birth until 1 year old..... 961
-Feeding, whole milk... 655
-Raising, on skimmilk 1119
-Raising, without skimmilk 410
-Selling, by mail.. 599, 609
-Shipping 608, 881
-Skimmilk vs. whole milk for 1076
-Twin 1005
-with goiters 1076
Calving time—Help at.. 978
California — almond growers act like business men 436
-butter scoring finished 1010
-co-operative associations... 335, 436, 484, 532, 602, 736, 787, 832
-co-operative marketing —How, was made a success 335
-co-operatives and the Mid-west 872
-Dairy Council meets.. 105
-dairy mfgs. meet.... 930
-dairymen win victory 920
-dairy products manufacturers meet 842
-farmers control prices of their products ... 832
-Fruit Growers' Exchange 484
-Marketing Asso.—How crops are pooled in.. 736
-milk consumers 87
-pig club 52
-Raisin Trust—Story... 532
Campbell, M. D.—Address 668
Canada — milk situation 753
-thistles—Destroying.. 292
Cane seed meal 44
Cannery refuse—Corn.. 815
Capper-Volstead bill ... 610
Carelessness 53
Carlotta Empress Fobes 606
Carnation Milk Products Co. letter 606
Carrots for horses 1077
Casein from skimmilk..1043
Cattle—names-Choosing 1043
-Preparing dairy, for show ring 110
Champion records 77
Chart showing differences in exports and imports of dairy products 424
Cheese—and butter prices in 1920—Total 1140
-and butter shortage greater than condensed milk shortage 554
-at Wis. State Fair.... 336
-Biggest, in N. Y..... 284
-Cost of making, and future of dairy industry 112
-factories — What, of Minn, paid for fat.. 159
-factory bookkeeping ..1044
-federation — Establish 794
-Filled, makers guilty.. 288
-from silage-fed cows 609, 610
-Good, means more consumed 336
-in cold storage 445
-industry and the milking machine 545
-in Tillamook Co., Ore. 329
-made in 1919 by states 246
-making, in Holland.. 487
-Making, on farm....1077
-not true to type 308
-Preserving home-made 160
Cheese prices—for Aug. 440
-for December 1133
-for July 162
-for November 964
-for October 761
-for September 569
-in 1920—Total 1140
-in principal markets 334, 395, 445, 492, 614, 660, 705, 765, 800, 855, 882, 931, ...962, 1040, 1075, 1116
-New York 81
Cheese — produced in 6 months 1920 240
-producers of Wisconsin to federate 966
-Six-ton, at N. Y. Fair 166
-To improve Wis..... 563
-weights—Full 646
Cheesery—Farm 1077
Chester Co. picnic..... 335
Chicken pox 972
Chickens—Care and feed of, this winter..... 852
Chinook Segis Pontiac David—How, was fed 1109
Churning—Cream thickens in 881
Christmas on the Willcox dairy farm..... 992
Chrouser, J. L.—Breeder 789
City—Supplying large, with butter 1112
Cloth—Honesty in 737
Clover—Alsike 224
-Fall plowing, for sugar beets 201
Collective bargaining— 654
-bill passes Senate....1010
Colorado—dairying 1128
-Gopher in 843
Colt—Feed and care of 213
Community team work —Adventures in 599
Concentrates—Does heavy feeding of, pay?.....1127
Concrete — as building material for houses.. 600
-roads—Value 328
-silo 72
-To repair cracks in... 9
Condensed and evaporated milk exports.... 859
Condensed milk—exports 552
-factories closed 552
-market 326
-market weaker 242
-produced in 6 months 1920 240
-sold to Germany 81
-prices 668
-surplus less than butter and cheese shortage 554
Condenseries — Effect of closing down, on dairy industry 608
-in Illinois close..... 445
-Prices paid and received by 19
Condensery— prices-Aug. 396
-prices—December 1136
-prices—July 166
-prices—November 950
-prices—October 745
-prices—September 563
Condition—Our, not serious 160
Conditions — Beware of 210
Conference—Farmers'.. 664
-Farmers', on prices and credits 760
Contest—National cow guessing, at National Dairy Show 833, 844
Contract — Dairymen's League 704
Contracts signed by Calif. co-operators .. 787
Co-operation— 44
-and justice 879
-and skill 486
-Essentials of successful 1000
-Farmers profit by.... 240
-Forced..... 200, 434, 454
-Improvement comes through 1031
-stabilizes prune industry 602
-Value 1031
Co-operative— creamery made good 373
-creamery successful in No. Minnesota 44
-League movement 381, 384
-marketing—How, was made a success in California 335
-milk delivery plant in Greenville, Pa. 109
-milk plant—Ups and downs of a..... 74
Corn—and grain show at La Crosse 442
-and soy bean silage—Value 840
-cannery refuse 815
-Converting, into milk and meat 327
-Cribbing, the old and new way 375
-Curing seed 534
-Dead seed, ears expensive 204
-Ensile, earlier 240
-equals hominy feed for swine 508
-fed cattle—Cost of producing 487
-fodder—Sweet 288
-Hogging off 392
-in the dough 675
-Kind to grow 173
-Preserving, without silo 29
-Reducing, losses 34
-Seed, from healthy stalks 474
-shocks—Tying 250
-song—Correction 1111
-Sowed 337
-Stripped and topping 76
-When to ensile 240
-Where to cure seed ... 612
Corpus Luteum 629
Correction — Farmers' saving 548
-Names of cows transposed 902
-on calf in aeroplane.. 10
-on corn song 1111
-on Murphy Bros..... 121
-on scrub bull law in Ontario 287
-on Swiss cheese 10
Cost of production—240, 1053
-and fixing prices 548
Cotton seed for cows.... 337
Cottonseed meal—low in price 1036
-prices tumble 886
Countess Prue—Record and feed 958
County agents to meet.. 843
County League meeting 67
Cow—Best market for feed 1042
-Days of man time for year for 240
-Drying up 655
-guessing contest at National Dairy Show 833, 844
-Help, at calving time 978
-is pregnant—Length of time 856
-Judging, by length of tail 609
-milks hard 1096
-Periods of heat for... 139
-Pining 814
-Points in judging....1124
-race at Mo. State Fair 654
-stable—Talking in ... 606
-stall—Size of 305

-test cows at Wisconsin State Fair 475
-tester—Experiences of 69, 1116
-tester—Reflections of an ex- 38
Cow testing association—Arkansas, Wis. 379
-Bashaw-Webster 880
-Butler Road, O. 1123
-Fairfax Co., Va.....1110
-Penfield, O. 1054
-reports 6, 46, 72, 111, 176, 198, 254, 296, 332, 378, 428, 485, 544, 604, 662, 696, 790, 858, 878, 916, ...955, 1046, 1084, 1122
-Richland-Buena Vista 1127
-Year's work of Canaan Co., Ct. 791
-Year's work of Edgar 790
-Wausau-Marathon 379
Cow testing associations —in Denmark 1092
-in various countries in 1919 1092
-New Hampshire 1054
Cow—testing directory.. 880
-testing exhibit at Wis. State Fair 475
-the best market 1042
-Tribute to 220
-When, is in calf..... 899
Cows—and ave. production in New York...1095
-and heifers — Relative production of 795
-Buy, now 960
-Feeding 840
-for Alaska 846
-How efficient are your 13
-milked by geese 279
-need plenty of feed... 598
-Sell feed through 960
-that made Denmark famous 528
-Utilizing pure-bred reactor, on Women's Relief Corps Farm.. 832
Cover crops 234
Cowpeas—Plowing under 385
Cowpox 128, 1056
Cream—Better 1076
-Imitation 121
-Neutralizing 961
-or milk—Selling 549
-Pasteurizing 961
-Selling, or milk.....1043
-thickens in churning.. 881
Creamery — boilers-Inspect 1130
-Co-op., successful in Northern Minnesota 44
-How one co-operative, made good in Minn. 373
-in Franklin Co., Tenn. 953
-output in Minn. for July 634
Credit—Better, for Washington farmers 840
Credits situation—Relief for, asked by farmers 1082
Creed of the out-of-doors 1035
Crop—condition not serious 160
-contracts of California co-operation 787
-report 383
Crops—for peat soil....1005
-for tile drained land.. 920
-How, are pooled in co-operative marketing associations in Cal. .. 736
-increased by good rotation 474
Crook Co., Ore. 177
Cultivator — Spare, and spoil crop 822

D

Dairy—Americanized, in England 4
-cattle—Buy, now 960
-cattle valuation 912
-Cattle Congress notes 242, 260, 270, 386
-Cattle Congress report 546
-Division — Research work of 65
-industry situation 1004
-situation 608
-situation and prices..1004
Dairying—Helps and handicaps to 980
-in Colorado 1128
-on eight acres 609
-30 years ago.. 39, 75, 141, 165, 221, 230, 293, 334, 462, 494, 563, 605, 696, 744, 806, 859, 875, 917, ... 1010, 1074, 1120
-30 years ago—Ed. 486
Dairy products—Advertising 288, 869
-Balance of trade in... 424
-Differences in exports and imports of 424
-Exports 923
-Farmers should use more 1005
-Imports 1019
-Manufactured, for 1919 in all states as reported by U. S. Bureau of Markets.. 246
-Marketing 794
-Minnesota 794
-Prices of, and dairy situation 1004
-produced in New York 1095
-production for 6 mos. in 1920 240
-used in U. S..... 229
-Value of advertising.. 288
Dairymen — Eliminate poor 960
-in West receive no money from bank.... 880
-of Calif. win victory.. 920
-of Iowa Co., Wis., visit Green County 756
Dairymen's League—and A. W. McCann 698
-contract 704
-ussed 842
-ts officers 1006
-rs 492
the game 656
-reduces milk prices for December 882
-Stick to 746
Damages when neighbor's bull serves cow 434
Day on farm—Length.. 751
Dehorning — Treatment after 1056
Denmark— 528
-cow testing ass'ns....1092
Detroit milk campaign.. 160
Dimple Queen of Wakpala 219
Disc tractor plow 655
Disinfectant for barn.. 841
Disinfecting for mites 1039
Distributor in the silo.. 609
Dorsey, Jas., sentence cut in two 44
Ducks die 50
Duke's Rachel Interested 1039
Dusting instead of spraying trees 897

E

Eastern States Exposition 530
Eau Claire, Wis., Milk Producers' Asso. ...1117
Eckert, E., raises pigs.. 305
Eggs and milk..... 920
"Egypt" in So. Illinois 486
Eight-letter formula for success 1069
Electricity in New Zealand 692
Emergency tariff bill— 1045, 1079, 1113, 1116
-(Ed.) 1118
England— Americanized dairy in 4
English, L. W.—Farm.. 35
Ensilage cutter—Owning 279
Endometritis 674
Entz, Dr., friend of children 423
Exhibitor—Small, at fairs 384
Exhibits—Dairy, at county fairs 204
Experiments at Beltsville, Md. 11
Exports — of condensed and evaporated milk 859
-of dairy products.... 923

F

Fair—Green Co., Wis... 69
Fairs—Season of 88
-Small exhibitor at..... 384
Fall reflections of a farm 689
Fanning mill operated by gas engine 336
Farm—account book ...1115
Farm—Becker, A. 281
-boys and girls to the city 12
Farm bureau— 608
-and co-operative marketing by Butter, Cheese, and Egg Journal 698
-and marketing 554
-Federation meets 963
-meeting on Orcas Island 599
-Oregon, organized 922
-Object and purpose... 336
-officers meet 136
-progress in Vermont.. 545
-Purpose 840
-to investigate price of milk in Rock Island, Ill. 384
Farm—business-Size... 333
-day — Reasonable length of 751
-efficiency called for by Aitken 1124
-English, L. W. 35
-Fall reflections of a.. 689
-Geare Bros. 231
-Greene, J. C. 191
-help—Handling, by Mr. Crooker 123
-homes — Permanent, necessary 600
-homes—Suggestions .. 601
-houses—Modern 243
-Jones, H. 477
-labor—Is shortage of, serious? 540, 548
-labor—Obtaining 330
-leaders go west to study marketing 307
-loan act and the dairy farmer 1041
-management 1033
-management departments in agricultural colleges 1118
-Mosley, H. R. 817
-name—Registering ... 337
-Nelson, W. M. 816
-of 88 acres of sand... 289
-of the future 541
-products—Cost of producing, and fixing prices 548
-products decline in prices 794
-products prices decline 1042
-Putting, on business basis 1033
-Returning to the 654
-Riford, E. P..... 105, 122
-Rupprecht, F. 333
-Smith, E. C. 158
-Sorenson, L. 817
-surveys 1118
-Welles, M. L. 1069
-woman—Survey of work done by..... 70, 76
-Wilkerson, J. D. 1081
-women—Are, dissatisfied 1055
-Women's Relief Corps 832
Farmer—and his hired man 735
-in politics 610
Farmer's—job-How big is 693
-wife—Independent ... 328
Farmers—and labor in politics 240
-ask credit relief 1082
-going to city 12
-meet at Wash., D. C. 835
-must think through...1048
-Progress of 1118
-Washington, to have better credit 840
-Worthless 793
Farmers'—conference .. 664
-conference on prices and credits 760
-marketing conference 79
-saving 548
-week at Marshfield Experiment Sta. 10, 124
Farming—Believe in your job of..... 486
-Making a business of 1118
-on the decline..... 434
-Plea for bright side of 473
Fat—in buttermilk 1005
-in cream—Price 241
-percentage not changed by feed 921
Federal land banks sound 326
Feed—and hay prices 334, 394, 445, 505, 614, 660, 708, 756, 800, 851, 886, 922, ... 962, 1045, 1078, 1116
-and milk prices 960
-and demand lessens.. 258
-does not change fat percentage 921
-flights and protein... 151
-How much, to buy... 77
-Pays to, well 663
-prices—Declining 116
-prices make cow best market 1042
-Sell, through cows... 960
-To manufacture, in Marinette Co. 111
-values compared 123
Feeding—cows on test 385
-Good, pays 654
-stuffs—Price decline in, gathers momentum.. 203
-with brains 840
Feeds—Succulent, stimulate secretion 123
Fern Princess of Suncrest 882
Fertilizer—experiments-Results 820
-for marsh soils 157
-Kind of, to buy..... 880
-Kind of, to use..... 699
-New, discovery 1004
Fertilizers for pasture.. 156
Fertility—Buying 880
Fetus—Development of.. 937
Financial Raleigh's Foxy 675
Fire—Don't take chance with 95
-Threshing time 123
Fish eggs and milk..... 920
Fitzpatrick, W. W., Guernsey fieldman ... 940
Flaxseed too high to feed 921
Flaxstraw useful 620
Fleischmann Co. serve bread and milk 200
Florida live stock roundup 701
Food—and wages 1118
-Cheap, affects all 1042
Foot Rot 267
Fordney emergency tariff of 1921..... ....1045, 1079, 1113, 1116
Forage poisoning 745, 746, 819
-Antitoxin for 289
Forest shades—From, to Holstein pastures ... 789
Fort Scott Dairy Show 877
Foxes—Trapping 973
Frances Lydia — How, made record 164
Frandsen, J. H. resigns 846
Freight rates on hay reduced 1082
French Truth-in-fabric bill 610
Fruit—Storing 635

G

Gapes 972
Garget 629
Gasoline and oil—Extra gallon of 200
Geare Bros. farm 231
Geese milk cows 279
Georgia — Jersey jubilee 50
-State Fair 888
-Word from 263
Germinating hard seed.. 795
G. L. F. Exchange—in New York 3
-Local 658
Goat travels with vacationites 375
Goiters—Calves with ...1076
Gold Butter Beauty 675
Government publications 56
Government's hired men to serve public ..151, 194, 282, 478, 538, ...607, 737, 874, 1044
Grades—Registering 795
Grading butter 196
Greeley, W. B. 737
Green Co., Wis., Fair... 69
Greene, J. C., farm..... 191
Gregory, H. W., dairy professor at Purdue.. 42
Grain—Decline in, ends 202
-Feed, to cows on pasture 288
-Feed, with clover hay and silage 609
-Lodging of and causes and prevention 691
-mixtures for cows on pasture 161
-Profit from feeding..1120
-stack—Making 36
Grange League Federation Exchange in New York 3
Grangers in 54th annual session 850
Grass—and hay-Nutrients in 920
-Dry 920
-seed—Seeding, in autumn 423
-Two blades of, where one grew before.... 156
Graves, R. R.—Address by, on heredity and production 785
Grove City—dairy production 411
-Dairy Show 714
Growin' up for you..... 874
Guard, S. R., goes with A. F. B. F. 1121
Guernsey breeders — of Clark Co., Wis., meet 24
-of Marathon Co., Wis., organize 742
-of Portage Co., Wis., meet 930
-of Red River Valley meet 48
-of So. Wis. organize.. 195
-of Washburn Co., Wis., meet 843
-of Waukesha Co. meet 10
Guernsey— cows-World's champion 959
-The, quality cow 996
-producers—Do, reproduce? 527
-producers which have reproduced 527
-products win 449
-products won at national milk and cream shows 190
-world champion — Countess Prue 958
Guernseys—imported by Oregon 14
-Money for, in So. Fair circuit 930
-New Hampshire, sold in Washington 37

H

Hand sore from milking 94
Harford Co., Md., juniors 625, 932
Harness—Oiling... 609, 789
Hay—a cow will consume 435
-and feed prices ..334, 394, 445, 505, 614, 660, 708, 756, 800, 875, 886, 922, 962, ... 1045, 1078, 1116
-and grass—Nutrients in 920
-Better, by the simplest way 193
-Cost of labor of acre of 240
-Freight rates on, reduced 1082
-Marsh 961
-Peas for 123
-Rye and vetch 337
-Salting 161
Haywood, J. K. 1044
Hebe 179
Hebe-made—An interview 608
Heifer—Periods of heat for 139
Help—Handling, on dairy farm 215
-Handling, on Mr. Crooker's farm 125
Hens need fresh air...1149
Herds—on Accredited List 76
-removed from Accredited list 1040
Heredity and production 785
High school agriculture 199
Hired man—Farmer and his 735
-speaks 51
Hoard's Dairyman herd again on Accredited List 794
Hodgson's, L. C., view of breeder 220
Hog—cholera fakery .. 768
-cholera serum 266
-market 336, 618
-Points in judging ....
Hogs—Feeding and caring for 153
Holiday reflections 1004
Holstein—asso. of Illinois officers 768
-asso. of Missouri 896
-campaign in New England 761
-club — Tri-county, O., meets 87
-organization campaign in New England 697
-pastures—From forest shades to 789
-The, heaviest milk producer 997
-world champion—Segis Pietertje Prospect...1002
Holstein breeders—of Delaware meet 1121
-of Illinois meet 768
-of Illinois organize ... 959
-of Jefferson Co. meet.. 118
-of Kittitas Co., Wash., organize 534
-of New England organize 1038
-of New England want field secretary 380
-of New Jersey going after paid secretary 284
-of New Jersey organize 492
-of Ohio meet 348
-of Ottawa Co., O., on tour 612
-of Wayne Co., O., meet 41
-of Washington Co., Oregon, meet 1002
-of Waukesha Co. meet 243
-of Wisconsin meet... 926
-of Wisconsin to meet 752
Holsteins—in New York 121
-in Northern Wisconsin 789
-Kansas, make tour .. 234
-Promoting, at Ft. Scott, Kans. 35
-to France 707
Hoofs—Tool for trimming cow's 201
-Trimming 396
Hopkins, A. W., resigns 804
Horse—Cost of keeping 77
Horses—Care of, in hot weather 123
Hours—Length of, on farm 751
-to work on farm..... 751
Houses—Concrete for .. 600
-Suggestions for planning 601
Howard—Dr. L. O.-Work of 151
-J. R.—As, sees the agricultural situation 1128

I

Ice cream made in 1919 by states 246
Ice—crop is no frost.... 647
-for cooling milk a saving 1004
-house construction.... 647
-house—Post 1132
-Making 647
Idaho—dairy excursion.. 902
-Dairy progress in 108
-imports Jerseys 1078
-short course 199
-State Fair 834
-wants testers 48
Ignorance cause of failure 1117
Illinois—breeders plan cow testing company 690
-condenseries close 445
-Southern, milk producers organize 1125
-State Fair 294
Imports of dairy products 1019
Inbreeding 795
Indiana boys and girls serve refreshments.. 400
-dairymen to meet.....1030
-Increased testing in... 139
-Jersey cattle tour..... 136
-State Fair 432
Inoculating alfalfa seed 1114
Intradermal vs. ophthalmic and subcutaneous tests 289
Inventions and appliances of interest to agriculture.. 28, 134, 182, 264, 307, 455, ...508, 629, 818, 1149
Iodine for pregnant animals 1076
Iowa—corn show 975
-Dairy Council at the fairs 741
-dairy courses 159
-dairy rally 42
-Fair — Junior judging at 19
-short course 919
-State Fair 376
-swine feeders' day ... 539

ILLUSTRATIONS

Airplane and Holsteins.. 744
Alexander, E. J. 896
Alfalfa — cocked behind mower 1
-Grimm and common type, in Ore. (2) .. 692
-Grimm, in Oregon.... 692
-in irrigated region.... 1
American Farm Bureau Federation directors.. 963
Alsberg, Carl L. 607
Auto—Bob Ramsay's ... 502
Auto truck with penumatic tires 170
Atkeson, F. W. 252
Ayrshire aged cow class at Eastern States Exp. 531
Ayrshire bull — Auchenbrain Toreador 554
-Cavalier's Sherry Redman 546
-Cloverdale Choice Goods Howie's Hot Stuff 280
-Morton Mains Lord Barrylyndon 649
Ayrshire cow—Athalee of Pataskala 382
-Balmangan Vera 43
-Bruchag Pearl 2d 788
-Finlayston Bell's Daisy 872
-Finlayston Bell's Mamie 872
-Henderson's Betty ... 425
-Jean of Crestmont ... 340
-Lessnessock Dairy Loudoun 994
-Lucy Webb 1113
-Meikle Kilmory Lady Butte III 788
-Nancy Whitehall 875
-Pamelia Ayer of Sunnyside 2d 872
-Riverview Pansy 163
-Slodahill Alice 2d 280
Ayrshire cows owned by L. W. Newton 597
Ayrshires — for Hawaii 618
-from Crestmont Farm shipped to Porto Rico 298
-on F. B. Catlin's farm 426
-on Masonic Homes Farm, Penn. 872
Babcock, Dr. S. M., celebration 876
Baltzer, A. C. 723
Barker, J. P. 972
Barn—and cows 693
-and Guernseys of M. L. Welles 1069
-and silo in St. Louis milk district 873
-and silos on E. H. Turner Farm 189
-Anthon, L. 911
-Briggs, F. E. 911
-Interior of, on Ames Farm 325
-New, on Iowa fair grounds 376
-of H. W. Bonnell 329
-of P. H. Crane..... 999
-Old, made wholesome with iron and concrete and windows on Women's Relief Corp Farm 837
-on Geare Bros. Farm.. 231
-Queen Mary 4
Barns and Ayrshires owned by L. W. Newton 597
Barnyard — Dry, where mud was deep on Women's Relief Corps Farm 832
Becker—A., children ... 281
-Mr. and Mrs. A..... 281
Boy—driving mule 810
-scouts 67
Boys—cattle judging contest at Ohio State Fair 450
-and girls in Australia 855
-at work and play (5) 529
-judging contest at Fort Scott Dairy Show ... 877
-milking and weighing milk (2) 529
-on horses 529
-playing games 529
British-Friesian cow—Lochland's Chloe 280
-Lochland's Pel Naspa 280
-Paisley Daisy 788
-heifer—Lochlands Nicol 788
Brown Swiss bull—Vogel's College Boy ... 651
Brown Swiss cow—Betty of Lakeview 546
-Helena of Walhalla.... 343
-Lou Anna of Lake View 294
-Nagilla 658
Brown Swiss herd 995
Buildings in wholesale butter section 1112
Bull—exercise 1097
-Tethering 735
Butter—carton used on English Farm 35
-house refrigerator ...1112
-statue at Nebraska State Fair 425
-unloaded at wharf on North River 1112
-Wholesale, section ...1112
California dairy products judging team...1041
Calves—dressed for judging and pictures 212
-in crates 599
Chart showing differences in exports and imports of dairy products 424
Cheese factory—Interior, in Tillamook, Ore...1142
-in Tillamook Co., Ore., (2) 329
Cheese—12,000-lb. 284
Chicken — White Wyandotte 852
-with tuberculosis 130
Children—being weighed and measured 423
-in Lost Springs School, Kans., drinking milk 423
Cleaning ring groove .. 913
Clover with and without fertilizer 156
Cold storage plant of Wis. Cheese Producers' Association 1031
Collector—brush 68
-ring 68
Concrete—road 328
house construction ... 600
-house floor plan 600
-storage tank protected from heat and frost 233
-water storage tank and windmill of G. Ryan 233
Corn—crib—Make-shift 375
-crib—Metal 375
-crib—Tile, with granary at top 375
-Early Yellow Dent ... 172
-field showing effects of manure 476
-Golden Glow 172
-Prize 256
-that responded to liberal supply of nitrogen 691
Cornstalks in snow 327
Cotton—class in the South 762
-studied in southern school 670
Cow—Advertising what, can do 192
-tester 69
-testing exhibit at Ia. State Fair 376
-used for judging 1134
Cows in national guessing contest at National Dairy Show 833
Coykendall, H. G. 602
Creamery—built by Father Duffey 953
-in Franklin Co., Tenn. 953
Crosby, Edw., and his cow and calf 932
Cultivator — Motor, details 377
-Motor, planting corn 377
Cup—Ayrshire, to University of Vermont 922
Dairying—in Idaho—As it is in spots 108
-in Idaho—As it was.. 108
Dairymen of Iowa Co., Wis., visiting Green County 756
Daisies — Ox-eye, in meadow 107
Davenport, E. 1000
Devon steers 35
Drawing showing saving of water pipe (2) 233
Electrically equipped dairy in N. Z. 692
Entz—Dr., weighing and measuring children 423
-Dr. J. J. 423
Exhibit—Cow testing, at Iowa State Fair.... 376
-Dairy, at County Fair
-Grain, at Ohio Fair.. 382
-of grain and vegetables 88
Farm—buildings at Conn. Agr'l College.. 912
-buildings of J. C. Greene 191
-buildings on Tilden Farms 693
-Geare Bros. 231
-home 1111
-homes for employees of Murphy Bros., Wis. 33
-house on Hillcrest owned by P. B. Crane 277
-house plans (6) 601
-Riford, E. P. 105
-scene in So. Wis. 373
-Women's Relief Corps 869

HD
V.60

Fastening paper caps on milk bottles 4
Fitzpatrick, W. W. 940
Float advertising Guernsey cow 748
Foote, Conie 169
Galloway—bull 952
-cow 952
-cows 952
Garden on farm 693
Gearhart, E., and her calf 834
Girl drinking milk 229
Grain stacks 86
Graphic representation of use of acid phosphate 5
Greeley, W. B. 737
Greene, J. C. 191
Greenlee, Helen 651
Gregory, H. W. 42
Grinding—piston ring.. 913
-valves 913
Guard, S. R. 1121
Guernsey—breeders of Outagamie Co. on Ingall's Farm 424
-exhibitors' herd at N. D. S. 649
-Get of sire at D. C. C. 547
-get of sire—First prize, at Minnesota Fair 390
-heifer 287
-heifer—Fancy Fanny of Boone 432
-herd 996
-producers which have reproduced (20) .. 527
Guernsey bull—Audacity of Edgemoor 656
-Cherub's Prince 295
-Grassland Comet 912
-Itchen May King.. 51, 342
-Langwater Steadfast.. 484
-Langwater Warrior .. 484
-Pencoyd's Secret Marose 554
-Sunkiston 1069
-Veda's May King of Edgemoor 915
Guernsey cow—Advertising, in float 748
-Bell's Paragon of Fox Valley 1036
-Briarbank Queen 2d... 479
-Brita of Beaver Ridge 737
-Brownie of Linwood ..1036
-Chilmark Rival Antoinnette 843
-Countess Prue 949
-First Dawn and her calf and herdsman... 785
-Fisherman's Ellerslie.. 530
-Frances Lydia 164
-Gerar Etta 656
-Lady C of Mara Alva 158
-Lady Du Chene.....1071
-Langwater Helpmate 484
-Marshie D. V. 1071
-May Rose of Westbrook Farm 280
-Merrimac's Blossom.. 37
-Mildred II of Les Godaines.. 294, 546, 742
-Miss Spottswood of A. D. F. 425
-Monobelle 799
-More Confidence 482
-Opportunity of Birchwood 1069
-Pearl of Pomeroy and two calves 737
-Pergue's Crescent 116
-Princess Ultra Grace 1071
-Queen Rose of Pine Grove 543
-Rebecca of Sunny View 839
-Rockingham's Tulip .. 382
-Rose of Little Platt.. 10
-Sanoma's Archer Girl 292
-Sweet Bell 70
-Ultra Celia 737
-Wilda Lucillea of Mara Alva 1138
-Wilson's Pet 915
Guernseys—and barn of M. L. Welles 1069
-imported by Oregon.. 14
-in Barron Co., Wis...1070
-of Twinkling Lily Family 37
Gullickson, T. W. 971
Handschin, W. F. 1033
Harding, W. G., and Holstein cow at Minnesota 391
Harford Co., Md., judging team 625
Haslerud, E. J. 835
Hauling milk co-operatively 1111
Hay—loader 193
-stack covers 193
-stacking device 193
-stack poorly built 193
Haywood, J. K. 1044
Heads of the 5 dairy breeds (2) 993
Hen—Knock-kneed 624
Hens with tuberculosis.. 130
Her Christmas wreath ..1008
Hill, E. K., giving prizes in essay contest 3
Hirsch, W. R. 871
Hog—house-Ia. movable 956
-used for judging.....1134
Holstein bull—calf of W. Pontius 853
-Carnation King De Kol 738
-Cedar Lawn Canary Paul 342, 648
-Johanna Bonheur Champion 2d 298, 476
-Johanna Glenda Lad.. 546
-King Aaggie Hengerveld 294
-King Pontiac Asiatic Ormsby 530
-Matador Segis Walker 6th 915
-Sir Bess Ormsby Fobes 40
Holstein—breeders of Ottawa Co., Ohio... 612
-breeders of Outagamie Co. on Erickson's farm 436
-calf and Byron and Joyce Palmer 112
-calf and Carl Johnson 853
-calf and K. Denney .. 20
-calf—Chinook Segis Pontiac David 1109
-calf club of Douglas County, Nebraska.... 80
-calves and boy 529
-calves fed skimmilk .. 113
-calves for Nicoletti boys 1013
-grade cow—Aggie 475
-grade cow—Betsey ... 628
-grade cow—Sissy 628
-grade cows—Baldy and Curly 475
-heifers and steers sold to Belgium for beef.. 78
-herd 996
-herd—Mt. Hermon ... 689
Holstein cow—and calf (2) 789 932
-and calf—Modesty With Pride 789
-and milkers at Iowa Soldiers' Orphans' Home 954
-Beaucoup Sibyl Segis..1124
-Becker's, A. 281
-Belle Lyons Korndyke Hengerveld 140
-Bessie Lyons Hengerveld 2d 1071
-Buffalo Parthenea Skylark 1114
-Carnation Pioneer Segis 1074
-Cascade Johanna Illustrites 1120
-De Kol Albin Princess 2d 546
-De Kol Korndyke Ormsby 2d 380
-Doetje Nellie Concordia 342, 648
-Dorinda Storrs De Kol 912
-Edenvale Nellie Veeman Pietertje 439
-First prize 69
-First prize 2-year-old 69
-Gerda Hengerveld 3rd 1123
-Iowana Bettina 38
-Iowana Miss Fayne.. 38
-Japalar Wonder Beuzzetta Woodcrest 333
-Jemima Johanna of Riverside and four daughters 1130
-Johanna Concordia Gilt Edge 333
-Johanna Mutual Girl.. 478
-Kayewood Joyce Korndyke 196
-Lady Aaggie Echo Hengerveld 110
-Lady Korndyke Norma Pietertje 1081
-Lady Volga Colanthus Segis 606
-La Verna Lincoln 1117
-Lillie Burke Canary... 39
-Llenroc Lady Jemima 1130
-May Walker Ollie Homestead 1036
-Miss Jessie Johanna De Kol 439
-Mutual Clothilde Segis Walker 915
-Ohio Lizette 382
-owned by H. Schultz.. 873
-Ponderosa Grace Pietertje Ormsby 154
-Star of Wilson 607
Holstein cows—barn and silo on Women's Relief Corps Farm 832
-Daughters of Eggler Mercedes 475
-Like begets like 789
-of R. McIntyre 744
-Seven 1st prize aged, at Minn. State Fair.. 390
Holsteins—at Arizona State Fair 953
-at Fort Scott, Kans... 35
-in Barron Co., Wis....1070
-Notable Canadian 1130
-owned by H. Jones.... 477
-Three generations 475
Home of P. H. Crane and family 999
House—and barn of G. L. Gaden 911
-Concrete, of Donaldson system 600
-floor plan—Concrete .. 600
-Monolithic concrete ... 600
-plans (6) 601
-showing water supply system 232
Howard—Dr. L. O. 151
-J. R. 1032
Ice—field laid out in squares 647
-house—Post, uninsulated 1132
-Making 647
Iceman—Veteran 647
Indiana live stock judging team 624
Interior of refrigerator of butter house 1112
Intestine covered with tubercles 120
Jersey—aged cow class at Shreveport 871
-breeders and farmers at Shreveport 871
-calf and boy 972
-calf and girl 834
-calf club—Shedd 114
-calves—Two, and girl 65
-grade cow—Blackie... 330
-herd 998
Jersey bull—at Arizona State Fair 957
-Buttercup's Butter Lad 871
-Captain Tristram 915
-Chief Raleigh 294
-Fashionable Fern Lad 546
-Gamboge's Royal Majesty 554
-Gypsy Gamboge Lad.. 530
-Rose's Elmhurst Jolly 390
Jersey bulls purchased for Dearborn Co., Ind. 250
Jersey cow—Austin's May Pogis and her twin calves 792
-Blue Belle's Sophie..1071
-Countess Lad's Rosebud 476
-Dutchess 84
-Eminent's Distinction 962
-Eminent's Foxy Belle 1071
-Eminent's Jimp's Owl 915
-Fairy Boy's Houssie 2d 888
-Fauvics Nic Nac..... 444
-Fern's Oxford Triumph 871
-Fortune's Admiration 381
-Gamboges Royal Sybil 136
-Hope You'll Do..... 329
-Jap's Mertha Lass ... 481
-Lucky Farce 740
-Majesty's Minerva.... 166
-Martha's Majesty 203
-Oak Park Venus 750
-of J. C. Greene..... 191
-owned by L. W. English 35
-Pearl's Alpha 120
-Pilots Rockland Beauty 838
-Poppy's Dortha 114
-Raleigh's Miriam.. 547, 871
-Rochettes Noble Nina 432
-Sly Puss P..... 648
-Sophie's Deborah 735
-Sophie's Tormentor's Elinda 8
-Successful Queen 191
-Trill Pogis of Lilydale 290
-University Kenna Climax 109
-Vive La France..... 235
-Westfield Girl 342
-You'll Do's Fairy 871
Jerseys—in Mondovi Calf Club 933
-in Rogers, Ark., C. T. A. 796
Johnson, Carl, and his prize heifer 853
Junior fair in pictures (10) 256
Juniors—of Grove City are live wires..... 714
-Three 20
Kansas students dairy cattle judging team at N. D. S. 650
Koenig, Fred 554
Larsen, C. 1037
Lemon packing house... 787
Lindsay, B., and sheep 973
Liver with tubercles.... 130
Live stock shipping point 1111
Living room of H. S. K. Willcox's house 992
Livingston, George 283
Lynn, F. E., and Poppys Dortha 114
Magnet—Removing 68
Marvin, Chas. F. 538
Maryland dairy products judging team at N. D. S. 652
McClelland, W. receives McCune trophy 714
McEvally, Olive, and herd she tested.....1110
Meierei—Typical 788
Members of Montgomery Co., Ind., Ayrshire Calf Club 1124
Michigan club members two-day camp (8) .. 352
Milk—booth for fair.... 204
-delivery wagons of Geare Bros. 231
-fairies in Medford, Ore. 3
-fairy pageant in Tipton Park, Ind. (4).. 67
-Food value of 71
-for growth and health 229
-pageant in Medford, Oregon 3
-pail—Small top and ordinary 16
-plant in Greenville, Pa. (2) 109
-posters 3
-receiving station at Shipman, Ill. 873
Milking—machine used by Mrs. J. Pohl..... 909
-machines used at Iowa Soldiers' Orphans' Home 954
-time on Ames Farm.. 325
Minnesota—Co. herds at Minnesota State Fair 610
-dairy stock judging team at D. C. C..... 546
Missouri—junior judging team for N. D. S.... 400
-students' dairy cattle judging team at N. D. S. 649
Nebraska dairy judging team 1040
Negro boy 911
Nests that are neat and clean 852
Nordman, Ed. 1031
Oats—infested with weed seed 107
-Prize 256
-that did not lodge (2) 691
-Wild, adjoining hay field 107
Ohio dairy products team at N. D. S. 652
Oregon—dairy cattle judging team 1044
-live stock parade 243
Oxen 35
Palmer, Byron, and Joyce, and Holstein calf 112
Panel—forms 600
-sections set up 600
Parade at Idaho State Fair 834
Pea cannery waste for silage 327
Penn. boys and the cup they won 53
Picnic—Cow testing.... 192
-of Holstein breeders of Jefferson County 118
Pig— 256
-and boy 52
-Duroc-Jersey 450
-Goldie 1050
Pigs—Experiments in feeding at Iowa Exp. Station (4) 951
-Hampshire 810
-in alfalfa 1033
-in pasture 153
-in rape 956
-owned by H. Jones.... 477
-sleeping 956
Plans of farm houses (6) 601
Plymouth Rock male... 624
Pohl, Mrs. J., with milking machine 909
Potatoes—Spraying, for blight 37
-Waste in handling....1038
Poultry disease demonstration 599
Powell, G. Harold 488
Prize winners at Wisconsin Junior Live Stock Show 892
Raisin—drying scene in San Joaquin Valley.. 736
processing plant 532
Ramsay Mr., on his way to get Mary 1012
Red clover field in No. Illinois 1033
Red Danish bull—Kristoffer Vesterskov .. 528
Red Danish cow—Ella.. 528
-Frigga VIII 528
-Liss 528
Refrigerator — Interior of, of butter house..1112
Removing piston rings 913
Road—concrete 328
-Mud hole in 328
Rock, M., and her cow and calf 932
Rye—in cover crop experiments 234
-Petkus winter 172
Self-feeders for hogs (3) 152
Sheep— 256
-and B. Lindsay..... 973
Shipping live stock 1111
Silage cutter 279
Silo—Building concrete 72
-Filling 279
-filling outfit—Small.. 279
Silos—and barn on E. H. Turner Farm 189
-Battery of, on Geare Bros. Farm 231
-Concrete stave, struck by lightning 797
-on A. Becker's Farm.. 281
-Two 327
Smith—Harlan 606
-Jos. 939
Soil—Keeping, compact checks nitrogen 691
Speakers at Chester Co. picnic 335
Stallard, J. E. 1040
Staples, C. H. 871
Statue—Butter, at Neb. State Fair 425
Straw—Saving, for winter 195
Studying Ohio fertility plots 5
Stumps—An acre of, blown at one blast... 883
Sudendorf, E. 1136
Sunflowers— 1072
-on farm of Thomas & Son 1072
Sweet clover—Mowing, in September 236
-of A. Becker 281
Swiss cattle 473
Switzerland—Scene in.. 473
Taylor, Wm. A. 479
Tester—Cow 69
Testing magneto 68
Thanksgiving dinner .. 831
Thorne, C. E., addressing Ohio farmers .. 476
Threshing machine—canvas under 36
Timothy plot at Ohio Exp. Station 234
Tobacco leaves—To make, thin 811
Tomlinson, W. 348
Tractor — Lubricating side of 1110
True, Dr. A. C. 194
Trull, T. A. 48
Truog's soil acidity test 304
Wallace, Mrs. R. G. 602
Ward, Pat 810
Warehouse of Wisconsin Cheese Producers' Federation 1031
Waterloo, Wis., corn judging team 1051
Water—storage tank and windmill of G. Ryan 233
-supply system for farm home 377
-supply system in house 232
Weir, W. W. 922
Westover, E. L. 293
Wharf where butter is unloaded on North River 1112
Wheat—Bread 1088
-Common, varieties ..1088
-Durum 1088
-Marquis 172
-showing results of fertilizers 5
-Spelt group of 1088
White Wyandotte pullet 852
Whitney, Milton 874
Willcox, H. S. K..... 992
Wilson, James 291
Windmill and water storage tank of G. Ryan 233
Winners in Junior Dairy Show at South St. Paul 1134
Woman tester at work 192

J

Jamestown, N. Y., owns milk plant 290
Jefferson, E. C., with La. Ext. Dept. 179
Jersey—breeders of N. Y. endorse pooling system 1075
-breeders of Sauk Co. meet 255
-breeders of Virginia meet 286
-bull asso. in Jefferson County, Indiana 9
-record broken in Wis. 109
-record of Jolly Little Lady 1083
-show and sale—Nat'l 801
-show at Shreveport, Louisiana 661
-The, premier butter breed 998
Job—Believe in your... 486
-for agricultural graduates 192
Johnson grass for pasture in Illinois..... 795
Jolly Little Lady—Record 1083
Jones, H.—Farm 477
Judging—cow-Points in 1134
-swine—Points in 1134
Junior dairy show at So. St. Paul 1134

K

Kahn-Wadsworth bill .. 610
Kansas—Dairy Show... 786
-Free Fair 476
Kentucky—and Indiana dairymen organize... 697
-dairymen to meet.....1100
-Fair prizes 42
Kenyon-Anderson bill.. 610

L

Labor saving machinery requires less people on farm 336
Lady Volga Colanthus Segis 606
Land—clearing and the new settler 935
-clearing round-up in Marinette Co. 883
-Rise in, prices 1118
Larsen, C., goes to Ill. 1037
La Verna Lincoln 1117
Law—Ontario compels use of pure-bred bull 200
-providing for care of women and children at childbirth 968
Laws and work 1042
League—Anti, propaganda 753
-co-operative asso. moves to Utica 618
-co-operative movement 381, 384
-County, meeting 67
-Favors, plan 492
Lease—Company 1077
-Fairness of 77
Leaves aid garden fertility 769
Legislation—Pending, of interest to farmer... 610
Legislative matters before Congress 1133
Legumes—Hard seeds in 45
Lice— 1020
-Kinds and treatment.. 400
Life—Disciplined 766
Lighting—Better, for farm home 140
Linseed meal—Heavy production of 162
Live stock—exports promoted by B. of M.... 44
-Feeding in transit.... 431
-most profitable 1078
Livingston, Geo. 282
London Dairy Show 966
Louisiana milk men on trial 44, 46
Lucky Farce 740

M

Machinery—Charges for renting farm 289
-Labor saving, requires less people on farm.. 336
Mammitis..... 219, 360, 629
Man—The, who doesn't know 1117
Mansfield Doris Finance 734
Manure—Handling in summer 13
-phosphated — Effect 5
-Storage 747
-Weed seeds in... 107, 122
Marathon Trio county, Wis., picnic 57
Marketing—and production 12
-conference 79
-dairy products 794
-How co-operative, was made a success in California 335
Marsh soils — Fertilizer for 157
Maryland—Virginia milk producers reorganize 738
McCann, A. W., and the League 698
McEvally, Olive, woman tester in Virginia ...1110
McNutt, J. C. resigns... 19
Meat—and milk-Am't to spend for 160
-for family of eight.... 548
-Shipping farm 1086
Meierei—The 788
Men hired by government.. 151, 194, 282, 478, 538, 607, 737, ... 874, 1044
Methylene Blue reduction test 280
Mexico dairies 383
Michigan farmers' round-up 4f
Middlesex Meadows quartette 936
Milk—a factory lunch in Springfield, Mass. 935
-and feed prices..... 960
-and fish eggs 920
-and meat—Am't to spend for 160
-and meat—Comment.. 298
-and meat—Criticism on Mr. Whisenand in Breeders' Gazette 160
-and politics 76
-and raisins—Advertising 608
-bar at Cortland Co. Fair 166
-bar at picnic 113
-Bonus on, in Effingham Co., Ill. 1030
-Bloody..... 139, 814, 881
-booth for fair..... 204
-campaign in Detroit—Results 160
-campaign work 383
-cans and pails—Cleaning 1151
-Condensed, evaporated, and powdered, made in 1919 by states.... 246
-contract in Oregon... 838
-cooling station for Ala. 655
-Cost of producing—Dairy Division on ...1042
-costs in Oregon.....1044
-delivery plant—Co-operative, in Greenville, Pennsylvania 109
-dispensary in Sheboygan, Wis. 302
-Disposing of, on farm 1077
-Essentials in pasteurizing, successfully .. 337
-Experiments with, for Indiana school children 880
-Factors affecting quality of 1145
-Food value of..... 70, 229
-Food value of (essay) 714
-given to pupils in Marion Co., Kans.... 423
-given to school children in Sheboygan, Wis... 302
-inspectors to meet 86
-Is, formed in udder?..1119
-League sold, in N. Y. for $3.65 496
-makes kids husky.....
-making efficiency 202
-market—Improving .. 979
-market threatened in New York 386
-Marketing, by Twin City Milk Producers' Association 840
-Municipalization of, in New Zealand 325
-Neglecting quality in.. 830
-news from Wash. state 567
-One quart of, is equal to different foodstuffs 70, 229
-pageant in Tipton Park, Ind. 67
-Pasteurized, sours.... 337
-Pasteurized, sours overcoming 487
-Pasteurizing, essentials 337
-Paying for, by test... 960
-Peanut 239
-plant—City-owned, in Jamestown, N. Y... 290
-plant in Syracuse ... 431
-plant—Ups and downs of a co-operative.... 74
-pooling contract objections—Answers to 752
-pooling plan fought by dealers 618
-pooling progress in New York 554
-Pooling propaganda.. 614
Milk prices—advance in New York City and Syracuse 166
-for December reduced by Dairymen's League 882
-in California rise 155
-in Rock Island, Ill.... 384
-in Washington, D. C. 287
-New York, for Oct.... 496
-of League 496
-prevailing in different sections of country 171, 286, 535, 713, ... 926, 1138
-Producers' and consumers' interest in.. 163
-Toronto 429
-Wisconsin, for Nov... 922
Milk— problem-Solving, in Michigan 12
-produced by Twin City Milk Producers' Association in June.... 840
-producers to meet.... 492
-Producers' Federation 506
-Producing clean 364
-Quality in, counts.... 298
-questions—British 1145
-Red 674
-Ripener 961
-Ropy 549
-ruling for Washington, D. C. 179
-scores—Los Angeles .. 374
-secretion 1119
-Selling, or cream 549, 1043
-Shipping raw, in South 655
-situation in California 87
-situation in Canada .. 753
-situation in N. Y. 434, 704
-situation, New York—Fable applied to..... 440
-Smith, E. C., produces high quality 158
-strainers—Use best ... 138
-strike in New Orleans 911
-strike in Seattle ended 883
-strike—St. Louis 873
-Stringy 18
-survey in Los Angeles 105
-Tainted 749
-trial in Louisiana.. 44, 46
-Use more 70, 229
-utensils—Handling ...1151
-war in Oregon 558
-Weigh your, when ready for market... 920
-What, lacks as beverage 1109
-Where is, formed?....1119
-Whole, vs. skimmilk for calves 1076
-Will alfalfa pasture taint 841
Milking—causes sore hand 94
-troubles—Banishing.. 909
-tube 454
Milking machine—and cheese industry 545
-operator 796
-reduces labor and production costs 909
-testimony of J. Pohl.. 909
Milking machines—Care and use of..... 250
-More, used 384
-Solution for cleansing 241
Millet bran 723
Milwaukee Milk Producers' Asso.—Complaint or action, which?... 654
Minetta of Ashwood.... 606
Minnesota—club show .. 305

533827

-Dairy Short Course... 514
-State Fair 390
-testing news 177
Minnesota's dairy products 794
Missouri—better bull campaign prizes 1125
-cow race 18, 895
-Cry. Short Course....1038
-Holstein Asso. 896
-junior contest 939
-juniors get $850..... 740
-junior judging team for N. D. S. 400
-State Fair 298
Mites 400, 1039
Mondovi, Wis., High School Jersey Calf Club 932
Monopoly prices on food prices 1042
Montana State Fair 480
Mosley, H. R.—Farm .. 817
Musser, K. B., goes with A. G. C. C. 70
Mystery of soil 277

N

Name — Registering farm 337
Names—Choosing cattle 1043
Nancy Whitehall 875
National Board of Farm Organization to meet 219, 936
National Dairy Asso. report 1003
National Dairy Show—Behind the scenes at 875
-Boys and girls to judge at 20
-Ed. 434
-notice 71, 78, 84, 120, 168, 222, 357, 404, 407, 411, 422, 440, ... 453, 481, 485
-writeup 648
National Dairy Union—finances... 39, 202, 1150
-The 1142
National Grange—at Washington, D. C... 835
-meets 850, 882
-notes 247
-on politics 92
National Jersey Show— 362
-and sale 801
National Milk Producers' Federation 506
National milk producers meet 668, 1133
Neighbors costly institutions 189
Nebraska State Fair... 425
Nelson, W. M.—Farm.. 816
Neutralizing sour cream 961
Nevada Bull Asso..... 237
New Orleans milk strike may benefit La. dairymen 911
New York—Agr'l Society to meet.....1121
-breeders meet 1073
-butter market.. 14, 43, 82, 128, 162, 203, 453, 492, 558, 627, 668, 705, 772, 800, 855, 891, 942, 982, ... 1015, 1083, 1121
-dairymen meet 954
-dairy production statistics 1095
-farmer—Business conference 424
-Federation of Agriculture meets -.....1080
-Milk Committee has service bureau 43
-milk market threatened 386
-milk situation 434
-milk situation — Fable applied to 440
-Organization work in 658
-outlook 426
-pooling contest 704
-pooling contract—Answer to objections 752
-representative agricultural meeting 1132
-State Fair 444
New Zealand—Electricity in 692
-Municipalization of milk in 325
Nitrogen — causes grain to lodge 691
-Surfeited with 691
Nolan bill 610
Northwest Live Stock Show 843
Nutrients in hay and grass 920

O

Oat—hay-Cutting 337
-straw—Feeding 337
-straw—Value 337
Oats—Fall sown 142
-Kind, to grow 172
Ochoco Project, Ore. .. 177
Ohio State Fair 382
Ohio's—Cornfield Day.. 476
-Fertility School—Facts from 5
-plans for the future..1111
Oil meal for cows near parturition 1056
Oleomargarine—Equivalent of, in milk.....1118
-Thom. C. H., on..... 122
-used in one family.... 486
-vs. butter for children —Results of experiments 548
-Why, is taxed 122
Ontario law compels use of pure-bred bull.... 200
Ophthalmic—test 1119
-vs. intradermal and subcutaneous tests... 289
Oregon — buttermakers' meet 1076
-Dairy Council 1086
-Dairy Council's work..1037
-Dairymen's Co-op. League 446
-developments of interest to dairymen 838
-Farm Bureau organized 922
-Farmers' Week 982
-imports Guernseys ... 15
-milk war 558
-milk contract 838
-notes 387
-summer dairy show... 243
Overproduction—Is it .. 857

P

Pacific Coast Co-op. Marketing Assos. .. 872
Pacific International—entries 751
-Live Stock Show.... 914
Packer, B. G.—Address 935
Painting—Pointers on.. 309
Parks, R., makes good with hens 21
Parsnips — Wild, poisonous 241
Pasteurized milk sours.. 337
Pasteurizing cream 961
Pasture—Feed grain to cows on 161, 288
-Fertilizers for 156
-for pigs 153, 180
-Johnson grass 795
-mixture for rocky hillside 1077
-Restoring damaged... 2
-Sudan grass 1059
-Sweet clover 236
-Sweet clover and rape for 385
-Topdressing for 734
Pea growers of Dodge Co. meet 756
Peas for hay 123
Peanut milk 239
Pearl's Dot 860
Peat—for fuel 659
-soil—Crops for 1005
Pennsylvania boys in judging contest 53
Permanganate solution 1145
Pessimism vs. thinking.. 122
Phosphated manure—Effect 5
Phosphoric acid—New process of extracting, from rock phosphate 1004
Phosphorus and soils... 13
Photography — Truth in 12
Picnic—Chester Co., Pa. 335
-Farm Bureau, of Rock Co., Wis. 407
-of Delaware Co., N. Y. 113
Picnics—Farmers' 12
Pierce, Jas., dead 801
Pig—club-California ... 52
-feeding experiments at Iowa Exp. Station... 951
-Preparing, for showring 450
-weighs 308 lbs. at 208 days 952
Pigs—Feeding and caring for 153
-Grain for, on pasture 180
-Hairless 1076
-Must, root? Evvard says no 951
Pinkeye 1146
Play the game 657
Plow—Best depth to.... 435
-Disc tractor 655
Plowing with jointer.... 13
Poem—Cold-pack canning in rhyme..... 20
-Corn song 814
-Dr. Babcock's birthday 739
-Her Christmas wreath 1008
-If 786
-Lime the land 20
-Man's greatest blessing 73
-Scythe song 20
-Uncle Ezra invests in cow 511
-Work 483
-Xmas and the herd... 991
Poisoning—Forage..745, 746
-Forage—Antitoxin for 289
Politics—and milk 76
-Grange on 92
Pooling—contract objections-Answer to .. 752
-progress in N. Y. 554, ... 614, 618
Pork—Curing, by brine method 1043
Potato blight—Controlling 37
Potash for marsh soils.. 157
Pot luck or silos.....1072
Poultry—breeding stock-Selection and care of 624
-culled in Coshocton Co., Ohio 581
-diseases—Common ... 972
-house—Is, ready for hens this winter.... 852
-Tuberculosis in 130
Pregnancy— Determining 899
-or gestation 856
Prices—and the dairy situation 1004
-Fixing 746
-Fixing, and cost of production 548
-Monopoly, on food products 1042
-of farm products decline 794, 1042
-of feed make cow best market 1042
-regulated by supply and demand 840
Prince plan opposed... 558
Princess of Meadowbrook 910
Producers — Do, reproduce? 527
Production—and heredity 785
-and marketing 12
-Limiting 746
-Relative, of heifers and cows 795
Progress of farming...1118
Promfret, Vt. 615
Protein—and feed flights 151
-Cost of, in concentrates at various prices 151
Prune industry stabilized through co-operation 602
Pullets—Care and feed of, this winter..... 852
Pulley—Size of milker pump 385
Pure-bred—bull must be used in Ontario..... 200
-sires—Value 1009
Pure-breds—Why breed, in census of H. F. Association 76
Purdue short course....1048
Pyometra 766

Q

Quality—Where did, go? 329
Queen Rose of Pine Grove 543

R

Raisin—growers and collective bargaining 654
-industry — Fixing prices in 548
-industry in Calif..... 532
Raisins and milk 608
Raleigh's Corinne 422
Rates—Freight, on hay reduced 1082
Ration— 609
-Economical 1120
-for cows on test 385, 1076
-for Holsteins after calving 655
-for laying pullets 844
-for winter egg production 870
-Next winter's 45
-with alfalfa 77
-with cane seed meal.. 44
-with corn and cotton-seed meal 960
-with flaxseed 921
-with grain profitable 1120
-with hominy 385
-with marsh hay 961
-with mixed hay and silage 435
-with rye 13
-with velvet beans.....1043
Rations—for cows on pasture 161
-for pregnant sows 153
-for suckling sows 153
-Home grown dairy ...1005
-with alfalfa hay 795
Record—of world's champion Guernsey .. 958
-of world's champion Holstein 1002
Records—Champion 77
-Champion Guernsey .. 959
Red Danish cows—Origin 528
Red water..... 18, 1096
Registering grades 795
Register of Production—Wisconsin 1037
Reid, E. B. 437
Report of Pacific Coast Co-operative Marketing Associations.... 872
Retained afterbirth 510, 718
Reward of struggle....1076
Ridgeway, J. W., goes with creamery 1079
Riford, E. P., farm 105, 122
Ringworm 182
Roads—Concrete 328
-Paved, do not produce deserted farms 328
-Value of good, to farms 328
Robertson, J. W.—Address 486
Rockwell, E. C., goes to Chicago 15
Root pits 795
Roots—Feeding, to stock 1077
-for stock 1077
Roup 972
Rupprecht, F., herd.... 333
Rye—and vetch for cover crop 234
-and vetch—Sowing ... 123
-for winter cover crops 234
-in wheat fields 170
-Keep, out of threshing machine 170
-Planting old 660

S

Sale—Ayrshire, at Sandhill Fair N. C.....1002
-Bitter Root Guernsey 43
-Edgemoor Farm 51
-First National Jersey 661
-Fond du Lac, Wis., Guernsey 940
-Fond du Lac Holstein 660, 1054
-Georgia Jersey 50
Getting ready for, on Tilden Farm..... 693
-Green Co., Wis., Holstein 822
-Guernsey, at Pacific Live Stock Show..... 922
-Iowa Guaranty Holstein 898
-Jefferson Co., Wis., Holstein 936
-Jersey, in Texas managed by Mrs. Green.. 761
-Jones & McKerrow.... 742
-Juneau Co., Wis., Holstein 822
-Lake Co., Ill., Holstein 761
-Lake Mills Holstein... 806
-Langwater Farms 484
-Meridale 481
-Minnesota Holstein ... 752
-Mock, at Conn. Agr. College 912
-Moore, J. C. 1079
-Mower Co., cancelled.. 383
-National Jersey 191
-National Jersey, at Shreveport..... 801
-New York State Guernsey 482
-1920 National Dairymen's 743
-N. D. Holstein 210
-Oneida Holstein 94
-Pabst Farm bull 627
-Paige, J. C. 898
-Pierce Co. Guernsey...1075
-Quebec Ayrshire..... 930
-Richland Co. Holstein 843
-Setting stage for big.. 693
-Sheboygan Co., Wis., Holstein 902
-So. Wis. Guernsey ... 619
-Tillamook Co. Guernsey 206
-Timonium 605
-Tri-county, at Viroqua, Wis. 846
-Vermont Ayrshire Club 843
-Virginia Holstein 862
-Wachsmuth Bros. 846
-Walworth Co., Wis., Holstein 891
-Washington Co., Wis. 846
-Watertown, Wis., Holstein 891
-Waukesha Co. Guernsey 895
-Waukesha Co. Holstein 882, 1055
-Waupaca Co., Wis., Holstein 931
-Wilson, F. 720
-Wisconsin Guernsey .. 614
Sales—Michigan (3) ... 898
Salt for hay and silage 241
Salting hay 161
Sand—Farm of 88 acres 281
Sawdust—as a stock feed 115
-for feed 384
Scrub—bull funeral 306, 957
-Swat the 597
Seattle—milk fight 630
-milk strike settled.... 883
Seed—Germinating hard 795
-Importation Act 247
Seeds—Adulterated and misbranded 318
-Hard, in legume..... 45
Segis Pietertje Prospect 1002
Self-feeders for hogs.... 152
Separator—leaves fat in milk 841
-loses $2.20 per day ... 252
Separators in Kansas... 813
Sheboygan — Co., Wis., club news 932
-Wis., has milk dispensary 302
Shedd Jersey Calf Club 114
Sheep—Best breed of ... 609
-Different breeds of ... 609
Sheppard-Towner bill.. 968
Shipping farm meat...1086
Shorthorn—record broken by Snowdrop.....1117
-records 834
Show ring—Fitting calf for 212
-Fitting cattle for..... 110
-Preparing animals for 110
-Successful community efforts in..... 69
Silage—Am't of, to feed to prevent spoiling.. 385
-Corn and soy bean, value 840
-corn good nurse crop for alfalfa 1114
-cutter—Owning 279
-fed cows—Cheese from 609, 610
-Investigations 121
-Moving pea vine..... 747
-Oats, peas, vetch 465
-Removing, from silo.. 36
-suggestions for La..... 166
-Sunflower, experience 156
-sunflowers—Wild 161
Silo—built 34 years ago 482
-Concrete 72
-Concrete, not round... 241
-Distributor in 609
-for 4 cows 795
-Kind of wood for 337
-Painting interior of stave 289
-Straightening.... 241, 385
-Tallest 201
-Ten reasons for a 314
-Two-piece stave 337
-Why build 266
-Why every farmer should have 20
Silos—Are concrete stave, durable? 797
-or pot luck.....1072
Sir Bess Ormsby Fobes 40
Sire—Buy a proven....1070
-The right dairy 1053
Sires—Pure-bred vs. grade 1009
Skagit Co. Fair..... 263
Skimmilk—Casein from 1043
-Value 1076
-Value of, for hogs 888, 1043
-vs. whole milk for calves 1076
Smith—bill 611
-E. C., dairyman 158
-H., new position 606
Snip Mauger 2d 675
Snowdrop—Record 834, 1117
Soil—Mystery of 277
Soils and phosphorus... 13
Sophie 19th completes ninth record 543
Sophie's Deborah..... 735
Sorenson, L.—Farm 817
Sorghum—fodder for cows 795
-hay not poisonous..... 487
-poisoning 745, 746
-poisoning—Overcoming 881
-Second growth, poisonous 288
-seed as feed 795
Southern Illinois milk producers capitalize at $500,000 1125
Sow—Care and feed of.. 153
Soy beans—Cutting, for hay 337
Spanish bull fighter and American bull handler 1120
Spartanburg, S. C.—Bettering, with butter 1147
Spot Fox 874
Stack—Making a 36
Stallard, J. E., fieldman 842
Star of Wilson 607
Starters 961
Standards—Butter 238
Steen, H.—Articles..335, 436, 484, 532, 602, ...736, 787, 832
Sterilizer—Steam 921
St. Louis—Milk Marketing Company 800
-milk strike—Who won 873
Stock conditioners—Beware 210
Storing root crops..... 795
Story—"And of such as these" 831
-Broadening out ..502, ...564, 670, 762, 810
-Christmas at Cloverdale 1012
-Convincing a sceptical father 304
-Growin' up for you... 874
-Jerry Greene, yer honor 1050
-One who doubted finds real Thanksgiving ... 831
-Oxen talk in their stables 1003
-Tom's new suit 737
Straw—and kernel-Saving every 36
-Fertilizing value of... 241
-Plowing under 241
-Stacking 36
-Thrift in handling.... 195
-Timothy, for bedding.. 841
Strippings—Test of 526
Success depends upon man 990
Sudan grass—Is, poisonous? 288
-pasture in Kansas....1059
-poisoning 745, 746
-vs. legumes 77
Sudendorf, E., retires...1136
Sugar beet information 921
Sugar beets—Fall plowing clover for 201
-Feeding, to cows 549
Sunflower—fodder 630
-silage experience 150
Sunflowers— Experience with, in Canada 1072
-When to cut..... 161
-Wild, for silage 161
Supervisors needed in Washington 663
Supply and demand regulate prices 840
Sweet clover—earning its way 236
-Harvesting annual ... 699
-New annual 288
-pasture 236
Swine—Feeding and caring for 153
-Points in judging 1134
Swiss cheese 654

T

Talking in cow stable.. 797
Tankage—What is 841
Tariff bill—Emergency ... 1045, 1079, 1113, 1116
-Emergency (Ed.) 1118
-Include butter in.....1116
-in Senate 1113
Taylor, Wm. A. 478
Teat—cups-Solution for cleansing 241
-Leaking 510, 1100
-Obstructed.. 629, 960, 1146
-plugs—Substitute for 134
Teats—Sore 1020
Tennessee—club activities 451
-dairy clubs 52
-junior dairy clubs.... 304
Test bottles—Cleaning 201, 487, 747, 1005
-Emptying 549
Tester—Advice to 312
-cow—Experiences of.. 69
-Experiences of an A. R. 1116
-Getting ready for 119
-Job for agricultural graduates 192
Testing cows—Job for agricultural graduates 192
Tests in Indiana 139
Texas—calf club 887
-cows to Germany..... 740
-news 360
Threshing — from shock or stack 36
-time fires 123
-time on farm 36
Thinking vs. pessimism 122
Thistles, Canada—Destroying 292
Thinking through 1048
Tillamook cheese and co-operation 329
Tie that binds producers 787
Timothy—Experiment at Mo. Exp. Sta. to determine quality of, cut at different stages 193
-improved by breeding 106
-straw for bedding 841
-Time to cut 193
Tires for farm truck... 170
Tobacco does not add fertility 699
Tom's new suit 737
Tool rental—Charges ... 289
Townsend highway bill.. 611
Tractor—engine-Leaks in 913
-ignition difficulties.... 68
-Lubricating, in cold weather 1110
Trapping—foxes 973
-notes 972
True, Dr. A. C..... 194
Truth in fabric bill—... 610
-favored 554
-Story 767
Tubercular—cows-Utilizing pure-bred, on Women's Relief Corps Farm 832
-free herds in Miss.... 680
-free herds in U. S.... 76
Tuberculin test— 1005
-Limitations of 698
Tuberculin tests — Relative efficiency of.... 289
Tuberculosis—a private and a public question 1042
-Cause 655
-dangerous in herd ... 122
-Experiences with, in herds (Ed.) 698
-free herds in different states 1094
-free—Hoard's Dairyman herd 794
-free in Barron Co. Wisconsin 1070
-in hogs increases 157
-in poultry 130
-Keeping reactors 486
-Ophthalmic test for...1119
Twin calves 674, 1005
Twin City Milk Producers' Association 434

U

Union Co., Ohio, tour.. 296
University Kenna Climax 109
U. S. Chamber of Commerce 285, 288
U. S. Dept. of Agr. publications 56
Utah dairy course 1087

V

Valentine's Ashburn Baronet 884
Valves—Grinding 913
Van Norman, H. E.—Address 700
Ventilating buildings where National Dairy Show is held..... 746
Ventilation— Importance of 746
-flues 1119
Vermont—Central, Cattle Club 408
Vestal bill 610
Vetch—and rye for cover crop 234
-and winter rye—Sowing 123
-Hairy 190
Virginia farm homes convenient 1055
Vive La France record 235
Voca 5th of Avon.. 508, 754

W

Wages—and food.....1118
-for buttermakers 747
-in New York State.. 201
Warber, G. P.—Address 506
Warts—on head 899
-on teats 899
Washington—cattle win at Western shows... 719
-dairy notes 748
-D. C., weekly news... 11, 43, 78, 120, 179, 206, 239, 287, 338, 383, 437, 558, 618, 664, 738, 804, 886, 923, 970, 1002, 1045, ... 1079, 1133
-producers buy milk plants 606
-short course 1136
-State Fair 536
Water—Safe, for the dairy and farm 33
-supply system for farm home 377
-supply systems — Discussion of various types of, and their adaptability 232
Weed seeds in manure 107, 122
Weigh your milk and cream when ready for market 920
Well question 1043
Welles, M. L.—Farm...1069
Western Royal Live Stock Show 792
Westover, E. L., Guernsey representative... 46
West Virginia dairy survey 980
Wheat—bran and middlings prices 140
-Kind, to grow 172
-Story about different varieties of 1088
-Winter, sowed by mistake 549
Whitewash—mixture .. 13
-recipes 241
Whitewater calf industry 599
Whitney, Milton 874
Wilkerson, J. D., Farm 1081
Wilson, James, dead ... 291
Wireless service for farmers 44
Wisconsin—buttermakers meet 862
-cheesemakers to meet 962
-cheese producers to federate 966
-Cheese Producers' Federation 240
Wisconsin Dairy Council —membership 427
-report 169
-subscriptions 7
-What, has accomplished 1126
Wisconsin—dairymen to meet 1040
-marketing conference 1036
-Register of Production 1037
-short course 141
-State Fair 342
-State Fair—Butter exhibit at 11
-State Fair—Free cheese and butter at 202
Woman—farm-Survey of work done by 70, 76
-power—Waste of, menace to rural life..... 70
Women—Are farm, dissatisfied? 1055
-should be interested in law for their good... 968
-to be dairy specialists in Kansas 169
Women's Relief Corps Farm 832
Wood—Kind of, for silo 337
-lot—The 1076
Woods—Care and improving farm..... 1076
Wool—crop-Plan to move 405
-pools combined 554
Work— 641
-and laws 1042
-Remedy for H. C. L... 155
World's Dairy Congress 1079
Worms—in horses.. 766, 856
-in pigs 718

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HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

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Curing Alfalfa for Dairy and Beef Cattle

GEORGE STEWART, Utah Experiment Station

THE great intrinsic value of alfalfa hay for dairy and beef cattle may be considerably enhanced by wise handling and proper curing. Probably no other crop is so sensitive with respect to quality as alfalfa when curing methods are concerned. Certainly none is more so. The fact that three or more cuttings instead of one constitute the yield is a large factor in making this true; but it is not the only factor, by any means.

Not only does the time of cutting affect the total yield of hay by regulating the growing period of each cutting, but it also regulates, to a surprisingly great extent, the relative content of protein, fat, fiber, and ash. Exposure to sunshine and rain permits loss in soluble food nutrients, especially in protein. Color and aroma in the hay, both vital to highest palatability, may be either lost or preserved according to the way in which the hay is handled after cutting. Important, however, as are all these factors on the final quality of the hay, the loss or preservation of leaves is of still greater importance. In the leaves is the greater percentage of protein, fat, and ash, and also the most palatable part of the hay when cattle at least are concerned. Method of curing has almost entire control over the proportion of leaves that is lost or saved. It is apparent therefore that the time of cutting and the manner of curing alfalfa are of such great importance as to be vital.

Time of Cutting

Two experiment stations have made a rather exhaustive study of the stage of growth at which it is most profitable to cut alfalfa for hay. Kansas found that it was slightly more profitable when only the yield was concerned to allow the crop to reach the stage of full bloom before cutting. This slight increase in yield was more than offset by a decrease in palatability when blooming was permitted to advance beyond the early stages.

It was further found that if alfalfa was cut just as soon as any blossoms appeared that the protein content was approximately 14 per cent, whereas if allowed to pass to full bloom and let a few seeds begin to form the protein content was only 11 per cent. This is a loss of more than 20 per cent of the most valuable food constituent. The protein content of the leaves decreases from 28 per cent at the beginning of bloom to 24 per cent at the end.

Utah Station results are similar except that early cutting was found to increase the yield as well as the quality of the hay. Early, medium, and late cuttings were found to yield in the proportions of 100, 92, and 85 respectively. The yields in pounds to the acre were 10,719, 9,829, and 9,100. The feeding value of the hay in this experiment was measured by the quantity of beef produced. The relative value of the acre-yield of beef when the hay was cut early, medium, and late was 100, 79½, and 69½ respectively. Not only was the yield increased by early cutting but also the value per pound. As an average for five years, in order to produce one pound of gain, it required 16.82, 22.07, and 28.02 pounds respectively of early, medium, and late cut hay. These relative values are here shown beyond question.

In damper regions, or even in wetter seasons of the drier sections, alfalfa does not bloom readily. In such cases, it is counted best to watch for the young shoots and cut just as soon as they are starting new growth. When late cutting is practiced these new shoots would probably be advanced far enough in growth for the mower to cut them back.

Finally, it must be borne in mind that very early cutting, that is one, two, or three weeks before the first blossoms or the first new shoots appear, not only gives a low yield of poor quality, but weakens the plants and allows weeds to get started. Kansas found barley-grass (fox tail) to increase much more rapidly in alfalfa fields that were cut extremely early.

Method of Curing

Method of curing has much to do with the preservation of aroma and the avoidance of dust or mold. Certain factors are beyond the control of the farmer, such as unexpected showers, for example, but in the main curing depends rather on the idea of the man who is handling the hay than on unavoidable weather conditions. If the grower understands two things and the reasons that lie back of them he is much more likely to make first-class hay than would be the case otherwise. These two facts are (1) that alfalfa ought to be cured slowly and so far as possible in the shade and (2) that the quality of alfalfa is easily injured after curing has begun by undue exposure either to sunshine or to rain.

Curing in the shade means that drying should be done rather gradually and by means of air rather than sunshine. This relates mainly to saving the leaves, because rapid drying at first is the way in which leaves are lost. A brief glance at the structure of the stem and leaf will give considerable assistance in understanding just why this is the case. It should always be borne in mind that a plant is alive at the time of mowing, and that moisture is therefore passing rather rapidly from root to leaf and is there being largely evaporated —"transpired", the botanist says. Somewhere between 600 and 1,000 pounds of water are passed through the plant and evaporated away by the leaves for each pound of growth made by the plant.

The mere cutting off of the stems of alfalfa near the ground in no wise kills the plants. It merely severs its connection with the root; that is, the source of the stream of water is cut off. If exposed to rapid drying the plant is unable to keep up a flow of water through to the leaves because the slender leaf stems dry out to such an extent that they cease to function. The leaves and the main stem of the plant are so comparatively coarse that they may still be moist when the leaf petioles are dry enough to become brittle. This is the principle that lies back of the loss of leaves in rapid drying.

Sometimes—rather generally, in fact—moisture reduction is really retarded by very rapid drying at first. The leaves are mechanically good ex-

(Continued on page 8)



ALFALFA BEING COCKED CLOSE BEHIND THE MOWER
This hay was cured partly in swath, partly in the windrow, and partly in the cock. About one-third of the leaves were lost.



ALFALFA IN THE IRRIGATED REGION
The leaves have just wilted and therefore will not drop off. The ground is drained; no hay spoils and all leaves are saved. No bleaching takes place.

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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Entered at Fort Atkinson, Wis., as second class matter.

How to Restore Damaged Pasture

Many Minnesota farmers were forced in the spring to turn their stock out to pasture early notwithstanding the fact that grass started slowly. The effect of this early pasturing may be seen now in short pastures which, in some sections, are being burn out. A pasture that is grown close during the early season is sure to go into the hot weather of summer in bad condition. The roots of the grass are not protected by the leaves and blades as they are intended to be and evaporation from the soil is rapid and the roots are usually badly damaged. In such condition grass can make but little growth.

Andrew Boss, veteran farm manager with the Minnesota Experiment Station, says such pastures can be saved to some extent by proper care. Where the acreage of pasture is sufficient and with a little to spare, many of the bare or thinner spots can be top-dressed with good barnyard manure to advantage. The top-dressing will protect the roots somewhat, and in the course of a month or two a decided improvement in quantity and quality of grass will be noted.

"It is good practice," says Mr. Boss, "to divide the pasture into two fields, if possible, and pasture alternate weeks, or for alternate longer periods, depending on the quantity of grass and the condition it is in. A part of the pasture should be allowed to make good growth and be held in reserve until the hot weather of July and August comes on. During the fly season it is difficult enough to keep stock in good condition even when they are on good pasture, and no pains should be spared to have at least one or two extra pasture fields for this season."



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

The wond'rous perfumed smell of ...,
The purpling color, too.
The stories poets tell of it,
The things the blossoms do.
The meadows and the way of it
Now here, now there, a sort
Of gypsy, and the play of it,
In Nature's gladsome sport.

The herd is mighty proud of it,
It means th' golden cream.
And see the flowered crowd of it,
Where orchard beauties dream.
Each clover bloom—each bud of it,
Brings fortune to the herd.
The very boon and blood of it,
Makes it a happy world.

From Los Angeles comes a hen and egg story that must be repeated here, because once upon a time the fisherman was popularly supposed to be the biggest and most picturesque liar. The hen that made fame for herself is a White Rock. She is owned by one Jacob Winkler, No. 2656 Lacey Street, in case you want to verify the facts. For a long period, this hen went about her laying in the regular way. But suddenly Madam Hen layed an egg that was the size of a peanut and was reportedly like one. All of which local chronicled in proper order to the White Rock chamber of commerce. When a Rock lays peanuts, it's high time somebody did some investigating.

Speaking of Hens

And while on the subject of eggs and things, it is just as well to follow the idea evolved by the State Agricultural College at Storrs, Conn. "In the thirty-first week of the ninth annual egg-laying contest at the college, the egg yield leads the crack poultry fanciers to reach a definite decision about Madam Hen. It is officially given out that many hens in the state are getting by, yearly, with a measly production of perhaps eight or nine dozen eggs, and now their owners are advised that said birds must get busy immediately and show at least two or three eggs more a month, to eliminate the slackers. The minimum production allowed must be eleven or twelve dozen annually."

And here is the reason for the highly scientific deduction: High egg prices appear inevitable, due to the high cost of feed and labor. Therefore the poultryman must get more money for his eggs, or he must sharply reduce the cost of feeding his flock through getting more eggs per hen. Making birds comfortable by keeping coops free from red mites, seeing to it that the hens have an abundance of fresh drinking water, segregating the cocks after the hatching season, providing plenty of green feed in winter as well as summer, all will help in coaxing the hens to better production. Plymouth Rocks have led in the contests for many seasons but this last test shows that Leghorns rule the roost.

Just to walk out in a field and see the grass and clover growing may not mean much to an ordinary individual. But cows coin all that into the currency that buys health.

The pasture to a herd means the dinner table of mankind. There the banquet is spread for cows, and what on earth would our meals mean if there was no such thing as milk and cream and butter?

There's Just ... Efficient
CREAM ...ARATOR
And ...at's The
DE LAVAL
For Forty Years
The World's Standard



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Milk Makes Kids Husky

EDITH KNIGHT HILL, Secretary Oregon Dairy Council

MEDFORD is a substantial attractive town in Southern Oregon. The Siskiyou mountains, snow crowned, look down on the town, the sun shines on it, and for miles around are orchards and dairies, farms, and lovely scenes. Farther up on the hills are grazing lands. But in the center of all this loveliness the dairy council in its survey found that 30 per cent of the children get no milk in their diet.

This fact alarmed the home demonstration agent, Miss Florence Pool, and at the suggestion of Mrs. Jessie McComb she prepared a program for a milk campaign. Grant's Pass, just a few miles away, had the campaign first with Miss Ruth Corbett in charge. Medford followed immediately, using the same picture slides, posters, and general play.

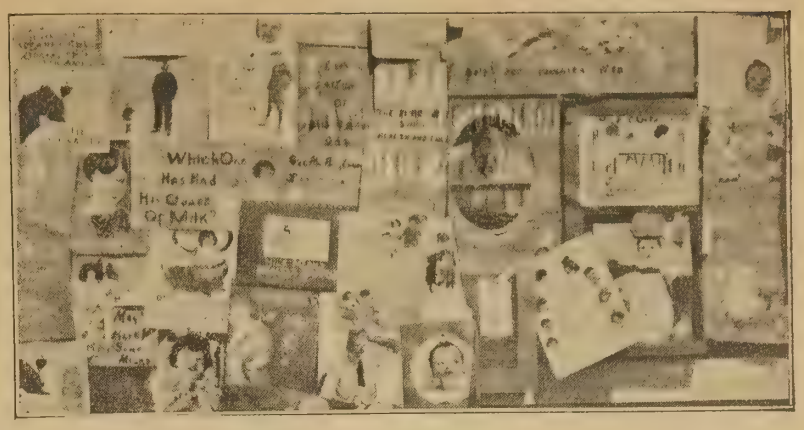
The secretary of the Oregon Dairy Council went to Medford and spoke to the school children, divided into three groups, third and fourth, fifth and sixth, seventh and eighth grades being grouped. From the talks and the leaflets the children were given information and inspiration for the posters they were to make and the essays they were to write. Then they went to work and on the morning of the last day of the campaign a committee of judges selected the best two essays and best two posters from each group and named a grand prize winner. The Medford Chamber of Commerce gave a cash prize to each child on the list of winners. Then at noon the Commercial Club gave a dairy luncheon in the Hotel Medford and lady Miss Pool and the parent-teacher ass put on the prettiest fairy pageant imaginable. Little girls and several little boys, too, all dressed in white were milk fairies. And they were the prettiest youngsters, the milk-fed type.

Each child had a card fastened with a loop of cord bearing a letter. A make-believe milk bottle was placed before the basement window of the city library and at a given signal out popped the first fairy who announced the pageant. Then one by one out trooped the little fairies spelling milk facts as they arrived. There were "Rosy Cheeks" and "Pearly Teeth" and "Alert Minds" and a lot of other folks and as they appeared they danced on the lawn and sang and, by clever management, changed position to spell other milk facts. The final statement spelled by the little boys made quite a hit. It was "Milk Makes Kids Husky".

In addition to the children's part and the co-operation of the teachers, which was splendid, the stores put in special exhibits. A hardware store showed milk pails and dairy utensils and an exhibit of hay, silage, and other feed that goes to make a gallon of milk. This was prepared by the farm agent. Other places showed comparative food values and one showed a milk bottle attached to a balloon basket, holding down the high cost of living. The balloon was in reality a basket-ball with a string crocheted covering. But it was most effective. The whole town co-operated and when the campaign was over not a person in Medford had been overlooked. Everyone knew about milk and its food value and the milk men did a good-office business but best of all the children were getting nourishment that one-third of them had lacked before.

To carry on its extension work and enlarge its scope the Oregon Dairy Council is planning to adopt a new policy for raising money and use the plan similar to the National Dairy Council's but modified to suit local conditions. A letter was therefore sent to each member recently asking if the members were willing for the change and asking if they wished their subscriptions used if the new way were adopted. The replies are all encouraging, expressing the greatest confidence in the council and appreciation of its work in educating the public in regard to the vital food value of dairy products.

Milk stations established by the council with the best of co-operation from the teachers and principals are doing well and paying their own way. At Failing school in a foreign district, Miss Porter, the principal, reports the station self-supporting and most popular among the kiddies.



COMPETITION POSTERS MADE BY CHILDREN OF THE THIRD AND FOURTH GRADES OF THE MEDFORD, ORE., SCHOOLS



EDITH KNIGHT HILL, SECRETARY OREGON DAIRY COUNCIL, ANNOUNCING PRIZE WINNERS IN ESSAY CONTEST IN MEDFORD, ORE., MILK CAMPAIGN



MILK FAIRIES WHO PARTICIPATED IN MILK FAIRY PAGEANT. AMONG THEM WERE "ROSY CHEEKS", "PEARLY TEETH", AND "ALERT MINDS"

THE G. L. F. EXCHANGE IN NEW YORK

ROBERT L. VOORHEES, NEW YORK

THE week of June 21st has come and gone. But it is a week that will always remain memorable in the minds and hearts of progressive dairymen and other farmers in conservative New York State. For during that week they were given an opportunity to become shareholders in the greatest farmers' co-operative movement that has ever been conceived, barring none. They were offered stock at $5 a share in the organization for which articles of incorporation were filed early in June, known as the Grange League Federation Exchange, Inc., authorized to capitalize for $1,000,000 with a stock issue of 200,000 shares.

The name of the new venture will tell most of the story. Its purpose, as outlined by its leaders, will complete it. And there is no doubt but that story holds more hope for farmers who are really versed in agricultural conditions than the story of any organization that has been established before. As its name implies, it has been formed jointly by the members of the Grange in the state, the members of the Dairymen's League, and the members of the county farm bureaus. It is a great thing when each big organization in the state gets together and works to one end, and that end the practical improvement of agricultural conditions in a way that will antagonize no interests except those that have wrongfully been fattening off the farming business.

As a means of protection, many co-operative farming associations have been started in the last few years. In almost every county in every state there is some kind of an organization to help the farmer-members in their efforts to get an equitable price for their products. Logic naturally suggests that it is a natural development for all of this co-operative work to be amalgamated in a big central state organization. Also, in order to offset the advantage which those who control binder twine and other things which the farmer must have, it would be a logical evolution to have a big and powerful buying organization which would be able to overcome the leaches.

It is the final purpose of the G. L. F. Exchange, as this new venture in New York State is popularly called, to effect this saving. Anyone at all acquainted with modern business must hesitate to claim that it will be able to accomplish all of these things at once. It won't. But the fact is that it is good machinery for the purpose founded upon a correct principle. There is no doubt that if it is carried on correctly and a methodical, if slow and sure, program is consistently followed it will finally achieve its purpose. And who could expect a baby to spring full armed to the fray—for fray it will be.

But it is wrong to call it a baby. In fact, it is really almost two years old, for it will take over the business of the same order which was established by the New York State Grange about 22 months ago. This business, with an initial and total capitalization of only about $30,000, was able, in that time, to work up to a business amounting to $100,000 monthly, to pay off all indebtedness, to create a comfortable reserve, and to pay six per cent on its outstanding stock. In that time it has learned many things and the new exchange will have the benefit of these.

New York is a big dairy state, in fact, one of the biggest. It is not saying too much to state that New York dairymen will use the exchange more than any other class of farmers. They buy 450,000 tons of feed yearly, cost-

(Continued on page 25)

An Americanized Dairy in Old England

BRADFORD A. COOKE, IOWA

AS you pass down the drowsy street of some English provincial town—or even a residential street of London itself—in the sunshine of a summer morning, you'll probably see drawn up against the curb, a milk cart hauled by a plodding old nag in charge of a slovenly, unkempt boy. On the cart bold letters declare "clean, pure milk", and the name of the person or persons dispensing it.

The ten- or twelve-gallon can containing the milk has sloping sides and often is dirty, battered, and rusty, showing signs of wear and hard usage. The brass faucet at the bottom of the can (or "churn" as it is called) is polished to the extreme, for your Englishman must have clean brass. The effect is, of course, lost for it shows off not its own brightness, but the ugliness of the can. And beside the can are smaller utensils, all getting dirt from the dusty street, while hungry flies buzz thickly about. Seeing this you wonder how even the gullible public can believe such a brazen declaration, "Clean, pure milk".

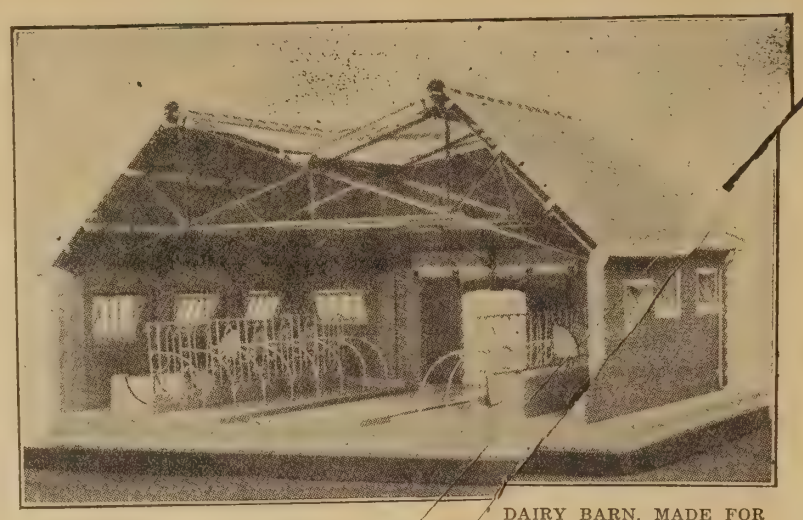
Now the cart is some day doomed to disappear, and I think soon, for modern methods of delivery are coming in to supersede the old, and bottles to take the place of the churn and jug.

No transformation comes without some actuating force and the gradual change that has come about in English milk production, leading up to the milk laws that went into effect on March 14th last, is largely due to the efforts and energy of a man who received his training in the United States. This man is Wilfred Buckley of Basingstoke, Hampshire, and his one aim has been to produce pure milk, coupled with the attempt to improve milk standards of the country and place the production of clean milk on a practical basis.

In days gone by, and even up to t present, milk production has much to be desired. Previous to when tentative milk laws wer was but never put into effect, were milk and no classes or named defined. True, the milk milk", or his milk "special", these names "children's milk", rade and the were only tricks ng, meant nothnames, strictly steurized", "cering. The ter such as we know tified", and were unkno especially small ten-

Many fa have labored in difants, in barns old fashioned and ficulty with much too little incon the cattle they were respa house, causing crowding and g through lack of fresh air. ely window or two admitted just cient light to emphasize the thickess of the dust in its path. Cobwebs bearing mute testimony to the age of the barn hung as graceful decorations from the ceiling. They were built to stand, those old barns, and when we are gone they will still be there. But a new rule will guide the hand that does the chores, a rule of cleanliness, and the cobwebs will have disappeared. A progressive English farmer will have punched holes in the walls to make windows for more air and light, and the old quagmire in the barnyard will have disappeared. At least so thinks Mr. Buckley, who, while living in America, observed the workings of New York State pure milk laws and had a vision of entire reconstruction in the English dairy industry.

It was my privilege, while in Eng- nd after the armistice, to be sta- ed at Basingstoke at a Canadian al, where I was told of Mr. and his work at Moundsmere eing interested in agricul-



A SECTIONAL MODEL OF THE "QUEEN M THE LORD ROBERTS ME- DAIRY BARN, MADE FOR THE NATIONAL CLEAN MILK SOCIET SABLED SOLDIERS MORIAL WORKSHOPS FOR

ture and especially in dairying, I re solved to see for myself the farme the man who is said to produc cleanest milk in England. ot an

I found Moundsmere to b ansion ordinary farm house, but of a plu that might well be the ho e home of tocrat. Then as I enter ring at me this Englishman I s ous place in from the most co eorge Washingthe hall a picture his but said nothton. I wonder must have followed ing, but my astened to explain. my gaze fo said, "my wife is an

"Yes," d I myself have lived in Americ State for a number of New That is where I got all my yea xperience which I aim to put d practice here. I try to produce n milk, put it on the market in the w state, and have a product above the highest grade of milk sold in London."

And he does. At some time during each week a sample is taken by University College, Reading, to be examined for bacteria, and from 24 samples covering a period of six months during the winter of 1918-19 the average number of bacteria found was 1,130 per cubic centimeter. In only nine cases was the count over a thousand. The consistency of a record like this is an example of what is possible to him who will take care to be clean.

You will notice that these figures are for the winter months. Winter is the hardest time to produce clean milk and to better understand the above achievement let us just look at these figures in comparison. Average London milk at that time contained anything above a million bacteria per cubic centimeter. A sample taken at random from a London dairy showed a count of 22 millions per c.c. "Grade A" pasteurized milk in New York City may contain as many as 30,000 per c. c. New York City standard for "certified" milk is 10,000 per c. c.

Moundsmere Manor equipment is elaborate and expensive and the owner's thoroughness characterizes every operation. The buildings form a sort of quadrangle, with one barn on the east side and implement sheds on the north end. Another cow barn stands on the west side and sheds for young cattle and horses along with the hospital enclose the south end. A gate admits you to the yard on the west side. The cow barns are new and highly modern in construction, having been built in 1915 when the original ones were destroyed by fire.

A noteworthy feature of these two barns is the roof which, instead of sloping downward all the way from the centre to the eaves, comes to a peak at about half way to the center and from there slopes inward, the latter slope being glass, thus admitting a maximum of light in proportion to inside space. This method allows direct sunlight to reach the cattle no matter what the time of day and, of course, maximum results for money expended.

The one outstanding feature of the farm, however, is the separate milking barn, used for no other purpose, the interior of which is of cement and iron throughout. The cement floor is kept spotless and is more accustomed to water and the scrub brush than many an American kitchen. Foul odors and dirt find a "No Admittance" sign on the door. The barn is surrounded by a concrete walk about four feet wide which serves to keep dirt away from the doors.

Passing from here we go twenty yards to the milk house, where the finishing touches are put on. In it are two rooms, one for boiler, sterilizer, and washing sinks, the other for cooling and bottling for market, for all of the milk is bottled on the premises.

When milking time comes around the cows are driven into the milking barn in groups of 25, having been previously washed. The milkers enter, wearing clean, white suits and ca to prevent contamination from t source. To keep bacteria out no portion of the milker's body is allowed to touch the cow unnecessarily. Small top pails are used as further precaution against dirt. Mr. Buckley says that these alone will enable a man to produce clean, sanitary milk. All the milking is done by hand although only a small staff of milkers handle the entire herd of about 70 cows, for Mr. Buckley, progressive as he is, still remains skeptical about the use of milking machines. "I have yet," he claims, "to see any milk, drawn by machinery, that compares favorably with the product of Moundsmere Manor."

On such a farm I naturally expected to find a herd of fancy cattle, but was doomed to disappointment. A grade Shorthorn herd was all I saw. But there are herds and herds. Mr. Buckley's is headed by a bull from one of the most famous families for milk production. Intelligent grading has developed an average production of 700 gallons a year per cow for the entire herd of 70. Of these some half dozen are 1,000-gallon cows. Production, he claims, is his purpose, and not to raise expensive pure-breds. Moreover, he prefers to do one thing well.

Dirt is not the only cause of contamination. Disease, contagious and hereditary, has to be reckoned with and one of the greatest things Mr. Buckley has done is to provide against it in his herd. The hospital houses every sick cow until she recovers and every newly acquired cow until she has been examined for tuberculosis and proven free from it, when she is allowed to join the rest.

Immediately after it is drawn the milk is taken to the milk house to be cooled and bottled for market. The bottles are capped in the ordinary manner with sterilized caps and then sealed with an extra cap and wired, thus gaining a three-fold object, protection from contamination and theft in transport, protection of Moundsmere's reputation, and advertisement of Moundsmere's goods. So thoroughly is the milk house protected from dirt that the milkers are not even al-

(Continued on page 16)



FASTENING PAPER CAPS OVER THE LIPS OF THE BOTTLES TO PREVENT SUBSEQUENT CONTAMINATION

Facts from Ohio's Fertility School

CLARENCE M. BAKER, OHIO

IS there something more to the selling of a product that fertilizer salesmen should know and how can they find out? These are some of the things taken into consideration in the fertilizer school held recently in Ohio, a part of which was conducted at the Ohio State University, Columbus, and the other at the Ohio Experiment Station, Wooster. This school consists of a program of lectures, demonstration and field studies.

What Plant Food Is

Professor M. A. Bachtell explained first to the 150 fertilizer agents that quite a number of the elements are necessary as plant food, the principal ones being carbon, oxygen, nitrogen, phosphorus, potassium, calcium, magnesium, iron, and sulphur. Phosphorus is being found in the bones of animals; potash in the ash of plants. Nitrogen—a large per cent of the air is nitrogen and calcium, which is known as the great regulator of soils, is found in limestone. Calcium is valuable in strengthening the cell walls of the plant, encourages the growth of clover and helps to develop vigorous roots and root hairs.

Sulphur only recently has been regarded as a necessary plant food and present studies and investigations show that many soils may need sulphur. Sulphur is one of the constituents of the oils of plants, which gives flavor to mustard, onions, horse-radish, etc. However, in actual practice, acid phosphate furnishes all the sulphur that is needed for soils in most cases.

There are three elements which have been limited to fertilizer practice, namely: nitrogen, phosphorus, and potassium. Other elements may become of greater importance as soils are farmed over long periods. Liming the soil adds much calcium and magnesium and others are supplied with acid phosphate or sulphate of ammonia. Therefore, fertilizers may be valued generally on the elements considered commercially valuable.

A soil is usually judged by its ability to produce crops, but plant food and soil fertility are not always synonomous. Soil fertility includes factors in the soil that contribute to plant growth when supplemented by favorable external conditions. It is not practical that plants may be analyzed and fertility elements supplied to the soil in the proportion that they may be found in the plant and it is necessary to carry into actual experiment to find out what plants really need. The chemical laboratory helps to discover some things, but authentic information can only come after long years of experiment.

Soil Characteristics and Their Relation to Fertilizer Requirements

Guy W. Conrey and E. E. Barnes pointed out to the fertilizer people that it is necessary to recognize that the soil is fertilized to grow the crop rather than simply to fertilize the crop. consideration of the character of the soil is important from this viewpoint. Texture means the size of particles which make up the soil, while structure refers to the arrangement of the particles within the soil, whether in single grains or in groups or in clusters.

Color is important in that it indicates something of the character of the soil. Brown soils are usually well drained, while a gray color indicates poor drainage; colors may be modified by organic matter in the soil, as a black soil is generally high in organic matter, but generally deficient in drainage.

Organic matter is important in improving the structure of both clay and sandy soils and also for increasing the water-holding capacity.

In practical tests, the plowing down of clover sod has a tendency to increase organic matter; crop rotation and the application of mineral fertilizers also aid.

Acidity is a soil characteristic quite important in crop production. Clover failures are frequently traced to acidity. There is an injurious effect to crops on acid soils not always due to acidity but to other compounds often found in soils where liming has not been practiced. Liming then corrects acidity and also destroys some of these injurious compounds.

The effect of drainage on soils is most forcibly brought out at the Clermont County farm in Ohio, where fertilizers have been tried on drained and undrained land. In a rotation of corn, soy beans, wheat, and clover, there is a total increase of $58.20 on the plots receiving phosphated manure and limestone on drained land as compared with $35.21 increase on undrained land, per acre. A definite increase is found on practically all drained plots over the undrained in this soil fertility work.

In consideration of soils, sandy soils are benefited by increasing organic matter and the water holding capacity through the growth of legumes. Lime is important to grow legumes, which in turn produce nitrogen for such a soil.

Peat and muck represent soils having a large amount of organic matter and of course are low in mineral elements, particularly potassium and phosphorus, so that the use of large amounts of fertilizers on these soils containing these elements are effective.

In general consideration of soil characteristics, it has been found that phosphorus is usually the limiting factor in crop production and that liming is essential where the soil is acid; that soils of heavy texture are fairly well supplied with potassium, and all special crops like potatoes, tobacco, and sugar beets need an additional supply of this element.

Work at the Ohio Experiment Station

After several days of program at the Ohio State University, the fertilizer men were taken to the Ohio Experiment Station where they were given a chance to view the fertilizer work.

Director Thorne outlined the work at the Ohio Experiment Station, stating it was possible from the work done at the Ohio Experiment Station to produce bread from the soil to produce crops without depending upon the earth; that it was possible to grow crops without depending upon original plant food in the soil, but simply using the soil as a place upon which the crop may rest and take root. This is borne out by the fact that the average yield for heavily fertilized corn in continuous culture has been 45 bushels per acre, or an increase of 33 bushels as compared to the non-fertilized continuous culture. Figures for oats are 47 bushels—an increase of 25 bushels over continuous culture, non-fertilized. In wheat there is a yield of about 23 bushels—an increase of 15 bushels over the unfertilized plots. The continuous culture, of course, is not practical in farm application, but these experiments support the fact that crops may be grown entirely from the plant food applied through commercial fertilizers although at considerably more expense than one could grow them in a rotation where clover and fertilizers are also added.

The effectiveness of phosphated manure in comparison with complete fertilizers in producing crops was a surprise to a good many of the fertilizer agents. For instance, in a 3-year rotation of corn, wheat, and clover, where 8 tons of stall manure and 300 lbs. of acid phosphate is placed on corn, the average yield from 1897 to 1905 was 63 bushels per acre of corn, 23 bushels of wheat, and 4,212 lbs. of clover. For the second period of this long-time experiment, from 1906 to 1918, the average is 70 bushels of corn, 31 bushels of wheat, and 5,336 lbs. of clover. Now, where no manure was added, but a fertilizer made up of 80 lbs. acid phosphate, 80 lbs. muriate of potash, and 160 lbs. nitrate of soda was added, the average yields for the first 12 years were 45 bushels of corn, 12 bushels of wheat, and 2,700 lbs. of clover. For the second period, the yield of corn was 52 bushels, wheat 23 bushels, and clover 3,552 lbs.—a gradual increase, but not equal to that of phosphated manure. In this test, even yard manure, untreated, but applied regularly in the rotation for the last 12 years of the period, has given 55 bushels of corn, 26 bushels of wheat, and 4,217 lbs. of clover to the acre in the rotation year.

21 crops average unmanured yield for corn is 36 bushels, for 21 crops 18 crops at 14 bushels, and for Another 2,815 lbs.

men was brise to the fertility mental fertilizout in the supplecomparison of where there is a tilizers in a 4-yecation of fer- the point is to deteon, in which fertilizers should bewhether the all the crops in the routed over to a single crop, and or given crop, which one? For in single one plot has the fertiliz then equally among all 4 crops, ed

(Continued on page 24)

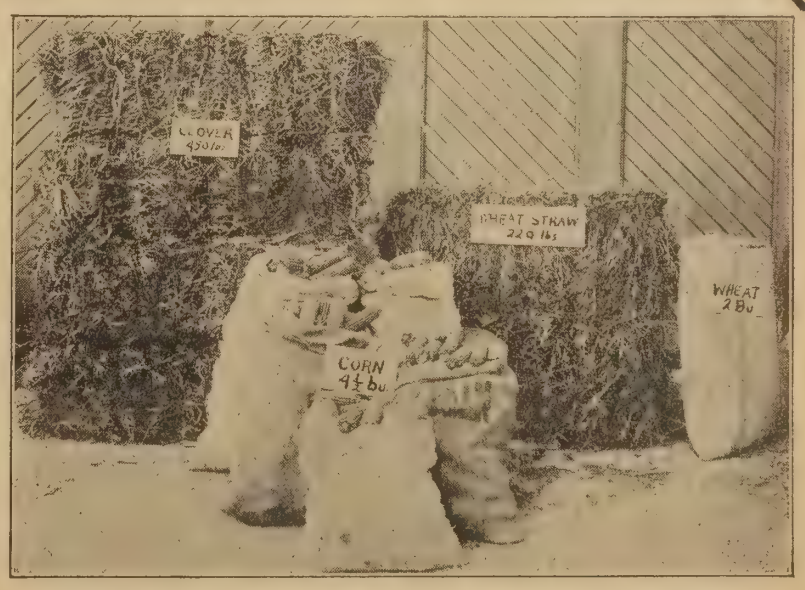


FERTILIZER AGENTS STUDYING FERTILITY PLOTS UNDER DIRECTION OF SOIL IMPROVEMENT COMMITTEE AT THE OHIO EXPERIMENT STATION



COMPARISON OF FERTILIZERS IN GROWING WHEAT AT OHIO EXPERIMENT STATION

Left: Complete fertilizer consisting of 160 lbs. acid phosphate, 100 lbs. muriate of potash, 50 lbs. dried blood, and 200 lbs. nitrate of soda. Right: No fertilizer.



GRAPHIC REPRESENTATION OF THE INCREASE FROM 125 LBS., ONE BAG, OF ACID PHOSPHATE FROM EXPERIMENTS AT THE OHIO EXPERIMENT STATION.



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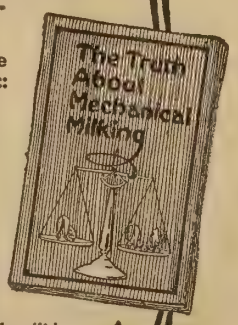
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Cow Testing Ass[ociations]

RECORDS, PRICES OF FEEDS, AT, AND MILK

Following is the summary of reports received during [the week and up to the time of going to press of this issue:

State	Association	Tester	Mo[nth]	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
			April	187	28	87.0	O. O. Zehring
			May	304	31	70.7	A. C. Slifer
			June	535	30	56.2	W. A. Stark
Ohio	Montgomery Co.	Arnold Wood	May	330	68	91.9	H. Powell & Son
Pa.	Buffalo Valley	Norman E. H[ers]	"	539	268	89.9	Piet Bergsma
Wis.	Ft. Atkinson	Wm. Seales [ngsberg]	"	550	55	59.1	L. McBain
Pa.	Meadville	H. C. Dri[ussell]	June	158	17	67.9	Ingle Farm
Wash.	Whatcom Co.	John V[elson]	"	335	79	71.5	H. Riesenweber
Wis.	Richland Co.	Hen[W. Reed	"	311	43	96.5	A. B. S.Co.
Ind.	Posey—Gibson	L. [alter Geurkink	"	324	65	83.5	S. A. Gray
Wis.	Ellington	M[M. W. Smalley	"	157	9	72.4	G. M. Putman
Colo.	Arkansas Valley	Max Mueller	"	445	97	68.9	R. K. Bonduel
"	Johnstown	J. E. McMahan	"	307	41	79.5	Frank Hesler
N. H.	Contoocook Valley	[rn.] F. Zachariasen	"		33	64.98	F. E. Fox
Wis.	Shawano	A. W. Cowles	June	561	127	76.1	Fred Kemmel
Ohio	Westerville	[nty] H. L. Brown	"	339	41	69.5	Adams & Suddarth
Wis.	Waukesha Gue[Olive McEnally	May	413	80	65.1	C. H. Bready
"	Byron [n Valley] G. H. Todd	"	450	27	59.5	W. L. Simpson
Tenn.	Wilson Cou[sta County] J. T. Collins	"	208	21	63.61	Rawlings & Raller
Va.	Fairfax [ce William] Gilbert Merchant	"	266	32	82.08	W. A. Madison
"	Loudou[n]						
"	Augu[sta]						
"	Pri[nce]						

Association Notes

Montgomery County, Ohio:—Market milk in April sold for $3.80 per cwt. The creamery paid 65c per lb. for fat. Milk retailed at 16c per quart, butter at 70c, and cheese at 40c per lb. Oats sold for $66 per ton, cottonseed, $80; bran, $60; mixed feed, $80 to $90; corn, $2.30 per cwt.

Buffalo Valley, Pennsylvania:—Not many unprofitable cows are being weeded out at this time. Members are buying their feed co-operatively. The farmers are beginning to feel the need of better sires. In May market milk sold for $2.55 per cwt., testing 3%. Milk retails for 12c per quart and butter for 70c per lb. Oats is rated at $1.40 per bushel and corn at $2.

Fort Atkinson, Wisconsin:—June condensery milk sold for $2.75 per cwt. Feed prices are: Bran, $57 per ton; corn meal, $62; oil meal, $74; oats, $1.10 per bushel; pasture, $3; silage, $7 per ton.

Meadville, Pennsylvania:—Six unprofitable cows and one scrub sire were sold during May. There is now but one more sire to be replaced by a pure-bred. A bull association is started with the hope of increasing the number of pure-bred sires. Market milk sold for $2.90 per cwt. Unicorn sold for $80 per ton; linseed meal, $82; cottonseed meal, $82; corn meal, $90; wheat bran, $65; Larro, $75; pasture, $1.50 per cow.

Whatcom County, Washington:—May market milk testing 3.8% sold for $2.60 per cwt. The creamery paid 62c per lb. for fat. Milk retails for 12c and butter for 65c. Mill run is valued at $48 per ton; ground corn, $65; oil meal, $78; oats, $60.

Richland County, Wisconsin:—A number of unprofitable cows were disposed of during May. An increase in production is the result of feeding cows a balanced ration while on pasture, which had never been tried in this association before. Farmers are buying their grain co-operatively in carload lots. Several milking machines and a number of drinking cups have been installed. Better barns and a few silos are being built. In May 4% market milk sold for $3 per cwt. The condensery paid 75c per lb. for fat, the creamery paid 60c, and the cheese factory 57c. Milk retails for 12c per quart, butter for 56c per lb., and cheese for 23c per lb. Oil meal is rated at $85 per ton; oats, $60; cottonseed meal, $82; bran, $52; corn, $55; barley, $67; alfalfa hay, $40; Boss Feed, $64; Schumacher, $62.50.

Posey—Gibson, Indiana:—Plans to co-operate in showing cattle at the state fair are being made and the men are fitting their animals now. Members who have been supplementing their pasture with grain are getting good results. Two A. R. records are being made in the association. The creamery paid 60c per lb. for sweet butterfat and 50c to 54c for sour. Milk retails for 16c per quart and butter for 70c per lb. Corn and cob meal is priced at $56 per ton; bran, $60; cottonseed meal, $85.

West Branch Co-operative, Pennsylvania:—This association completed its year's work June 11th, at which time two associations were formed from the one, with the addition of some new members. The high cow for the year was a pure-bred Holstein owned by J. E. Linker. This cow produced 14,154 lbs. milk and 316.5 lbs. fat. The highest butterfat producer was a grade Holstein owned by Luther Schooley, which made 416.9 lbs. fat in 12,053 lbs. milk. The association records for one year show an average milk production per cow of 6,402 lbs., an average fat production per cow of 236.4 lbs., an average income above feed cost per cow of $97.49; returns for $1 invested in feed, $1.70; feed cost of 100 lbs. of milk, $2.16; feed cost of 1 lb. of fat, 58c. There were 358 cows tested for one year, of which 29 did not pay their feed bill for one or more months, 33 produced over 10,000 lbs. milk or 300 lbs. fat, and 4 produced over 400 lbs. of fat.

Ellington, Wisconsin:—One pure-bred bull from a dam with an A. R. record of over 600 lbs. fat has been bought. The condensery paid $2.65 per cwt. for 4% milk in June.

Arkansas Valley, Colorado:—In June there were 43 quality cows, of which one produced over 90 lbs. fat, two over 80 lbs., and nine over 50 lbs. Members are looking forward to an increase in the quantity of milk produced in a few months, as most of the dairymen are breeding for fall production and the cows are generally at their lowest now. Feed prices for the month of July are: Corn chop, $2.65 per cwt.; barley, $2.90; bran, $2.40; shorts, $2.60; maize, $2.05; oats, $3.35; cottonseed, $3.95; beet pulp, $4; silage, $8 per ton; alfalfa hay, 1st, $18; alfalfa hay, 2nd, $15.

Johnstown, Colorado:—Two herds decreased their number of milking cows during June, J. W. Whowell & Son disposing of 12 grade Holstein cows at an average price of $250 and Van Meter and Krebill selling five grade Holstein cows at an average of $235. These grade cows will be replaced with pure-bred heifers. Another member sold a fine bull calf. June market milk testing 4% sold for $2.70 per cwt. The condensery

paid 67½c per lb. for fat and the creamery paid 72c. Milk retails for 15c per quart. Silage is rated at $8 to $10 per ton; hay, $15 to $20; oats, $3.80 per cwt.; barley, $3.35; corn, $3.60; bran, $2.65; milo maize, $2.60; dried pulp, $1.75; oil meal, $4.60; cottonseed meal, $4.25.

Fairfax, Virginia:—Three unprofitable cows were sold during May and four pure-bred cows were bought into the association. The increase in production of the association over last month was 35.8 lbs. milk per cow. Market milk sold for 38c per gallon and 20% cream for $1.50 per gallon. Alfalfa hay is rated at $40 per ton, mixed hay, $25; corn silage, $10; "Ready-mixed" grains, $80; wheat bran, $62; beet pulp, $60.

Contoocook Valley, New Hampshire:—The two Jersey cows heading the list in June were Clever Little Lady and Dream's Miss Jane, producing in the last 120 days 303.1 and 283.8 lbs. butterfat respectively and exceeding the work of Loretta D by 22.9 and 3.6 lbs. butterfat. Feed prices here are as follows: Bran, $65 per ton; gluten feed, $78; cottonseed meal, $80; oil meal, $72; ground oats, $84; corn meal, $78; Union Grains, $82; hay, $30; silage, $8.

Westerville, Ohio:—Of the 307 cows tested in June, 5 produced over 60 lbs. fat, 15 over 50 lbs., and 23 over 45 lbs. The average per cow was 623 lbs. milk, 27.1 lbs. fat, with an average per cent of fat of 4.59. Market milk testing 4% sold for $3.50 per cwt. The condensery paid 62c per lb. for fat, and in addition, 80c per cwt. for milk. Butter retails for 63½c per lb. and milk for 14c per quart. Oil meal is rated at $4.20 per cwt.; cottonseed meal, $4.10; bran, $3.10; middlings, $3.55; corn, $2.85; oats, $3.80; Big Q, $4; gluten, $3.90; Cow Chow, $4.25; Top Notch, $3.65; Union Grain, $4.20; hay, $30 to $35.

Byron, Wisconsin:—All cows are now on pasture. Some herds are getting silage and a little grain with the pasture. Highland pasture is figured at $5 per month per cow.

Wilson County, Tennessee:—During June several unprofitable cows were replaced by better ones. Most of the members are feeding a grain ration to supplement pasture. Feed prices are: Cottonseed meal, $4.10 per cwt.; Schumacher, $3.35; Dairy Feed, $3.25; Cow Chow, $4.40; pasture, $1.50 per cow per month.

Loudoun Valley, Virginia:—The average production of this association for May was 582 lbs. milk, 23.6 lbs. fat. Market milk sold for 36c per gallon, and 20% cream for $1.75 per gallon. Milk retails for 16c per quart and butter for 75c per lb. The following prices are paid for feeds: Alfalfa hay, $40 per ton; clover hay, $35; mixed hay, $35; corn silage, $8; "Ready-mixed" grains, $80; wheat bran, $63; middlings, $80; corn meal, $76; cottonseed meal, $84; oil meal, $65; beet pulp, $60.

Augusta County, Virginia:—This association averaged 612 lbs. milk, 31.06 lbs. fat during May, which is an increase over last month of 38 lbs. milk. Six unprofitable cows were sold during the month and one pure-bred bull and two pure-bred Guernsey cows were bought. Market milk sold for 31c per gallon, or $3.60 per cwt. Twenty per cent cream sold at $1.80 per gallon and butterfat at 70c to 75c per lb. Milk retails for 15c per quart and butter for 70c per lb. Alfalfa hay is rated at $35 per ton; clover hay, $30; mixed hay, $30; corn silage, $10; "Ready-mixed" grains, $80; wheat bran, $54; middlings, $52; cottonseed meal, $80.

Prince William, Virginia:—Two unprofitable cows were sold during May and one pure-bred bull bought for the association. The average production of the association for the month was 809 lbs., milk, 23.04 lbs. fat. Milk sold for $4.18 per cwt. or 36c per gallon and 20% cream for $1.96 per gallon. $1.16 per lb. was paid for butterfat. Milk retails for 14c per quart. Feed prices follow: Alfalfa hay, $40 per ton; clover hay, $40; mixed hay, $32; corn silage, $8; "Ready-mixed" grains, $72; gluten meal, $80; wheat bran, $79; middlings, $82; corn meal, $84; cottonseed meal, $80; oil meal, $92; beet pulp, $67.50.

Wisconsin Dairy Council News

During the month of June, 29 creameries, one cheese factory, one ice cream factory, one market milk plant, one breeders' association, and ten farmers joined the Wisconsin Dairy Council. Thirteen of these creameries were co-operative creameries, which goes to show that the farmers believe that their product should be advertised. The average membership is lower than last month as the average during June was only $17.04 for creameries, $5.11 for cheese factories, and $7.28 for farmers.

Bayfield County has a 100% membership, the first county in the state to reach that limit. Mr. E. R. Tetzner, proprietor of the Spring Hill Live Stock Farm and secretary of the Chequamegan Creamery Co., is responsible for this splendid showing as he accepted the chairmanship for Bayfield County and his good neighbors recognized the value of such an association; therefore, they made it 100% membership. If all the counties would do likewise the Wisconsin Dairy Council would be in a position to advertise dairy products in the way they should be advertised. Nearly every one thinks the idea is a good one but they want the other fellow to do the advertising, but remember you never get any more out of a thing than you put into it. Let us put our money and enthusiasm back of the Wisconsin Dairy Council and show that we are producing the best food product in the world.

What county will be the next to report a 100% membership?

Joined Wisconsin Dairy Council During June	
Ashland Dairy Products Co., Ashland	$10.00
Bayfield Creamery Association, Bayfield	4.00
Black Creek Co-op. Cry. Co., Outagamie	14.00
Buena Vista Cry. Co., Portage	8.00
Cable Produce Association, Bayfield	5.00
Chequamegan Cry. Co., Bayfield	12.80
Chippewa Model Dairy Co., Chippewa	15.00
Clayton Co-op. Cry. Co., Polk	10.00
Coon Valley Co-op. Cry. Co., Vernon	33.11
Cornucopia Cry. Co., Bayfield	3.50
East River Valley Cry Co., Brown	10.00
Farmers' Co-op. Butter Assn., Monroe	52.64
Fox River Valley Cry. Co., Brown	10.00
Forest Creamery Co., St. Croix	15.00
Glidden Creamery Co., Ashland	10.00
Grandview Co-op. Dairy Prod., Bayfield	5.00
Greenfield Creamery Co., Monroe	23.00
Ludington Farmers' Creamery Assn., Eau Claire	16.36
Marinette Produce Co., Marinette	7.00
Mason Co-op. Cry Co., Bayfield	10.61
Oulu Co-op. Cry Ass'n., Bayfield	7.50
Peacock Creamery Co., Grant	25.00
Phillips Creamery Co., Price	16.88
Port Wing Creamery Co., Bayfield	6.00
Rio Co-op. Creamery Ass'n., Columbia	20.00
Waterville Co-op. Cry. Co., Pepin	45.50
Wauzeka Cry. Co., Crawford	10.00
West Salem Co-op. Cry. Co., La Crosse	70.16
Williams Cry Co., Eau Claire	20.00
John Clarson, Grant	5.11
Shawano Ice Cream Co., Shawano	5.00
Boulevard Dairy Co., Marinette	5.00
Jefferson Co. Holstein Ass'n., Jefferson	25.00
Brook Hill Farm, Waukesha	50.00
Wm. F. Ebel, Sauk	2.40
Theo. E. Herwig, Sauk	2.60
Wm. Krause, Sauk	3.00
Edw. L. Egerer, Sauk	3.00
Mt. Zion Branch, Columbia	3.60
Henry W. Hansburg, Sauk	3.40
D. J. Coffee, Oconto	1.00
T. J. Gallagher, Oconto	1.00
E. B. Dutton & Son, Oconto	3.20
Milwaukee Milk Bottle Exchange	521.50

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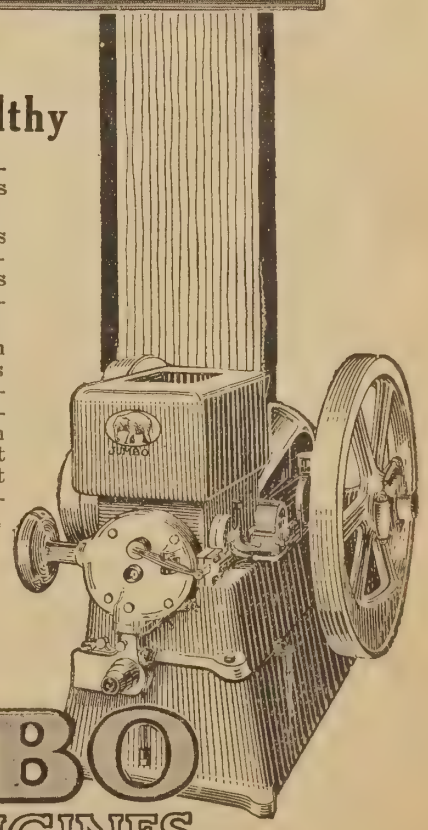
More than 100,000 successful farmers use Jumbo Engines to insure an adequate supply of water in the tank as well as for doing much of the drudgery around the farm.

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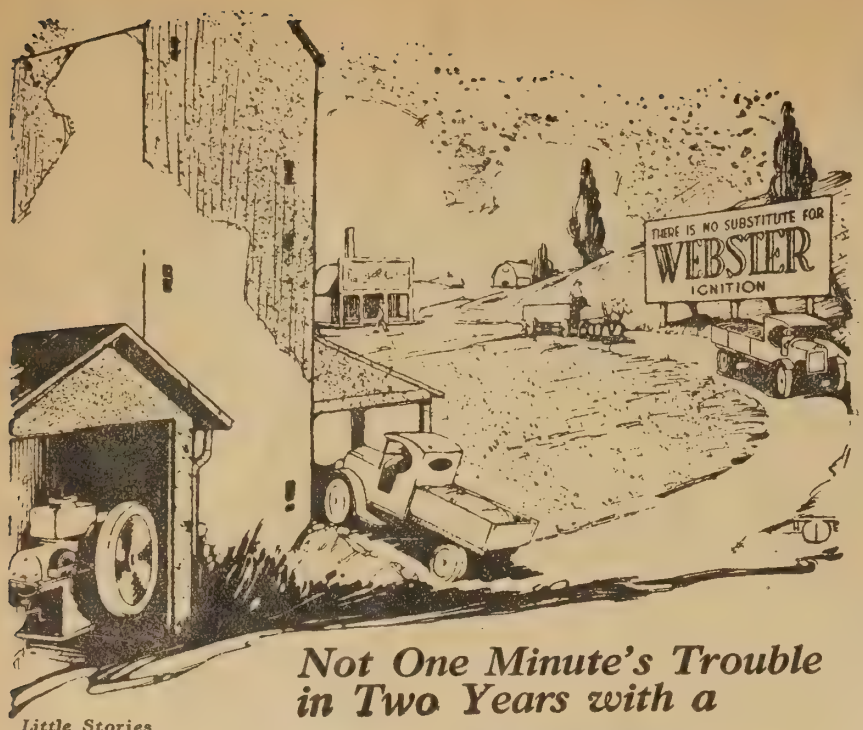
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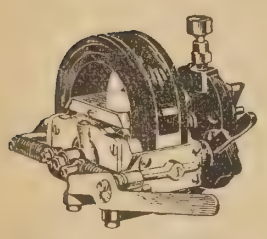
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(Continued from first page.)

cretors of moisture but the stems lack the evaporating surface necessary to perform this function. It therefore happens that drying more slowly at first may in the end result in a more rapid curing. It most assuredly results in a much more efficient preservation of the leaves.

The upshot of all this is that alfalfa ought not to be exposed in the swath to direct sunshine any longer than is necessary. As soon as the hay rake will gather the alfalfa it is time to rake. Throughout the arid or semi-arid region—west of the one hundredth meridian—farmers are more and more adopting the practice of curing in the windrow and cock rather than in the swath. This permits the gradual reduction of moisture through the leaves in such a manner that the leaf petioles are kept functioning. In the end the moisture is gotten rid of about as rapidly and the leaves are preserved.

On some large farms the push rake, sweep rake, bull rake, or buck rake as it is variously called is used to transport the hay from the field to the stack or the barn. With this method of harvesting no wagons are used and the hay is handled from the windrow. Soon after cutting, the alfalfa should be raked into good-sized windrows and so left as to dry gradually but thoroughly.

By far the larger part of the alfalfa hay both of the West and the Middlewest is cured in cocks, loaded on wagons, and hauled to the yards. Here curing may be divided between the windrow and the cock with just a little in the swath and just a little left to take place in the mow or stack.

Cock Curing in Favor

In the dry interior mountain region there is a growing tendency to rake the hay immediately after mowing and to cock at once, usually by hand. From Lewiston in Idaho, Umatilla in Oregon, or from the Yakima in Washington all the way through Wyoming, Utah, and Colorado to Arizona, New Mexico, and California the best growers advocate getting the hay into the cock as soon as possible after cutting. On well drained land it is not at all uncommon to see two mowers at work in a field, followed only a few swaths behind with a two-horse rake. Meanwhile a squad of men are making cocks as rapidly as possible so that practically all the alfalfa cut on a given day is in the cock that night. Ultra-conservative farmers at first objected to cock curing on the ground of poor hay and extra labor. The first was almost at once abandoned because this method makes the best possible hay. The objection to extra labor in handling green alfalfa in the field has some weight but not enough to counterbalance the saving that comes from clean and rapid handling in loading and unloading.

Good cocking is also economical because of the fact that the hay settles flat and is not rolled or tangled. One pitchforkful of hay should be lifted free from the remaining windrow and placed directly on top of the swath on which the hay cock is being built. It is rapidly becoming a practice to make cocks just large enough to be handled in one good forkful at loading time. The pitcher does not then have to tear the hay apart in loading. In unloading, the derrick fork also does cleaner and more rapid work. On the stack or in the barn, the man has flat, compact flakes of hay to handle. These settle readily into place when he tramps them. It is also possible to build better stacks when stacking out of doors is the practice as it still is in considerable parts of the great alfalfa region.

Curing in the cock in a region dry enough to permit it has several distinct advantages. First and foremost, the leaves may be practically all saved. This, as already explained, makes the hay both more nutritious and also more palatable especially for cattle and hogs, the two most important animal machines on most dairy and general live stock farms in western and central America. Cock curing also permits easier handling of the hay and consequently less pulling apart. The more compact flakes settle more rapidly and hasten mow or stack curing which, taken in connection with cock curing, develops the aroma of the alfalfa hay.

Aroma and Color Important

As any plant matures it develops a characteristic taste and odor, or aroma. In general green fruits are bitter, sour, acrid, or otherwise unpalatable. This is equally true of alfalfa. If cut for hay before the buds are formed the hay is lacking both in substance and in palatability. When flowering begins, certain chemical juices known as enzymes are given off by cells on the interior of the plant. These render soluble much stored food that has hitherto been insoluble. These begin to move from



SOPHIE'S TORMENTOR'S ELINDA, A JERSEY COW OWNED BY HOOD FARM, MASSACHUSETTS

She has recently completed a record of 14,693 pounds milk, 807 pounds fat at age of three years and seven months. At two years, five months she began a test during which she produced 7,095 lbs. milk, 407 lbs. fat. She is a granddaughter of Sophie 19th of Hood Farm, being sired by Sophie 19th's Tormentor, sold in 1918 to Falfurrias Farm, Texas, for $7,500. The dam of Sophie's Tormentor's Elinda is Lass 47th of Hood Farm with four Register of Merit records, one being of 15,292.4 lbs. milk, 869.5 lbs. fat.

stem and root toward the flower where seed would soon develop.

Cutting in the bloom period catches this plant food in its most soluble form and also when the plant is beginning to develop the sweet smelling aroma of well cured hay.

At mowing time, the aromas have just begun to develop. If the hay be dried out rapidly or exposed to direct sunshine in the swath, the enzymes are killed and cease to function. Only a small part of the aroma is allowed to develop. On the other hand, if the curing is done in the windrow, cock, and mow rather than in the swath, the plants continue to live and the enzymes to work. Out of mercy animals ought to be killed quickly. Since plants have no feeling, it is wise and profitable to cure in such a way as to encourage a lingering death. In fact, the longer life lingers in alfalfa the better the hay will be. Alfalfa cut early and cocked green will continue to pass through enzymatic changes for some time after being stacked.

Not only are the aromas allowed to develop by cock curing, but color is also preserved. Alfalfa can be made to come out of the stack as bright in color as when standing in the field. There is no dust, no mold, no bleaching save a little on the outside of the hay cocks. Such hay is highly palatable. Moreover, it is sweet and considerably more nutritious than hay that is either bleached or dark colored.

The bleaching takes place when direct sunshine or rain comes in contact with alfalfa. Here is where swath curing is detrimental, aside from the leaves lost. Direct sunshine and oxygen from the air decompose soluble protein and permit the escape of a part of it into the air. Rain leaches away soluble protein and ash, particularly after bleaching has loosened it. In the swath every leaf or stem is wet in a shower and then exposed to still more active bleaching while it redries.

Hay in the cock is not exposed except on the outside to sunshine or to rain unless wet by a heavy shower. Dew, which falls in appreciable quantities in the less arid regions, cannot affect more than the outside of the cock. In the swath all is exposed to this alternate wetting and drying. Even when wet through, small cocks will dry out rather readily. In case of prolonged wetting, enough to render necessary the moving of the hay cock, it is probably wiser to allow the top to dry and then merely to lift the cock to one side and set it on dry ground. Tearing it to pieces loses too many leaves and exposes the hay to a possible second shower in a condition that makes heavy loss inevitable.

If canvas covers become generally used in damper regions, curing will be simplified from the standpoint of protection against rain. Expense of investment and of labor in covering and removing covers will always, however, be a considerable handicap in respect to the use of canvas covers.

Jefferson County, Indiana, Organizes Jersey Bull Association

Jefferson County, Indiana, through County Agent B. H. Doddridge and with the help of the Dairy Extension Division of Purdue University, has organized a four-block Jersey bull association. A total of twenty-three members owning 200 cows have joined this association. Very few of these cows are pure-breds and the idea is to improve the standard and type of the native cattle through the use of high class Jersey sires. It was the desire of the association to obtain four bulls of similar breeding with similar fat requirements of 500 pounds average production on the dam and both grandams. Interest at the meeting held in Antioch School House, Jefferson County, June 18 was fine and the desire to bring about better stock conditions was the motive for the organization.

Through this small start of bringing in four excellently bred pure-bred sires it is hoped that the future Jersey stock of this county will gradually tend toward higher milk production and better type. Southern Indiana is coming into its own and Jefferson County is one of the links helping out in the Jersey progress that is being carried out in this section of the state. With a Jersey bull association organized in Scott County in 1918 and two Jersey bull associations in Dearborn County, it is quite evident that the dairy farmers of Southeastern Indiana are beginning to realize the value of better sires. The day of better sires—better stock is fast approaching in this section.

Indiana. A. C. BALTZER.

To repair cracks that may appear in a concrete wall the following method has been suggested by one of our correspondents: Cut out the cracks and brush them until thoroughly dry. Dust cement into hot pine tar until the mixture becomes so stiff that it is difficult to work. Fill the cracks with this mixture while hot, and repeat as often as it becomes cold during the operation.

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CONTENTS

Curing Alfalfa for Dairy and Beef Cattle 1
How to Restore Damaged Pasture 2
The Dairy Optimist 2
Milk Makes Kids Husky 3
The G L. F. Exchange in New York 3
An Americanized Dairy in Old England 4
Facts from Ohio's Fertility School 5
Cow Testing Associations 6
Wisconsin Dairy Council News 7
Jefferson County, Indiana. Organizes Jersey Bull Association 9
Correction 10
Waukesha County Guernsey Breeders in Annual Meeting 10
Farmers' Week at Marshfield 10
Correction 10
Washington, D. C., Weekly News 11
Attention Buttermakers 11
Farmers' Picnics 12
Truth in Photography 12
Solving Milk Problem 12
Farm and City 12
Production and Marketing 12
Good Whitewash Mixture 13
Rye in Ration 13
Phosphorus and Soils 13
Jointer Makes Better Plowing Job 13
Handling Manure in Summer 13
How Efficient is Your Milking Machinery? 13
Oregon Imports Guernseys 14
New York Butter Market 14
Rockwell Chicago Secretary 14
Young Calves Do Best in Barn 16
Veterinary—Bloat—Garget—Stringy Milk—Abortion 18
Dairy Cow Race 18
Red Water 18
John C. McNutt Resigns 19
Junior Judging at Iowa Fair 19
Prices Paid and Received by Condenseries 19
Boys and Girls to Judge Cattle at National Dairy Show 20
Scythe Song 20
What a Junior Has to Say About a Silo 20
Cold-Pack Canning in Rhyme 20
Why Every Farmer Should Have a Silo 20
Lime the Land 20
Hens Making Good 20
How I Made My Crop of Potatoes 21
Junior Letters 21
Clark County, Wisconsin, Guernsey Breeders' Picnic 24
Imperfect Bull 24
Inventions and Appliances of Interest to Agriculture 28

Coming Events

Missouri State Fair, Sedalia, Mo., August 14—21. E. G. Bylander, Secretary.

Illinois State Fair, Springfield, Ill., August 20—28. B. M. Davison, Secretary.

Wisconsin State Fair, Milwaukee, Wis., August 30—September 4. O. F. Remey, Sec.

Iowa State Fair and Exposition, Des Moines, Ia., August 25—September 3. A. R. Cory, Secretary.

Ohio State Fair, Columbus, Ohio, August 30—September 4. E. V. Walborn, Secretary.

Minnesota State Fair Minneapolis, Minn., September 4—11. T. H. Canfield, Secretary.

Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.

Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.

Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.

New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.

Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Correction

The caption with the illustration on page 1,430 of the July 2 issue of Hoard's Dairyman is incorrect. The calf shown in an aeroplane is not the one awarded as a prize at the meeting of breeders at Arden Farms as stated. It is the first bull calf delivered by aeroplane, being purchased from Clover Lea Farms, Minnesota, and delivered to Mrs. J. H. Molty, Wisconsin.

Waukesha County Guernsey Breeders in Annual Meeting

The annual summer meeting of the Waukesha County, Wisconsin, Guernsey Breeders' Association took place the first day of July at the farm home of F. E. Fox. In spite of threatening showers, three hundred members and friends gathered to proffer respects to the Guernsey.

At the business meeting reports were made by Secretary Fox, which included a report of business transacted through the office of the secretary of the association. Total sales since the first of March, 1920, aggregate approximately $80,000, which included the annual consignment sale. In this four month period, 354 Guernseys, including pure-breds and grades, were shipped to various parts of the United States, including all sections from New Jersey to Louisiana, and from Missouri to Colorado and Kansas.

A. J. Glover, Editor of Hoard's Dairyman, discussed the "Farm Bureau and Its Value". Many farm organizations have failed because farmers themselves failed to support them. Mr. Glover stated that the farm bureau is one that the farmers can support, as they receive its benefits. Bankers, merchants, railways, and industrial concerns are organized while the farmer has been the last to organize to improve his condition.

The farm bureau was not organized to establish a monopoly or exercise any influence in politics. One of its finest characteristics is the fact that no member can accept a political office and hold office in the farm bureau. No person can become a member unless he is a land owner, renter, or tenant on a farm. Of the $10 annual dues, $.50 are directed to the national field, $2 for the state organization, and the balance, $7.50, remains in the county where it is used to benefit those paying the amount.

A farm bureau can be of great assistance to its members by purchasing materials, such as fertilizers for the land in the form of phosphorus, potash, and limestone. Through cooperation better markets can be obtained for produce. An instance of this was related by Mr. Glover regarding the pea canning industry of Wisconsin. Immediately following the canning season, many producers are forced to sell their peas at a very low price due to accumulating wages and other bills that must be paid, the market is overflowed, prices consequently decline, and the farmer loses. If the farmer would cooperate, the produce could be put in warehouses and kept there until the market is in a normal condition, and prices would be received that would insure a profit.

Mr. Glover advocated the use of farm products on the farm. Many people residing in rural districts patronize the town store buying oleomargarine and nut butter of various descriptions, and sell all the milk and cream instead of keeping part for home consumption. He heavily scored such parties who do not know the great food value of the product they have.

Professor Geo. C. Humphrey of the University of Wisconsin discussed the various phases of breeding cattle that would ultimately establish a higher and better class of pure-breds. Those who see and appreciate the extraordinary opportunities and who do the extraordinary things as Waukesha County has been doing have the satisfaction of seeing their efforts crowned with a high degree of success and of gaining rewards that are truly worth while.

From Professor Humphrey's remarks the following is quoted:

"It has been said that this is the golden age for production and selling pure-bred cattle. Opportunities for selling have been so good that men in many instances have profited more by dealing than they have by breeding. Prices for practically all registered stock, regardless of how it may be bred, have been at a considerable advance over the prices paid for native and grade cattle. This age of easy selling has exerted an influence on the future prospects for pure-breds that should be recognized and that urges us to do the extraordinary things to insure a continued success. Only to the extent that we can succeed in keeping pure-bred cattle in an exclusive class where there will be special demand for them, can we hope to realize prices for them that will make it profitable to produce them.

"One who travels extensively over a given country and has occasion to visit numerous herds of cattle will be impressed with the comparatively low standard of excellence that exists outside of show herds, that have been assembled by purchases to a very large extent, and a comparatively few herds that have been the results of extraordinary work.

"It must be admitted that many, if not the majority, herds of pure-bred cattle show a marked lack of uniformity in excellence. Except for the matter of color, there is not the uniform breed character and excellence of individuality that many people are led to believe exists in our pure-bred registered cattle, especially where their knowledge of breed characteristics is based upon reading breed literature, visiting cattle shows, and attending high class sales.

"How long commonplace pure-bred cattle will continue to command a premium in price over grade cattle is a question and a matter of interest in the present state of pure-bred cattle industry. Developments that are taking place repeatedly with reference to numerous consignment sales of pure-bred cattle, an increased number of pure-bred cattle that are proving their actual value in competition with many grade cattle tested in cow testing associations, point to the necessity of keeping pure-bred cattle in a class where they may be appreciated and regarded as the best and most valuable animals that can be secured for foundation herds.

"Personally, I am impressed with the following facts:

"That many animals never ought to be registered as pure-bred, at least not passed on into the hands of men who reproduce and register from their desirable offspring.

"That many men who purchase ordinary commonplace pure-breds would accomplish more in dairying if they were to continue with good grades or even common native stock.

"That only the get of what might be called certified sires and possibly the produce of a similar class of dams, should be registered.

"The campaign for pure-bred sires on every farm, which in reality goes with the organization of community breeders' associations, has been one of Wisconsin's greatest forward movements in dairy cattle breeding. It has turned the attention of men to the importance of sires in a most forceful manner and promises to become a long time campaign as the results are greater and more gratifying as time advances."

Wisconsin. F. E. Fox.

Farmers' Week at Marshfield

Farmers' Week at the Wisconsin Branch Experiment Station at Marshfield comes on July 27 to 29. The first day is being devoted to farmers from Taylor and Clark Counties, the second day to Wood County, and the third day to Marathon County.

The program covers a wide range of subjects interesting not only the farmers but their wives and the young folks. Mrs. Nellie Kedzie Jones expects to be in attendance the three days, taking up topics of interest in the home. Mr. A. J. Glover will discuss the value of milk from a nutritional standpoint.

The afternoon program will be divided into sections to inspect the soil and crop production work now under way at the experimental station. Hog feeding trials will be another feature of interest in which experimentation was started in 1919. Discussions of practically everything in the chicken department will be held that will be of interest to the farmers and their wives.

The Marshfield Branch Station started eight years ago and during that time has grown to a position that demands the attention of the progressive farmers of Central Wisconsin operating on soil similar to that found in the Station Farm. According to the survey of the Soil Department, upward of 5,000 acres of soil known as Colby Silt Loam is found in Central Wisconsin. It is this type on which the Marshfield Station is located. This soil area is recognized to be one of the finest agricultural regions found anywhere in the United States. The problems arising in soils and crop adaptations will be solved in a large measure at the Marshfield Station.—F. L. MUSBACH.

Correction

In an editorial in the July 2 issue of Hoard's Dairyman favorable comment was made on the splendid work of the Dairy Division in the making of Swiss cheese. Mr. L. A. Rogers, who had charge of the scientific investigations and experimentation, was given much credit for the results secured. Mr. Rogers writes that the actual solution of the Swiss cheese problem was accomplished by his associates. He states that particular credit is due Dr. J. M. Sherman, "whose isolation of the organisms giving Swiss cheese its flavor and eyes deserves special recognition".



ROSE OF LITTLE PLATT

Rose of Little Platt, a five-year-old Guernsey owned by Charles A. Wilkins, Wisconsin, has recently completed a record of 12,159.7 pounds milk, 666.71 pounds fat in Class BB. This record entitles her to second place in her class. She was dropped September 10, 1914, and was bred by J. M. McLeod & Sons, Wisconsin, She was purchased by Mr. Wilkins after dropping a calf on March 24, 1919. Her sire is Frau's Stranford, a son of Glenwood Stranford—AMERICAN GUERNSEY CATTLE CLUB.

Sale Announcements

Aug. 12—Guernseys. Southeastern Guernsey Breeders' Sale, Salisbury, N. C. C. T. Rice, Sale Mgr., Oakton, Va.

Sept. 6—Holsteins. Dispersal of F. C. Brinton, Jr., Herd of Registered Holsteins at West Chester, Pa.

Sept. 13—Holsteins. Dispersal Dr. R. Ivey and Dr. S. P. Scherer herds, Fishers, Indiana.

Sept. 29-30—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.

Oct. 12-13—Holsteins. Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.

Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.

Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.

Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.

Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.

Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.

Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.

Nov. 16-17—Holsteins. Second Iowa Breeders' Guaranty Sale at Waterloo, Ia. C. H. Jenness, Sec.

Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, JULY 12—There is a notable relief from the tension which had been increasing up to July 1 in both business and political circles. In political activities there is a breathing spell between the conventions and the commencement of the active work of the campaigns. In business circles there is a relief because the fickle weather factor has shifted in favor of increased production and both government and the best authenticated private reports indicate that crop shortages will not be as acute as preliminary estimates seemed to indicate.

Great stress is being laid in eastern circles, reflected here in numerous ways, on the fact that President J. R. Howard of the American Farm Bureau Federation confirms the government crop report showing better conditions in the wheat fields, fair to good corn crop, and increased oat acreage and prospects.

How acute the situation has been, however, is shown by the action of the Interstate Commerce Commission. Nearly every American industry which produces any material freight shipments, has been before the I. C. C. asking for action to give increased freight facilities to handle the output. Of all that have appeared only two have been given relief, one the coal industry, which had special preference orders of a kind issued some weeks ago, and the other the wheat farmers and elevator interests who appealed last week for 22,000 additional freight cars, and were rewarded by an order issued the following day instructing eastern railroads to turn over 24,750 freight cars to the granger roads. The I. C. C., besieged on every hand, is refusing to lose its head or become worried. Fuel for those sections which produce no coal of their own, and next the movement of basic food crops continue to receive the consideration they need.

Government reports on the butter market show the market steady under the depressing influence of unusually large Canadian imports which are said to be of good quality, and sought for storage in preference to domestic make. Some Danish and some Holland stock is also arriving, although not heavy shipments. Storage reports indicate comparatively small storage buying, and stocks on hand do not compare with stocks at this time last year. Note is made in the government report that the increase in cold storage holdings in June in the five chief markets was but little more than half as much as during the same month last year. There seems to be a shortage in butter production this year. The production figures are not available, but this is indicated in many ways, and chiefly in the way the market holds up under other adverse factors.

A strong organized effort is apparent to create sentiment between now and December for the Welty bill, to establish a National Immigration Commission, and begin a systematic effort to limit and scrutinize immigration to this country. The Welty bill H. R. 14196 was introduced just before the adjournment of the last session. It is sponsored by the National Committee for Constructive Immigration Legislation, a national organization of which Henry W. Jessup is chairman and Sidney L. Gulick, secretary. The bill provides for a study of the needs of each state for immigrants, a study of the origin of the people seeking admission, and a means of limiting applicants to those who can be assimilated, and whose place in American life and industry is assured before they come. The bill shows careful preparation and is a distinct step in advance in constructive study of this grave national problem.

Captain George A. C. Hearsey of Palia Ranch, Oudh, India, has been the guest of the Department of Agriculture this week. He is just out of English army service and is going back to his Indian ranch to establish there a great agricultural industry. The ranch contains fifty square miles of fertile land. His trip here was to get in touch with dairy matters in particular, as he states that the Hindoos refuse to eat imported cheese because of religious scruples against the rennet used made from calves killed not in accordance with their religious rites and ceremonies. The same objection goes to imported meats, and he proposes to establish a beef industry there where the meat will be killed as the natives demand. Before going away from the United States, Captain Hearsey will visit the Middle West and South to acquire information as to American methods of beef cattle production and cotton and rice production.

Your correspondent has been promised an early visit to the dairy herd and experiment station of the Dairy Division at Beltsville, Md., where among other important and interesting experimental and research work in progress, there is one project under way which is of the utmost importance to the entire dairy industry. I refer to the work of Professor Meigs on the physiology of milk secretion and nutrition of dairy cows. This work has been carried on now to the point, I have been informed, where the definite relationship between the mineral content of the ration, the mineral acids in the blood, and the amount of milk secretion has been established. The object of the work is given in one of the department publications as follows: "To obtain definite knowledge of the mechanism of milk secretion and of the factors which influence or control this function, with a view to the more logical breeding and feeding of dairy cows." It is apparent that these experiments have close relationship to both feeding and breeding work, and that the success of this experiment has great potentialities in the whole milk industry. I am not sure whether or not I will be permitted to write as to results, but I can at least direct attention to the factors of the problem which are being considered, and indicate when and where the final results may be known.

Attention, Buttermakers!

The management of the Wisconsin State Fair has an excellent cold storage and exhibit room for dairy products. A large butter display is desired. Each buttermaker is requested to send a 20-lb. ash tub to this exhibit. The prizes and bonuses are liberal. If we do our part we will have an exhibit worthy of our state and of the men who make the butter. Let's see what we can do.

C. J. DODGE, Supt. of Exhibit.

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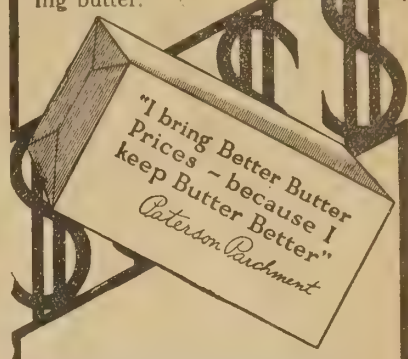
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THE PATERSON PARCHMENT PAPER COMPANY
37 Eighth St.
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Who Owns Gridley's?

The Gridley Dairy Co. of Milwaukee is a strictly Wisconsin enterprise, built with Wisconsin money, and more than 90 per cent of its present capital stock is owned by people in the company's employ. Not one dollar of this stock has ever been owned or controlled by outside influences or capital.

John LeFeber
President

EDITORIAL COMMENT



FARMERS' PICNICS

Since the advent of county breeders' associations and the farm bureau, farmers' picnics have become more numerous. The automobile has made it possible to hold county picnics and it is not uncommon to attend gatherings of five or more thousands. Some of the picnics we have attended have had ball games, horse races, men's and boys' races, merry-go-rounds, and various other attractions. Invariably they have a program with two or three speakers. These occasions become sort of a three- or four-ring circus and afford entertainment as well as instruction.

We consider these occasions highly desirable for they bring farmers and their families together, affording an opportunity to become better acquainted and to gather useful information which should encourage them in their work. The life on the farm has been too strenuous with too little opportunity for social affairs, but the automobile has made it possible for farmers to get together the same as the people in the city and it makes farming more inviting.

We would offer, however, a suggestion to those who have charge of these picnics. We think it would be well if each county could own a tent so that the speaking and entertainment could take place under cover. It should be located away from the horse races, ball games, and merry-go-rounds, for when the speakers' stand is placed in the midst of all attractions, it makes it almost impossible for a speaker to reach his audience. Further, if the day is rainy, the tent will afford protection. Some counties already own tents. We attended a picnic recently that would have been disturbed very materially by rain if the crowd could not have sought shelter under the tent.

TRUTH IN PHOTOGRAPHY

Comment on the subject of truth in animal photography is stimulated by the recent receipt of a consignment of pictures from a prominent breeding establishment. By these photographs low backed animals are given the appearance of being straight lined, high rumps are cut down, low tail heads are made smooth, small udders are enlarged and squared up, every weak point being covered by the artist's brush.

Such photographic surgery is deception. Why is a false appearance given to an animal's published likeness? Are these animals so defective that they cannot stand a fair inspection? Did the breeder who mailed these photographs desire his live stock reproduced as it is or does he prefer having the photographer make it look as he thinks it should? Sometimes it happens, even, that the changes brought about may not be improvements —the animal may have a better appearance on the honest, untouched negative.

Breeders place the blame for retouched pictures on the camera man, and the latter lays the guilt at the door of the breeder. He claims that some breeders are not satisfied with photographs showing their animals as they are, defects and all, and cites many instances as proof.

Wherever the fault lies, the practice of retouching should be done away with. It is Hoard's Dairyman's purpose in publishing photographs to inform its readers of the type of dairy animals in other herds than their own. We desire to stimulate the ambition to own as good cows as those reproduced on our pages. And we want photographs to be honest representations of the originals.

The "Agricultural Gazette", London, has the following pertinent remarks on this subject:

"At one time the average member of the public valued photography as a means of illustration, because it was believed that the camera gave a genuine and absolutely truthful result, whereas a drawing or sketch might be varied at the will of the artist. Gradually it became known that photographs were not necessarily truthful—people were made to look much younger in their photographs than they really were, and so it came to be said that 'Photography cannot lie—but the photographer can'.

"This retouching or faking was soon applied to the photography of animals. Legs can be shortened, backs straightened, hollow parts filled in, and protruding parts removed; so that the photograph, instead of representing the animal as it really is, may merely represent it as the photographer thinks it ought to look, or as the owner would like others to think that it is.

"The result is unfortunate, but most unfortunate of all to the owner of good stock.

"The whole purpose of photographic illustration is to show what the animals actually look like; so, as far as possible, to put anyone who sees the picture in the position of looking at the animal itself. But if that person has any idea that the photograph is other than absolutely unfaked, he at once discounts its value. Consequently, seeing that few people interested in live stock nowadays are ignorant of the prevalence of faking, it should be obvious that the owners of good stock are losers by the practice because the photograph of a good animal should need no faking."

SOLVING MILK PROBLEM

The Michigan Milk Producers' Association has attempted to inform the consumer regarding the expense connected in the production and delivery of milk. The members of this association do not believe in strikes because they are too expensive and do not produce the results so highly desirable both to the producers and consumers.

The consuming public must be informed regarding the food value of milk and the amount of effort required to produce dairy products. The consumer is not particularly concerned about the cost of producing milk, although we consider it wise that he have a general idea of its cost. The main point the consumer is interested in is, what is the milk worth to him.

The Michigan Milk Producers' Association has followed a constructive policy and has been the means of establishing what is known as the Detroit Area Milk Commission and through this commission has established a confidence between the producing and consuming public and has avoided milk strikes. This commission is made up of both producers and consumers and the milk problems are presented to this body.

Besides this work, the association has protected the dairymen's market and is now carrying on a campaign to inform the consumer regarding the food value of milk and its products. It seems to us that all milk producers' associations could well afford to put forth effort to inform the consumer regarding the value of dairy products, the cost of milk production, and what it will ultimately mean if continual attempt is made to depress prices of milk. When the consumer appreciates the food value of milk and understands all the operations back of its production, there is going to be less complaint regarding its present prices. The Michigan Milk Producers' Association is to be commended for the services it has rendered to its members and to the consumers, especially in Detroit.

FARM AND CITY

The condition of our times has led us to exaggerate our problems and to view our situation with fear rather than from the basis of facts. The apparent high wages and short hours prevalent in the city have, without doubt, encouraged many farm bred boys and girls to leave the farm. This movement from the rural districts to the city has produced a shortage of labor on the farm. There are those who believe this a calamity and almost irreparable, but we do not view the situation with alarm. When economical forces swing, as they are bound to, in the opposite direction from which they are now operating, the young men and women of the farm will see the advantage of taking up agricultural work.

Most young men who leave the farm will not return to it but some will see that high wages and short hours are more or less a delusion and that if they are to make any progress in the accumulation of wealth it will require greater effort and a better opportunity for saving than is afforded in many of the positions in the city which now seem to be so attractive. We may have reached the time in our efficiency of production where we can hope to make more than a living on 8 hours a day but it is a noticeable fact that the men and women who have accumulated some wealth have worked many more hours than this every day. Seventy-five cents to $1.25 an hour looks very attractive to the farm boy and 8 hours a day appears to him as being a snap. He fails to comprehend that rent, food, and clothing are much more important factors in the city than in the country and when he must pay the advanced prices for all these essentials he has very little left and that which he has left after paying for these necessities is very likely to be spent for the attractions of the city. The eight hours a day labor do not include the time spent going to and from work; in the large cities this means an hour or more every morning and evening.

We have met several men of late who claim, notwithstanding they are earning seven and eight dollars a day, that the amount they are able to save in the city is not as large as in the country where the expenses are less and the opportunities for saving are greater.

If the young men and women continue to leave the farm in the future as they have in the past year or two there will be less food produced and the prices will be higher, making it more difficult to earn a living in the city. We do not believe there is any law or regulation that will cause these people to stay on the farm. As sure as night follows day, the unyielding economical law will bring about conditions to keep young people on the farm long before any calamity will come to agriculture.

PRODUCTION AND MARKETING

Much effort has been put forth by our experiment stations and various other agricultural agencies to secure and disseminate information which will lead to a lower cost of producing farm products. It has been pointed out that it is important to feed the soil in order to produce profitable yields of grain. There are certain fixed charges which cannot be eliminated whether the soil is rich or poor. It requires as much time to plow, harrow, and plant an acre of land low in fertility, one that will yield 12 bushels of wheat or 25 bushels of corn, as land that will yield more than twice that amount of grain. It requires as much stall room and nearly as much feed and work to keep a cow that will produce 150 lbs. of fat as one that will produce 300 or 400 lbs. Again and again these lessons and many others have been pointed out showing that the increased yield brings a much larger profit than low production. We must bear in mind these things.

But there is another phase of agriculture which has only recently had serious consideration and that is the marketing of farm products. Our system of marketing is a good deal like Topsy—it "just growed". The consumer has made certain demands which the middleman has sought to satisfy. The farmers have been slow to consider improvement in their system of marketing. They have produced their products; hauled them to the city without thinking that they might do something to facilitate a better system of marketing. There is a service to be performed between the producer and the consumer. This service may be performed by the farmer or by the consumer, but it is our opinion that both of these groups are too busy with their own affairs to devote very much time to distribution. However, there is opportunity for the farmer, through his organization, to see that his products travel more directly to the consumer, that they do not fall into the hands of useless speculators. On the other hand, the consumer can put forth some effort in assisting the farmer to get his products into the consumer's hands at the least expense. There is no farm problem of more vital importance to the welfare of agriculture than to build up an economical system of marketing farm products.

Good Whitewash Mixture

The recipe for the whitewash used by the Wisconsin Experiment Station for the poultry houses on the station farm is given by J. B. Hayes:

Slake quicklime with enough water to make a thick paste. While it is slaking add a pint of melted lard or other grease and a cupful of salt to a bushel of lime. Add enough water to bring the solution to the consistency of thin cream and strain through a piece of burlap. It is also advisable to add four ounces of some coal tar disinfectant to every gallon of the mixture.

Before the whitewash is applied it is necessary to clean the house thoroughly, remove the furnishings, and clean the floor. An application of one part coal tar disinfectant and one part kerosene oil to the roosts and nests will destroy the mites.

Rye in Ration

We have about four or five tons of rye that we want ground, and would like for you to give us a ration composed of corn meal, cottonseed meal, and ground rye. We are not feeding any hay at all. The cows are on a good pasture and are doing well.

Montgomery, Ala. L. T. M.

While rye is comparatively high in its content of digestible nutrients, it is less valuable in a dairy ration than some of the other cereals because of being less palatable. The amount which can be satisfactorily fed in a grain mixture is limited somewhat by this factor.

Such a concentrate mixture as 300 pounds of corn meal, 100 pounds of cottonseed meal, 150 pounds of ground rye, and 200 pounds of wheat bran should be satisfactory. If our inquirer cannot supply wheat bran, he can substitute this with an equal amount of ground oats or can grind alfalfa finely and mix this in the ration. One of the great values of bran, oats, or ground alfalfa in such a mixture is to lighten it somewhat so that it is more easily masticated.

The roughages supplied are quite as important as the particular kinds of concentrates fed. If pasture is good, it may not be profitable to feed hay at this time, but if the pasturage is not wholly satisfactory it will pay to feed liberally of such legume hays as clover, alfalfa, soy bean, or cowpeas.

Phosphorus and Soils

HOARD'S DAIRYMAN:—Soils were provided by nature in the beginning with varying amounts of phosphorus and they will never hold any more of this fertility element unless man adds it directly in one form or another. It is impossible, of course, to build up the phosphorus content of soil by growing special crops as one may do in the case of nitrogen. Green manures return nothing to soils in the way of phosphorus save that which they have taken from it in their growth. Barnyard manures carry small amounts of this element but not as much of it as was contained in the foods from which the manures were made. Every crop that goes to market removes from the farm a considerable amount of this element. Over against this loss may be set, of course, the gain that comes from feeding grains that have been purchased, but as very much more grain ordinarily is sold than purchased the balance of such operations results usually in loss. The fact is that soils everywhere tend to grow poorer and poorer in this important element.

Soils which have been remarkable always for their fertility are fast approaching—and some of them have already reached—the point where lack of phosphorus is becoming the limiting factor in productiveness. The effect is to be noticed in smaller crops of ripened grain than the appearance of the growing crop in midsummer would seem to indicate. Soft corn, owing to lack of phosphorus for bringing the kernels to maturity, is sometimes an indication that soils approach the danger mark. Regarded from any point of view steady loss in this element is certain, and the loss in question constitutes a serious menace to future fertility.

Throughout the corn belt farmers are buying rock phosphate in increasing quantities to replenish the phosphorus in their soils. The Illinois Agricultural Association has contracted for and is directing the distribution of thousands of tons of this substance containing 13 per cent of phosphorus. Each ton of such rock carries at least 260 lbs. of this fertility element or the phosphorus equivalent of 130 tons of manure. Some farmers are using a ton to the acre, an amount that will supply the phosphorus needed for ten or a dozen good sized crops of corn. Others are applying 1,000 lbs. to the acre over the entire farm. Where the smaller applications are being made it is the plan in most instances to add a similar amount in five or six years from now. Rock phosphate is slow to give up its phosphorus, but through the building up of soils in organic matter by use of green manures, wastes, and crop residues the process of solubility is hastened.

Illinois. ORIN CROOKER.

Jointer Makes Better Plowing Job

HOARD'S DAIRYMAN:—I notice that the gardener who wants the very best possible job of plowing done has a jointer on his plow. We farmers are apt to think that a jointer has no place anywhere else and so leave the man who turns under all weeds, manure, and so on for onions and melons to use the jointer.

I am discovering that the jointer is a farmers' plow attachment. This year, outside of a few acres of new ground, the jointer was used for every kind of plowing. I had corn, strawberries, tomatoes, onions, and potatoes. I notice that the best plowmen in this neighborhood use jointers. I notice that there is little if any straw or weeds sticking over the edge of the furrow after they have done a job of plowing, too. When one uses a small tooth cultivator or a wheel hoe on crops he will appreciate the soil turned with the jointer more than any other time. Yet even in the cultivation of corn many old stalks can be pulled up with the cultivator teeth if they are not well turned under.

A jointer takes a small furrow just in front of the main plow and turns that furrow completely over into the cut made on the previous round. That leaves a clean edge to turn over because a cornstalk or weed must turn over with the jointer furrow.

I have a jointer with a round shank. This is the first one I ever used so made, but it is easier to adjust than the flat ones and is much stronger. I like to set the point of the jointer about an inch to the left (with right hand plow) of the edge of the landside of the plow. This gets all of the trash better, I think.

It seems to turn a jointer furrow over better if set on its tip or nose a little more than one would think necessary. This leaves the moldboard of the jointer with more curve against the furrow; it takes and turns the jointer-furrow better. I also like to set the jointer just as low as possible. The round shank on the jointer allows every sort of an adjustment and no wedges or nails of any sort are needed.

This attachment cost me $2.50. Probably it would be $4 by this time, but it is worth it. Tractor plows have them and there must be a reason for that. Jointers help to make a smoother and cleaner plowing job. They throw a furrow edge over so there are less lumps, too, and that is a desirable result.

Ohio. EARL ROGERS.

Handling Manure in Summer

HOARD'S DAIRYMAN:—It is always a temptation to let manure pile up—be it summer or winter. In the warmer months, however, when field work claims so much attention, the tendency to do this is perhaps greater than at other seasons. However, this is the time of year when one can least afford to permit fertility elements to remain idle. It is also the season when loss through fermentation is likely to be greatest. A heap of barnyard waste that stands through any considerable period in midsummer is apt to become a mighty uncertain asset, especially if it receives no better protection and oversight than is customary on most farms.

In distribution of manure in midsummer one should not overlook the advantage of applying the waste directly to meadows and other available grass plots. No other crop, perhaps, can make better use of manure in small quantities than the grasses. Owing to their intricate and delicate root systems they respond almost immediately to its touch. Grasses pick up and store away large quantities of fertility elements. In this condition such elements are locked away so that they cannot escape either in the air or in the drainage. Nature keeps them busily employed. It is no failure in economy to fertilize grass plots in midsummer which one plans to plow in the fall or spring. To store the manure away until just before the plowing is done is to subject it to loss. If applied directly to the grass in small amounts thinly spread practically no loss will occur. Rains will wash the soluble elements directly into the soil where the grasses can utilize them. If the manure dries up under the effect of the sun nothing is lost except moisture. Direct sunlight renders inactive the bacteria which cause heating when the manure is left in a pile.

Illinois. ORIN CROOKER.

How Efficient is Your Milk-making Machinery?

HOARD'S DAIRYMAN:—Foremen of manufacturing establishments must see to it that all machinery under their care is well oiled, polished, running smoothly, and highly efficient in its operation in order that the company that owns it may secure a fair return on the investment. Every dairy in this country should be conducted on this same principle. How many dairy farmers consider each one of the cows in the herd a machine that must yield a certain return in order to justify her existence and continued feeding and care?

When labor is $4 per day would you, Mr. Dairyman, be willing to have your hired men do only boys' work—or half what a man should do? Why should consumers pay 16c per quart for milk from 4,000-lb. cows when 8,000-lb. cows could be had if the dairymen were "on the job" as they should be? We know that 16c per quart is a relatively low price for milk but in these days when the dairy situation in some sections of our country is in a rather crucial state, the dairymen must have a "clear case" and convince the city folks that practically every dairy represents a highly efficient organization, even though in some cases the number of cows kept is small. The man who milks 3,000- and 4,000-lb. cows should be "frozen out" once and for all time. The term "dairyman" cannot properly be applied to him.

Increasing numbers of city councils and boards of health are raising the requirements regarding milk which may be sold to the public. More and more, the city milk supply will have to be produced from tuberculin tested cows that are kept and milked under strictly sanitary conditions. High priced labor and feed must not be wasted on "loafer" cows. In a recent editorial, Hoard's Dairyman hit the bull's eye when it stated that "about all the poor dairy farmers are doing is to produce enough milk to hold the market price of dairy products to a point that makes the good dairy farmer scratch to make a reasonable profit. Dairy farmers should either keep good cows, provide them with good rations, give them good care, and follow generally good dairy practice or go out of the dairy business."

Here is food for serious thought. The fruit growers are spraying and pruning and taking precautions as never before to secure a high quality product which brings them a good price. This price is very little affected by the inferior fruit put on the market by the small would-be orchardist. Shall the followers of dairying, which is recognized by many as the most important branch of agriculture, neglect to take the necessary precautions in order that their business may be highly organized and markedly efficient? We anticipate that someone will immediately rise up and say that the labor shortage is the bugaboo and that if he could only obtain competent help at reasonable wages he would observe all of the practices which efficient dairying now demands. It is sadly true that lack of the skilled help required in up-to-date dairies today constitutes a serious handicap; but at the same time what phase of agriculture will yield a bigger return on the labor cost connected with it than will well managed dairying? In a recent two-year survey of 260 farms in Greenbrier County, West Virginia, it was ascertained that the 90 beef farms, containing an average of 396 acres, made a family income of $1,590 and a labor income of $94. The 121 general farms, containing an average of 158 acres, made a family income of $532 and a labor income of (minus) $60. The 20 dairy farms, containing an average of 156 acres, made a family income of $1,268 and a labor income of $366. Thus it would seem that the dairy farmer can expect a considerably larger return for labor than can some who are engaged in a number of the other lines of agriculture.

To what nobler and more constructive purpose can dairymen direct their energies than to the great betterment of the dairy industry? The dairy cow, that "foster mother of mankind", has ever been and will continue to be a distinctly essential factor in the life and continued development of this and every civilized nation and she is therefore deserving of the best possible care and attention. As dairymen who are anxious to uphold the dignity of our calling and ever help to improve and perpetuate our business let us resolve to

Adopt systematic and economical feeding.
Drive all scrub bulls to the shambles.
Verify the worth of every cow by keeping records.
Advertise the cow and her products.
Never relax interest in the work.
Capitalize quality in both cows and their products.
Eradicate contagious diseases.

West Virginia. E. J. PERRY.









Oregon Imports Guernseys

E. K. HILL, Secretary Oregon Dairy Congress

THE Pacific coast states are taking an interest in improving their dairy herds and to attain this object they are giving especial attention to breeding. The importation of 59 fine Guernseys from the Island of Guernsey was a recent event in Oregon that attracted the attention of the public to the fact that Oregon is forging to the front in the dairy industry.

E. L. Westover, field dairyman of Oregon Agricultural College, went to New York, met the Guernseys from the Island, and brought them to Oregon. They were placed in the Pacific International Livestock show building for a short time and were distributed by lot on June 28 to members of the Oregon Guernsey Cattle Club. Tillamook, the county that is famed for its wonderful cheese; Clackamas County, where the Jerseys and the Holsteins and the Guernseys all have enthusiastic owners; Coos, another great dairy and cheese district; Washington and Clatsop, way up in the northwestern part of the state; all got lucky numbers and drew some valuable cattle.

In this lot is some of the best breeding of the Island, backed by high production and good type. sire and backed by high producing records. His dam has a record of over eleven thousand pounds of milk, 600 pounds of fat, as a two-year-old and calved 30 days after the test was completed. His grandams have an average production of 14,298.75 pounds milk, 739.29 pounds fat. His two grand sires have over 120 Advanced Registry daughters and 24 Advanced Registry sons.

Guernseys are gaining in popularity very fast and the demand in the Middle West and East far exceeds the supply. The Oregon Guernsey breeders feel that they are fortunate in being able to secure such a high class lot of animals. They will be foundations for building up great Guernsey herds in the different sections. Many of them will be shown at the state fair and the Pacific International Stock Show next fall.

A Washington (state) cow that is creating a sensation is Duenota 2d (31462) who has just completed a re-entry record of 12,781.2 pounds of milk and 708.06 pounds of butterfat. She is owned by H. B. Douglas, Hope Farm, and is the oldest daughter of his foundation cow, "Duenota".

To Duenota 2d goes the great honor of being the first Guernsey cow in



THERE WERE 59 OF THESE GUERNSEY BEAUTIES IMPORTED BY THE OREGON GUERNSEY CATTLE CLUB

They are close descendants of the great old Island cow, Valentine III, who has an Island record of 15,477 pounds of milk, 783.10 lbs. of fat, also several animals that contain a large percentage of the Golden Secret breeding, close descendants of the great cow, Nelly Joy 4th, who has a record of 20,709.90 pounds of milk, 1,019.25 pounds of fat, a record made in America. Many of the animals are closely related to the Island cow, Fleurie III of the Cloture, a cow that has an Island record of 14,805.75 pounds of milk, 757.72 pounds fat, made at nine years of age. On the sire's side the animals are close descendants of such bulls as Imp. Sailor Boy, whose three-year-old daughters have an average production of 11,010.98 pounds of milk, 553.30 pounds fat. There are several granddaughters of Imp. Clara's Sequel, a bull that had thirty-two Advanced Registry daughters whose records run from 532 pounds fat as two-year-olds to 682 pounds of fat as senior three-year-olds.

Sires of other heifers are Imp. Roberts Boy, whose three-year-old daughters have an average production of 10,000 pounds milk, 488.21 pounds fat; Imp. Sailor Boy, whose three-year-old daughters that have been put on test have an average production of 11,010.98 lbs. milk and 553.30 pounds fat; and Duke of Waumesit, a bull that has eleven Advanced Registry daughters.

Two other bulls that are sires of many of the heifers are Golden Noble IV of the Briquet, a prize winning the state of Washington to make 700 pounds of butterfat.

She made this record in her 12th year, which shows the remarkable persistence and productiveness in age of the Guernsey cow and especially of the Duenota family.

It is worthy of note that her record was made under ordinary conditions and she was pastured with the herd whenever the season permitted and occupied her usual stanchion with her stable mates. Hope Farm is a working industry and Mr. Douglas believes strongly that the Guernsey cow can produce a creditable record and still be a strictly paying dairy proposition.

New York Butter Market

NEW YORK CITY, JULY 13—This is indeed a very peculiar year in butter markets. On the surface it appears that there is a marked scarcity of butter and that prices should continue high and the market active for many months to come. However, there are at intervals marked periods of depression for which it is difficult to make satisfactory explanations. Reports on holdings in public warehouses show that approximately 9¾ million pounds of butter are stored away at present as compared to 21½ million pounds one year ago. Receipts are considerably below those of last year and have been since early in the year. Why there should be such periods of inactivity is beyond solution by the ordinary individual who is in position to watch the trend of the market.

One factor at present which is causing a somewhat nervous feeling among butter receivers is that of butter imports. While until the present time comparatively small amounts of Holland and Danish butter have been received in this country, vast cargoes are headed this way at the present time. It is expected that fully 40,000 casks of Danish butter, aggregating close to 4½ million pounds, and 12,000 to 15,000 casks of Holland butter, approximately 1½ million pounds, will be unloaded here before the end of the week. That quantity of butter at one time can not fail to have a material bearing on butter prices for a temporary period at least. There are reports, however, which tend to offset the pessimistic feeling engendered by the near arrival of so much butter. Those reports are: Holland has placed an embargo on exportations of butter because of domestic demand, and England has contracted for 9,000 tons of Danish butter to be delivered during the coming months. If those reports are accurate, it is very probable that very little butter from those two countries will be shipped to this country for some time to come. A quantity of Argentine butter, aggregating 3,654 boxes, was received here last week. As that butter is of inferior quality, netting the shippers from 46 to 50c, it is considered as having no material bearing on the market.

At the present time the market is passing through a slump. The price fall, however, is not in proportion to the inactivity on the street. Receivers are unwilling to sell their butter at lower prices and most of them are holding on to the supplies which they have on hand. In many instances, receivers have their boxes full and in order to make room for incoming shipments are sending the butter to public warehouses. They seem to feel that the present slump is but temporary and that they will be well repaid for the cost of placing the butter in storages. The most noticeable feature in the market at present is the lack of demand for undergrade butter. While that condition has obtained more or less for some weeks it is particularly acute at present. As a result the range of prices of undergrades is constantly widening. The quality of butter on the average is considerably below normal for the season which accounts in part for the apparent lack of demand for firsts and seconds.

Last week witnessed a very fluctuating market so far as purchasing activity was concerned. Immediately after the holiday the market was very weak and the price fell 1c. On Thursday, a greater activity developed and the price advanced ½c and a similar advance took place on Friday. A weakness was at once apparent on Monday and the price fell ¼c and on Tuesday an equal decline followed. There is very little buying at the present moment and further declines are expected. Quotations are: Extras (92 score), 57@57½c; higher scoring than extras (93 score or higher), 58@58¾c; firsts (90—91 score), 54½@56½c; firsts (88—89 score), 52@54c; and seconds (83—87 score), 46@51c.

W. B. LIVERANCE.

Rockwell Chicago Secretary

Announcement is made that E. C. Rockwell is now secretary of the Chicago Milk Producers' Association. W. J. Kittle, who has served in that capacity from the early activities of the association, resigns to become head of the Chicago Milk Producers' Co-operative Marketing Co. His work will be the selling of the milk shipped in by the producers to their association.

Have You Seen That New John Deere Plow?

It's Built Especially For the Fordson Tractor

Because it is built of new-process John Deere steel, the No. 40

weighs less than the average horse-drawn sulky plow;

pulls extremely light—a real fuel saver;

stands the strains under all conditions — its beams are guaranteed not to bend or break.

Due to the self-adjusting hitch—an exclusive John Deere feature—bottoms run true and level at all depths — they neither "nose in" nor "hop out" of the ground.

Its John Deere bottoms insure good work.

YOU have been hearing for some time, no doubt, that John Deere was building a new plow especially for the Fordson tractor.

Perhaps you are one of the many farmers who asked that John Deere build such a plow.

Perhaps you are one of the many who have gone to John Deere dealers with the query: "When can I see that John Deere plow built especially for the Fordson?"

John Deere specialists took their time in building the plow. They had the John Deere reputation to consider, first of all. They knew that farmers expect especially good performance from a John Deere plow. Their task was to give the user the benefit of such performance behind his Fordson tractor—to fit a John Deere-quality plow to the Fordson as carefully as a good tailor fits a suit of clothes to a customer.

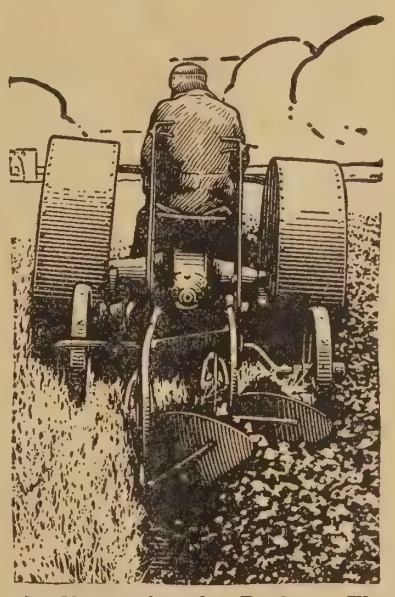
The plow is now ready. It has been branded with the famous John Deere trademark of quality. It is called the John Deere No. 40.

Here Are Features That You have been Wanting

Imagine a two-bottom tractor plow that is lighter than the average horse-drawn sulky plow—

—a tractor plow that pulls so light that it soon pays for itself in lower fuel consumption, greater acreage per day, minimum wear on the tractor—in all the factors that mean lower plowing cost per acre—

—a tractor plow that has this desirable light weight and light draft **plus** tremendous strength—**beams that are guaranteed not to bend or break;** frame construction that stands all of the strain of utilizing the tractor's power under all conditions.



The No. 40 fits the Fordson. The No. 45 is built for use with ANY "two-plow" tractor.

Those are important features of the No. 40 that you are sure to appreciate.

Beams, braces and axles are made of a **new process, John Deere steel** that combines the desired lightness with the necessary strength.

It's the Plow with the Self-adjusting Hitch

The No. 40 has a self-adjusting hitch—an important advantage in plowing with the Fordson.

When you adjust the plow for depth with the depth lever, the hitch point automatically regulates itself to the correct line of draft. That means that the bottoms run true and level at all depths, doing uniformly good work all the time.

It means that there is no undue wear on shares because of bottoms "sledding" or "running on their nose"; no worry or loss of time over hitch adjustments.

The self-adjusting hitch is exclusively a John Deere feature. Any plow for use with the Fordson needs it, but—**no other plow has it.**

John Deere Bottoms do Good Work; Wear Well

The No. 40 is equipped with genuine John Deere bottoms—the bottoms that scour, wear well and make good seed beds.

These bottoms include both steel and chilled types in a variety of shapes to meet different requirements.

The shares are quick detachable—loosen one nut to remove a share: tighten the same nut and the share is on tight.

The power lift of the No. 40 is simple, strong and positive. It works perfectly. The lifting parts move only when the plow is being raised or lowered—practically no wear.

This is the Plow the Fordson Needs

If you are planning to buy a Fordson tractor, it will pay you to investigate the No. 40.

The tractor will give you pulling power. It will be up to the plow you buy to apply that power. Remember that, no matter how well a tractor may do its part, the plowing outfit is no better than its plow—just as no knife is better than its blade. You need the best plow you can get.

The No. 40 may be on display in your town now. If it isn't it soon will be. Get acquainted with it thoroughly before you buy your tractor.

The best place to judge the No. 40 is in the field. Watch it at work and see for yourself how wonderfully light it pulls; how simple and strong the hot-riveted frame construction is; how the self-adjusting hitch keeps the bottoms running true and level at all times, and how the bottoms scour, pulverize and turn the soil in that John Deere way—the way the practical farmer wants it done.

Another Plow for ANY "Two-Plow" Tractor

If you are planning to buy a "two plow" tractor other than the Fordson you will be interested in the John Deere No. 45. This plow is exactly like the No. 40, except that it has a flexible hitch and rear furrow wheel. It has the fuel-saving light draft, the strain-resisting strength, and the seed bed-making qualities of the No. 40. It is adaptable for use with any standard two-plow tractor.

Ask us to send you free booklets describing these lighter, stronger plows for "two-plow" tractors. Drop us a postcard or letter today. Ask for **booklets F-114.**

JOHN DEERE
MOLINE, ILLINOIS

Lowe's



Cost of barn paint

A new way to figure it

Take a pencil and paper in one hand, and put down the cost per gallon. Take a brush and a half pint can of any paint. Now paint the side of your barn as far as the paint will go. Then measure the space, and mark it down.

Now take a half pint can of Lowe Brothers' Barn Paint, and do the same thing. In doing it, compare the ease with which Lowe's spreads on, and how thoroughly it covers. Take particular notice of how you can brush it out so much farther than the other paint.

Now measure the space Lowe's covered. Compare it with the other.

Then consider the reputation of Lowe's, with its half a century of paint making back of it, to back it up. After which, if you don't paint all your barns with Lowe Brothers' Barn Paint, it will be because of some reason all your own, that you don't want as good a paint as your money will buy.

Lowe Brothers' Barn Paint is sold by the one best dealer in each town. Send to us for some eye-opening paint facts and figures. They save you money.

The Lowe Brothers Company

491 EAST THIRD STREET, DAYTON, OHIO

Boston New York Jersey City Chicago Atlanta Kansas City Minneapolis Toronto

Paints

Several Hundred Ohio Farms
For Sale

WE are offering several hundred of the best farms in Ohio at prices that are low in comparison to the value of the property and the income assured purchasers.

These farms are a part of the Miami Conservancy District, which is a political subdivision of the State of Ohio, and represent a surplus acreage that we own in the Miami Valley.

Rich silt loam top-soil deposits make this land very productive—practically inexhaustible.

It is our earnest desire to bring more good farmers to this community, which lies within a thirty mile radius of Dayton. Quick markets are available by rail, interurban and highway.

We Would Like to Send You Booklets Giving Detailed Information. Just Address "Farm Division"

THE MIAMI CONSERVANCY DISTRICT

DAYTON, OHIO

Where Farming Is Profitable

Farm lands in the South have not been boosted by speculation. Why buy a farm in a high-priced section and cripple your future with debt when you can buy a better farm in the South for one-third the price? Don't you want a farm where climatic and soil conditions are unexcelled? It is our business to help you find just what you want. We know Southern lands and land values and it is to our interest to locate you where you will succeed and make business for the railroad. There is no charge for our service. For full information call on, or write to J. C. Williams, Manager, Southern Railway Development Service, 1302 Pennsylvania Ave., Washington, D. C.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,

POUGHKEEPSIE, N. Y.

An Americanized Dairy in Old England

(Continued from page 4)

lowed to enter it. They must pour the milk through into a receiving can outside which empties through a pipe in the vessels inside in which the milk is cooled.

Seeing all this on one farm I could not help but look back at my boyhood days on the home farm, when we were astonished at the audacity of the milk plant which had insisted on its patrons sweeping their stables, and of how we struggled from before dawn till after dark to make ends meet without being able to buy any equipment like I saw here. Then I yielded to temptation and asked Mr. Buckley if he thought it was practical, and if it was not merely the hobby of a rich gentleman-farmer. I shall let the master of Moundsmere speak for himself.

"Of course I have money," he said, "to do this properly, and I realize just what the farmer is up against, as regards equipment. But no man needs all this expensive equipment to get good clean milk. I have it because I am working not only for myself but for many others as well. I built these barns when the old ones burned down and, while they still owe me money, I think they pay because of their convenience and the pleasure of working in them. Besides they help to advertise Moundsmere Manor.

"When I returned from America I wanted pure clean milk for my little girl whose illness demanded it. It was practically unprocurable so we started our own farm to provide it. That was in 1907, and in 1910 at the request of a committee on pure milk my product was put on the market. I can say with some pride that ever since then, milk from Moundsmere Manor has been a basis for milk standards throughout the country.

"I now have plans for demonstrating to farmers in general how they can materially improve their milk. I don't care about them doing just what I am doing if I can but help them to put the production of clean milk on a sound, practical basis. Farmers are following me too and even at the beginning are achieving success."

That is true. The movement is spreading and is not confined to his own district. A farmer in Yorkshire hundreds of miles away is now producing milk that in quality rivals the product of Moundsmere Manor. Pure milk production has been made a subject of discussion in farm papers and from this small beginning has sprung into being the nucleus of a department of dairying in the national government.

When war came and the nation had to look ahead to conserve the food supply, a man to whom the nation could look as an authority on milk was needed in the dairy branch to superintend the distribution of milk to England's millions. Wilfred Buckley was the man chosen in preference to numerous college professors who were ready and anxious to take the job. In his London office he was able to do what he had wanted to do before. He not only carried the routine work of rationing the nation but also an educational campaign among the farmers, with the result that visible improvements were made during his tenure of office. Cow testing associations were encouraged, a system of inspection was evolved and had it not been for the heavy reduction of feed imposed by the government, that limited the farmers' producing ability, it is hard to say what the movement would have accomplished.

On his own farm he also carried out instructional work, holding regular classes for his employees. I attended one of these classes at which lantern slides were used to make it more instructive and interesting. During the war he had to depend on his help nearly all the time so it was essential that every man should know his job thoroughly.



This shows the comparative amount of dirt that falls into a small top pail and into an ordinary pail.

You have seen the results of Wilfred Buckley's American inspiration so far. But what is to follow? There will be a fight, and a long one, too, before his vision is completely realized. No revolution in any industry ever came about without one. So it is here. The man has been misunderstood and papers have called him a faddist, but victory is gradually coming his way and clean milk to England. The new milk laws which came into effect in March are a testimony to the success of the propaganda of the "faddist". These laws, as enumerated in Mr. Reece's article in Hoard's Dairyman of April 30th, contain many flaws, as is well shown in the Farmer and Stockbreeder, London, in its criticism of them in the issues of Feb 16th and Feb. 23rd.

We are told in history that Minerva sprang full armed from the head of Zeus, the father of gods, but that is the only record we have of anything being born perfect. English milk laws sprang in their infancy from the brains of Major Lord Astor and his staunch lieutenant, Wilfred Buckley. Time and experience alone can develop them to a vigorous and sturdy maturity.

Young Calves Do Best in Barn

Large numbers of calves are now on hand from the million and a third dairy cows in Minnesota. The owners are engaged in raising the heifer calves at least, and are doing so by hand, depending mostly upon skimmilk. In this connection one question is often asked—should the young calves be kept on pasture or are they better in the barn?

The dairy division of the university has tried both plans and finds the best results come in keeping the young calf in a clean place in the barn until about three months old.

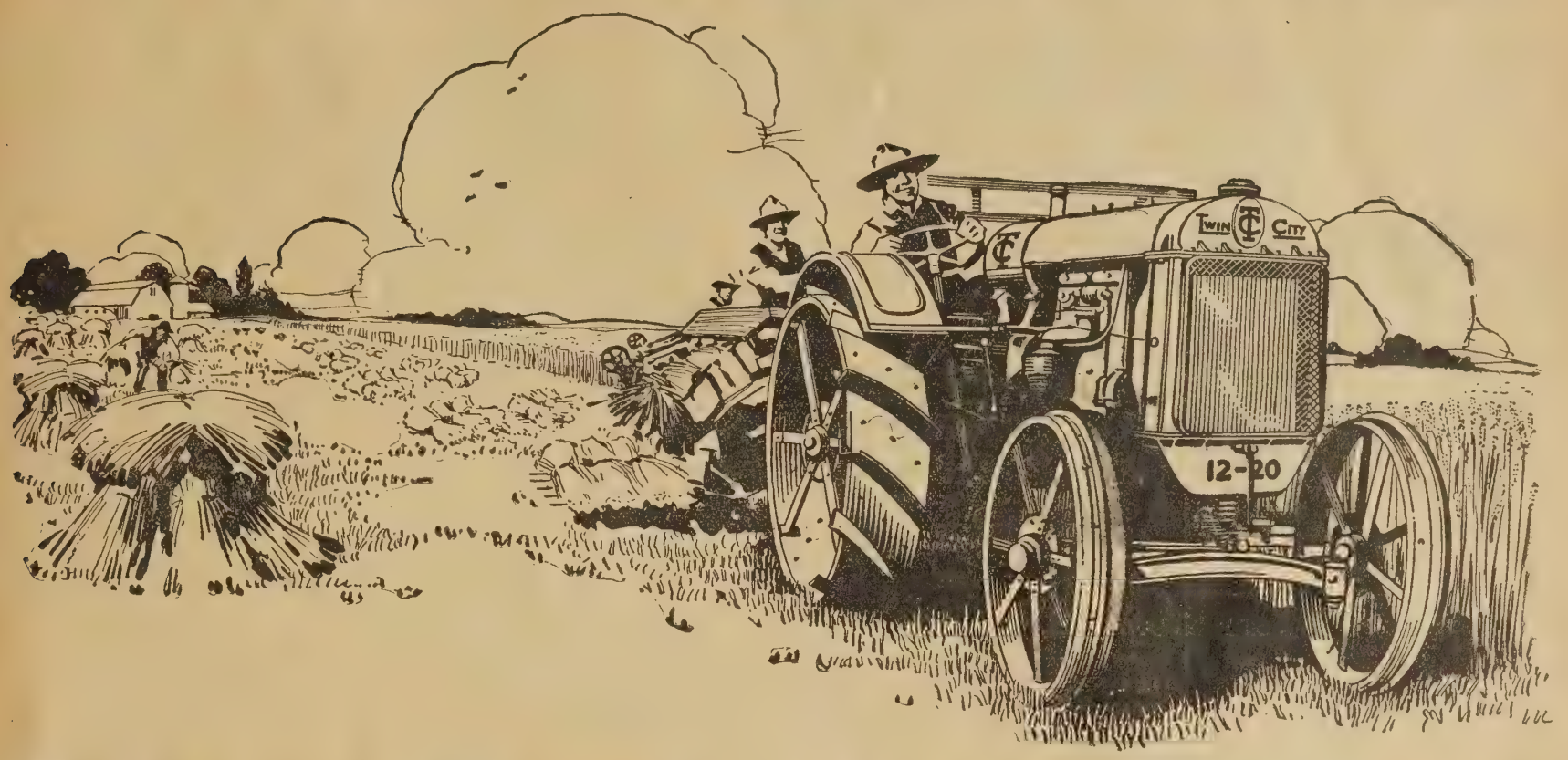
For the first two or three months the young calf does not eat grass enough to amount to much and does better if given a little bright hay instead; furthermore, the young calf suffers from heat and flies and does not seem to be able to look out for itself. During this period, the calf is best kept in the barn or at most allowed to run in a dry lot near the barn part of the day.

For skimmilk calves three to six months old a small pasture near the barn where they can be easily fed and looked after is ideal. Shade and plenty of water should be supplied. A row of small stanchions suitably located are almost indispensable if many calves are to be fed together.—C. H. ECKLES, chief of the division of dairy husbandry, University Farm.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

TWIN CITY

12-20 Kerosene Tractor with 16-valve engine



When Every Hour Counts

You know there will be no delays in haying, harvesting, threshing, or any tractor work on the farm, when you have the Twin City 12-20. You can clean up all these jobs at the right time—in quick time—and be ready for your fall plowing.

For there are no uncertainties about the Twin City. The best that tractor science has produced is built into this tractor. Its 16-valve (valve-in-head) engine delivers full power because it exhausts *all* burnt gases, leaving a clean cylinder for each new charge. This means more power from the fuel—more power applied to the work—real fuel economy you can see.

With the Twin City's great surplus power you have the rugged strength and light weight which only the finest special alloy heat-treated steels can give. It is built to do the work, not to meet a price. This means dependability year in and year out.

Removable cylinder walls for uniform cooling and quick and easy replacements—crankshaft counterbalanced and drilled for force-feed lubrication—all transmission gears of special alloy steel drop-forged and heat-treated, completely enclosed and running continuously in bath of oil—Hyatt roller bearings throughout.

There is a Twin City of horse power to meet the needs of every size farm: 12-20, 16-30, 25-45, 60-90. All-Steel Twin City Threshers have several exclusive grain saving features: 22-42, 28-48, 36-60. Write for details.

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Motorize your farm with the Twin City "Team of Steel," 12-20 Tractor and 22-42 Thresher

A Guaranteed Remedy for
Contagious ABORTION
Are you letting this scourge cost you calves, milk and cows? If your cows are affected, stamp it out.
ABORNO
the guaranteed treatment for Abortion, has been successful on thousands of cows. Give it a chance in your herd. Easily administered by hypodermic syringe—acts rapidly on germs in the blood. Can't harm the cow.

Write for our booklet and guarantee.
ABORNO LABORATORY
Section A LANCASTER, WIS.

"First Aid" for Cows
EVERY farmer, dairyman and stockman knows that prompt treatment saves loss. With a Pilling "Easy-to-Use" Cattle Case, you can give an animal immediate relief from milk fever, bloat, etc.
Pilling Cattle Case No. 2, shown here, contains high-grade "Easy-to-Use" instruments of the latest approved designs. Purchased separately, they would cost $18.00. But we ship complete set, in oak case, with "Easy-to-Use" directions, only $12.50, postpaid Order today. Booklet free.


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DOG DISEASES
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Mailed free to any address by the Author
America's Pioneer Dog Medicines
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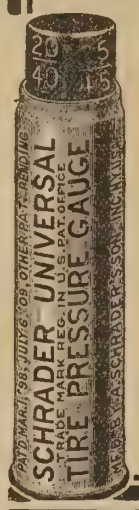
Cow Waters Herself

With this wonderful new **Libbey Automatic Water Bowl.** Each bowl controls own water supply. Animal moves lever, opening water valve, when it starts to drink. Lever swings back closing valve when animal stops drinking. No float tank required. Bowls may be put at different heights or in any stall or pen. Cannot overflow; cannot get out of order; almost no water left in bowl. Most sanitary bowl ever sold. **Prevents spread of contagious diseases.** Increased milk yield quickly pays back cost. Saves labor; saves feed. Write today. Also for Catalog . if interested in Stanchions, Stalls, Carriers, etc. Sent free.
C. A. LIBBEY COMPANY
195 Marion St., Oshkosh, Wis.

HOLSTEINS AT AUCTION

Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont,** the First **Tuesday and Wednesday** of **every other month,** Feb.4-5; Apr.1-2; June3-4; Aug.5-6; Oct.7-8; Dec.2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*
Address **The Purebred Live Stock Sales Company.**

For Sale
Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.
SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

TIRE MILEAGE
Are your tires inflated to the same pressure?


If not, the softest one is working overtime.
Guard against this by using a
SCHRADER UNIVERSAL TIRE-PRESSURE GAUGE
Price - - $1.50

"No Flies On Me"
Twenty-Four Hour Protection

COWS will not produce large quantities of milk unless they are allowed to feed in peace and contentment. Flies torture them and when cows are not protected from these great enemies, they cannot yield the maximum quantity of good milk and butterfat. A single spraying of
KOW-PROTECTO
KEEPS FLIES OFF

not only at milking time, but for 24 hours. By spraying just once a day, you save a lot of time; protect the vitality of your cows and increase your profits through the bigger flow of milk. It is absolutely harmless and cannot taint milk or blister skin, yet flies cannot live where this liquid is exposed or applied, in pens, stables, yards, manure pits, etc.
25 to 35 Per Cent More Milk

Get Our Money Back Guaranteed Trial Offer-Prepaid.
Limited time offer. Send $1.25 for prepaid 1-2 gallon, enough to protect two cows 10 weeks. Or we will prepay one gallon for $2.00. State P. O. and Express Address.
Money Back If Not Satisfied
Agricultural Chemical Co.
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946 W. North Ave., Chicago, Ill.

Young Sons of SIR BESS JEWEL ORMSBY
The records of his eight nearest dams average better than 30 lbs. He is a son of Sir Pietertje Ormsby Mercedes 37th. Dams are A. R. O. and untested daughters of Hillvale Sir Ormsby. Write for descriptions or come and see them.
T. J. Jones, - Wales, Wis.

FOR SALE
21 Head of Holsteins
16 Pure-breds and 5 Grades. Heavy milkers. Headed by a son of King Netherland Segis Konigen, the 43-lb. son of King Segis Pontiac Konigen. They are priced to sell. Address
BOX 269, - Care Hoard's Dairyman

A Good Consistent Pedigree
Isn't it worth more than a high record or two in a weak pedigree, which shows no certainty of transmitting Production?
We offer *3 SERVICEABLE BULLS* with good solid pedigrees.
No. 1—Double grandson of 40-lb. sire, from a 22.6 Jr. 2-yr.-old, 7 nearest dams average 23.7, all above 21 lbs. No. 2—Son of No. 1, A. R. O. dam, 15 nearest dams average 21 lbs. butter, 520 lbs. milk. All tested. No. 3—Yearling sired by No. 1, 7 nearest tested dams average 23.46. Priced for quick sale.
BROOKENS BROS., PARKER, S. DAK.

FOR SALE AND EXCHANGE
25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.
G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.


RIPPLEY'S FLY REMOVER SAVED $225
in milk for a customer who used it
On Five Cows for 90 Days
Kills and keeps off animals Flies, Mosquitoes, Ticks, Lice and all Insects. Cows give 25% more milk, as they are protected and fed quietly all day. Horses work and drive better, Hogs and Poultry are free from lice. No Gad Flies or Warbles to bother where it is used. 1 gal. and Sprayer for applying, $2.50; 5 gal. and Sprayer, $7.50; 10 gal., $12; 25 gal., $28; 50 gal., $55. Four gal. Sprayer for applying on Dairy Herds, $9.50. Money returned if animals are not protected. One gallon protects 250 cows. Order from ad, terms cash—catalog free.
Rippley Manufacturing Co., Box HD Grafton, Ill.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Bloat—Garget

1. About a week ago my calf three months old began blowing up. She is not constipated and her bowels move regularly. She is being fed 8 lbs. milk with boiled oil meal and oat meal twice daily. We have raised five calves before with the same feed. She also gets dried clover but does not eat very much of it.

2. We also have a cow fresh eleven days that gives 8 lbs. of milk to a milking and with her back teats gives thick brown milk. This cow is in very good condition.

Green Bay, Wis. J. E.

1. Physic the calf with castor oil in milk and then feed milk containing one ounce of limewater to the pint. Make the limewater by slaking a lump of caustic lime as large as a walnut in a quart of water. Let the lime settle and then use the clear liquid. Feed a little milk often from a sterilized vessel and make the calf drink slowly. Let it eat whole oats, wheat bran, and oil meal at will. Do not boil the feed or mix it in the milk. Have the calf take exercise daily. In case of severe bloat give half a teaspoonful of formaldehyde in milk and if necessary increase the dose.

2. The udder has been attacked by mammitis (garget) and the condition has become chronic and incurable. Under the circumstances it would be best to dry off the milk secretion and fatten the cow for the butcher. Meanwhile isolate the animal and milk her last, as such disease often is spread from cow to cow by the milker's hands. Cleanse and disinfect the place she has occupied.

Stringy Milk

Please tell me what to do for a heifer that gives stringy milk. It looks nice when you milk it but after it sets a while it is so stringy we can hardly hold it on a spoon. She had her teat split on a wire and had 5 stitches taken in it.

Pana, Ill. E. S.

It is quite likely that you will find that the heifer is not to blame for the condition of milk described. That often is caused by bacteria in the milk utensils, wash water, setting water, or from the dust of the stable, milk room, or setting room. Set a sample of milk from each quarter of the udder in a separate sterilized vessel to determine if all of it becomes similarly affected or if one teat really is giving abnormal milk. If the udder proves not to be at fault place a number of samples of the milk in separate sterilized vessels and to each add some possible carrier or container of the bacteria. For instance, in one put a little wash water, in another water from the setting tank, in another some stable dust, and so on until it is found that one sample becomes stringy and the source of contamination is discovered. Meanwhile more perfectly cleanse, scald, and sun dry the milk vessels and also keep the stable clean and cleanse the udder and teats before each milking.

Abortion

Kindly advise me what to do for abortion. Two of my cows recently aborted. Can anything be done to prevent it or to keep it from spreading?

Sparta, Wis. T. S.

At once isolate the two affected cows and then cleanse, disinfect, and whitewash the stable. Use a mixture of one part of compound cresol solution and 30 parts of water, or 5 ounces of formaldehyde and a gallon of water for the disinfecting work. A trained veterinarian should be employed properly to cleanse and disinfect the womb of each aborted cow and to show you how to flush out the vagina of affected cows and heifers that are to be bred. Until the veterinarian can be employed flush out the vagina of each aborted cow once daily with lukewarm, boiled water containing 30 grains of permanganate of potash to the gallon. Do this by means of a fountain syringe, or clean rubber tube, funnel, and nozzle. Also syringe out the vagina of each cow and heifer every other day for 2 or 3 weeks before breeding. When a cow that has aborted has again been bred continue the vaginal injections until it is seen that she is not going to come in heat again. This means that she should pass three weeks after service without coming in heat. After that the womb is tightly closed and likelihood of infection from outside is negligible. The sheath of the bull also should be flushed out with the permanganate solution before and after service. There is no specific remedy for abortion, but if you can have a trained veterinarian give the treatments suggested and carry out the disinfecting campaign persistently the contagion will be likely to die out in time.

Dairy Cow Race

At the Missouri State Fair will be scheduled what is termed a "real cow race". One thousand dollars is offered in premiums in each of two divisions in a production contest to be established during the fair week, one class to be made up of Jerseys and the other of Holsteins. It is expected that this will prove an interesting attraction for those interested in dairy cattle. The substantial purses offered in this "race" will stimulate this interest.

Red Water

HOARD'S DAIRYMAN:—I note that one of your readers writes with inquiry regarding red water, a disease of the urinary passage. I have found the following to be a very satisfactory remedy. For young stock, six months to a year old, give one-half pound salts, follow twice a day with one-half ounce tincture of gentian and same amount of tincture of iron and ginger. Do this for three or four days and allow a good grain ration. For older animals the above should be doubled, giving all tonic mixed together in warm water.

Kantonah, N. Y. H. H.

DAIRY MARKETS

CHICAGO, July 15—Butter—Creamery, extras, 55c; standards, 54¾c; dairy, firsts, 47@55c; seconds, 44@48c.

Eggs—Ordinary, 38½@39c; firsts, 42@43c.

Cheese—Twins, 28⅛c; Young Americas, 25½c.

MILWAUKEE, July 15—Eggs—Fresh firsts, recandled for city trade, 43@44c; checks, 27@28c; dirties, 29@30c.

Butter—Creamery—Tubs, 56c; prints, 57c; extra firsts, 54@55c; No. 1 packing stock, 38c; No. 2, 20@30c.

Cheese—Twins, 23½@24c; Daisies, 24½@25c; Longhorns, 25½@26c; Young Americas, 25½@26c; fancy Brick, 27½@28c; Limburger, new, 1 lb., 31c; Limburger, new, 2 lbs., 30c.

NEW YORK, July 15—Cheese—Steady; state milk, common to specials, 20@28c; skims, common to specials, 5@19½c.

Butter—Weaker; receipts, 10,945 tubs; creamery, extras, 56¾@57½c; state dairy, tubs, 42@56c; imitation creamery, prints, nominal.

Eggs—Steady; receipts, 14,510; nearby white fancy, 63@65c; nearby mixed fancy, 45@57c; fresh firsts, 45@53½c.

DAISY FLY KILLER PLACED ANYWHERE ATTRACTS AND KILLS ALL FLIES. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or 5 by EXPRESS, prepaid, $1.25.


HAROLD SOMERS, 150 De Kalb Ave., Brooklyn, N. Y.

Reliable Fly Knocker
will protect your cows and other stock from flies and only costs about one-fifth as much as other sprays. Supplied in concentrated form. One gallon makes 16 gallons spray solution by simply pouring it into water and stirring. Price 1 Gallon Can $5.00, makes 16 Gallons; 1 Quart Can $1.50, makes 4 Gallons. If your dealer doesn't have it, we will supply you by express on receipt of price. Write us.
RELIABLE PRODUCTS CO.
4230 VAN BUREN ST., CHICAGO, ILL.

John C. McNutt Resigns

Professor John C. McNutt has resigned as head of the Department of Animal Husbandry at the Massachusetts Agricultural College. He will be the eastern representative of the Shorthorn Breeders' Association.

Professor McNutt came to the college January 1, 1916. Since this time the work of his department has been increasing in popularity among students both in the regular courses and in the various short courses. He has been especially successful in training student judging teams; these teams having won distinction not only in the East, but also at Chicago, and, on two occasions, individual members of these teams having won substantial cash scholarships in competition with college men from the entire country.

Professor McNutt has had immediate charge of the cows, horses, sheep, and swine at the College and under his direction a marked improvement has taken place in the quality of the stock. At the Eastern States Exposition of 1919 a number of prizes were taken by the live stock exhibited by the Agricultural College. Professor McNutt has been in close touch with the best live stock breeders of the state and as a result the College has received gifts of many valuable animals.

Professor McNutt is one of the foremost live stock judges of the country and has judged at some of the largest agricultural fairs in the eastern states.

Junior Judging at Iowa Fair

A new Junior Dairy Cattle Judging Contest for the 1920 Iowa State Fair has just been announced. This will be held the first Friday afteroon of the fair, after the general junior judging contest is completed. It is open to any boys or girls over 12 years of age and under 18. The contestants will judge a class of cows and bulls of the four dairy breeds, Jersey, Guernsey, Ayrshire, and Holstein. The three standing highest in this judging will be named to represent Iowa at the National Dairy Judging Contest held October 8 at the National Dairy Show in Chicago.

The dairy department at this year's Iowa State Fair in Des Moines, Aug. 25 to Sept. 3, will be the biggest of its kind ever held in the Middle West, fair officials state.

Prices Paid and Received by Condenseries

Prices paid producers for 3.5% milk delivered at factories during June are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms operating approximately 80% of the total factories in the United States:

Geographic sections	Firms reporting	June price per cwt. Range	Ave.
New England	4	$2.94—$3.52	$3.32
Middle Atlantic	96	2.60— 3.46	2.98
South Atlantic	6	2.60— 3.34	3.05
East North Central	115	2.31— 3.10	2.69
West North Central	11	2.50— 3.00	2.77
South Central			
North Western	19	2.40— 3.25	2.52
South Western	11	2.20— 2.80	2.45
United States	262	2.20— 3.52	2.80

Manufacturers' wholesale selling prices for May as given below are based on reports made by manufacturers covering actual sales of condensed and evaporated milk delivered to jobbers, wholesale grocers, and similar buyers at manufacturers' distributing points on basis of cash short time credit. Foreign prices are given as f. o. b. or f. a. s. points of export in section in which sales were made.

Geographic sections	Sweetened condensed per case* 14 oz. cans		Unsweetened evaporated per case* 16 oz. cans		Sweetened condensed bulk per cwt.		Unsweetened evaporated bulk per cwt.	
	Domestic	Foreign	Domestic	Foreign	Unskimmed	Skimmed	Unskimmed	Skimmed
New England	$9.24	$9.13	$5.59	$6.25	$22.00	$16.04	$10.80	$5.26
Middle Atlantic	8.87	8.34	5.57	5.63	21.75	15.38	11.82	5.86
South Atlantic	9.03	9.25	5.69	6.25	20.78	16.13	11.00	6.36
East North Central	9.37	9.13	5.38	5.78	21.13	16.30	10.78	6.12
West North Central	9.37	9.13	5.47	6.25	19.75	17.26	10.16	6.00
South Central	9.33	9.25	5.66	6.25	23.00	17.26		7.00
North Western	9.45	9.25	5.40	6.25	20.17	15.62		5.55
South Western	9.45	9.25	5.34	6.25	21.00	16.51	11.34	4.95
United States	9.17	8.83	5.50	6.03	21.10	16.05	11.18	5.96

*Case contains 48 cans.



This Seventeen Year Old Girl Milks Twenty-seven Holsteins with the Perfection

TWENTY-SEVEN cows, especially when some of them give as much as 100 pounds in a day, is quite a bunch for a girl to milk. When Theodore Gillis' 17 year old daughter can handle them all alone with the Perfection, it's not hard to understand why Mr. Gillis thinks his milker is a wonderful machine.

Mr. Gillis has labor problems just like everybody else. And sometimes he's right up against the wall for hired help. But since he has a Perfection, his daughter can always help him out. "The Perfection Milker was rightly named," he says, "for it is a perfect milker and so easy to operate that my daughter, 17 years old, has milked my whole herd of 27 Holstein cows every night during the summer when we were short of help."

The Perfection Gets More Milk

"The Perfection gets more milk than any hand milker can get from my cows. One of my cows, 5 years old, gave as high as 102 pounds of milk in a day. A heifer gave 64 pounds in a day. One of my cows, which had been milked nearly two years without freshening we could not dry up without taking the machine off her."

Just Ask Your Neighbors

"We have several other kinds of milking machines in this neighborhood but everyone seems to think the Perfection gives the best results and is the most reliable machine."

Names, Addresses and Catalog Waiting For You

How much would it be worth to you to have your milking problem solved? Find out about the Perfection Milker. We'll gladly send you names and addresses of owners so you can investigate for yourself. Just ask the men who own Perfections what they think of them. We will also send without charge a copy of "What the Dairyman Wants to Know", the book that answers every question about milking machines. Write.

Perfection Manufacturing Company

210 E. Hennepin Avenue Minneapolis, Minn.

The Perfection is the Milker with the Downward Squeeze Like the Calf

PERFECTION MILKER

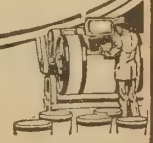
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are the best. Being made of aluminum they are **brighter, lighter, stronger and more durable** than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. **Sample tag, catalog and prices mailed free.** Ask for them.

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HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Boys and Girls to Judge Cattle at National Dairy Show

The boys and girls who are selected to compete October 8th, in the National Junior Judging Contest for dairy cattle, at the National Dairy Show, Chicago, will come back with something worth while. The National Dairy Association, under whose auspices this contest is held, plans to make this the largest and most instructive junior judging contest ever held. It is expected that 30 teams, from as many states, will be at the judging arena when the contest begins, according to representatives of the Dairy Division, Bureau of Animal Industry, and the Boys' and Girls' Club section of the States Relations Service, U. S. Department of Agriculture, who are co-operating with the National Dairy Association in putting on the contest.

Thirty-nine gold, silver, and bronze medals and a gold watch, offered by the National Dairy Association, will be awarded to the winners; and in addition to this, the first fifteen teams entered will be housed and fed in Chicago, at the expense of the National Dairy Association. Some of the dairy cattle breeders' associations also have signified an intention of awarding prizes to those doing the best work in judging the cattle of their respective breeds.

All Club Members Eligible

Only one team can be entered in the contest from any one state. Any boy or girl between the ages of 12 and 18, who is a bona fide member of a club project, and who has not had more than six weeks' training in any agricultural college or short course at such an institution, is eligible for a team. Eligibility, however, must be certified by the director of extension of the state land-grant college.

Plan Many Extra Features

Besides the excellent training in judging dairy cattle which will be obtained at a contest of this kind, the team members will enjoy a number of other advantages. Some of the leading breeders of dairy cattle will talk to the boys and girls and give them the benefit of their experiences in dairy cattle breeding. Tours of the city of Chicago are also planned for the judging teams, and the contestants will have an opportunity of seeing the places of interest and meeting the prominent people of the city and state.

Last year the judging contest was tried out on a small scale, six states being represented; and the success of this initial attempt prompted the plans for a larger contest this year. Practically all the states in the Middle West have agreed to send teams to the contest, and some of the eastern and western states have signified their intention of competing.

What the Contest Can Accomplish

The benefit from such an event is bound to be far-reaching. Thousands of boys and girls who competed in the local contest, then in the county contest, and finally in the state contest for state team championship, have obtained a fine training in cattle judging. Competition always arouses interest in a subject, and these contests have proven very effective as a means of teaching dairy cattle judging, and in developing a wholesome point of contact between boys and girls and the cow—that efficient producer of human food. There is a very urgent demand for good cattle judges in America.

Entries for teams that are to compete in this contest must be sent in by August 1, to W. E. Skinner, General Manager, National Dairy Show, Suite 222, 910 South Michigan Ave., Chicago; and the names of the individuals who will compose the teams must be sent in by September 27. Details as to the classes of animals to be judged, the manner of judging, etc., will be announced later.—National Dairy Show Association.



BOTH GETTING THE RIGHT START—KENNETH DENNEY AND HIS PURE-BRED CALF

Scythe Song

Mowers, weary, and brown, and blithe,
What is the world methinks ye know,
Endless over-word that the scythe
Sings to the blades of the grass below?
Scythes that swing in the grass and clover,
Something, still, they say as they pass;
What is the word that, over and over,
Sings the scythe to the flowers and grass?

Hush, ah hush, the scythes are saying,
Hush, and heed not, and fall asleep;
Hush, they say to the grasses swaying,
Hush, they sing to the clover deep!
Hush—'tis the lullaby time is singing—
Hush, and heed not, for all things pass,
Hush, ah hush! and the scythes are swinging
Over the clover, over the grass!

ANDREW LANG.

What a Junior Has to Say About a Silo

A Second Prize Essay

I think that a silo is a good investment for all farmers—large or small—because silage solves the problem of producing more feed for the stock of the farm. The greatest expense connected with live stock business is the cost of feeding, and the silo will lower the cost.

Silage can be made from almost any green forage crop. Corn, soy beans, clover, alfalfa, and millets may be used for this purpose. Silage preserves the entire plant, retaining all of the juices and flavor of the growing plant. Silage properly made is a money maker and a labor saver.

The green, succulent ensilage is appetizing and easily digested and keeps the cattle in a much better condition through the long winter months and adds materially to the milk flow at this time of the year. Ensilage fed cattle keep in a thrifty condition and have glossy, sleek coats of hair. A full silo will enable a farmer to keep more stock.

Silage will save the buying of special feeds to a large extent. It is quite an all around feed in itself. It should be fed night and morning after milking. A good ration is about 30 pounds of corn ensilage, clover hay, and a pound of grain for each three pounds of milk daily produced.

A silo is the cheapest place to store rough feed as less room is required for storage of the product than when cured and mowed away in the barn. A ton of hay in a barn will occupy at least 400 cu. ft., while a ton of ensilage stored in a silo will occupy about 50 cu. ft.

A silo will increase the value of the farm. It usually pays for itself in one year's time, and it is a big profit producer each year after that. In times of drouth, long wet seasons, or early frost, the crops that have been grown can be saved if one has a silo. Every argument is in favor of a silo because ensilage feeding means profitable feeding.

Wisconsin. EDWARD NELSON.

Cold-Pack Canning in Rhyme

The people try to conserve food,
They improve more each day,
And now I am going to tell to you
A new and easier way.
By doing it this way
You're helping Hoover's plan,
And also by conserving food
You're helping Uncle Sam.

First put your jars into a pan,
This is to sterilize,
While these are getting ready
Fix your fruit if you are wise,
And after you have graded it,
Picked out the ripe and green
Place it in a colander
And wash it till it's clean.

Then put it in a cheese cloth bag,
Place this in boiling water;
Now leave it here to sterilize
One minute and a quarter,
Then quickly place in very cold
And dip it up and down,
And after you have finished you have
The finest fruit in town.

Of course you've made your syrup,
The gas is turned up far.
So quickly peel your peaches,
And place them in a jar.
Then place it in the canner,
Leave for one-third of an hour,
It's prepared and cooked so carefully
There's small danger of flat sour.

So now remove it carefully
And place it on the shelf,
Then leave it till next morning
And test it for yourself.
Now this latest, newest method
Is as easy as can be;
But if you doubt my word one bit
Try it for yourself and see.

We're the Washoe County Canning Team
In members we are three.
We demonstrate Cold-Pack Canning
To all, admission free.
Although we're just beginners
On winning, our plans are laid.
With the aid of our instructors,
Don't you think we've progress made?

Nevada. Florence L. Brown.

Why Every Farmer Should Have a Silo

Third Prize Essay

Dairying is one of the greatest industries. This branch is carried on mostly during the summer months when the cows have the chance of living on the fresh green pastures. Then they milk their best. As soon as the summer months are over, then cows do not produce as much milk because they usually do not get the kind of feed that will make the most milk. But by the use of the silo this



THREE ENTHUSIASTIC HOARD'S DAIRYMAN JUNIORS

can be partly overcome. Good fresh silage fed with good clover or alfalfa hay has proven to be an excellent ration for the winter months.

The income of the farmer living in the north during the winter months has mostly come from the logging industry, but since this is growing constantly less, a new industry should be the resort. Dairying should be this resort, and don't forget that the silo is the best co-partner for one in this business. As a rule, prices of the dairy products are higher in the winter than they are in the summer, so let the silo give your stock feed that will make them produce more. Here are eight good reasons why every farmer should have a silo.

1. The silo gives 25% to 30% more feeding value to the corn crop than when it is fed as dry fodder.

2. The silo provides a succulent feed in winter and helps to keep the cows healthy and in a good working condition.

3. The silo gives an insurance against short, drouth stricken pastures.

4. The silo makes the farmer make the best use of a frost stricken corn crop. Even immature corn can be put into the silo to good advantage.

5. Silage is a good feed for fattening stock for the market.

6. The silo furnishes the cheapest form of feed for the winter months.

7. The silo should be a partner of every cheese factory patron.

8. The silo enables the farmer to feed his stock from less acres, thereby leaving more crops to be marketed and in the end benefiting himself and his country.

Wisconsin SYLVIA NELSON.

Lime the Land

Music—"Over There"

Farmer get your lime, get your lime, get your lime,
Put it on in time, on in time, on in time;
Try it on your land today,
Then we'll hear what you will say.
Hurry right away, no delay, go today.
Make your family glad to have had such a dad,
Tell your dear wife not to pine,
For you see a dollar sign.

Chorus

On the land, on the land,
Spread the lime, spread the lime, on the land,
For your crops all need it, your crops all need it,
The crops all need it ev'rywhere.
So prepare, so prepare,
Spread the lime, spread the lime, ev'rywhere,
For they need it, they need it badly,
And they won't yield well till we get lime on the land.

Hens Making Good

HOARD'S DAIRYMAN JUNIORS:—I have just made such a fine record with



When the Cow Kicks over an open pail the milk is spilled and lost. This cannot happen if you use a Non-Spill Sanitary Dairy Pail. This new pail is spill-proof. An automatic valve is your protection against spills. This simple device saves milk and money for you.

The Pail Pays for Itself several times over during the summer season when the flies and heat cause the cow to kick. It is a protection against costly milk waste by spills.

The Non-Spill Pail is absolutely sanitary. It is made of heavy charcoal tin plate. Its seams are smoothly soldered, leaving no crevices where germs can lodge. Its capacity is 3 gallons. A closely woven brass sieve, protected by a non-splash rim, strains the milk and keeps dirt and foreign substances out of the pail.

Your local dealer sells it or will get it for you. It's a Schlueter metal product.

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200,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs areusedby the best breeders in the business.



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my flock of hens that I thought you would all like to hear about it. I started to raise poultry one year and a half ago. During this time I have spent $150 on them and, not having the money, I went in debt. I wanted to give them a good start. Today I have paid off all of the debt and have left $10 with which to start my bank account.

The following is the egg record they have made. They started laying in October. Now don't you think that this is a good record for 12 Single Comb White Leghorns to make?

Month	No. of eggs	Month	No. of eggs
October	59	March	269
November	77	April	295
December	88	May	300
January	132		
February	170	Total	1390

During the months of April and May I got 595 eggs, an average of about 10 a day, from the twelve of them. I consider this a very good record considering that some of them must have laid every day for two months. During the month of April, I broke the state record and in May I broke my own record. I am claiming United States record for egg production from an ordinary flock. My hens do not come from stock that has high record egg production, or from flocks that have been trap nested for higher egg production.

My baby chicks are coming along fine. The males began crowing when they were five weeks old. I am glad that the debt is paid off so that I can now begin to bank some of the money I am making.

Wisconsin. RUSSELL PARKS.

How I Made My Crop of Potatoes

HOARD'S DAIRYMAN JUNIORS:—The potato is one of the most widely cultivated of the agricultural plants and is becoming very important as an article of human food in this country. It ranks sixth in agricultural importance in the United States.

I enrolled as a member of the Potato Club for the purpose of learning the cheapest way of raising potatoes and also earning some money of my own. The purpose of the club is to teach us boys how to raise potatoes. It also teaches us to be businesslike as we have to keep an account of expenses and profits.

The kind of soil on my potato crop is a sandy loam. First I plowed my plot of ground, it being a hay meadow before. Then I disked the ground and later on plowed it again, and finally harrowed the ground, and then I was ready for planting.

The kind of seed used was Green Mountain selected from last year's crop. The Green Mountain potato is medium in length with an oblong form and the skin is white and eyes shallow.

I cut my seed potato in pieces from one to three eyes on each piece. I planted my potatoes in rows twenty inches between each hill and three feet between each row. About two weeks later I harrowed the potatoes until they came up and then I was ready to cultivate. I cultivated my crop about four times during the season in order to do away with all weeds.

I had no trouble with diseases on my crop of potatoes but was troubled with insects for which I used Paris Green.

About October 3, I began to harvest my crop of potatoes. I dug them with a potato digger and received one hundred and twenty-three bushels of potatoes on one-fourth acre of land. I sold forty bushels and stored the rest away.

The expenses on my potato crop this year was nine dollars and forty-five cents. The value of the potato crop was one hundred and eighteen dollars and eighty-five cents, leaving a profit of one hundred and nine dollars and forty cents.

Although the potato is used as a human food it has several other uses. Starch, potato flour, glucose, and syrup are made from potato. This club work has been of great interest to me as I have learned quite a few new things about the growing of potatoes.

Michigan. WALLACE KRIEGER.

Junior Letters

Hoard's Dairyman Juniors:—My father and I live on a farm of 220 acres. We are alone on the farm this year, as we haven't a man to help us as yet, but we have rented some land to a man who is going to raise onions and radishes and some of our neighbors are going to raise tobacco on shares with us.

We have 37 head of cattle 15 milk cows, 5 yearling heifers, 8 heifers that might be in some time pretty soon, 8 calves, and a bull. Some of these are pure-breds and some are not.

We have a milking machine and a separator, both machines of which we think are the best ever. It used to take us about two hours when we had a hired man. Now we have no man and still we get done in about an hour or less.

We have five work horses and a pony. The horses' names are John, Kate, Prince, Jim, and Tom; the pony's name is Dandy and he belongs to me and my other two brothers. I use him the most, because I have to go and get the cows at night from the pasture and take them down to the pasture again in the morning.

We have about 75 hens and get about 35 eggs a day. We have about 75 young chicks now. Some we hatched in an incubator and some we had under an old hen.

We have all the grain planted.

I am 13 years old and in the seventh grade. My teacher's name is Miss Ruby Linde. My class wrote for diplomas just to see what we could do. I passed in all but spelling. The superintendent said that we had the banner class of Jefferson County.

I have a dog and his name is Spot. He is brown and white and has a while collar with a brown spot on it so we call him Spot. He always goes with me whenever I go on the pony or if I take the rifle.

My brother and I trapped last season and made over $50.

The name of our farm is Koshkonong Creek Farm.

Well, I must close, wishing the juniors good luck.

Wisconsin. Vernon O. Loga.

Hoard's Dairyman Juniors:—I received your letter and I shall answer it to the best of my ability. Yes, I work away from home during vacation. I have secured the same place I had last summer, a place about 6 miles from home. I operated a milker last summer. I sure did like it. The work was pleasant and as I like to be around cattle I enjoyed it. This summer I will do more orchard work, not because I'm tired of cows, but for the reason the man had to kill them. He killed about 27 head. They had tuberculosis. Some he valued at $750 a head.

My wages are $45 a month and board and washing. I think that very good for me as I am only 15 years old. I weigh about 120 lbs. I expect that after I am older I will go some place where I can learn more about the business. To make a success with dairy cows a person has to have some knowledge of what he is doing. Some people treat a cow as though she were a wild beast. To make a cow produce you have got to feed and take care of her to the best of your ability and if your ability isn't any good, why, what is the use of starting? To make a success a person has to have his mind on his work no matter what he is doing.

Washington. Keith E. Brooks.

Hoard's Dairyman Juniors:—I have all sorts of animals: An old sheep and a pair of twin lambs which are almost pure-bred Oxfords, a little pig that grunts half the time, and some rabbits. I have three white ones; they are about three weeks old, a bunch of little ones and there are six little gray ones and one white one. I also have three old ones, a Flemish doe and a pair of half wild ones. We are not having good weather here now. It is either raining or cloudy all the time.

Ontario, Can. Gerald Mains.

Hoard's Dairyman Juniors:—I read the paper every time it comes and found out that the juniors' page is the best. You asked me how I feed my rabbits and what I am planning to do with them. I feed them grass, oats, and corn twice a day. I give them fresh water and rutabagas or carrots every day. I have pure-bred Belgian hares which I got from E. C. Pebbles. I paid five dollars a pair. I am going to wait till I have a bunch of them and then I am going to sell them. But the worst of it is the price I ask for them is too much, although I ask just what I paid for them. I would like to have some of the juniors write to me. My address is Coleman, Wis., R. R. 2.

Wisconsin. Joseph G. Kralovetz.

Breeders and other Buyers
+
The Wisconsin State Fair, Milwaukee, Aug. 30 to Sept. 4, inclusive, will present the Best the Great Badger State has to offer in Life Stock, Agriculture and Allied Industries "
+
One Wisconsin County alone will send over 400 Dairy Cattle, including Grand Champions and Champions "
+
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Few countries possess all the conditions for happy, prosperous living as does British Columbia. The varieties of climate and soil offer inducements for almost every branch of agriculture. Whether in the warm interior valleys, the rich grazing table lands or the fruitful lowlands of the coast or Vancouver Island, the advantages offered for

Dairying, Fruit Growing and Stock Raising

are such as must appeal to those who wish to improve their circumstances and at the same time live in a country of delightful climate, magnificent scenery, varied resources, progressive people and abundance of opportunity for development. British Columbia—the playground of America—is already famous for the production of its orchards, fields and dairies. Now is the time to

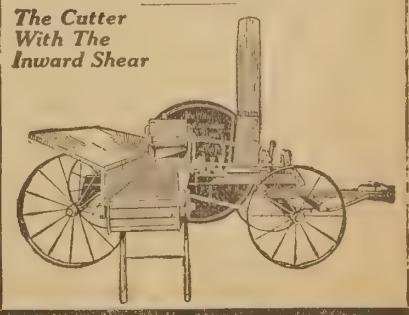
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The Cutter With The Inward Shear





The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

Some very fine Holstein calves; will ship C. O. D. subject to inspection. $30.00, we pay express. Write for full particulars. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 4*

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

High grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

Holsteins—All ages, federal tested. Write your wants or come and see us. We can furnish one or one thousand; prices from one hundred dollars up. We are the largest U. S. exporters. HUNTLAND PLANTATIONS CO., Middleburg, Va. 18-10

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Mo. 19*

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

Holstein and Guernsey pure-bred and grades. Write me. If it is 1, 100, or 1,000 head I can please you. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Holstein and Guernsey springers and fresh cows; also high grade calves either breed, two months old, $35 each. We pay express. CLOVER VALLEY HOLSTEIN FARM, Whitewater, Wis. 21-10

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

For Sale—Two yearling bulls by 30-lb. sires. They are fine well grown fellows. One light in color, one evenly marked. Both are by yearly record bulls also. We have several younger bulls by these same sires from tested dams. We will sell you a heifer to go with these bulls if you want to get started in Holsteins. Herd under Federal supervision. F. S. MILLER, R. 1, Waterloo, Iowa. 24-4

Bulls of serviceable age, sired by Sir Ormsby Elgin Pietertje, one of the best bred Minnesota sires and from high producing dams. Prices reasonable. Write for breeding and photo. McNELLY & HARPER, McIntosh, Minn. 25-4

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 26-4

For Sale—High grade Holstein cows and calves. Write SUCCESS STOCK FARM, W. Strauss, Watertown, Wis. 26-2

20 high grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old. $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Holsteins for Sale—Thirty head registered cows and heifers. Best blood, great producers, young cattle at a bargain. CHAS. T. LITTLE, Kewanee, Ill. 26-2

Buy Dodge County, Minnesota, Holsteins. Our wide acquaintance makes it possible for us to furnish Holstein cows and heifers in carload lots. We have on hand at present, milking and springing cows, also a fine lot of two-year-old heifers, everything tuberculin tested, subject to 60-day retest and guaranteed as represented. BRINGGOLD, ROUND & FAIRBANKS, West Concord, Minnesota. 26-4

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

For Sale—Two pure-bred Holstein bulls, excellent breeding, one serviceable and one seven months old. Send for pedigrees and prices. STATE NORMAL SCHOOL, A. N. Johnson, Mgr., River Falls, Wis. 1-2

Three registered yearling Holstein heifers. Price $360. One has 32-lb. sire. ERNEST SEDGWICK, Greenup, Ill.

Registered Holstein bull calf. Dam's record 23.47 lbs. Sire's two nearest dams 26.17 lbs. Priced to sell immediately. $75.00. JOHN BLUHM, Smithton, Mo. 1-2

STOCK FOR SALE

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

Cows for Sale—100 head of Holstein springers, to freshen from one week to three months. Will sell singly or in car lots. A. E. LEWIS, Lancaster, Wis. Long distance phone 114R.

Southern Holsteins. Did you know that there are good calves from Advanced Registry cows raised in the South? I have calves, both sexes, from cows with records as high as 26 lbs. and sired by a half brother to Sir Skylark Ormsby, the sire of Duchess Skylark to Sir Skylark Ormsby, the World's Record Butter cow. Herd under Federal supervision. For description and prices write KING L. BANKS, Raines, Tenn. 1-2

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, 1 two and a half years old from imported cow; 1 one and a half years old; 1 bull calf 2 months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also fourteen high grade Guernsey heifers. Address A. W. BROWN, Rhinelander, Wis. 24-4

Ready for Service—Have several high class young bulls. Most are from high producing A. R. dams. Will be year old in July, August, and September. May Rose and May Rose Glenwood cross. Prices are low for quality. FRISSDALE FARM, R. 1, Hopkins, Minnesota. 25-4

For Sale—Guernsey bull, 10 months old. Sire: Langwater Frenchman; Dam: A daughter of Imp. Clara's Sequel, with a record of 580 lbs. fat, Class F. On retest will make 65 lbs. fat. Also some younger bulls of choice breeding. CHAS. A. WILKINS, Platteville, Wisconsin. 25-3

Five registered and three high grade young Guernsey cows for sale. May Rose breeding and bred to grandson of Langwater Raritan, to freshen in fall. WALTER VAUGHN, Marion, Iowa. 26-2

Six Months' Grandson of Langwater Rosie, containing as high as 17% of May Rose II. blood. C. M. McCONNELL, West Salem, Ohio. 25-spl

Entire Guernsey herd. Bulls from a cow that averages 50 lbs. of 8% milk per day for four months after freshening. Write your wants. P. L. DWIGHT, De Ruyter, N. Y.

Registered Guernsey bull, priced right. CREEK FARM, Creek, N. C.

Jersey Bulls, 2 to 9 months old, out of high producing dams. Priced to sell. For prices and pedigrees write FRED HISKETT, Sampsel, Mo. 26-3

Jersey Bulls—Young thoroughbred Jersey bulls sired by Sophia 19th's Tormentor 19th, the grandson of Sophia 19th. SHERMAN NURSERY CO., Charles City, Iowa. 24-4

For Sale—A handsome yearling Jersey bull and some calves of Noble of Oakland's breeding. CLARENCE RAGSDALE, 789 Monroe Ave., Moberly, Mo. 26-2

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

David W. Williams, Lake Forest, Ill., can buy you pure-bred dairy cattle of any breed. 4*

STOCK WANTED

Wanted—Pure-bred Ayrshire, Guernsey and Holstein females. Give age, breeding and price. DAVID W. WILLIAMS, Lake Forest, Illinois. 4*

Wanted—Twenty-five pure-bred Holstein heifer calves under six months, for calf club work. Desire twenty-five pound backing. J. O. SHAFF, Camanche, Iowa.

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

English Setter Females Free—We desire to place 16 English Setter females, one on a farm, giving one to each farmer who can show us that he has a satisfactory farm and will properly feed; either a bred Setter or one to be bred to one of our best dogs. We will pay $10 apiece for each one of the puppies of the first litter when four months old. We shall place these Setters as fast as we can until our number is exhausted. Therefore write quick, if you want the opportunity. This is a good chance to make some money without an initial investment. Address, WILLOW BROOK KENNELS, 147 Ames Building, Boston, Mass.

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

For Sale—Pure-bred Duroc Jersey boar pigs, Pathfinder breeding. Also a few choice pure-bred Poland-China pigs for sale. STATE NORMAL SCHOOL, A. N. Johnson, Mgr., River Falls, Wis. 1-2

Durocs—Spring boars at $25 and $35. MARELLA FARM, Hagerman, Ida. 1-2

POULTRY

Eggs—From prize winning stock, bred for egg production. White Plymouth Rock, S. C. Rhode Island Reds, S. C. White Leghorns. Price very reasonable. Write for mating list. ABTS STOCK FARM, Columbus, Nebr. 10*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 23-6

RABBITS

Rabbits, Pet Stock—Read The Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MACHINERY

For Sale—One 1920 Empire Milking Machine, consisting of one double unit, one type B double cylinder pump and 2½ H. P. engine. This machine has been used only one week and is right in every way. First check for $295 takes this outfit. Address B. W. WILCOX, Sugar Grove, Warren Co., Pa. 1-3

For Sale—One new De Laval centrifugal milk clarifier No. 111. One new Victor No. 2 combined churn and butter worker. 60-gallon capacity. One Alaska large type copper cooler 2½ feet by 10 feet. Address BIRTCHERD DAIRY, Norfolk, Va. 1-4

Davis milk bottle filler and capper, slightly used, $175.00 f. o. b., Evanston, Ill. EMERSON FARM DAIRY.

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Agents—Mason sold 18 sprayers and auto-washers one Saturday; profits $2.50 each; square deal. Particulars free. RUSLER COMPANY, Johnstown, Ohio. 25-spl

LIGHTNING RODS

Lightning rods, exclusive agency and quick sales to live dealers selling "Diddie's Universal Rods". Our copper tests 99.96% pure. Write for agency. Prices are right. L. A. DIDDIE CO., Marshfield, Wis. 13-24

PARTNER WANTED

Wanted Partner—In fifteen-year established retail dairy. Fine trade, sixty cows; 400-acre farm fully equipped; high price for milk. Eastern state, fine climate, fine opening for active, competent, honest man who understands the details of the business. Want party to invest in one-half interest in cows and equipment. Would contract with party who could furnish all the help for farm and dairy work dividing 50-50 net income. Will not appear again, be quick. Must take charge by the first of October. Address BOX 266, care Hoard's Dairyman.

FARMS FOR RENT

Over 100 acres fine land, 17 miles macadam roads to City Hall, Philadelphia. 1½ to large manufacturing town of Ambler. Modern cow barn, 48 standing, 4 box stalls. Milk room, feed room, cement floors. Large implement and tool house. Large hollow tile slate roofed house (not finished inside.) Macadam roads each side and through farm. Very moderate rent, desirable tenant. Immediate possession. Rent free for one year. FARM, 2024 N. Tenth St., Philadelphia, Pa. 25-4

Wanted—We have a number of farms from 200 to 640 acres for rent to high class renters on the fifty-fifty basis. None but high class renters will be considered. A. G. WHITNEY LAND AND LOAN COMPANY, St. Cloud, Minn. 26-2

BUSINESS OPPORTUNITY

I have only pasteurizing plant in city of fifteen thousand. Will sell or trade for registered Holsteins. CHAS. G. ABBEY, Gilby, North Dakota. 26-2

FARMS FOR SALE

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red, White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Hardwood cut-over land, silt loam, clay subsoil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4. NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Cortland County good farms for sale. Write GEORGE V. CLARK, 13 North Church St., Cortland, N. Y. 17-13

Farms in Southeastern North Dakota in the famous James River Valley, Stutsman County. Must be sold immediately. Write for big free list. JOHN B. FRIED LAND COMPANY, Jamestown, North Dakota. 21-8

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

Real Farm Bargains in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (not Inc.), Medford, Wisconsin. 24-5

160-acre farm, highly improved, good buildings, complete, $20,000. 70-acre farm adjoining city limits, complete, $16,000. Write for other bargains. WM. ALBRECHT, JR., Wausau, Wis. 25-6

For Sale—Modern dairy farm and beautiful country home in Maryland, on state road, 117 acres, wonderful spring water, Kewanee water system, Delco lights, 2 new tile silos, extra tenant house, hot water heat, concrete horse barn, 26 concrete stanchions, new concrete calf barn, 14 box stalls, individual drinking cups, everything new and recently painted white. Immediate possession. Address GEORGE M. EVANS, Elkton, Maryland. 25-5

Clovercrest Farm for Sale—320 acres of very rich silt loam practically all under cultivation, well tiled, rotated hay and pasture land, 30 acres of alfalfa. Twelve-room, two-family house, dairy barn 36x74, barn 50x52, silo 16x50, hog house 24x42, large corn crib, hen house, granary, machine shed, power house, and milk room including milking machine. Delco light plant and water system. A fine dairy or stock farm. Must be seen to be appreciated. EARL D. OLIVER, Amboy, Minnesota. 26-4

I know of some exceptional farm bargains in New York State, small and large. Fine buildings, spring water, alfalfa land, good roads. Eighty to hundred twenty per acre. Easy terms. These are unusual bargains. Write me. BOX 256, care Hoard's Dairyman. 26*

140 acres first class, gently rolling land, fine buildings and location in Central New York State for $12,000. Part cash, balance easy. Write for full particulars. FORT & WILDER, INC., Oneida, New York. Members of the Farm Brokers' Association, Inc. 26-4

For Sale—Several improved farms and 10,000 acres cutover land, silt loam, clay subsoil; near Ladysmith, Rusk County, Wisconsin, in heart of dairy country, good roads, schools and churches; easy terms. Write for information. MANNING & HOOD, Ladysmith, Wisconsin. 26-4

For Sale—One of the best dairy farms in Michigan. 210 acres, two sets of buildings. 70 acres alfalfa and other growing crops, fully equipped. Will give immediate possession. Write for particulars and price. Address BOX 52, Lansing, Michigan. 26-3

Own a home in Eastern Kansas—Wheat, corn, clover, alfalfa land. Ottawa the county seat, Franklin Co., 10,000 population. University, excellent schools, manufacturing interests, mill, creamery and condensery. Fine location. Buy now. Write for free booklet and new list No. 457. Farms and city property for sale. FRANK B. MANSFIELD, Ottawa, Kansas. 26-3

For Sale—Illinois grain and dairy farm, 170 acres, 23 miles southwest of Chicago, 15 miles east of Joliet, one mile to good town on stone roads, good transportation, first class improvements, modern house, new barns, tile silos, tenant house, all buildings in good repair and paint, electric lighted, cement walks, new fences hog tight, 130 acres in cultivation, tiled, best of soil, fine lay of land, ideal location, splendid farming country, good markets. Farm and its equipment is capable of producing a milk check of $1,000 a month; improvements are worth $30,000. Send for photo. RICHARDTON, Owner, R. 1, Tinley Park, Ill. 26-2

Join our South American Colony. Choice land $5.00 per acre. For literature, address BOX 277, Gridley, Calif. 24-4

Land that grows the finest of crops. We have a few more of our low priced farms to offer you on a small down payment and on very easy terms. This railroad wants a few more settlers, and for that reason we can offer you a real bargain. Write today for free information, telling you how to secure one of these farms. L. B. ARNOLD, Land Commissioner, 154 Wolvin Bldg., Duluth, Minn. 25-spl

Would you like $1,000 monthly milk check from 230-acre farm, modern buildings, priced $10,000? Come East! Write NEW YORK FARM AGENCY, Westfield, New York. 9-spl

For Sale—40-acre farm in Taylor County, all good high land, 20 acres cultivated, balance pasture; good barn and well, cellar with stone wall on place; price $3,600. HARNEY FARM, R. 1, Marshfield, Wis.

It will pay you to send for our new free summer and fall land list, showing photographs of a large number of choice farm bargains in the greatest dairy district in America. Central Wisconsin. Write today. GRAHAM'S LAND OFFICE, Marshfield, Wisconsin.

FARMS FOR SALE

480-acre dairy farm on the Mouse River, 275 acres under cultivation, balance pasture, hay meadow, and heavy timber. 10-room house, fair outbuildings, spring water piped to buildings, 1½ miles to county seat on main line transcontinental railroad, splendid market. Holstein milk produced on this farm now sells for $4.00 per hundred delivered at station. Price $40 per acre, $4,000 down, balance 6%. This is for quick sale by the owner direct. Write or better come and see this place at once. J. W. PRITCHARD, Fessenden, N. D.

Fine opportunity for dairyman—640 acres in Leavenworth County, Kansas, 34 miles from Kansas City, Mo., and 5 miles from condensery, lime stone land, fine blue grass and alfalfa; 200 acres under cultivation for silage and feed. Modern dairy barn for 80 cows, 3 silos, 170 acres now in wheat, will make 25 bushels per acre, will be put back into alfalfa. Owner will furnish land and cows for half proceeds, or will sell on payments covering a long period of years. WHITSED LAMING, Tonganoxie, Kansas. 1-4

For Sale—640 acres splendid land, 60 miles from Chicago and good gravel road. Eight-room house, barn and outbuildings. 300 acres fine blue grass, balance in corn, oats, wheat, rye and barley. This farm can be bought on very liberal terms, at $85 per acre. There is no encumbrance on the farm. One hundred and fifty head of Holsteins on place. Address GEORGE BRAZELTON, R. 3, Morocco, Indiana. 1-2

For Sale—In Madison County, New York, a 175-acre dairy farm for $8,000 if taken at once. Apply to owner. JOHN H. SMITH, R. 3, Crown Point, Ind.

$140 per acre buys my improved equipped dairy farm. Terms. EDW. JOHNSON, Box 29, Peshtigo, Wis.

Bargain—240-acre dairy farm, splendid soil, stock, machinery, $15,000. 120-acre improved farm, $4,000. Central Wisconsin. Small payment, balance 6%. DR. HARRINGTON, 124-30th St., Milwaukee.

For Sale or Rent—200-acre stock, dairy, fine general farm. Joins river, summer resort, near city, 2 railroads, Peoria hard road. PROCTOR, Chillicothe, Ill.

For Sale—In order to settle an estate we are offering four farms of 160, 480, 570, and 1,100 acres of black prairie alfalfa, corn, clover and stock land. Richest lime soil in the south, located close to Aberdeen, the most beautiful city in the South in the heart of the famous black prairie alfalfa belt. Will make special price and easy terms to responsible buyer. A. E. WISHART, Aberdeen, Miss. 1-2

Farm with growing crops, 124 acres, equipped, $2,600. Woman owner must close affairs quickly, throws in everything just as it stands; splendidly located; machine-worked fields, 10-cow wire-fenced, spring-watered pasture, 500 cords wood, 100,000 feet timber, only ½ mile to mill; 500 apple trees; good 8-room house, big basement barn, silo, other buildings; quick action price $2,600 takes all including, horse, 2 cows, 2 pigs, poultry, machinery, cream separator, sprayer, small tools, 5 cords stove wood, ½ acre potatoes, 3 acres oats, 1 acre corn, ½ acre beans, good garden. Details page 6 Strout's Big Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150DL Nassau St., New York City.

Maryland Farm for Sale—140 acres, 20 acres timber, 30 acres meadow, balance rich level land, on macadam road, 52 acres wheat, and other crops. 10-room house, 2 sleeping porches, good outbuildings, plenty of fruit, watered by springs, and branches; fine community; 43 thousand feet of lumber and all crops. $10,500 takes all. We have many others; send for our catalogue. CAUGHY, HEARN & CO., 220 E. Lexington St., Baltimore, Md. 1-4

New York State, greatest guaranteed farm bargains. Before buying send for my list at once. FRANK J. BASLOE, Herkimer, New York. 1-2

Shawnee, Oklahoma, center of a great dairy country. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla.

For Sale—Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

$6,800 buys real bargain, 80-acre improved farm, short distance from Duluth; large barns; hay carrier; dandy house, hardwood floors; horse barn; chicken house; ice house; horses; cows; chickens. Can buy easy terms. Write today. R. R. FORWARD, Duluth, Minn. 1-spl

For Sale—240 acres cutover land in upper Wisconsin dairy belt. 2 miles from railway station, stores, churches, etc. Gently rolling, easily cleared. Buy it. F. X. NELESSEN, W. Wrightstown, Wis. 1-2

Great Chance, Men. Good land, easy terms, free list. BAKER A-76, St. Croix Falls, Wisconsin. 7-spl

Western Canada, the finest grain farming country in the world. Brandon, Manitoba, the center of its most prosperous district. Improved farms can be bought for $20 to $75 an acre. Will return as much as $300. American land. $100 American money buys $110 to $115 Canadian money. Buy now; everything in your favor. For particulars write to C. C. JACKSON, 437 Tenth St., Brandon, Manitoba.

For Sale—234-acre farm in Oneida County, Wisconsin. 80 acres under plow, balance cutover and timber land. All fenced. Fine buildings. Complete machinery. Excellent for dairying purposes. Price only $14,000. Will take up to $6,000 in trade. A small payment will handle. H. G. BANNERMAN, Redgranite, Wis.

We have several fine dairy farms for sale, with or without stock, located about 30 miles west of Washington, D. C., in this great blue grass section. Also farms to meet every want. N. R. HANES, Ashburn, Va.

Farm for Sale—One of the very best, consisting of 141 acres all level, 6 acres timber, remainder all tillable and in the highest state of cultivation; graded water system; buildings first class condition; keep 40 cows; farm house, 2 tenant houses. Sell with or without stock. Reason for selling, leaving state. "Terms cash". ALFRED BRAKE, Adams, R 3, Jefferson County, N. Y.

For Sale—Good farm Western New York. Particulars. FITZPATRICK, 52 Arlington, Buffalo, N. Y. 1-2

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

SEEDS

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 3*

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Carload lots of alfalfa and straw. Quote delivered prices first letter. F. MARQUARDT, Morris Plains, N. J. 25-spl

TOBACCO

Tobacco Natural leaf prepaid. 10 lbs. mild smoking $2.25; 5 lbs. smoking and chewing, $1.75; 3 lbs. select dark and red chewing, $1.40; guaranteed sound and sweet. Hatler is reliable, Martin Bank. JOHN HATLER, Martin, Tenn. 23-5

PRINTING

Hoard's Dairyman Art Dept. designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cts. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wis. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

SILOS

For Sale—Indiana stave silos, 10x20, 12x24. LUCIE KEVIL, Princeton, Ky. 24*

Bargain, 12x28, 14x30, new fir silos never erected. Immediate delivery. Save money, don't delay. Whirlwind silo filler. EDW. BENNETT, Brookfield, Wis.

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

PATENTS

Patent Your Inventions. Call, write BLACK, OLESON, ALLEN & THORNE. Patents, trademarks, patent causes, 154 W. Wis. Ave., Neenah, Wis., or Second National Bank Bldg., Washington, D. C. 25-4

FEED BAGS

We pay 14c for beet pulp bags. Proportionate prices for other sizes. Better write for price list now. LARIMER BAG COMPANY, Washington, D. C. 19-spl

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—An up-to-date dairyman who can take charge of a small herd of Jerseys and who can make the highest grade of butter. Address BOX 242, care Hoard's Dairyman. 24-4

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Wanted—Single men for agents in New York State Cow Testing Associations. Good wages and expenses to competent men. Experience in feeding and in operating Babcock test desirable. Give age, school training, farm experience, names and addresses of former employers. Write G. W. TAILBY, JR., Animal Husbandry Department, Cornell University, Ithaca, New York. 25-3

Wanted—Reliable man to milk and feed test cows under direction of competent herdsman in one of the best Holstein herds in the country. A splendid opportunity for right man. State qualifications and wages expected in first letter. MAXWELL FARMS, Waterloo, Ia. 25-3

Wanted—Cow tester for association work, state training and experience. CORTLAND CO. FARM BUREAU, Cortland, N. Y. 26-2

Wanted—Middle aged married man to work in a modern dairy barn. One whose ambition is to give good service in return for good wages and a fine modern home to live in. We have an average sized farm and one of the leading dairy herds of the country. Faithful service and not the grandstand variety is desired. The hours are regular and the equipment is complete. If you are looking for a permanent job write us. If you are a person who makes a change every six months, knows all there is to know about the dairy business, then save your stamps. Address BOX 253, care Hoard's Dairyman. 26-2

Wanted—Single man for farm work. Steady employment on modern farm near the city. Must be a good man with horses and willing to help milk. Apply PAUL REED, Oconomowoc, Wis. 26-2

HELP WANTED

Wanted—High class farmer to manage 640-acre stock and grain farm in central Minnesota. Position open October 15th. A. G. WHITNEY, St. Cloud, Minnesota. 26-2

Wanted—Herdsman to take charge of herd of 20 cows and 15 young cattle, Jerseys and Holsteins. State wages expected, experience and references. RAY McCAULEY, Hicksville, Ohio. 26-2

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Wanted—First class married man for general farm work. Excellent wages to right man. State wages desired and send references in first letter. CURTISHOLM FARM, Stockton, Illinois. 26-2

Wanted on farm, middle-aged housekeeper for four grown-ups. Good location, steady, suitable wages. Reference exchanged. State particulars and wages wanted. Address BOX 258, care Hoard's Dairyman. 26-2

Wanted—At Thornhill School, which cares for boys who are wards of the Juvenile Court of Allegheny County, Pennsylvania, married couples preferably without dependent children to take charge of cottages in which about twenty of these boys live and care for and train them for good citizenship. Compensation $75 to $90 per month for the couple with furnished quarters, food, fuel and lights, thus relieving them from any outlay for rent, food, fuel and lighting and all other items of household expense. Only people of recognized character and interested in helping boys desired. Address SUPT. THORNHILL SCHOOL, Warrendale, Pa. 23-spl

Herdsman, married, wanted at once. State of Maryland. One hundred milking cows, half registered, twenty on official test. Good house and privilege provided. State full particulars and salary in first letter. Address BOX 261, care Hoard's Dairyman.

Wanted—An experienced herdsman to take charge of herd of 100 Holstein and Guernsey cows on Sept. 1st next. Dairy farm located in Virginia, 70 miles from Washington, D. C. Prefer a man familiar with Sharples milking machine. State application, experience, salary wanted and references. J. CLIFFORD MILLER, Brandy Sta., Va. 1-2

Wanted—Two experienced A. R. O. milkers on modern breeding farm doing seven-day and semi-official work under modern conditions. CLOVER LEA FARMS, W. W. Walker, Austin, Minn. 1-2

Wanted—Man to milk test cows. Must be good dry hand milker, one who has had experience or young man interested in good Jerseys, a young experienced man preferred. If we can get the right man we can use him as assistant herdsman and will pay accordingly. Address ALLEN DALE FARMS, Shelbyville, Kentucky. 1-4

Wanted—Man with family who can handle dairy where from fifty to seventy cows are milked with milking machines. All modern conveniences, electric lights and running water in barn. State how many in family, ages and experience. Will furnish good house to live in with garden; milk and butter for family. State what wages you would expect. W. H. ENGLAND, Ponca City, Oklahoma.

Wanted—Manager for 60-acre farm breeding pure Guernseys and having 8 acres of fruit. Buildings and equipment new and modern and land in good condition. Location in Northwestern Pennsylvania near railroad and trolley. Address BOX 259, care Hoard's Dairyman. 1-2

Experienced bottling room man, single or married, on farm to handle about 500 quarts of milk per day, not pasteurized, and take care of necessary machinery. EDW. FREESE, Aurora, Ill. 1-2

Wanted for cows on official test—A single man who is steady, reliable and experienced in fitting and showing. State salary expected in first letter. HOMESTEAD DAIRY FARMS, Salisbury, Md.

Wanted—Man and wife, no children. Wife as cook in boarding house, man in dairy barn. Must be good milker. Good wages. Everything furnished. State, Maryland. Address BOX 262, care Hoard's Dairyman.

Wanted—Married man, good farm teamster, also acquainted feeding and handling Hereford cattle. $80 month and house. ROUTE 1, BOX 23, Libertyville, Ill.

Herdsman wanted—Single man for small herd Holsteins, located northern Ohio. Must have had some experience and plenty of ambition. At present can board only but later will supply house if services prove satisfactory. Looking for man of good character and natural ability to whom I will offer a permanent propostion with interest in herd. Send full information in first letter. Address BOX 263, care Hoard's Dairyman. 1-2

Wanted—Man to take charge of small herd and help with farm work. Good wages, reasonable hours, excellent care and quarters. State recommendations and wages demanded. ST. MARY'S COLLEGE, Winona, Minn.

Wanted—An honest, good natured lady who is a real good cook and housekeeper. Real gentlemanly treatment and a best farm home guaranteed. Sister lives with me, a bachelor. State age, wages and character in first letter. MEADOWBROOK FARM, R. 2, Hilbert, Wis.

Wanted—A married man on a two-hundred-acre dairy farm who understands farming and dairying. Willing to run a retail milk route. Wife to board help. State wages, age and size of family in first letter. W. W. PAUL, Champaign, Ill.

Manager for farm in Barron County, Wisconsin. Must understand farming, poultry and dairying, and be married. Children no objection. Must be worker as it is not an office position. All modern buildings and equipment. State nationality, religion, wages desired, past experience and full particulars in first letter. An excellent opening for industrious general farmer. HENRY L. STOUT, McCormick Bldg., Chicago. 1-3

Wanted, Superintendent—I milk 300 cows. All milk bottled and sold wholesale. Want married man capable of superintending such a plant, buying, producing, etc. Address BOX 265, care Hoard's Dairyman.

HELP WANTED

Wanted—Two single men as herdsman and assistant herdsman for Guernsey herd near Detroit. Write stating wages and giving references in first letter to JAMES JOHNSTONE, Supt., Peaceful Vista Farm, Route 3, Redford, Mich.

Wanted at Once—Single or married man to feed and milk Guernsey cows on test. Good wages and big opportunity for right man. State experiences, age and reference in first letter. WARE SHOALS FARMS, Ware Shoals, So. Carolina. 1-2

Wanted—Single men to milk and care for ten cows three times a day. Must be good dry hand milkers. Also one man to feed calves and young stock. $65 per month, board, room and laundry. CLEVELAND CITY FARMS, Warrensville, Ohio. 1-2

Wanted—Man who likes dairy work, as second man in first class Holstein dairy. Board and room furnished. Excellent conditions. Healthful climate. State institution tnree miles from good town. Single man or can use married man if the wife will help in the boarding house. Write wages wanted and experience and qualifications in detail in first letter. W. P. SNYDER, SUPT., North Platte, Nebraska. 1-2

Wanted—Single man for milk house and creamery work. Give references and wages expected. SPRING GROVE FARM, R. R. 7, Ft. Wayne, Indiana. 1-2

Wanted—Single man, good farm teamster. Best of living quarters. $60 month and board. ROUTE 1, BOX 23, Libertyville, Ill.

POSITIONS WANTED

Wanted—Position as farm manager. Experienced in dairying, Holstein A. R. O. work, hogs and general farming in Northern Wisconsin and Minnesota. Agricultural education. Single. Will furnish references. State particulars. Address BOX 257, care Hoard's Dairyman. 26-2

Wanted—About October 1 position as farm manager or herdsman by a first class married man in a herd where ability and results will be appreciated. At present am manager of a large dairy farm in Southern Wisconsin. Experienced in A. R. O. work and an expert calf man. Address BOX 260, care Hoard's Dairyman.

Wanted—Position on dairy farm by single man, age 20, for general work. Experienced, reliable and references. Address BOX 268, care Hoard's Dairyman.

Position wanted as herdsman or assistant herdsman in pure-bred Holstein or Guernsey herd, where good results will be appreciated. Expert calf raiser. Can give excellent references. State proposition and wages in first letter. Address BOX 264, care Hoard's Dairyman.

Highly experienced farmer, dairy and cattle man wants position as manager on modern dairy farm where he has a chance to stock the place with thoroughbred Holsteins. Only A-1 proposition considered. Address BOX 279, care Hoard's Dairyman. 1-3

Wanted—Position with Holstein herd on long time test by energetic, thoroughly experienced young man of good habits and education. Place must be modern and have a bright permanent future. ROUTE 6, BOX 73, Yakima, Washington.

Dairy farm manager open for position after September 1st. Married, no children. Practical and theoretical knowledge of pure-bred dairy farming, Holsteins preferred. Understands short and long time testing, fitting for shows, etc. Can furnish herdsman or would consider first class herdsman's position myself. Wife will board help if so desired. Satisfactory reference. American, age 30. State salary, particulars first letter. Address BOX 270, care Hoard's Dairyman.

Wanted—Position by married man on stock farm where house is furnished. Have had experience with pure-bred stock. Can give references. IMES CUNNINGHAM, Northfield, Minn. 1-2

Married man wants position at once as farm manager on up-to-date farm. Can furnish best of references. Address ELIND W. SMITH, Russell Farm, Chaffee, N. Y.

Wanted—Position as herdsman on dairy farm. Good man with stock and for barn work. Can commence November 1st. Address BOX 278, care Hoard's Dairyman.

Farm Manager, agriculturist, good executive, scientific and practical in all branches modern farming, dairying. Address BOX 277, care Hoard's Dairyman.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

(This announcement is made with the approval of the Bureau of Animal Industry, United States Department of Agriculture)

Better Sires-Better Stock

$1,000 Money Prize

UNDER rules and conditions provided by the Bureau of Animal Industry, United States Department of Agriculture, a money prize of one thousand dollars will be paid by Chapin & Company, Chicago, to that county in the United States which first becomes free from inferior sires.

By inferior sires are meant low quality purebred sires as well as all crossbred, grade and scrub sires. The word "sires" includes stallions, bulls, jacks, rams, boars and bucks. Poultry is not included.

A county eligible to receive the prize must have a total of 500 or more sires of all classes and 5,000 or more head of female breeding stock.

All owners of males kept for breeding purposes, in the classes mentioned, and a majority of other livestock owners in the county, must have declared their intention of hereafter using nothing but purebred sires by joining the "Better Sires—Better Stock" campaign of the Bureau of Animal Industry.

Upon notification by a County Agent or the officer of a county livestock organization, that the county he represents is free from inferior sires, the Bureau of Animal Industry will investigate the claim. If the Federal expert finds that the county is, in fact, free from inferior sires, the Chief of the Bureau of Animal Industry will declare that county as winner of the prize.

The prize money will be deposited in a local bank to the credit of the County Agent, official of the county livestock organization or other person or persons considered best qualified to administer the fund. It will be maintained as a revolving fund from which loans may be made to persons desiring to purchase purebred sires in any of the classes mentioned. After three years from date of the award, the fund, with accumulated interest, will be distributed in five equal prizes, in open competition, for the most meritorious young stock resulting from the use of purebred sires. One prize for horses, beef cattle, dairy cattle, sheep and swine.

County agents or officials of county livestock organizations desiring to enter their counties as competitors for this prize, will indicate their intention of so doing by letter to Chapin & Company, sending a duplicate of the letter to the Chief of Bureau of Animal Industry, United States Department of Agriculture, Washington, D. C.

No time limit is placed on the offer of this prize. No other rules govern the competition except those herewith provided by the Bureau of Animal Industry.

In addition to the money prize, the county that is declared winner will be presented with a silk banner and a certificate signed by Secretary of Agriculture E. T. Meredith and Dr. John R. Mohler, Chief of Bureau of Animal Industry.

CHAPIN & COMPANY

327 S. La Salle Street Chicago, Illinois

Facts From Ohio's Fertility School

(Continued from page 5)

equally on corn, wheat, and oats; another one-half on corn and one-half on wheat; and another, in which the fertilizer is applied, to wheat. The outcome has been that the net gain per acre per rotation is highest when the fertilizer has been applied to the wheat, the gain being $60.22, and the increase in crops being 17 bushels for wheat, 3.8 for oats, and 13 bushels for corn. The values used were: corn, $1.60; oats, 75 cents; wheat, $2.50; and clover, $25 per ton.

In discussing these results, however, Professor C. G. Williams, associate director of the station, points out that these experiments have been carried on only 5 years and that so far as experimental men are concerned, it would be best to consider the application of one-half of the fertilizers, to be used in a rotation on corn and the other half on wheat. So far the total value of increase, or the net gain per acre, per rotation, has not been as high as when the fertilizer (1,000 lbs.) is applied all at one time on the wheat. This, of course, from the farm management standpoint is better, since the labor is distributed over a greater period of time. Some argue that it would be possible to put all fertilizers on one crop, thus saving some labor, but it would require a larger investment per acre at one time in that it would require a larger investment in fertilizers per acre when the wheat is sown.

Clark County, Wisconsin, Guernsey Breeders' Picnic

The Clark County, Wisconsin, Guernsey breeders were fortunate in having a bright, sunshiny day June 23 for their annual summer meeting and picnic at the farm of F. E. Winn, with nearly three hundred in attendance.

L. E. Scott told of tests being put on where all dairy breeds were represented and of the Guernsey's ability to produce butterfat more cheaply than other breeds. He urged better co-operation among the breeders and told of what the Chippewa County associations had done the past year to get more Guernseys into the county. He also especially urged the Clark County breeders to organize boys' calf clubs so as to help the boys get pure-bred calves.

The talk was followed by the business meeting and the following officers were elected: President, R. C. Powers; vice-president, George Emfeld; and secretary-treasurer, J. P. Shuering.

Thirty-five new members were added to the association. The association went on record as instructing their secretary to ask the county board to hire a live county agent and one who is interested in live stock.

There were several requests from different members that the next picnic be held in various parts of the county, but it was finally left to the board of directors to select the place.

E. A. POWERS.

Imperfect Bull

We have a fine Holstein bull 8 mos. old which has only one testicle down in place. The other is just outside the body and seems well developed. Will this bull be likely to be a calf getter?

Pennsylvania. C. J. F.

Such a bull is termed a "high flanker" and will be likely to prove sure as a breeder. Where one testicle is in the scrotum and fully developed the animal is fertile and the testicle which has not come down but is well developed also may perform its normal function. It is considered somewhat unwise, however, to breed from such a bull as the tendency to a like condition may prove hereditary, but there is no certainty about that.

"Going All Around"

says the Good Judge



I find men are taking to the Real Tobacco Chew.

The good, rich taste lasts so much longer that you find it saves you money to use this class of tobacco. Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

RIGHT CUT is a short-cut tobacco
W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 110 Broadway, New York City

TRADE IP MARK
BLACK FLAG
Three Sizes 15¢ 40¢ 75¢ Except west of Rockies

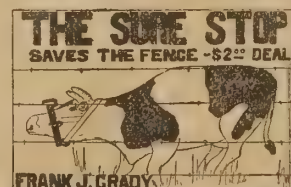


Kills Flies

Kill flies and prevent disease. Put one teaspoonful of Black Flag in sheet of folded letter paper; blow it (with breath) into air of rooms. Will kill almost every fly in ten minutes. Kills insects by inhalation. Bugs don't eat it—they breathe it, and die. Destroys ants, flies, fleas, bedbugs, roaches, mosquitoes, some moths; lice on animals, birds or plants. Harmless to people and animals. Look for BLACK FLAG trademark and red-and-yellow wrapper. Drug, department, grocery and hardware stores, or direct by mail on receipt of price. *U.S.Gov't (Bulletin 771, Agri. Dept.) shows glass containers keep insect powder freshest. Buy Black Flag in Sealed Glass Bottles instead of 'insect powder' in paper bags or boxes.*

BLACK FLAG, Baltimore, Md.

THE SURE STOP POKE
SAVES THE FENCE - $2.00 DEALER OR DIRECT



IF NOT O.K AFTER TWO WEEKS RETURN C.O.D BY PARCEL POST AND GET MONEY BACK. CATALOG FREE.

FRANK J. CRADY
271 WINNEBAGO ST. MADISON, WIS.

When Writing to Advertisers, Mention Hoard's Dairyman

The G. L. F. Exchange in New York

(Continued from page 3)

ing them $25,000,000 roughly. Preparations are already being made by the G. L. F. Exchange to effect a big saving for this industry by handling this business. It will be able to purchase feeds under huge contracts, securing the advantage of a reduced price. This has been demonstrated. It will have the necessary capital to secure warehouses in which to store it so that it will be possible to buy on a low market and hold it. It will be able to save an immense amount in transportation by shipping in trainload lots. It will be possible to secure feeds of a higher standard.

The men who have the work of carrying on the Exchange are not theorists, they are practical men. Realizing that there was no time like the present to start a really worth-while work, they secured the services of Professor E. S. Savage of the Department of Animal Husbandry of the State College of Agrculture at Ithaca, to go out to the Middle West and investigate feed conditions. Professor Savage is known the country over as an expert on feeds and feeding. Next year farmers will have the benefit of his expert knowledge plus the capital of the G. L. F. Exchange, when they come to buy their feeds.

To complete the cycle is the Dairymen's League on the selling end. It wields the concentrated will of all the dairymen in the state in securing a fair price for their milk. An instance, a remarkable instance of its value, was shown during the last weeks of May, 1920, when it was entirely successful in securing prices for milk during June, July, August, and September that was a distinct and just triumph for the dairymen of the state. With these two factors working in close harmony it will be possible to secure a more equitable distribution of profits in the dairy industry in New York State.

In these days when cheap production of milk is absolutely necessary, the G. L. F. Exchange has another function to perform on the buying end that is of incalculable importance. The dairyman must produce as much of his food as he can on the farm. In order to do this best he must secure the finest seeds and fertilizers that money can buy. And if he goes into the retail market, as he is forced to do at present, much money can do wonders in purchasing some very poor seeds. Many can vouch for that in the case of the A. A. Berry Seed Company. It is the purpose of the Exchange to buy guaranteed seeds in bulk and sell them to New York State farmers. It will mean protection against unscrupulous seed companies, seed of high test, and a lower price than can be obtained elsewhere for seeds of the same quality.

Fertilizer is another item. Fertilizer speculators have played hob with the farmer heretofore. This year shipping conditions have made conditions still worse. When the G. L. F. Exchange gets into its full stride, it will be possible to eliminate much of this handicap. It will do the same in the fertilizer business as it does in the seed and feed business—supply the dairymen of the state with a high grade fertilizer at a price that is better than can be obtained elsewhere.

Lots of dairymen may say, "Yes, it sounds very nice, but will it work?" That is the fine part of it. It has shown that it works already through the initial venture on the part of the State Grange. The New York Grange Exchange has prospered remarkably when the conditions and handicaps under which it strove are considered. It pointed the way, found out many mistakes that its experience will render unnecessary for the G. L. F. Exchange, and, best of all, left a solid foundaton for the new enterprise to build on.

Dairymen in New York State may well look forward with optimism to the future. As time goes on their interests will be more and more fully protected. They will be guarded in their buying and in their selling. It will only remain for them to use the best knowledge they have or can obtain to produce the highest quality of milk at the most economical rate. The co-operative feature of the Dairymen's League will protect them at all seasons of the year. If they have a surplus which dealers will not accept, they can dispose of it to the League. It is protection with a big P.

The week's campaign to float the stock of the new organization has proven that dairymen in the state of New York realize their opportunity presented through their medium. Reports show that several counties oversubscribed their quotas and that many others met them. Enthusiasm was decidedly evident. New York State dairymen have something that it will pay the dairymen of other states to watch, no matter how well satisfied they are with present conditions.

Jersey Cattle Notes

For week ending July, 2:

Number of animals registered: Bulls, 344; cows, 823; total, 1,167. Number of transfers recorded: Bulls, 266; cows, 1,226; total, 1,492.

SWINE

Cedar Crest Farms

Berkshires for Sale

Open and Bred Gilts at Reasonable Prices

J. K. Dering, Owner, Lake Villa, Ill.



SPECIAL PRICE

on Duroc pigs of May and June farrow. Sired by State Fair winners. Gilts bred for fall litters. Write for Catalog and price list.

Green Valley Cherry King 2nd, No. 260435n.

We deliver the Hogs before you pay.
GREEN VALLEY STOCK FARM
BOX 6. LOUISVILLE, ILLINOIS

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois.

ISLAND FARM DUROCS

We are offering a few choice spring pigs, either sex, at $30 each at weaning time. Write us your wants.
ISLAND FARM, - Floodwood, Minn.

DUROC JERSEYS

Registered spring boars for sale. Growthy youngsters of the best blood lines.
Daily Bros., Manito, Ill.

Alfamarl Springs

Offers for sale Rex of Alfamarl Springs by Union Star, a richly bred Yeksa bull whose dam, Reunion made 576 lbs. fat at three years; out of Goldie Belle, a good daughter of Tricksey's Sam. He is ready for service.
F. M. TESS, Mgr., - TROY CENTER, WIS.

RED POLLED

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls also heifers and young bulls by them. Don't forget the date. Send for catalog.
Jean Du Luth Farms, Duluth, Minnesota.

BROWN SWISS



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.
IRA INMAN, Secretary Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

15,540.9 lbs. Milk
613.60 lbs. Fat

Is the average official production of his two nearest dams. This Brown Swiss bull is 16 months old and ready for service.
Two other fine yearlings and several younger bulls. Entire herd FEDERALLY ACCREDITED. Write for pedigree and prices.
WALHALLA FARMS, Middleburgh, N. Y.

Undefeated Show Bull

for sale. Because of sickness it is impossible for us to show this year and we are offering Gallatin Brownie for sale. He was undefeated at 4 state fairs, Waterloo and the National in 1919. Grand champion at the National. Now 3 years old and in even better show form. His dam is on official test and going strong.
We also have several very promising yearlings and bull calves, good show prospects.
HULL BROS., - PAINESVILLE, OHIO

For Sale

2 splendid Brown Swiss bulls, ready for service; best blood in America. For quick sale will accept any reasonable offer. Address
J. F. SCHOELLKOPF
Marine Trust Building, - Buffalo, N. Y.

JERSEYS

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.
Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.
Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.
Price, $150 f. o. b. cars our station.
Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

"OUR MAJESTYS SOLD"

And This "RALEIGH WILL SELL"
Bull, just 10 months old, and a clipper.
Sire—Grandson of Mable's Raleigh and Rozel's Noble.
Dam—By son of Financial Raleigh. She traces 3 times to Financial King breeding. Now on R. of M. test and making good.
G. D. GILBERT, Manager.
Ceylon Court Farms, Lake Geneva, Wis.

Hillcrest Jersey

Bull calf, 6 mos. Sire—Figgis Wingold. Dam—on R. of M. cow sired by grandson of Golden Fern's Lad. For particulars and price write
ROLLIE VANDERVORT, TOMAH, WIS.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.
Address: J. Q. Emery & Son, Edgerton, Wis.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Tierra Bella Stock Farm

Public Sale of Registered Chester White Hogs

We have reserved 40 choice Chester Whites, including 16 tried sows and fall gilts bred to Jumbo for fall litters, 10 big type fall boars sired by Pay Streaks Monarch, a good son of the Grand Champion Pay Streak, also 14 spring sows and boars sired by these big type boars. Everything will be registered and immuned by the double treatment. Write now for catalogue and plan to be our guest at Mauston, Wisconsin. Sale day August 14th.
V. C. TIEDT - - - - - - - - - - MAUSTON, WIS.

Who Pays The Price?

All stockmen have losses. Usually they come unexpectedly. That's why live stock insurance is desirable. It protects your invested capital. It reimburses you for loss.

We protect your investment at a cost less than the interest rate on the money you would use to replace a loss. When you lose an animal we pay you the money to replace it. WE PAY THE PRICE.

Insure In A Home Company, Owned by Wisconsin Stockmen

WISCONSIN LIVE STOCK INSURANCE COMPANY
Bank of Wisconsin Building, Madison "Not a Mutual Company"



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right – put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd





EVER WISH YOU KNEW

—HOW THE—

DAUGHTERS of YOUR BULL WILL MILK?

If you put two or three years into breeding and developing a lot of heifers you want to be very sure indeed that these heifers, after all the time and money you have spent on them, will be profitable producers. You can only be certain of this through the proper selection of your herd sire; and the only dependable way to judge of this quality in your bull is by the official records back of him.

RAVINIA AYRSHIRES

have the world's greatest number of A. R. records and world's records. A Ravinia Ayrshire bull will bring you dependable production together with strength, vitality, and type.

Write us today for our profit suggestions in Ayrshires and for "Why I Chose the Ayrshire".

GOSSARD BREEDING ESTATES

Martinsville, Ind. Preston, Kans. Axial, Colo.

Address all correspondence to General Offices, 1007 So. Michigan Ave., Chicago

THE METROPOLITAN LIFE INSURANCE COMPANY SANITARIUM FARM

HERD OF AYRSHIRES

Comprises 100 Breeding Matrons
From heavy producing families.

In service are:—

Boghall Crusader, No. 14968 out of the noted show cow "Boghall Snowdrop 2nd" A. R. Record 13825 lbs. milk, 503 lbs. fat.

Strathglass Traveller, out of Langdyke Sally 2nd, A. R. records, J-3, 12,925 lbs. m., 457 lbs. f. C. M., 15,985 lbs. m., 566.73 lbs. f.

Strathglass Royal Review, by "Hobsland Piecemeal", and out of Holehouse White Pearl 6th with 3 A. R. records averaging 12,000 lbs. milk, average test 4.2%.

Some good young bulls are in offer now.

For particulars, address

Dr. Horace J. Howk, Physician in Charge, Wilton. N. Y.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.

Some Nice Young Bulls For Sale.

The best of breeding. E. N. Manley & Sons, Lyons, Neb.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Every now and then some cock and bull yarn is started by ignorant men as to the evil effects of silage. No one can stop them. They are the natural product of ignorance. Disraeli once said, "Even Providence could not provide for the unforseen machinations of stupidity." The man who would seek to put down every ignorant tale told about silos and silage has an interminable task ahead of him.

ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

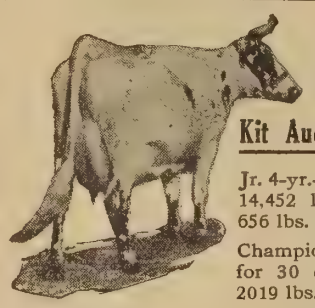
Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS



"Ayrshires of Quality"

Kit Auchenbrain

Jr. 4-yr.-old record 14,452 lbs. milk, 656 lbs. fat.

Champion of Breed for 30 days with 2019 lbs. milk.

Her bull calf, Kit's Surrel, by Surrel for sale.

WEYMOUTH FARMS,
North Weymouth, Mass.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Highland Farm Ayrshires

If you want—

Big Stylish Cows
Big Teats and
Big Production

Get a "Baron" to head your herd. A few choice bull calves by Imp. Baron's Best of Bargenoch, No. 12858, out of A. R. Finlayston dams, for sale.

Lt. Col. John R. Valentine, Prop Philip C. Palmer, V. S., Manager
Bryn Mawr, Pennsylvania



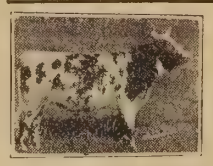
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan

Sons of
Ringmaster's Brae Burn Diplomat
For Sale

GEORGE F. WHITE, WESTFORD, MASS.

Ringmaster's Brae Burn Adonis

Young bull calves by this sire are now offered.

W. Grant Fancher, Essex Co. Training School, Lawrence, Mass.

Brae Burn Farm

Cavalier's Model Champion

1st at National 1919

Heads Our Herd



L. W. NEWTON, ASHBURNHAM, MASS



SPRING CITY STOCK FARM

We *Breed* and *Develop* Winners
Nine times *Premier Breeder* at National

We can supply your Ayrshire needs with animals bred to win.

Adam Seitz & Sons, Waukesha, Wis.

MIDDLESEX MEADOWS FARM

SOUTH LINCOLN, MASS.

AYRSHIRES

A. Henry Higginson



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.

Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Special Sale Bull Calves

sired by Friendlesshead Victor (Imported) champion two-year-old 1919 Wisconsin, Illinois and Iowa State Fairs, Dairy Cattle Congress at Waterloo, Iowa, and National Dairy Shows, and out of a high producing Advanced Registry cows. At farmer's prices.

ALDEBARAN FARMS, RACINE, WIS.



Economy in Production ← GUERNSEYS → Quality of Products



Indications that the Guernsey is recognized as the practical farm breed are thoroughly demonstrated by the great demand for Guernsey bulls in the leading dairy states. Wisconsin, the state leading in butter production, purchased more than 30 per cent of all Guernsey bulls sold in one year preceding May 1, 1920. Send for our free booklet, "Story of the Guernsey."

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 65, PETERBORO, N. H.

The Second Southeastern Guernsey Breeders' Sale

to be Held at Salisbury, N. C., Aug. 12th, 1920

In Co-operation with Rowan County Guernsey Breeders' Ass'n

This offering will consist of thirty-five selected Guernseys, and will come from four different states and about twelve different herds. These animals were selected by a Committee and are pronounced the best bunch of Guernseys ever offered at public auction in the South. They are from herds all under Federal inspection and every animal is guaranteed a breeder. There will be five bulls, whose dams average over 600 lbs. of fat each, and thirty females from six months to four years of age. Among them are daughters of some of the best bulls of the breed and granddaughters of the sensational Guernsey bulls. Two granddaughters of King of Chilmark, one of them bred to a son of Chilmark; eight granddaughters of Itchen Daisy's May King of Langwater, a granddaughter of Dolly Dimple's May King of Langwater, granddaughters of Ne Plus Ultra, granddaughters of Border Raider, and some of the very choicest Guernseys from the best herds in the Southern States. Three splendid heifers bred to a son of King of Chilmark, who is full brother to Lady Du Chene.

We feel that all Guernsey breeders will be interested in the kind of animals that will be offered in this sale and would suggest that you write early for catalog to

C. T. RICE, SALES MGR., OAKTON, VA.
Col. D. L. Perry, Auct.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredite' Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.

August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137

Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559,* pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398,* whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

CLELAND FARMS GUERNSEYS

We have just issued a new sale list, offering some very good cows and heifers.

We have two bulls just passed six months old, both are very good individuals of choice breeding, with excellent production back of them.

CLELAND FARMS, Chagrin Falls, O.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Your Opportunity

to obtain the blood that breeds on, sons of

Langwater Raritan

the only GUERNSEY BULL that has a full sister (Langwater Nancy) with 1000-lb. fat record.

Send for sale list.

Herdlea Stock Farms, - New Hope, Pa.

We are now offering a few well bred

May Rose Bull Calves

Sired by Langwater Renown 39636 and out of Daughters of Pencoyd's Golden Secret 16550. The dams are on test and doing very well. Also *an extra fine Yearling.* Now fit for light service. He is fawn and white, with clear nose. Anyone wishing to get the blood of this great family will do well to consider the above breeding. For price, pedigree, and all particulars address

GREEN MEADOW FARM,
Walter Jauncey, Mgr., Williamstown, Mass.

The Mixter Farm

325 GUERNSEYS 325

Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.

HARDWICK, MASSACHUSETTS.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr.**

Upland Farms Guernseys



THE GET OF LANGWATER CAVALIER NO. 21012

Langwater Cavalier is *Breeding On* in a remarkable way. His Granddaughters as well as his daughters are proving that he is a sire of sires.

Can you afford to overlook this point in selecting your *Herd Sire?* Write us for particulars about bulls that will *sire show winners* and *producers.*

F. P. FRAZIER & SON, Owners. W. K. Hepburn, Mgr. Ipswich, Mass.

ALBAMONT GUERNSEYS

Superior young bulls two to twelve months old, rich in May Rose blood. Several are

Sons of Don Diavolo.

Send for sales list. **J. C. HAARTZ, 10 High St., BOSTON, MASS.**

The Waupaca County Guernsey Breeders' Association

offers for sale high grade Guernseys from one of the oldest and largest Guernsey sections of the state of Wisconsin, also from a County ranking second in the state for the number of herds under Federal Supervision to eradicate Tuberculosis. Cow testing association work was early established and is being maintained in this Guernsey territory. WRITE US.

L. S. MURAT, Pres., E. A. HOTZ, Sec'y, - - Scandinavia, Wisconsin

Let Us Supply You With Guernseys

OUR GUERNSEY CATTLE ARE BRED FOR TYPE AND PRODUCTION. We can supply you with ANY NUMBER, MALE OR FEMALE, GRADE OR REGISTERED.

Our 175 members are ready to supply your demands at the most reasonable prices considering the excellent quality of stock offered.

Do you want a high class Guernsey bull, out of a high producing dam? Write us. Are you in the market for a carload of grade cows and heifers? Write us. Are you planning a foundation of pure-breds? Write us.

Come to the County or write your wants.

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are gh grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.

Send for sale list.

M. L. Welles, Rosendale, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

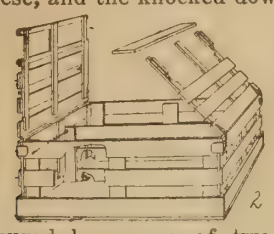
Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Inventions and Appliances of Interest to Agriculture

Folding Crate

When it is desired to fold this crate the locking bar is removed, the ends and partition are folded in, the sides and half covers are in turn folded in on these, and the knocked down crate

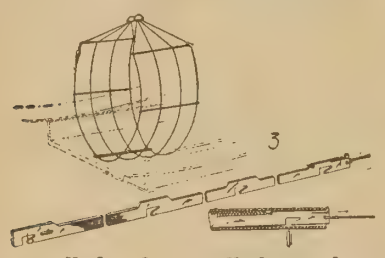


is secured by means of two spring pressed bolts extending through the bottom.

(Howard Harsh, Osakis, Minn. U. S. Patent 1,325,323).

Sling

The new feature here is the locking bar shown enlarged at the bottom of the figure. It fits into the tubular rod at the bottom of the sling, and

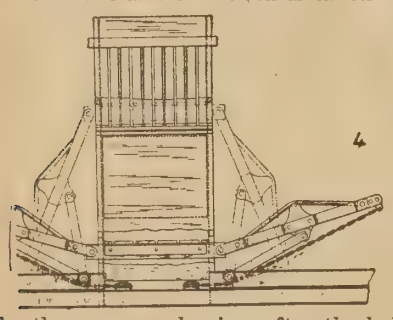


when pulled, releases all the cords on one side and dumps the load.

(C. W. Liberty, Minot, N. D. U. S. Patent 1,325,025).

Hay Press

This press does not need springs and air buffers to take up the shock of the falling follower plate. The hay is compressed by a toggle lever mechanism and the shock is taken up

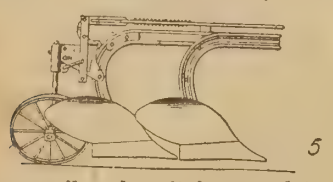


by the same mechanism after the bale is tied.

(Junior Monarch Hay Press Co., San Leondro, Cal. U. S. Patent 1,325,306).

Plow

This invention refers to the rear support of the plow frame and more particularly to the locking mechanism which holds it in elevated position. This is a curved latch which locks automatically when the actuating rod is moved forward; and re-



leases easily when it is moved to the rear.

(Sears, Roebuck and Co., Chicago, Ill. U. S. Patent 1,324,101).

Canada. C. J. LYNDE.

Sings a nameless poet: The old hen sat in a leafless tree and said, "Nobody cares for me. My food is what I find about, I hunt for it till I'm frazzled out. My owner says I do not pay, and that I ought to sing and lay. I wish he had to sit out here and live on pickin's all the year. I'll bet a half a cent, by jing, he wouldn't lay from now till spring."

GUERNSEYS

In the July 2d Issue

of the Hoard's Dairyman, page 1446 is an account of the Anna Dean Sale. If you read this you will notice that twenty-five daughters of Imp. Goldseeker of Anna Dean Farm sold at an average of $500. I am offering for sale three bulls by same sire as these heifers. One of them out of a daughter of Masher's Sequel with a record of 635 lbs. of fat. On the inside cover of the Guernsey Breeders' Journal, the last issue, you will find a picture of this cow's sister. I am also offering for sale a daughter of Imp. Clipper that sold for $1,950.00 at this sale.

W. W. CLARK, - Vesper, Wisconsin

Waldwic Guernseys FOR SALE

A few choice young bulls, sired by son of "Imported Itchen May King" and from dams making good A. R. records. Also few well bred cows and heifers.

EDGAR P. SAWYER, OSHKOSH, WIS.

WILLOW LANE GUERNSEYS

Young Bulls for Sale

some of serviceable age and younger. All from imported dams and by the best bulls on the Island.

Send for prices and particulars.

J. F. Davis, - Livingston, Wisconsin

HOLSTEINS

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.-072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk;* (4.02%) *1,294.7 butter.*
At 3- 3-23, 365 days—*22,496.6 milk;* (3.94%) *1,108.9 butter.*
2 years under full age—*43,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

YEARLY RECORD BLOOD

Bull calf born Dec. 11, 1919. Sire, Maplecrest Avalon, whose four nearest dams average 1,067 lbs. butter for the year, three of them being 1,200-lb. cows. Dam by a son of Dutchland Creamelle Korndyke Lad, with seven dams in her pedigree over 1,000 lbs. butter in a year. She is now on yearly test as senior two-year-old and is making a good record. Calf 90 per cent white, a very handsome individual. He has twelve dams in his six-generation pedigree that will average 1,035 lbs. butter in a year. Price for prompt sale, $250. The combination of yearly record blood would be hard to equal in the country.

AVALON FARMS, E. D. Curtis, owner, Bantam, Conn.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Warwood Farm

Has for sale

Holstein Bulls

from two to twelve months old, of excellent breeding.

FRED C. LANDORF, Foreman, Lisle, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Grandson of King Segis Pontiac

Ready For Heavy Service

We have for sale a 2-year-old grandson of King Segis Pontiac from one of our best "all the year" A. R. O. cows. He is a splendid individual, well marked and very well grown. Priced to sell. Also have a few bull calves. Write today.

PINEHURST FARMS, ROCKFORD, ILL.

HOLSTEIN BULLS

Ormsby Bred **Ready For Service**

from A. R. O. Dams Running on the 10-month test.

We are now able to offer bulls that are well grown, straight, deep bodied individuals, that combine in the closest possible degree, the blood that has made Minnesota famous. They are priced from $200 and up and we will make a lot price to breeders' clubs or county agents desiring bulls of the best breeding to place on the farms of their counties. We are also able to offer a few cows, to freshen in the fall, to the service of our herd sire, he by the only living son of PIETERTJE MAID ORMSBY and out of the highest record daughter of KING SEGIS PONTIAC COUNT.

Write or come and see us, farm just outside of city limits of St. Paul.

RAMSEY COUNTY HOME, - North St. Paul, Minn.



BEECHER WYTHE 2ND

Butter 7 days 19.65, milk 534.6 at 15 years of age, 75 days after freshening; 19.1 lbs. butter, 548 lbs. milk, 109 days after freshening.

At 14 years of age. Grand Champion Cow of Indiana 1918; 22,554 lbs. of milk, 800 lbs. of butter, as a ten-year-old. Dam of 12 consecutive heifer calves and one bull calf. Nine A. R. O. daughters.

2 Serviceable Bulls For Sale

Sired by King Colantha Lyons, a 35.68-lb. son of King Lyons, he by the great King Segis.

No. 1. Born April 18, 1919. Two-thirds white, nicely marked, good individual. Dam: 16 lbs. butter in seven days at 24 months. His grandam, Beecher Wythe 2nd. This cow has produced over 100 tons of milk and is now nearly 16 years old, is still milking at a great clip. Price $500.

No. 2. Born March 11, 1919. Five-sixths white, good individual. His dam, 13 lbs. butter at 2 years. Price $250.

M. J. SEBERGER
Schererville, - Indiana

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois

BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

Combining Type, Size, Constitution and Production.

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

BUY A BULL



That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.

W. J. Gillett & Sons, Rosendale, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**

Head Your Herd With a Bull!

Get a son of King Superba out of one of our good cows. King Superba's offspring won first and second in get-of-sire and calf herd at the Wisconsin State Fair, 1918. His four daughters sold in the Waukesha Sale, Nov. 1919, averaged $959. King Superba's dam was the first cow to be strictly officially tested for the entire year. She produced 1231 lbs. butter, 26,433 lbs. milk as a four-year-old. She has twice produced over 33 lbs. butter in 7 days. If you wish to combine individuality and production, head your herd with a Son of King Superba. We now offer a number of his choice sons, serviceable age and younger, out of dams with records up to 24 lbs. Several of the dams are on yearly test. Don't wait. Come and see them now. **BAIRD BROTHERS, WAUKESHA, WISCONSIN.**



One of the sons of King Superba. They are all excellent individuals.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS. HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke age over 37 lbs. butter in 7 days. Come

dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams aver- and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Thorp Holstein Breeders' Association

King Korndyke Haidee Ormsby

highest record bull in central Wisconsin, is now owned by this association. He was bought June 9, 1920, at Wm. Krause & Sons dispersal sale for $8550. Members consider themselves fortunate in securing a sire of such wonderful type, individuality and breeding. His sire is King Korndyke Colantha Ormsby, by a son of Colantha 4th's Johanna, the first 35-lb. cow and for years the world's champion butter producer in the aged class. His dam, Haidee Fanny Ormsby is a 34-lb. daughter of Sir Pietertje Ormsby Mercedes, noted as world champion sire of prize winners and the greatest sire of long distance cows in the world.

W. F. Nolechek, Secretary, Thorp, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

Crystal Run Stock Farm

Offers for sale 3 young Holstein bulls from 4 to 9 months old, sired by 31-lb. bull, whose first daughter to be tested made 21 lbs. butter in 7 days. Every dam in one bull's pedigree has a good A. R. O. record.

Priced from $100 to $200 f. o. b. Shelby.

GEORGE B. WILL, R. R. 6, Shelby, Ohio.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write C. J. Reamer, North Liberty, Ind.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed to have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein Friesian Breeders' Association.
A. F. Gafke, Secretary, Jefferson, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Buy Selected Holsteins

We fill orders for pure-bred Holsteins, high grade dairy cattle and choice young stock with carefully selected animals.

It will pay you to write us.

GUST MELSTER & SONS, CAMBRIDGE, WIS.

2500 Healthy Holsteins 2500

Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.

Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls 3 to 4 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

PABST KORNDYKE SEGIS

a son of Korndyke Segis Johanna heads my herd. His dam, Pabst Citronella, made 669.4 lbs. butter, 16,867.8 lbs. milk in 1 year as a 2-yr.-old, 26.285 lbs. butter in 7 days as a 4-year-old.

HERMAN LUEBKE, R. 8, WATERTOWN, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

Check Or Bond Buys Dandy Bull Calf

Born June 20, 1920. His dam and sire's dam average over 30 lbs. butter and 657 lbs. milk. Dam and grandam have good yearly records. Rich in Pontiac Korndyke and King Segis blood. Dark in color. Cut price. **Chic Dairy Farm, - - Juneau, Wis.**

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 8-month-old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 862 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs. Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY

WISCONSIN

DO YOU KNOW?

That there are 40 bulls with 30-lb., 40-lb. or 1,000-lb. yearly record dams in service in WAUKESHA COUNTY?

That there is more long and short time production work done in WAUKESHA than in any other county in Wisconsin, the greatest dairy state in the Union?

That WAUKESHA contains more tuberculin tested cattle than any other county in the world?

That WAUKESHA breeders have more dollars invested in Holstein-Friesian cattle than any other county in the world?

That WAUKESHA COUNTY produced the highest priced dairy cow in the world?

That bred for production stock pays?

WAUKESHA BREEDERS can supply your Holstein wants.

Tuberculin tested herds—State and Federal.

Individuality SLort and long time production records.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin. - - Office 254 Broadway

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

Oconomowoc, Waukesha Co., Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Minnesota Holstein Breeders' Association

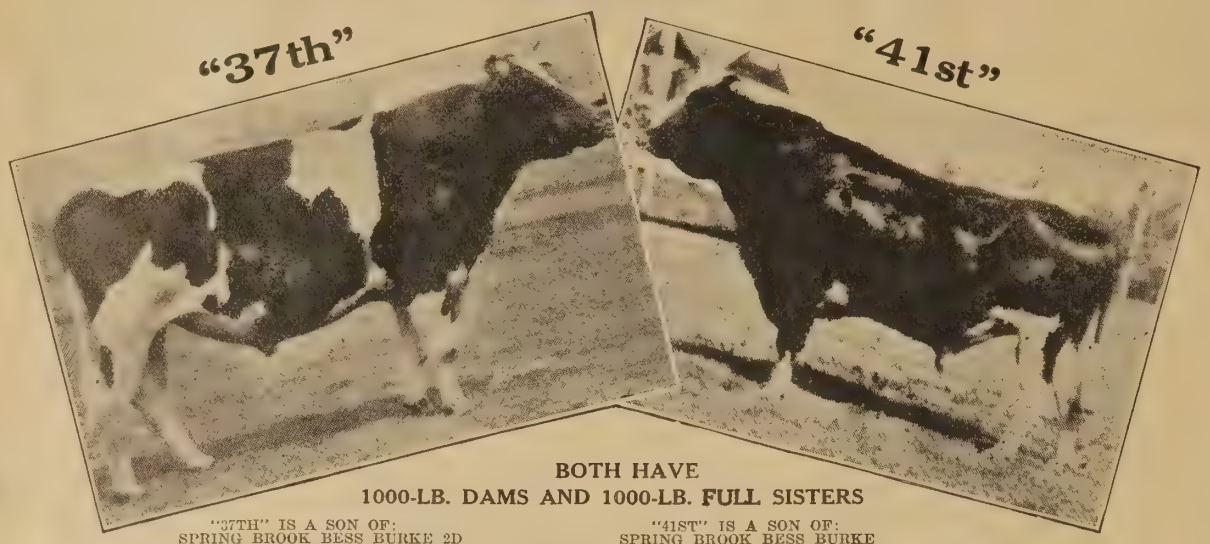
Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

SIR PIETERTJE ORMSBY MERCEDES

"THE WORLD'S GREATEST YEARLY RECORD SIRE"

OUR HERD SIRES



BOTH HAVE

1000-LB. DAMS AND 1000-LB. FULL SISTERS

"37TH" IS A SON OF:
SPRING BROOK BESS BURKE 2D
Butter, 365 days 1,290.91
Butter, 3 years 3,380.14
"The World's Largest Dairy Cow"

"41ST" IS A SON OF:
SPRING BROOK BESS BURKE
Butter, 365 days at 9 yrs. 1,094.16
Butter, 3 years 2,903.93
"The Greatest Mother of the Breed"

E. C. SCHROEDER FARMS, - MOORHEAD, MINNESOTA

(A FEDERAL ACCREDITED HERD)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.

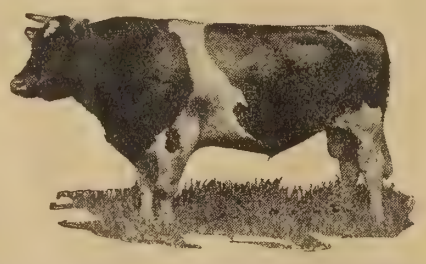
"The Home o the Ormsbys."

Use A Son of "Piebe"

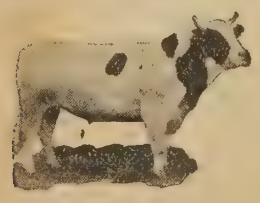
from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



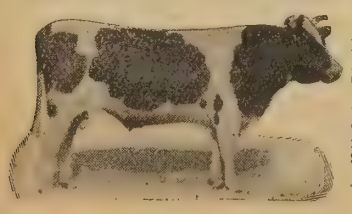
MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

Do You Need a Bull?

I am offering a splendid yearling for sale. He is growthy, well marked, and as straight as a line. His dam is a 24-lb. 4-year-old daughter of Sir Veeman Hengerveld and his sire a 28-lb. son of King of the Black and Whites. His 11 nearest dams average 28 34 lbs. in 7 days. Several younger bulls for sale.

E. J. BROSIOUS, STILLWATER, MINN.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines Very good individuals from good A. R. O. dams. For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

SIZE

King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired." Weighs 2,311 lbs. at four years. His dam is the highest record daughter of Sir Johanna Fayne with 32 lbs. in seven days and 941 lbs. for the year. We offer his sons from high record cows. Yearly record backing.

FLECKS FARMS, - Faribault, Minn.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM.
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

FRED S. BALL

SPECIAL HOLSTEIN AUCTIONEER

I sell a big per cent of all the Imported sales in the south-west. Wire early for dates as I sell every day in sale season. **EL RENO, OKLAHOMA.**

Bulls and Bull Calves

Bull calves from two to sixteen months of age from Ormsby dams by a 32-pound grandson of MAY ECHO SYLVIA, priced from $200 to $300. Photo and pedigree on application.

Bostwick & Son, - Ardmore, Okla.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - - IOWA

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

CLOVERCREST HOLSTEINS

Herd Bull for Sale

A 35.51-lb. grandson of King Korndyke Sadie Vale, born Jan. 1917. Six nearest dams average 116 lbs. butter in thirty days and over 30 lbs. in seven days. He is a son of K. K. S. V. 24th and Beauty Rauwerd Hengerveld 2d, whose sire is Prince Segis Korndyke. He is a sure breeder, seven-eighths white. Write for photo and pedigree.

CLOVERCREST FARM, Amboy, Minn.

Mankato Holstein Farms

are combining the best of Ormsby breeding through the sons of these great proven long distance sires: Sir Pietertje Ormsby Mercedes, Ormsby Korndyke Lad, King Korndyke Colantha Ormsby. These great sires have 22 daughters over 1,000 lbs. and 35 over 30 lbs.

A Federal Accredited Herd.

Marlow & Randall, - Mankato, Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**
H. R. Searles, Mgr. Rochester, Minn.

Here's Your Chance to Get a Choice Bull

From a sire whose 4 nearest dams averaged 29 lbs.

❖ Born November 1916 Black and white ❖ Born February 1917 Black and White ❖
❖ Born May 1917 Black and White ❖
3 Choice Bargains

L. H. HUNTER, RANDOLPH, MINN.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams sire a 31.42-lb. grand son of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT STILLWATER, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Facts in BLACK & WHITE

Holstein Registrations and Transfers Indicate Great Prosperity

The total number of pure-bred Holstein Friesian cattle imported from Holland was 7,752, and from these have sprung all the pure-bred Holsteins in the United States and Canada, as well as the numbers exported to Australia, South Africa, New Zealand, Mexico, and elsewhere. The Herd-Book of The Holstein Friesian Association shows a total of 783,427 registrations and that of Canada 100,725. The transfer record indicates a state of demand, and it is of interest to know that in 1918, 94,465 transfers were recorded.

Europe will look to America to replace her breeding stock depleted by the war, and values of American Holsteins will make substantial advances.

Know the Holstein facts from our various booklets. Send for them today and become a Holstein breeder or owner.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

SIR JOHANNA FAYNE



Sir Johanna Fayne 42147

has 31 daughters with long-time records. 10 daughters four years and older average 663 pounds fat from 21,441 pounds milk in 365 days. 7 three-year-olds average 455 pounds fat from 13,732 pounds milk in 305 days at an average age of 3 years, 4 months, 12 days. 14 two-year-olds average 388 pounds fat from 12,716 pounds milk in 305 days at an average age of 2 years, 3 months, 23 days.

IOWANA FARMS
DAVENPORT, IOWA.

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA



Home Farm Sadie Wayne Lad

Breeding With Show Type

in this bull born March, 1919. He is by one of the greatest sons of King Korndyke Sadie Vale and his 15 nearest dams, all tested, average 28.4 lbs. butter in 7 days. He is of exceptional quality, federally tested and recommended in every way.

He is priced for quick sale.

W. R. Barney & Sons, Home Farm, - Chapin, Iowa.

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH WHEATFIELD FARMS A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.

Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS
J. C. Dold, Owner. R. F. D. No. 14, LA SALLE, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. 7/8 pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

A King of the Pontiacs, Bull

Sire, Terracelawn King Pontiac; His sire, King of the Pontiacs; His dam, a 32-lb. daughter of Hengerveld De Kol. His first two daughters average more than 23 lbs. at two and a half years. Dam of calf a sister to the great 40-lb. cow, Otego Valley Christmas Belle, has 21.73 lbs. at three and a half years and is an excellent prospect for a 30-lb. record.

Calf was born Oct. 19, 1919, is a splendid individual, nearly white and well grown. Price $250. Address

S. J. Burton & Son, Worcester, N. Y.

2 Choice Bulls for Sale

No. 1. Born Dec. 19, 1919, good individual, good length, and a straight top line, three-fifths white. Dam, A. R. O. 18.10 lbs. butter as a senior yearling, milk 400 lbs., and daughter of 35.68-lb. bull, King Colantha Lyons. Sire, King Korndyke Gem, whose dam's A. R. O. record is 32.74 as a 3-year-old. Price $225. No. 2. Born January 9, 1920. A good, growthy fellow, heavy body, about three-fifths white. Dam, A. R. O. 22.50, milk 520 lbs. Sire, King Colantha Lyons, a 35.68-lb. bull. Price $225. Pedigree and photo on request. An accredited herd.

MICHAEL SEBERGER SCHERERVILLE, IND.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

365-Day Milk Production

STILL ANOTHER ONE

Grandson of Sir Pietertje Ormsby Mercedes 44th out of a granddaughter of Lord Homestead Netherland De Kol, born Jan. 4, 1920.

Handsome calf beautifully colored, more white than black, well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within reach of the farmer or small breeder.

CERRO GORDO FARMS, - Mason City, Iowa.

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

M & P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

Read This!

A bull with the combination of the great Ormsby Blood and Sir Veeman Hengerveld. Born February 22, 1920. Two-thirds black in color, well grown, fine individual.

Sire: Sir Veeman Artis Vale. His dam is K. K. S. V. Winnie Artis, a 31-lb. daughter of King Korndyke Sadie Vale. His sire is the famous Sir Veeman Hengerveld, who has 115 A. R. O. daughters, 17 daughters with records above 30 lbs.

Dam: Dividing Ridge Alice, A. R. O. Butter 25,687, milk 481.4. Her sire, Sir Ormsby Prescott. Her dam is well bred.

Price $250.00. Write or wire.

DIVIDING RIDGE STOCK FARM
Jordanville, N. Y.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

King Segis Bred Bulls

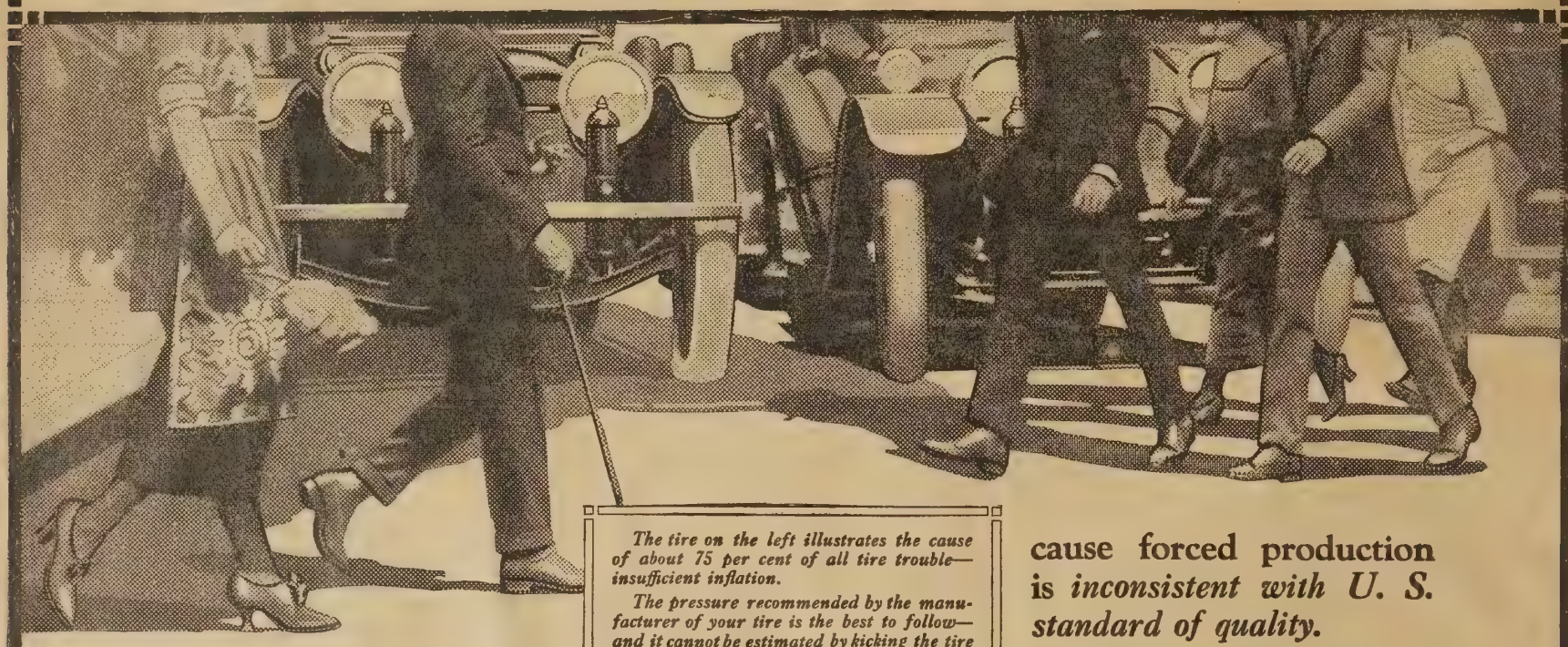
We have a limited number of calves and yearlings of KING SEGIS breeding.

Each individual has been picked from heavy producing dams and sires, many with large A. R. O. records and containing the best foundation blood of the breed.

Prices are reasonable. Write for pedigrees.

G. G. BURLINGAME, - CAZENOVIA, N. Y.

Opinions about Tires should be *Weighed* as well as Counted



The tire on the left illustrates the cause of about 75 per cent of all tire trouble—insufficient inflation.

The pressure recommended by the manufacturer of your tire is the best to follow—and it cannot be estimated by kicking the tire or punching it. The regular use of a reliable air gauge is the best safeguard against punctures, rim cutting and fabric breakdown.

THERE is hardly a motorist who hasn't at some time or other in his experience had a tire dealer attempt to sell him a tire by representing it as the fastest seller in town.

More attempts are probably made to sell tires by playing to the motorist's alleged weakness for "crowd of buyers" than by any other known method of selling.

* * *

The *experienced* motorist, of course, refuses to surrender his individual judgment to any crowd or mass of whatever size.

Too often he has seen the results of accepting opinions at their face value, without first finding out *what they are based on.*

And you will find him going more and more to the dealer who has something to offer in support of his tires other than "crowds of buyers" and "numbers of sales."

* * *

The opinion in favor of U. S. Tires is not based solely on the number of them in use.

Great as that number is, it is due to something besides clever arguments.

Thousands of motorists today are putting up with second choice tires because forced production is *inconsistent with U. S. standard of quality.*

The United States Rubber Company's enormous investment—greater than that of any concern in the industry—has always been aimed *solely* at quality.

Building a *tire* first and a market afterwards. Thinking of the *individual user* instead of the number of sales.

One of the reasons, perhaps, why there is now a scarcity of U. S. Tires.

* * *

If the time ever comes when U. S. Tires can be supplied to all, or nearly all, of the people who want them, they will still have *more to recommend them* than merely the largest following.

United States Tires

United States Rubber Company

Fifty-three Factories

The oldest and largest Rubber Organization in the World

Two hundred and thirty-five Branches

4 C
COLLEGE OF AGRIC
20 JUL 20
URBANA ILL

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., JULY 30, 1920. | Number 2

Safe Water for the Dairy

ORIN CROOKER, ILLINOIS

WATER that is not entirely safe for drinking purposes is not safe for use in the dairy. It must be quite above suspicion. To some persons it may appear that we assume in these statements a woeful lack of intelligence on the part of dairymen. This, however, is by no means the point. The average dairyman is as well versed in such matters, no doubt, as the average individual. Possibly he is more so. On the other hand, it is a fact that there is very little real understanding on the part of people generally in regard to what constitutes a safe drinking water. In this regard dairymen are in fully as much need as others of more knowledge. Too often the basis of judgment is the taste or appearance of the water. If it is cool, clear, without odor or disagreeable taste it is usually termed good and safe to use. These factors, however, may have little or nothing to do with its purity or impurity. Furthermore, people accustomed to drink all the time from the same well are poor judges of the taste or odor of the water in question. Our purpose in this article is to state what constitutes a safe drinking water and to indicate some of the more common factors which cause water to fall below this standard of fitness.

Briefly told, water that is free from sewage or other waste products is a safe water to use so far as human health is concerned. It is worth while, in passing, to note that a water may be free from such contamination and still possess taste or odor, or both, as is the case with many of the waters from so-called mineral springs. It may be free from sewage and still be highly colored, as in the instance of certain water supplies in New England where the coloring is due to causes that are entirely harmless. On the other hand, water may bubble clear, cool, and sparkling from a spring, yet notwithstanding its attractiveness it may contain sewage or other waste products. Let us, first of all, set to one side any notion we may have that the taste, appearance, or odor is any sure index of its quality.

It is not surprising, perhaps, that many farm water supplies are not above suspicion. Every farm owner is his own health commissioner, so to speak, and in most cases he acts in this capacity without any training or experience. City water supplies are safeguarded by men especially trained for this work. Not so on the farm. The well is sunk or dug, as a rule, in the most convenient spot, often with complete disregard of its surroundings. Little heed or attention may be given to sources of possible contamination. It is common enough to find the well curbing broken or insufficient. All told, it should be looked upon as a fortunate circumstance, perhaps, that farm waters are as good as they are.

On the assumption that a safe drinking water is one that is free from sewage or other wastes let us now group together the more common sources of such contamination.

(1) Underground seepage from privy vaults, barnyards, hog pens, cesspools, and so on.

(2) Foreign material entering the well through broken or insufficient curbings. Such include the droppings from poultry and farm animals permitted access to the vicinity of the well, leachings from mud and filth left around the well by the feet of those who have visited the barnyard, hog pen, and so on. Many small creatures, such as mice, toads, moles, snakes, and even rabbits, have found their way into wells equipped with poor curbing.

(3) Slop water thrown upon the ground from the kitchen door or discharged from the kitchen sink into a broken drain may influence quite readily the water of a well that lies within easy distance.

(4) To the factors indicated above should be added this additional one, namely, that when water is piped from a spring located on the farm it is not unusual to find it influenced by the seepage from fertilized fields or by the droppings of stock permitted to run in close proximity to the point where the spring rises to the surface of the ground.

In each of these instances, save the third, it will be seen that the chief factor of contamination is human or animal excrement, which we cover by the term "sewage". The possible contamination set forth under the third heading is of an uncertain kind which may or may not carry disease producing germs. It is, however, undesirable at best, and should be classed with the others as factors to be guarded against.

Looking back at this point over the four divisions into which we have classified, roughly, the sources of contamination most easily possible in farm water supplies, we are impressed with the fact that most of them can be easily obviated. Indeed, all of them, if need be, may be eliminated in some instances without unnecessary hardship. The source of possible pollution indicated in the third division needs nothing, for instance, to remove the menace it holds save a tight tile or drain and a discontinuance of a disagreeable practice which some farm housewives follow in the manner of emptying their dishpans. Where the ground has become thoroughly impregnated from kitchen slop water the effect of it, of course, will remain for a long time.

In much the same way other factors may be minimized or overcome. A proper curbing over the top and for six feet underground around the sides of the well, will keep out foreign material indicated under the second heading. The fencing off of stock, and smaller applications of manure in the neighborhood of a spring, will do much to overcome the situation spoken of under heading four. There remain, then, as sources of possible contamination which may not be so easily rem-

(Continued on page 41)



CARVED OUT OF THE FOREST

This is not a summer resort. The houses are the homes fo the employees on a new Holstein dairy farm in Door County, Wisconsin, that is owned by Murphy Bros. The building in the foreground is for the unmarried employees, that in the center is the herdsman's cottage, and on the right is the manager's home. A small club house with recreation rooms and sleeping quarters is to be erected later.

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
EDITORS
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C. L. BURLINGHAM

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Subscription Rates

Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Reducing Corn Losses

Experiments conducted by the Bureau of Plant Industry show that one of the best ways to increase profits from the corn crop is to avoid losses from such causes as frost, drouth, insects, and diseases. If dependable seed of strong germination is used, corn may be planted earlier than is commonly practiced, thus giving the crop a longer period for growth and enabling it to escape early fall frosts. Some varieties of corn are more resistant than others to frost injury in the seedling stage. It has also been shown that varieties are not all similarly affected by early and late planting.

The danger of losses from drouth may be reduced by earlier planting than is commonly practiced where the season is short, and by making successive plantings where the season is long. In the latter case the chances for the production of a partial crop are much better if early, normal, and late plantings are made than if the entire crop is planted at one time, as drouth or hot winds which injure the crop at one stage of growth may do little harm to it at younger or older stages.

Losses from corn weevils in the South may be reduced by selecting seed ears which are closely and completely covered by the shucks. Weevil losses in harvested corn may be lessened by the early feeding of ears not well protected against weevils, or by shelling corn and storing it in closely woven bags. The directions for reducing weevil waste in southern corn are contained in Farmers' Bulletin 915. Losses from disease may be reduced by the careful selection of seed corn which is free from diseases.—C. R. Ball, C. P. Hartley, and C. H. Kyle, U. S. Dept. of Agr.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Little Mother

Little mother of the farm,
With your hair of silver grey,
Shielding us from hurt and harm,
All along the worried way.
Do we understand your worth?
Do we know your virtues all?
Sweetest little soul on earth!
One who hear's the kiddie-call.

Little mother as we grow,
Up to manhood's proud estate,
Then, and not 'til then, we know,
Why you really are great!
Burden-bearer of the place,
Smiling wizard of all toil.
Always calm and fair 'o face,
Matron of the widespread soil!

Little mother of us all,
Grown-ups and the baby ones.
Summer's days or snow-flake fall,
So your patient story runs.
Always just the same, I guess,
Mothers are that way, that breed;
Sweethearts through the joys and stress,
Friends of fair times and of need.

We believe in tractors and there is nothing quite like being modern, but for fear somebody may think that the old fashioned mule is going out of fashion, suppose we give a few facts. In Yuma, Arizona, The Southwest Cotton Company of this section has just paid $1,800 for two spans of mules. This means $450 per hind-kicker. No, these mules will not be entered in any fancy racing or ear-wagging contest—they are for straight farm haulage.

Do You Love Your Dog?

A postman tells this story, and vouches that it is absolutely true. He is on a farm route, and when he does not stop to deliver letters, the Collie barks furiously. He shows his teeth and makes an awful fuss. In other words, the dog seems to sense that if the rural free delivery man does not leave mail of some kind, he is not fulfilling his mission. But when he does leave a letter or a paper there is no bark.

From a Note Book

A 250-pound hog, owned by L. Jones, near Island Number Two, Hickman, Ky., managed to escape and swam twenty miles down the Mississippi River. The current carried the porker on its mad trip. But during this time, said hog lost ten pounds in weight. Shows what worry will do, even to a piece of pork.

What is the smallest honey bee you ever knew? On an East India Island there is a race of bees that seem to hold the record. Their combs are no larger than a child's hand. Each cell is as tiny as a pin head.

The amateur farmer had just entered the general store in the village. He seemed a bit embarrassed.

"What can I do for you?" asked the proprietor.

"If you please," was the answer, "I want to get a dozen cream separators. I'll try them, and if they work out all right, I'll be back for more next week."

A meadow is a sacred place. With cow bells jingling in it, there is a suggestion of the sort of religion that means strong babies, smiling mothers, the strength of a nation.

Hand Milking versus The De Laval Milker



Hand milking is not a natural process. Neither is it uniform nor regular.

Even the best hand milker does not milk the same every day—nor at every milking. It is a well-known fact that even the best hand milkers milk more rapidly and energetically at some times than at others, as the time of year and a man's physical condition vary his methods of milking. Matters of temperament and disposition quickly affect the cow and interfere with the secretion of milk.

The De Laval Milker, on the other hand, is regular, uniform, and positive in action at every milking. It milks the same at any hour of the day and every day in the year. This regularity and the alternating action at fixed speed, are agreeable to the cow and promote secretion and regular flow of milk.

The De Laval Milker also saves time and labor. In fact, one man with a De Laval Milker can milk three times as many cows in a given time as he can milk by hand.

The perfect sanitary features of the De Laval Milker are important. All parts that come in contact with the milk can be quickly and easily cleaned and sterilized. This is especially necessary in marketing certified milk.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway NEW YORK | 29 East Madison Street CHICAGO | 61 Beale Street SAN FRANCISCO

QUALITY BUTTER BY PARCEL POST

L. W. ENGLISH lives on a dairy farm in the hills of Vermont. He manufactures and sells butter—good butter. No advertising is carried—not even a farm sign directs the attention of the passerby to the farm's production. Yet customers in several states insist on buying their butter from Mr. English and are willing to pay well for it. Last year the parcel post took 7,000 pounds from the farm and delivered it to points as much as a thousand miles distant. Returning mails brought payment at the rate of ten to fifteen cents per pound above New York City prices in letters expressing satisfaction and placing further orders.

The quality of this butter sells it. Mr. English supplies a local tourist hotel with a product of such flavor that guests order it sent to their homes. Visitors in their homes, in turn, recognize the superiority of the butter and send in their orders. On the afternoon we visited the farm a few weeks ago, thirty-one orders from several states were listed for parcel posting the next morning. On the desk in Mr. English's office were letters from which the following extracts are taken: "Please send me two pounds of butter each week. I am a son of Mrs. ——— whom you already supply." "Will you please send me five pounds of butter in prints, the same as Mrs. ——— receives. Send this amount weekly." "I like the butter which you send my sister, Mrs. ———, very much and would like you to send some to me regularly. I would like two pounds every other week. I understand the price is 75 cents per pound." It may be said in truth of this farm, "Satisfied customers, our best advertisement."



THE CARTON USED IN PARCEL POSTING BUTTER FROM THE ENGLISH FARM

Five of these can be wrapped in paper in the five-pound card board container used. This carton means quality to the customers of this butter. Seven thousand of these went out from the farm last year.

Every possible care is taken to safeguard the healthfulness of the butter sold. The herd of grade Jerseys is well fed and healthy. The milk is separated under every practical precaution of cleanliness and the cream is stored in a sweet, cool place until ready to be prepared for churning. When there is a surplus over the parcel post orders, it readily sells at highest quotations on the best creamery butter. It was given first place in the Vermont butter scoring contest and was third at the 1919 Eastern States Exposition.

Parcel Posting a Success

The success on this farm proves the parcel post can be made to give satisfactory service in "direct from producer to consumer" shipping. Butter is sent in lots of one to twenty pounds for distances of several hundred miles and delivered in good condition. It goes regularly to Washington, D. C. A twenty-pound package arrived in Florida when the temperature was 90°F. and was still cold enough to be hard.

"The secret of successful parcel posting of butter," says Mr. English, "is heavy paper insulation." In warm weather several thicknesses of newspaper enclose the package inside of the card board container. "Don't be afraid to use plenty of wrapping," he says. "Carefully insulated shipments of butter are sure to get through all right. We have never had a complaint." The card board boxes are purchased in large quantities. A size large enough to hold five one-pound prints costs $12 per hundred; one large enough for ten pounds is purchased for $17. In the winter season only one-half of a box is used so that the expense is cut in two.

Cost of Parcel Post Mailing

Parcel post charges are not prohibitive on a high quality product, especially with shipments of five pounds or more. However, butter on which the consumer is unwilling to pay a liberal premium could not be sent at a profit. It costs Mr. English ten cents to parcel post a package containing five pounds within the first and second zones. For a ten-pound lot the charge is sixteen cents, or one and six-tenths cents per pound. On a single pound the postage is six cents but only a few orders for this quantity are filled. The charge for container and stamps will average less than three cents per pound. The total when taken from the premium of ten to fifteen cents above New York prices which is received still leaves a good net return.

The English farm is a modest place. It has no expensive equipment or pretentious buildings. Its product differs from that of thousands of other Vermont farms only because of the pride of its owner. Its butter has no competition—it outclasses it. Oleomargarine does not cut down the list of its buyers; they accept it gladly at good prices. It is a quality product—sweet, pure butter made from milk fat from healthy cows and kept clean and cool from the time the milk leaves the udder of the cow until it reaches the table. It is such a product as generates a just pride in dairying. With dairy products handled in this manner there can be no over-production. The problem with the industry would be as it is now with the English farm, that of supplying demand. This Vermont farm gives proof that if a man will manufacture butter of the highest quality, "though he build his house in a forest the world will make a beaten path to his door."



RODERICK ENGLISH AND "THE BEST TEAM ON THE FARM"

Such a yoke of Devon steers is a source of pride on many a Vermont Farm. They are strong, tractable, and are easy keepers—picking their living with the milking herd when not at work. And when their period of usefulness is over, a ready market is found for them. For Vermont conditions, at least, Solomon's words were those of wisdom: "Where no oxen are, the crib is clean; but much increase is by the strength of the ox."



ONE OF THE THIRTY-FOUR JERSEYS WHICH SUPPLYS THE FAT FOR QUALITY BUTTER, AND MR. ENGLISH WITH HIS THREE ASSISTANTS

In a contest at the Windsor County Fair last fall Roderick won a ribbon; Susie, to the right of her father, fifth place; and Edna, at the extreme right, was the proud winner of the first prize, a registered Jersey bull calf. The English family is a happy one—with pride in old Vermont and in the industry which gives its livelihood.

Promoting Pure-bred Holsteins at Fort Scott

A. C. MALONEY, KANSAS

EXCITEMENT? Yes, lots of it; a parade, a crowd, the band, motion picture camera operator clicking off a reel, and everything necessary to emphasize the event was in evidence when a hundred head of registered Holsteins were distributed by lot to twenty local farmers at Fort Scott, Kansas. This is the first plunge of the farmers of this district in breeding pure-bred Holsteins.

The cows are owned by the Bourbon County Holstein-Friesian Company, which is a stock company, capitalized at $100,000, organized to promote the community breeding of high quality registered Holstein cattle in Bourbon County. This company is placing two hundred head of registered Holstein cattle on the farms of local dairymen on shares.

The band, twenty-one milk trucks that transport milk to the local condensery, and one of the company's herd sires headed a parade in which the cows were driven through the town to the Plaza, where they were distributed.

In order to be as equitable as possible, the animals that were distributed were divided into three groups. Twenty cows which were considered the most desirable were placed in one group, twenty cows which were thought to be the least desirable were placed in another group, and the remaining cows were placed in a third group. Cards numbered to correspond with number on the cows were placed in three different receptacles and each man who received cows drew one of the twenty most desirable cows, one of the twenty poorest cows, and from the remaining group, the cows necessary to complete his allotment.



THE YARD IN WHICH THE COWS WERE HERDED FOR DISTRIBUTION

The cows were purchased in southern Michigan and eastern Ohio by a committee composed of H. M. Griffith, farmer; I. O. Trask, banker; Peter A. Erie, dairyman; and A. C. Maloney, county agent. This committee spent a month in dairy districts of Michigan and Ohio selecting these cattle. They secured animals of from two to five years of age. A few of them had calves at their sides and the rest are expected to freshen within the next couple of months. These cows cost, laid down at Fort Scott, from $275 to $650 each, the average cost being nearly $400.

The Bourbon County Holstein-Friesian Company was organized by the Fort Scott Chamber of Commerce and the Bourbon County Farm Bureau co-operating. A committee from the Bourbon County Farm Bureau, at the suggestion of the county agent, investigated this system of community breeding and was convinced of its value and advantages. The committee then secured the assistance of

(Continued on page 48)

EVERY KERNEL AND THE LAST STRAW

C. A. LeCLAIR, WISCONSIN

PATRIOTISM during the past war inspired many farmers to get a crop of grain outside as well as inside their fence lines. If this custom is practical only as an emergency method of producing food, surely at this time when the demand for cereals is fully as great an effort can at least be made to glean every kernel grown within the borders of the farm. At best we are going to have short crops of wheat and rye this year. The value of these cereals will undoubtedly be unprecedentedly high for it is affected not only by local demand but that of other countries as well. Unless all indications fail, every kernel of bread-making grain grown will be highly bid for during the coming year. The value of oats and barley will naturally mount in proportion. Under these conditions who can doubt the practicability of making a supreme effort to get maximum yields of high quality grain? The state of fertility of the soil and weather conditions will determine how many bushels of grain the land will produce, but farmers themselves largely control how many of these bushels will be properly gathered.

This year utmost attention should be given to the time of cutting. The chances of getting quality grain are far better when a crop is cut before it gets too ripe. Often fields do not ripen uniformly, but in such cases any grain cut on the green side will ripen in the shock. On the other hand, if the harvest is delayed until the grain is dead ripe there is always the probability that wind, rain, and hail may cause lodging. When this occurs the binder cannot do a clean job and shattering of the grain invariably occurs.

Shocking the Bundles

Careless shocking of bundles also accounts for more loss of grain than is ordinarily realized. There are several ways of making shocks, namely, poor, good, and perfect. A squad of children can never be depended upon to do the work that experienced hands accomplish. It will pay this year as never before to shock grain in the most approved manner. Wheat, rye, and barley cure best in round shocks made of nine to twelve bundles each. The body of such shocks should be built by firmly setting the bundles with the heads drawn in or packed closely together. Shocks made in this fashion when capped with a couple of bundles placed so they will not blow off will withstand considerable wet weather without damage to the grain. On the other hand, oats cure better in long shocks placed in a north and south direction so that the sun can hit both sides about equally. If storms tip shocks over or remove the cap bundles one can make good wages by going over the fields to readjust them.

Threshing From Shock or Stack

How are you going to thresh? From the shock or from the stack? This is a question many county agricultural agents are asking their constituency at this season of the year. They are making a big drive for more stack threshing. There's a reason! No one can deny that the practice of threshing grain from the field has some advantages when the work can be done at the right time and everything goes smoothly. However, since most threshing on the average farm is done through threshing rings, there are about half of the members of each group who are obliged to leave their grain in the field overly long.

Last summer while I was with various crews in different parts of Wisconsin, it was apparent to me that in many instances fully a third of the grain was left in the field where shocks had melted down. The loss of grain was particularly marked with barley. Men who pitched the bundles from the shocks unto wagons would often leave on the field a large part of the grain, the straw of which was imbedded in the mud. In going from shock to shock the hands endeavored to rake up straggling stalks of grain, which slipped through the bundle as it dried out and became loosely bound, by taking one or two sweeps with their fork. At best they did only half a job of it. Supposing there is only a loss of one per cent of the grain in this way, it will pay to put a boy with a horse rake in the field to gather up the loose ends.

The fact that stacking is becoming more and more common in the middle west since the advent of high priced labor, should serve as pretty good evidence that farmers are finding economy in the practice over threshing from the field. As Mr. Hottman of Iowa County, Wisconsin, explained: "There are several farmers with whom it is necessary for me to swap labor. To reduce this exchange of help, I find it advantageous to stack as much grain as possible. In addition to insuring better quality it enables us to keep the machine humming when the separating begins. We can easily dispense with the help of three or four men to say nothing of twice that many teams and teamsters needed in shock threshing. The cost of feeding these extra harvest hands and their horses is considerable. If this expense can be eliminated it adds a neat little sum to the profits from each bushel of grain threshed."

Making a Stack

Stacks to be efficient should be properly built on a well drained spot of the farmyard conveniently placed for the location of the straw pile. There are men in every community and on most any farm who can build stacks which won't bulge or show green after being wetted by the first rain. In building round stacks even a beginner will make good if he insists that the bundles be always thrown to him so that they land in the middle of the stack. He should take his time in placing the bundles, at first throwing them into place with the short side of the bundle down.

When the maximum breadth of the stack is attained and drawing in of the bundles begins, they should be placed with the short side of the bundle up. This facilitates the shedding of rain when the stack is completed. To prevent bulging it is well to have the bundles pitched up from all sides of the stack if it is possible to do so. Avoiding to tread on any of the bundles in the outer three rounds of the stack also prevents danger of bulging out. Where a farmer is short of help, the simplest way to stack grain is to put it into long ricks. When this is done a man can pitch and stack at the same time. The bundles on the inside of the rick can be thrown at random and those on the outer course only need be laid with care.

I have always noticed that it is the most successful farmers who are never too busy to make repairs of granary floors, wagon boxes, and sacks in advance of threshing time. When the work begins men of this type will always be close to the machine for they know that this is the place where their supervision counts most. There is often a chance to prevent loss of grain in the operation of the machine. A little care in seeing that the bundles are fed heads first and uniformly, frequently results in the measuring of one to three bushels more grain in every hundred. Think of it! Three per cent of a year's work saved by a little extra vigilance when the threshing machine starts buzzing.

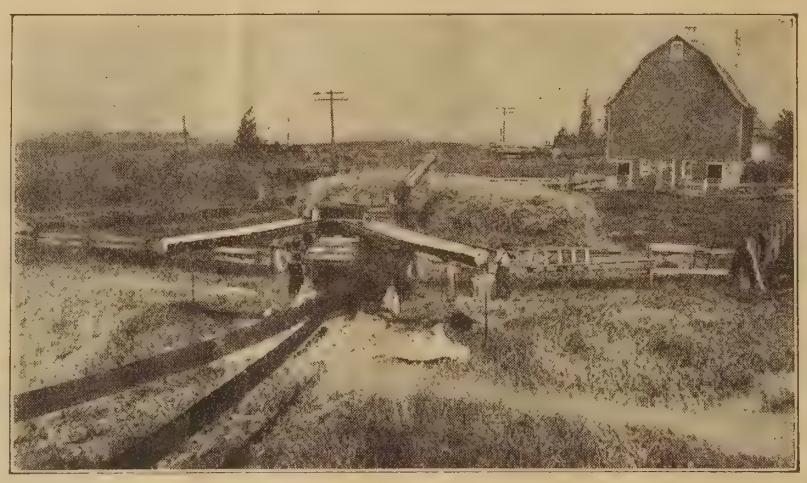
It is worth while to insist that the machine be shifted if the wind changes, for no outfit will do good work if it is obliged to blow the straw against a gale. The chaff and straw should be examined from time to time in order to determine whether the separator is doing a clean job of threshing. Often an adjustment of the concaves or a change in the speed of the machine will prevent grain from being blown into the straw pile.

The best proof that a great deal of grain goes over with the straw when special care is not taken to prevent it, is the way hens work over straw piles on the average farm. You can't fool a chicken when it comes to a square meal. Now if they got all the grain in the straw the loss would not be so great perhaps but conditions are such that the job is ordinarily too much for them. Another way to save grain is to place a canvas below the bundle carrier and beneath the sacking or weighing device of the machine where more or less slopping over of grain is likely to occur.

Stacking Straw

It is more than worth while to give special attention to the manner in which straw is stacked at threshing time. Too often the job of stacking is left to a tenderfoot upon the inducement that the work is soft under foot. It really takes a man who thoroughly knows how to handle a fork to build a well shaped and weather proof straw stack. Farmers who are in earnest to get the last straw will not hesitate to put the best man they have on the straw pile or climb up themselves. The feeding value of straw is of no mean consideration where considerable live stock is kept. It supplies one of the best forms of bedding known. Finally it has a fertilizer value twice that of farm manure. There is potential plant food in the average straw stack to make a couple of hundred bushels of grain.

As feed, bedding, or fertilizer, straw exposed to rain depreciates in value. If properly stacked the loss of vegetable matter and essential elements through the burning up process of decay can be greatly reduced. Notwithstanding, there are millions of straw stacks rotting down every year that represent value up into the billions of dollars which, if returned to the soil, would bring returns doublefold. Let's save straw and everything!



A CANVAS SPREAD BENEATH THE BUNDLE CARRIER AND SACKING DEVICE OF THE THRESHING MACHINE SAVES MANY BUSHELS OF GRAIN



STACKING GRAIN PREVENTS DAMAGE TO GRAIN AND STRAW BY WEATHER

The usual way of removing silage from the silo is to use a five or six-tine fork. If the silo is not of too great diameter it is comparatively easy to pitch the silage through the door. If the silo is underground and too deep to pitch out the silage, it can be taken out by lowering the truck into the silo, filling it, and then elevating it by means of a block and tackle or by horse or gasoline engine. The litter carrier is ideal for removing silage from the pit.

Controlling Potato Blight

C. M. BAKER, OHIO

LATE blight has been the scourge of all potato diseases for the past few years, and so far as can be determined it has so infected the potato growing districts that there is no chance of completely getting rid of it. It is either in the soil or in the seed, so that spraying is the only remedy to control it.

Damp weather with the temperature around 70 degrees Fahrenheit favors the development of late blight and whenever weather of this sort is recorded, it is well to look out for an outbreak of the disease. During hot and dry weather the blight does not develop to any noticeable extent but comes on quickly when the right conditions abound.

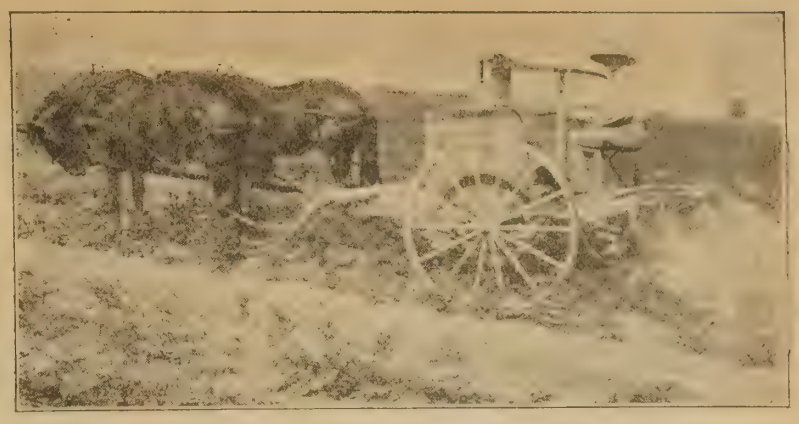
Bordeaux mixture is a reliable spray to use in controlling potato blight and after the potatoes are about 8 inches high it is necessary to spray them every 10 days or 2 weeks thereafter. Bordeaux mixture can be made at home, but some care must be used in preparation. It is made as follows:

Dissolve 6 pounds of blue vitriol (copper-sulfate) in warm water in a wooden or earthen vessel. Slake 6 pounds of quicklime, by adding a little water slowly to start the lime to heat and then just enough to keep it from burning. Dilute both mixtures to 6 gallons each. The spray tank may then be filled with 63 gallons of water and then at the same time 6 gallons of blue vitriol solution and 6 gallons of the lime solution, stirring the mixture constantly in the tank. This will provide enough spray for an acre of potatoes.

Sometimes Bordeaux mixture does some injury to the plants. Properly prepared Bordeaux, however, will not burn the leaves, but it is necessary to see that the solution is alkaline; that is, the lime is added to neutralize the acid effect of the blue vitriol, so that it is sometimes necessary to test the solution with litmus paper to be sure that the solution is alkaline. This will guarantee that the solution will do no damage.

It is quite easy, also, to control potato beetles or potato bugs while spraying for blight by adding 9 pounds of arsenate of lead paste, or one-half as much of the powder to 75 gallons of Bordeaux mixture.

It has been found that the application of Bordeaux keeps the plants in such good condition that it is profitable to use this spray where attacks of blight may be even light. It is simply crop insurance and a crop which requires a high overhead, such as potatoes, yet returns large profits, justifies the use of some form of insurance from disease.



SPRAYING POTATOES FOR BLIGHT

New Hampshire Guernseys Sold in Washington

G. N. ANGELL, WASHINGTON

THROUGH the activity of pure-bred dairy cattle breeders of the state of Washington, particularly of the Yakima Valley Guernsey Breeders' Association, practically the entire dairy herd of the Canterbury Shakers at Canterbury, New Hampshire, including 24 Holsteins and 30 Guernseys, has been transplanted from the Atlantic to the Pacific Coast. In the case of the Guernseys, at least, the herd has been kept almost intact in one district, so that the cumulative results of years of breeding along definite lines will not be entirely lost. The importation of the Guernsey herd is the direct result of the visit to the Pacific Coast last winter of Assistant Secretary F. B. Hills of the American Guernsey Cattle Club. At that time, with his assistance, several local breeders' associations, including that in the Yakima Valley, and a state association were formed. A little later agitation was started for the purchase of some pure-bred Guernseys. Breeders of Washington were disappointed in not securing any part in the importation of young stuff from the Isle of Guernsey, which was planned by Oregon breeders, and when the work on eastern purchases was first started early in March, it was thought that the associations in Clarke, Island, and San Juan counties would share in the importation. This plan did not materialize, but several requests were received from other counties for Holsteins and Brown Swiss, and among them was one for a carload of Holsteins for distribution among individuals, banks, and calf clubs in Stevens County. The assistance of Karl B. Musser, state college dairy extension specialist, and of J. N. Price, agricultural agent in Yakima County, was enlisted, and the Yakima breeders began assembling information regarding summer sales in eastern states and regarding possible sources of private purchase.

Early in May Mr. Price and J. L. Wallace, vice-president of the Yakima association, left for the East in time to visit several herds in Minnesota and Wisconsin before attending the annual meeting and sale at Chicago and Midlothian, Ill. There they learned of the impending dispersal of the Canterbury Shaker herd in New Hampshire. After a few days spent in Ohio they visited the Harbor Hill Farm on Long Island, New York, where they bought seven head, and Branford Farm in Connecticut, where they secured three. Upon reaching Boston they were informed that a deal for the sale of the Shaker herd was practically completed, but through the intervention of an officer of the Massachusetts association they were given an opportunity to price it, and purchased 54 animals at a figure which Mr. Musser says will never be duplicated in the West, considering the blood lines secured.

Mr. Wallace took charge of the shipment of Guernseys, totaling 40 head, while J. Wesselius, another member of the Yakima association, delivered the Holsteins, 23 females and one bull, to a Stevens County representative at Spokane. The date for the Yakima breeders' sale was first set for June 18, but after the six days' trip by express across the continent it was decided to postpone the event one week in order to condition the animals, and the state dairy extension specialist took immediate charge of them at the fair grounds near Yakima, spending 10 days there. He was later joined by Mr. Price. Both were made honorary members of the association in recognition of their assistance.

The sale, June 25, was made the occasion of a picnic for members. After adding to the cost of the animals the expense of securing them, each of the 40 head sold had been appraised, and only members of the association were allowed to bid, unless this appraisal price was not reached. Only one or two of the animals failed to bring the appraised valuation, however, and all of them went into hands of members. Moreover, about eight per cent of the bid values was rebated to members in the settlement following the sale, one of the results of which was the formation of the Yakima Guernsey Bull Club at Yakima, where six breeders secured an interest in Harbor Hill Pioneer, the yearling bull from Long Island purchased by J. B. Vance, and where the youngster will be given service for the present on about 60 grades and pure-breds.

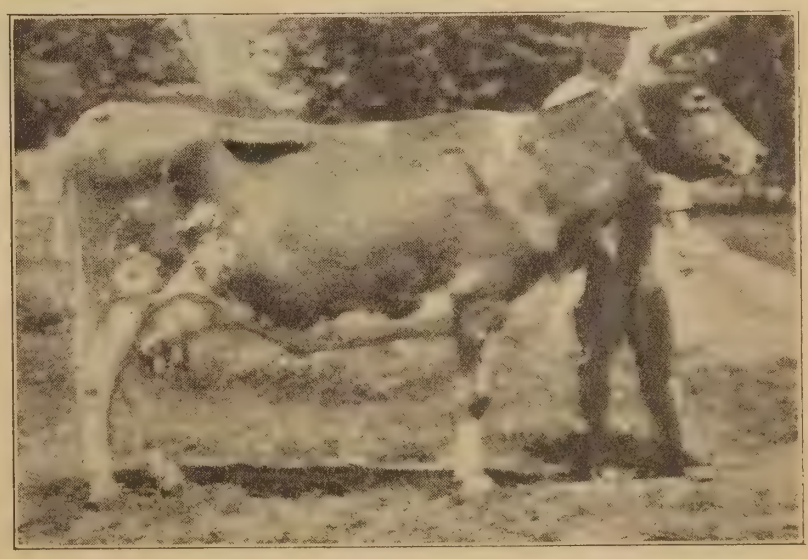
The greatest interest centered in the members of the Canterbury herd, 20 head of which were taken by breeders living near Outlook, Yakima County. The Twinkling Lily family from this herd, all but one of which went to Outlook, was first in the ring. This family, consisting of Twinkling Lily, a 10-year-old granddaughter of Lily Bell of Canterbury, and her three daughters and three granddaughters, has produced only one bull in three crops of calves. Its

(Continued on page 56)



THE SEVEN MEMBERS OF THE TWINKLING LILY FAMILY SHOWN AVERAGED $335 EACH IN THE SALE OF THE YAKIMA VALLEY GUERNSEY BREEDERS' ASSOCIATION AT YAKIMA, WASHINGTON, JUNE 25

They are from the Canterbury Shaker herd of New Hampshire. Three daughters and three granddaughters are in the group, and all except one went to breeders in the vicinity of Outlook, in the lower Yakima Valley.



THIS VETERAN OF THE CANTERBURY SHAKER HERD, BRED IN MAY TO FAWNEY'S GOLDEN SECRET OF APPLE TREE POINT, BROUGHT $400 IN THE SALE OF THE YAKIMA VALLEY GUERNSEY BREEDERS' ASSOCIATION AT YAKIMA, WASHINGTON, JUNE 25

She is 14 years old, is a granddaughter of Lily Bell of Canterbury, and was picked for the Panama-Pacific Exposition in 1915. Merrimac's Blossom 21989 is now at home on the farm of C. A. Prickett of Washington, and 19 other members of the Shaker herd are in the immediate vicinity.

Dairy Reflections of an Ex-Tester

PAUL T. MENZEL, MARYLAND

THE average farm, as a general rule, has the correct number of cattle to maintain the proper soil fertility, but the great cry is: "If I could only get more milk from my cows then it might pay me." As Professor Rasmussen has said, the need is not so much for more cows as for more milk per cow. It is simply an application of the basic principle of all business, namely to increase profits by increasing the productive efficiency per unit of machine and thereby lower the cost of production.

A recent survey by the city of Rochester, N. Y., revealed the fact that the cost of producing a quart of milk by cows averaging 8,000 pounds of milk a year was 8 cents and for cows averaging 4,000 pounds the cost was 15 cents a quart. These figures are all the more significant when we consider that they were based on 2,300 animals.

The results of cow testing records in Wisconsin are as follows: Cows averaging a yearly production of 5,000 pounds gave a profit of $45 over feed cost, those in the 7,500 class returned a profit of $103, and those cows averaging 10,000 pounds a year made a return of $161 over feed cost. These sets of figures are sufficient proof that it pays to have good cows and that when production is doubled, profits are increased three to fourfold. Moreover, it refutes the prevalent notion that high producers eat so much more than low producers that they do not make more profit in the end.

Further proof of the economy of production by high producers is furnished by the same Wisconsin data, which shows that cows in the 5,000-pound class had a feed cost of $94, those in the 7,500-pound class a feed cost of $115, and the 10,000-pound class cost $137 for feed. This shows that the heavy producers did cost more to feed than the low and medium producers, which is what one would naturally expect. However, it shows that although increased production causes greater feed cost, the increased cost is not in proportion to the increased profit. Increased feeding to cows of heavy milking ability is really an investment, and supports the saying of many experienced dairymen that the more feed a cow can stand the more milk she will give. From these figures we find that an increase of 47% in cost of feed made the profit 3½ times larger. The manufacturer would give a king's ransom for any means by which he could increase his profits to such an extent, and yet thousands of dairymen are drifting along in the same old way as their fathers did generations ago, with the scrub cow and the scrub bull and feeding by scrub methods.

The dairy millennium will never come until the dairy world has been converted to the gospel of "Feed, Weed, and Breed". The most powerful and effective force in bringing about this conversion is the cow testing association. Association work and its attendant extension work, such as co-operative buying of feeds, service in purchase of good stock, etc., is a more important factor in greater economy of production and the consequent increase of profit and eventual lower price to the consumer than the cost of feed, labor, equipment, marketing, and incidentals. This may sound absurd, but let us consider the facts. Everyone knows that the cost of the latter group of items is always a variable thing but that it always bears a definite relationship to the price received for milk. When the cost of all these things was low the price of milk was low, and now when they are high the price of milk is correspondingly high.

Malcolm H. Gardner, Superintendent of the Holstein Advanced Registry, who is well qualified to speak on the value of record keeping and what it has done to improve the great breeds of dairy cattle to their present phenomenal degree of productiveness, has said: "Cow testing associations pave the way and increase the demand for better breeding stock, and testing for the Advanced Registry assures a supply of pure-bred cattle of merit to meet that demand. Had we 50 such associations where we have one, millions of dollars could have been saved this year that will be wasted in feeding unprofitable cows." This was said during the war, when the government was sending millions of tons of food to the allies and when the most drastic conservation was needed. Today we are not under the obligation of exporting huge quantities of foodstuffs, but the high cost of living is a menace to our economical stability and prosperity to a greater extent than during the war. Increased economy of production is therefore more urgent than ever.

Mr. Gardner's statement in regard to the waste of feed on unprofitable cows is borne out by an example which is only typical of thousands of others. A certain dairyman in Minnesota sustained a loss of $59 over feed cost from his herd of thirty cows. From his testing records he was able to weed out half of his herd and at the end of the next year he made a profit of $69. Not only did his records make it possible for him to put his herd on the right side of the ledger, but he milked fifteen cows less a day, which easily saved four man hours, and he could have put the money he received from the cows he sold into the bank and allowed the interest to make as much as the profit was when he still milked the remaining animals which were needed to maintain soil fertility.

Proper feeding is the first step toward conversion to better dairying. The experience of a Delaware farmer is representative of what countless other milk producers have experienced. He was having his cows tested and at the milk station one morning one of the other patrons asked: "Harry, what good is this young fellow who comes to your place to find out how much cream your cows give? He doesn't make your cows any better, does he?" "No," was the reply. "He's only been coming two months and he can't make my cows any better, but he told me how to feed them and now I'm getting 50 pounds more milk a day and it doesn't cost me any more for feed. Jim Clark milks 16 cows and says he was feeding half a bag of feed more than he needed to, and he is now getting just as much milk as before. I'll tell you, a fellow don't know how much to feed a cow unless he does weigh the milk and, what's more, you know yourself that none of us fellows know what to feed a cow. That tester has made a study of it and the first time he came around he asked me what I was feeding. When I told him bran and corn, he took his pencil and in a minute told me how much brewers grains and cottonseed meal to add to what I was feeding. It's just like everything else, and it pays to let somebody do it for you that knows how. We farmers don't have time to keep records and it costs so little that it is certainly worth while to know what to feed your cows and just what they are doing, and, believe me, I've got a couple cows that are worse than I thought they were and they're going to the butcher as soon as I can get something better to take their places."

Countless examples like this one could be given, and specialized dairymen know that feeding right is as important as having good cows.

In a herd in which every milking was weighed from every animal several animals produced just about the same amount of milk during the year. Four of the cows were very close together in milk production. One cow had an average fat test for the year of 3.7%, another 2.7%, one of them 3.3%, and the other one 4.1%. These were wide variations, but the most able cow judge could not have been able to tell what percentage of fat each would test, even by looking at the milk from each animal.

I am forced to smile as I think about the time an old mossback who did not believe in testing, said: "I don't need to have my cows tested. I can tell how rich the milk is by the taste of it." It's too bad he doesn't make his ability known, for he could do away with the trouble and expense of testing for butterfat, would revolutionize the dairy industry, and could make a fortune for himself merely by tasting the milk of just as many high producers as his wonderful sense of taste could handle.

Anybody who has ever milked a cow for a year or even a few months at a time, knows that some cows start off with a big bucketful and after a month or two they drop off very badly. After five or six months they don't give enough milk to pay for the trouble of milking them. Such cows, however, are so noticeably lacking in persistency that it is not hard to find them out. The cow that drops off so gradually that you don't notice it, is the one that will fool you the worst. Without weighing the milk one would not notice a difference of a quart or so between one milking and the next. Persistency is one of the biggest factors in making a good record, and it cannot be accurately kept trace of except by the scales and records, at least weighing the milk once a month for several milkings.

Scrub bulls have more to do with the cost of milk production than feed cost, labor, and all the other important items. The scrub bull has no hope of salvation and must be gotten rid

PERSISTENCY AT IOWANA



IOWANA BETTINA IOWANA MISS FAYNE

IOWANA Farm Holsteins furnish many examples of persistent production. The daughters of the famous sire of yearly record cows, Sir Johanna Fayne, rank high in the breed. Eight have produced more than 20,000 lbs. milk in a year. Sixteen average over 20,000 lbs. milk, 618 lbs. fat. In Volume 29 of the Holstein-Friesian Advanced Register Herd Book, 28 of the 45 daughters listed are winners in the association prize lists or have been debarred by previous winnings. The average production of his yearly tested daughters three and a half years old or over is 21,545.8 lbs. milk, 662.07 lbs. fat.

Now the daughters of Oak De Kol Ollie Homestead, National Dairy Show grand champion, are piling up records to maintain the high mark set by Sir Johanna Fayne. Two of these daughters are here shown. At the right is Iowana Miss Fayne. She freshened first as a two-year-old in December, 1915. In four years and four months she produced 66,893.2 lbs. milk, 2,121.86 lbs. fat, and four living calves. Iowanna Bettina, at the left, dropped her first calf in February, 1916. In four years she has made 55,307.3 lbs. milk, 1,692.78 lbs. fat and has six living calves, including two pairs of twins. Both cows are now on test and safe in calf.

Such persistency is the highest attribute of the dairy cow. It is the difference between a discouraging mediocrity of results and the greatest possible returns from the herd.

of, the sooner the better. I have heard farmers say that they know of scrub cattle, that is, grades, that are better than some pure-breds they have known. That may be true, for unfortunately there are also some scrub pure-breds, but no one can deny that whatever excellence a grade may have, she obtained from either a pure-bred sire or dam. The world's champion grade cow, Alice, with a record of 20,099 pounds of milk and 729.1 pounds of fat, and another cow with a record of 14,858 pounds of milk and 725.3 pounds of fat, never got their ability from a scrub bull. Their excellence, like that of all other good grades, is due to pure-breds. In one cow testing association a member started in ten years ago with a pure-bred bull for which he paid $50, and the next bull cost $100, and the last two he obtained for $150. From the 17 milking head of grades, all of his own breeding, he was able to select one cow with a 13,000-pound record, two with nearly 12,000, and seven more with over 10,000 pounds. Last June I saw him at the big Holstein sale in Philadelphia, and he had a smile a mile wide. When I asked him the reason, he said: "That young bull they just sold is a full brother of the bull that I bought last year, and if he just brought $1,200, then mine ought to be worth as much. Mine only cost me $350, but his dam was only a two-year-old then."

Many farmers hold back from buying a pure-bred bull because they think the price will be too stiff. In many states the various breeders' associations have agreed to trade a scrub bull for a pure-bred bull calf. That may sound fishy, but it's perfectly sane. Any kind of a bull weighing 1,200 to 1,500 lbs. will bring $100 or more from the butcher, and for that sum you can get a bull calf that will improve the average farm herd at least 1,000 lbs. of milk per animal, if he is any good at all. If a farmer is interested in such a proposition all he has to do is to get the county agent to get in touch with some of the breeders of the breed he prefers. If the farmer is not well acquainted with the dairy breeds it would be best to consult the county agent for advice as to what breed would best suit his conditions. When he has decided on that point, the agent can help him by his knowledge of the reliability of the various breeders and by his ability to determine the value of the breeding of the animals offered. Under no circumstances should a farmer buy a bull that is just pure-bred and that has no production record behind him, for good individuals of known ancestry can be gotten so cheap that it doesn't pay to have anything else.

Dairying is a profitable industry, if it is done along efficient and scientific lines, a thing that any farmer can do, and which costs no more than milk production by scrub feeding, with scrub cows, and by using a scrub bull. Get into the game for greater profit—feed, weed, and breed.

National Dairy Union Finances

Balance on hand June 1, 1920	$4,457.89
Total receipts	221.66
	$4,679.55
Total disbursements	$284.33
Balance on hand July 1, 1920	$4,395.22

This is to certify I have today audited the books for Geo. Caven, treasurer of the National Dairy Union, and find the receipts from June 1, 1920 to June 30, 1920 to be $221.66, and the amount paid out for which he holds vouchers, the sum of $284.33, leaving a balance on hand July 1, 1920 of $4,395.22.

F. P. COLLYER.

Dairying Thirty Years Ago

Notes from the Issue of Hoard Dairyman for Thirty Years Ago This Week

The question, "Which is the best breed", seems quite as well answered then as now for the following statement is quoted: "The most profitable dairy cow does not belong to any one breed, at least it has never been demonstrated that she does".

Cheese was reported to sell for $.50 to $.75 per pound in Honduras and the editorial statement was made: "We believe that a great market for cheese, and perhaps butter, could be opened up in South America and Mexico if we had some live statesmanship and enterprise to make the start and give them a good article at a fair price".

A production contest at a Canadian fair between heavy milking Jerseys and "show vessel" Ayrshires, whose "breeding, keeping, and feeding has not been such as to merit the position of first class pure-bred Ayrshires", drew forth the editorial comment: "Slowly an idea is beginning to break into the minds of dairy breeders and dairy farmers that the dairy functions in cattle are just as clearly the result of careful and intelligent breeding and subsequent care and handling as are the qualities of speed in horses, or the powers of scent in hunting dogs. The progress of true knowledge in this respect has been retarded woefully by the 'hit or miss' unscientific slush of 'general purpose' ideas, among certain interested breeders, and farmers in general. To such ideas is due the degeneracy of the Shorthorn breed of cattle for dairy purposes. Such ideas will degenerate any breed, no matter how clear and distinct their dairy qualities may be. To the opposite ideas, viz., specific purpose breeding and handling, is due the grand progress which the Holsteins, Jerseys, Ayrshires, and Guernseys have made as dairy cattle."

The "achievement" of the Holstein cow, Parthenea, which made 38 lbs. 8½ oz. of butter in 7 days, in an average of 78 lbs. 5 oz. milk, was used to illustrate the editor's belief that "the cows of any breed that are the most copious milkers will not be, as they have not hitherto been, the phenomenal cows for yielding butter". Lower butter record cows had already been credited with 95 to 112 lbs. of milk per day.

A Kansas subscriber asked whether a silo built of stone would do "good business" and was advised that "In that land of light winters we should not object to the silo of stone".

Hot weather had lowered the quality of cheese so greatly as to "entail a heavy loss", many cheese being paid for "at only half or little more than half the price at which they were reported sold".

A lively discussion was being waged concerning the "butter extractor" for which the following excellencies were claimed: (1) Obtains more butter by saving the fat left in buttermilk in churning. (2) Dispenses with the churn and the power required to use it. (3) Reduces cost of making butter, and (4) Improves keeping qualities. Those who denied these virtues claimed the butter formed by the "extractor" was of poor body and that there was a heavy loss of butterfat in the skimmilk.



LILLIE BURKE CANARY, OWNED BY ADOLPH P. LEHNER, WISCONSIN

This cow has just completed a record of 33.035 lbs. butter and 586 lbs. milk in seven days. Her best day's milk was 94 lbs. As a junior three-year-old she has a 26-pound record and as a 24-month heifer she made 17 lbs. butter in seven days.

An article on "How to Drink Milk" was quoted from the New York Tribune under the sub-caption, "One glassful gives more real strength than a barrel of beer". An excerpt from the quotation follows: "Don't swallow milk fast and in such big gulps. Sip it slowly. Take four minutes at least to finish that glassful, and don't take more than a good teaspoonful at one sip."

Believing that the feeding of oleomargarine to the insane of the state "has a tendency to create a disturbance of the stomachs of the patients" the authorities of Michigan were moved to order that butter be supplied in its stead.

"When the 'witches' get into the cream and the butter won't come, hang a horse-shoe over the dairy door and then find out the reason why the butter doesn't come. If the cause proves to be too low temperature of the cream and the thermometer you use is one of your fingers, take down the horse-shoe, hunt up enough more of them to sell as old iron for 50 cents and trade the half dollar for a good dairy thermometer. This will bring whole piles of 'luck' into your dairy and keep out a good many 'witches'."

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MONDAY, TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY NIGHTS, at 8 o'clock.
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U. S. Government, State Marketing, Wisconsin Department of Agriculture, Household, New Era and a score of other added exhibits.
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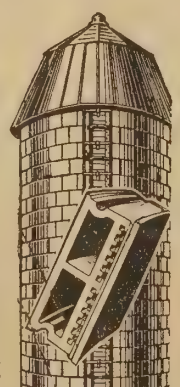
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Abortion Control in Wales

Mr. R. Hedger Wallace, of the University College of South Wales, England, writes that the county of Glamorgan, Wales, has issued the following order in the effort to control the spread of contagious abortion in Wales:

"For the purpose of preventing the spread of Epizootic Abortion, the Local Authority for the County of Glamorgan hereby—

"Prohibits the exposure by any person in any market, fair ground, or sale yard within the District of the Local Authority of a cow or heifer which to his knowledge or according to information furnished to him, has calved prematurely within the two months immediately preceding such exposure;

"Prohibits the sale by any person within the District of the Local Authority of a cow or heifer which to his knowledge or according to information furnished to him has calved prematurely within the two months immediately preceding such sale, unless before the sale he shall have given to the purchaser notice in writing of such premature calving.

"If any person exposes an animal for sale or sells an animal, or causes an animal to be exposed or sold, in contravention of these Regulations he shall be deemed guilty of an offense against the Diseases of Animals Act, 1894."

One way to make country life more attractive is to beautify the farm both indoors and out. It's the outdoors we think most about in summer; flowers and shrubs help.



SIR BESS ORMSBY FOBES. THIS HOLSTEIN BULL MADE TWO WISCONSIN FARMERS A PROFIT OF $24,400

THREE years ago two Wisconsin farmers paid $600 for a Holstein bull calf. He was out of a cow with a seven-day butter credit of 24.25 lbs. and a fat production for a year of 569.68 lbs. in 14,869.9 lbs. milk. His sire was Sir Pietertje Ormsby Mercedes 37th. Since his purchase, the dam made a 26.03-lb. butter record for seven days and produced 922.36 lbs. fat in 24,535.5 lbs. milk in a year. Animals of his sire's breeding have gained greatly in popularity through their large production.

Early this month his owners, Otto Schinke and B. W. Rabenhorst, sold this bull to Hollyhock Farms, Wisconsin, for $25,000 and retained the privilege of breeding ten cows to him. They had at least two other opportunities to make sales at near this valuation.

Their neighbors speak of the "luck" of these two men. They consider this profit and the greatly increased value of the two herds through the use of this sire to be the result of good fortune, a happenstance, and say: "They are lucky." They fail to give credit for the faith in good breeding which prompted the purchase in 1917 or the courage needed by two men with small herds to pay $600 for a bull calf.

There is no formula for such transactions as this—no set of rules a breeder can adopt and "go and do likewise". But the experience of Rabenhorst and Schinke is not all "luck", by any means. They followed the safest plan for buying a bull which it is hoped will develop into a valuable animal. They purchased into a family of cattle owned largely by men who would develop them. Recognizing the worth of yearly records they sought "long time" blood. They went to see calves by a sire of splendid individuality. He had type and production back of him, was young, and owned where his daughters, sisters of the bull calf, would be well grown and given records. His daughters would be out of good cows. Satisfied with the sire, they sought a calf out of a good cow. They found a dam which filled their requirements in Wisconsin Fobes, a cow which had a fair yearly record, was from a family of producers, had proved herself a good breeder, and had the conformation of a real dairy animal. Finally, the calf himself. His breeding was right but his type must be the best obtainable. How well the young $600 calf filled this last qualification is indicated by the fact that he has developed into one of the very best three-year-olds in the country.

The recent sale was not "all luck". These men made use of every safeguard in buying. They took no chances. They could have bought cheaper bulls had they been willing to lower their requirements. Their purchase of Sir Bess Ormsby Fobes has brought a liberal reward for their faith in good sires. Their experience may not be easily duplicated but it offers an inspiration to breeders who will exercise as much care in the selection of their next sire.

Safe Water for the Dairy

(Continued from first page.)

edied, those first enumerated. The location of the privy or cesspool vaults may be changed, but even so the ground in the vicinity of the old vaults will be highly charged with impurities and will so remain for a long period of time. The relocation of barnyard and hog pen may be impractical or at best attended with difficulties. If such be the case, the only way out, if it is found that the water supply is unsafe, will be through a deep driven well. Ordinarily, the factors of which we have been speaking do not have much influence on a driven well which picks up its water from a deep level, save in instances where the well casing or its joints are imperfect or where there are faults in the geologic formation which extend to considerable depths. In one southern city a public well over a thousand feet deep had to be abandoned because of surface contamination which found its way to this depth through faults and crevices in the rocks.

After this resume of possible sources of contamination of water supply with sewage and waste, one is interested to know how the ordinary dairyman may assure himself that the water from his well is safe to use. In most instances—indeed in all instances where absolute certainty is desirable—an analysis and examination by a competent person is essential. There are, however, several ways in which an approximate idea may be gathered by any farmer in regard to the state of his water supply. If his well is of the dug variety he should consider, first of all, the likelihood of seepage from barnyard, privy vault, and so on. He should look at the matter candidly—having in mind the general contour of the surroundings and with the understanding that the area of infection may include a circle drawn around the well, the radius of which circle may vary from one to several times the depth of the well.

While lack of taste, odor, and color in waters from dug wells is no indication of purity, the presence of such is a pretty reliable sign that everything is not right. Indications of this kind point to the necessity of an analysis. If the well is a driven one, turbidity or roiliness should be regarded as a signaling for attention, though it is possible for such to come from harmless causes. However, driven wells often leak water from joints and corroded surfaces and surface contamination may work in. If the leak is bad it may perhaps be detected by placing the ear against the pump, or it may be seen in some cases by removing the pump and throwing a beam of light down the inside of the casing by means of a mirror. With leaky casings that admit contamination the pipes must be replaced by new ones, save where the trouble lies so near the surface that it can be remedied by use of cement. Odors and tastes in deep well waters are as a rule less to be feared than those in shallower wells. Water from a depth is apt to be more highly charged with minerals and dissolved gases. The pipe which brings it up from below not infrequently imparts a slight iron taste.

A water analysis will cost, perhaps, from $15 to $25, depending upon how thorough it is and the standing of the person who makes it. The value of such an analysis is in direct proportion to the knowledge and experience of the one who makes it and interprets it. It is possible to tell many things by a determination of this kind. First of all the presence of sewage can be determined with accuracy. It is possible to tell whether the water has received its dose of impurity from a nearby source or from a point considerably removed both as to space and time. It is possible, also, to distinguish in most cases whether the sewage content comes from the privy or the barnyard. How all this is done would be too technical to explain in this article, but as a matter of general interest it may be said that a thorough examination of water takes account of the presence or nonpresence of the colon bacillus. This is an organism that inhabits the intestinal tract, or part of it, of both man and the farm animals. This bacillus occurs in very great numbers, therefore, in all human excrement and in the usual farm wastes. If it is found in a water supply it is positive evidence that "sewage" has found its way into it. Whether the sewage is of human or animal origin may be determined with fair accuracy by other factors. Human excrement carries more chlorine than that of animals. The slop water from the kitchen sink is also high in chlorine. Where the amount of chlorine in water is high and there appears no slop water influence from the kitchen drain it is a reasonable inference that the privy vault or the cesspool, if there is such, is responsible in part, if not wholly.

The approximate source from which the contamination comes—both in point of distance and recentness—can be inferred from the results of the several chemical tests which are made. It is quite possible for sewage contamination to be picked up by ground water at some distance from the farm, or it may be the result of a direct seepage from vaults or barn surroundings. With an analysis before him a person skilled and experienced in such things can tell approximately the situation without visiting the location. If any doubt exists an inspection of the premises will invariably remove all uncertainty. Safe water for the dairy is essential—quite as much as in the farm home. Milk is an ideal carrier of germs. An unsafe water supply used in the milk house is certain to result in contamination of the product sent forth.

Wayne County, Ohio, Breeders Meet

For doing things in a Holstein way the Wayne County Holstein Breeders of Ohio are a live bunch. On July 1 the committee previously appointed to select cattle for the Wayne County Exhibit at the Ohio State Fair spent the day looking over the Wayne County herds. The field secretary accompanied them and by night the committee had found enough good cattle to make the exhibit practically sure.

That evening some fifty of the breeders met at the Orrville City Hall. A feed committee was appointed to investigate the advisability of buying concentrated feeds co-operatively. It was decided to have a Holstein tour of the county some time in the near future. On this tour six or eight Holstein farms will be visited and something of particular interest will be discussed at each farm. At noon a basket dinner will be served. This club set out at the time of its organization to do away with the scrub bull in their county and much good has been gained.

Ohio. HOWARD BARKER.

Jersey Cattle Notes

For week ending July 9:

Number of animals registered: Bulls, 125; cows, 530; total, 655. Number of transfers recorded: Bulls, 280; cows, 827; total, 1,107.

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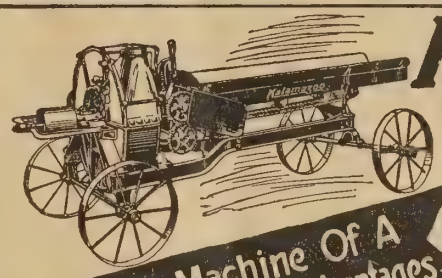
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CONTENTS

Safe Water for the Dairy - - - 33
Reducing Corn Losses - - - - 34
Quality Butter by Parcel Post - - - 35
Promoting Pure-bred Holsteins at Fort Scott 35
Every Kernel and the Last Straw - - 36
Controlling Potato Blight - - - 37
New Hampshire Guernseys Sold at Washington - - - - - - - 37
Dairy Reflection of an Ex-Tester - - 38
Persistency at Iowana - - - - 38
National Dairy Union Finances - - 39
Dairying Thirty Years Ago - - - 39
Abortion Control in Wales - - - 40
Wayne County, Ohio, Breeders Meet - 40
Jersey Cattle Notes - - - - - 40
Prizes at Kentucky Fair - - - - 42
Iowa Dairy Rally - - - - - 42
New York Guernsey Meeting - - 42
Gregory Heads Purdue Dairy Department 42
Washington, D. C., Weekly News - 43
New York Butter Market - - 43
New York Milk Committee - - - 43
Montana Guernseys Average Over $400 at Sale - - - - - - - - 43
Wireless Service for Farmers - - 44
Co-operation - - - - - - 44
Live Stock Exports Promoted - - 44
Justice Defeated - - - - - 44
Another Milk Trial - - - - 44
Cane Seed Meal - - - - - 44
Calf Feeding in New Zealand - - - 45
Hard Seeds in Legumes - - 45
Next Winter's Ration - - - 45
Cow Testing Association Notes - - 46
New Orleans Milk Producers Indicted - 46
Michigan Farmers' Round-up - - 46
Westover Appointed Guernsey Representative in West - - - 46
Red River Guernseys - - - - 48
Idaho Wants Tester - - - - 48
Veterinary—Chronic Cough—Abortion—Milklessness—Ducks Dying—Abortion 50
Georgia Jersey Jubilee - - - 50
Edgemoor Guernseys Average $962 51
What California Pig Club Boys are Doing 52
A Good Poultry Record - - - 52
Junior Dairy Clubs in Tennessee - - 52
Pennsylvania Boys in Dairy Cattle Judging Contest - - - - - - - 53
Your Worst Enemy - - - - - 53
Junior Letters - - - - - - 53
Government Publications - - 56
A Tri-County Picnic - - - - 57
Blackleg - - - - - - 59
Summary of Ayrshire Records - - 60

Coming Events

Missouri State Fair, Sedalia, Mo., August 14—21. E. G. Bylander, Secretary.

Illinois State Fair, Springfield, Ill., August 20—28. B. M. Davison, Secretary.

Wisconsin State Fair, Milwaukee, Wis., August 30—September 4. O. F. Remey, Sec.

Iowa State Fair and Exposition, Des Moines, Ia., August 25—September 3. A. R. Cory, Secretary.

Ohio State Fair, Columbus, Ohio, August 30—September 4. E. V. Walborn, Secretary.

Minnesota State Fair Minneapolis, Minn., September 4—11. T. H. Canfield, Secretary.

Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.

Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.

Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.

New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.

Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Prizes at Kentucky Fair

Premiums of $500 in cash are offered for Jersey cattle and $500 for Holsteins at the Blue Grass Fair, Lexington, Ky., the last week in August.

Mr. I. W. Cooper of Allen Dale Farms, Ky., will act as judge of Jersey cattle. J. J. HOOPER.

Iowa Dairy Rally

HOARD'S DAIRYMAN:—The "Iowa Dairy Rally" was held at Waterloo, July 14th and 15th, to exhibit to the people engaged in county agent work, home demonstration work, and other educational work the various processes of this important industry. It is realized by few that this is such an important industry which in Iowa last year had a valuation of cattle and products in the amount of almost $300,000,000. There seems to be a considerable awakening to the advantages of maintaining dairy cattle on Iowa farms and there is certainly an increasing realization on the part of the consuming public that milk and its products are not only the most economical foods which can be purchased at the present time, but that there are also elements contained which are highly essential to the health and growth of both children and adults.

The meeting was very largely attended. The two days were devoted to a study of dairy products, dairy cattle breeding, and the marketing of dairy products. The first visit was made to the farm of Mr. W. W. Marsh, where one of the most uniformly high producing herds of Guernseys in the United States is owned. While visiting this farm, a very interesting discussion of the tuberculosis eradication work which is being conducted in Iowa in co-operation with the federal government was led by Dr. J. E. Gibson of Indiana. At the present time almost two thousand herds of cattle in this state have been placed under the supervision of the Agricultural Department at Washington. Requests for supervision of additional herds are coming much more rapidly than can be cared for by the forces operating in Iowa. Dr. Gibson very effectively discussed the financial needs for the continuation of this work. He also set forth very clearly the value to the country of the ultimate control or eradication of this disease which is at the present time so prevalent among cattle.

Following this, a visit to the manufacturing and distributing plants for dairy products was made. A visit was also made to an ice cream plant which afforded the visitors an opportunity to learn much of this form of marketing. It was learned that the ice cream industry in the United States today is providing a market for the production of five million cows annually and that in Iowa last year, over six and a half million gallons of ice cream were sold. A visit was also made to the Orange Township Creamery. These visits gave a very clear idea of how dairy products are handled while being transformed into merchantable articles. The fact was developed that the producer of dairy products receives a larger proportion of the consumer's dollar, than in any other agricultural product. The average amount which is received by the producer of the consumer's dollar has been 38c in the past few years, but at the present time it is only 31 cents. In dairy marketing, the cost of handling and distributing as well as manufacture rarely exceeds fifty per cent and in most cases as much as two-thirds and three-fourths of the consumer's dollar is paid to the producer for the raw material. This seemed a very favorable matter for the system of marketing dairy products and also it appears should be an inducement to confidence in increased production.

Mr. M. D. Munn, President of the National Dairy Council and of the American Jersey Cattle Club, gave many ideas of the value of dairy cattle and dairy products and also a very thorough discussion of the present world-wide food situation.

A visit was made to the farm of John Cunningham, an average Iowa farm. Six years ago Mr. Cunningham was milking a herd of red grade cattle and securing an annual production per cow of about 275 pounds fat. In six years he has developed his herd to the point that he now owns only pure-bred Holsteins and has an average production per cow of approximately 380 pounds of butterfat. This was pointed out as a demonstration of what can be accomplished through the work of the cow test association. Helmer Rabild of the Dairy Division reviewed the accomplishments of cow test association work. A visit was made to an Ayrshire herd which is being operated on a 20-acre farm very profitably, at which time Mr. J. G. Watson, Secretary of the Ayrshire Breeders' Association of America, brought out the fact that the policies of the Ayrshire breed are to develop uniformly good cows both in type and production without making the greatest effort to produce unusually high records as has been done by some of the other milk producing breeds.

Mr. Watson referred to the fact that the Ayrshire cattle have not been used in Iowa to the extent that they have in many of the other middle west states and much less than in the eastern states and that efforts will now be made to bring realization on the part of dairy producers of the Middle West of the real serviceability of this breed of cattle.

Hon. G. N. Haugen, chairman of the Agricultural Committee of the House of Representatives, was present and gave a very thorough discussion of the work which this committee is doing and also a thorough disclosure of the reasons for the curtailment throughout the Department of Agriculture. He made reference to the splendid work which is being done in the eradication of tuberculosis, hog cholera, and black stem rust and showed how meagre the cost of such work has been in proportion to the results which have been accomplished. In all the appropriation for the work under the control of the Department of Agriculture approximates $140,000,000 annually. A decrease in appropriation slightly over $2,500,000 is all that has been made by the committee and it was Mr. Haugen's impression that this would not materially affect the real service which has been rendered by the Agricultural Department.

Visits were also made to the Maxwell Farm of Holsteins where the work of producing records under Advanced Registry conditions was discussed. Mr. McBride, manager of this farm, explained much of the system of management and feeding of cattle. He also discussed the system of breeding which is being accomplished upon this farm. At the Waterloo Jersey Farm, Mr. Van Pelt gave a very thorough discussion of the breeding practices which were being employed on that farm, exhibiting "Financial Beauty", a very strongly line-bred Jersey cow, and her offspring of several generations, both male and female. Other features of the breeding operations of this farm were displayed. It was also learned that from a herd of 28 milk cows an average of $71 worth of milk per day is being sold. Other speakers who added to the interest of the program were Miss Jessie Hoover, Milk Utilizing Specialist of the Department of Agriculture; Professor Mortenson of the Dairy Department, Iowa State College; J. V. Lingenfelter, Secretary of the Iowa Milk Marketing Association; Dr. Amy Daniels of the Child Research Institute at Iowa City; and Professor A. L. Haecker of Nebraska.

The purpose of this rally was very fully accomplished. Ideas were suggested to the county agents in particular of how and when work may be done to develop the industry in each of the counties in the state. Suggestions were dropped by many county agents that there seems to be a real interest in the production of dairy products developing in the southern part of Iowa which has been very low in this branch of agriculture. Satisfaction seemed to be evident among the visitors as well as those in charge that a very interesting piece of work had been done to stimulate the dairy industry in Iowa. SUBSCRIBER.

New York Guernsey Meeting

The Bi-state Guernsey meeting will be held August 7 at Glens Falls, New York, at Suburban Farm. Mr. James H. Seaman, proprietor, has invited the Guernsey breeders of New York and Vermont to attend. Breeders from other states will be welcome. A splendid program is prepared and a good herd of cattle is available for study.

Gregory Heads Purdue Dairy Department

Professor Howard W. Gregory, for the last four years connected with the dairy department at Purdue University, has been named head of the department to succeed Professor O. E. Reed, who resigned to join the Gossard Breeding Estates.

After graduating from Oklahoma Agricultural and Mechanical College in 1912, Professor Gregory went to the South Dakota Agricultural College where he remained four years as an instructor and in experimental work. He has had charge of the university creamery and he has put this business on an excellent basis. He was reared on a dairy farm and has had experience in both the production and manufacturing ends of the dairy business. With an acquaintance already started among Indiana dairymen, he will make a valuable man for the university.



HOWARD W. GREGORY

Sale Announcements

Aug. 3-4—Holsteins. The Pure-bred Live Stock Sales Co., Brattleboro, Vt.

Aug. 12—Guernseys. Southeastern Guernsey Breeders' Sale, Salisbury, N. C. C. T. Rice, Sale Mgr., Oakton, Va.

Sept. 6—Holsteins. Dispersal of F. C. Brinton, Jr., Herd of Registered Holsteins at West Chester, Pa.

Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Janesville, Wis., B. T. Green, Manager.

Sept. 13—Holsteins. Dispersal Dr. R. Ivey and Dr. S. P. Scherer herds, Fishers, Indiana.

Sept. 29-30—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.

Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.

Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.

Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.

Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.

Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.

Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.

Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.

Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.

Nov. 16-17—Holsteins. Second Iowa Breeders' Guaranty Sale at Waterloo, Ia. C. H. Jenness, Sec.

Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown. Wis. Francis Darcey, Manager.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

Washington, July 20.—The award of the Railroad Labor Board, announced today, makes certain the freight increase asked for by the carriers. The decision of the I. C. C. can be expected within ten to fourteen days. Everything is set for a tremendous effort on the part of the distributor organizations to make the originators of freight traffic bear this increase, an effort which has been made successfully in the past by distributors of general farm products, butter and cheese. That is, there seems to be, so well informed and reliable representatives of many interests here in Washington assert, a concerted effort to keep prices of commodities to the consumer at present levels, instead of passing along the freight rate, and compelling the producers to accept present prices, less the freight increase. That this will succeed with cereals, meats, and milk seems certain, as at the present time these commodities are delivered in the ordinary course of trade, freight paid to destination. This means that farmer producers of these products will bear the freight on their own products, as well as on the commodities they are compelled to purchase.

The first bulletin from the office of the secretary of the National Dairy Union was issued this week. It contains a reference to the pardon granted by President Wilson to John F. Jelke, convicted but never sentenced for participation in oleo tax frauds some years ago, some comment on the activities of the institute of margarine manufacturers, a resume of one of the important research projects being carried on by the Department of Animal Industry in the study of animal nutrition in milk production, and a comment on the absence of references to the McCollum discoveries and research work in vitamines, in the published material available from the Office of Home Economics of the Department of Agriculture. The National Dairy Union is advising dairymen and creamerymen everywhere to write the Office of Home Economics for their publications on the food value of milk and dairy products, to indicate to the department their interest in its work, and to "show to the public that the department bulletins fail to acknowledge publicly" the points of acknowledged superiority of butter over all its imitations and substitutes.

Bureau of Market Dairy Reports indicate increasing supply, which taken in connection with heavy imports tend to weaken the markets, but with strong demand from storage as a counteracting and strengthening factor. Storage reports show an increase of considerably over a million pounds in the past ten days as compared with the previous week, or the corresponding week last year. The figures for the week, 1919, are: increase in storage butter 5,632,000 lbs.; 1920, increase in storage butter, 6,518,000 lbs. The real feature of the week was the receipt in New York of the heaviest single shipment of Danish butter ever entering this country: 45,440 casks containing 112 lbs. each, a total of 5,089,280 lbs. Another shipment of 1,733 casks is enroute. The bulletin of the market division calls attention also to Canadian shipments, in boxes, and comparatively high scoring, yet which sold slowly in the New York market, and shipments of Argentine stock, off quality and off price.

A strong demand is being voiced by representatives of agricultural organizations here that farmers be placed on some of the great governmental instrumentalities which control the more important functions of the government, outside of the cabinet departments. In particular since the enactment of the Cummins—Esch law governing railroad and inland transportation, and the Jones law governing the American Merchant Marine, it has been found that the commissions created or extended in activity by these laws—the Interstate Commerce Commission, and the U. S. Shipping Board, are lodged with powers of very near life and death to each and every industry. It is this which is chiefly back of the unusual demand which has recently been heard for a farmer on the Shipping Board, and one or more farmers on the I. C. C. Admiral Benson, chairman of the shipping board, in a public statement on Monday of this week, said he would welcome the appointment of a man thoroughly familiar with American agriculture to a position on that body. In the development of the Merchant Marine, which of necessity includes the question of return cargoes, and this in turn involving cereals and meats and other of the products of the cheaper lands of South America, Africa, and Australia, American agriculture becomes interested at first hand, and is fully justified in demanding a place on this important board.

New York Butter Market

NEW YORK CITY, JULY 20—The very sensitive feeling that prevailed in the market, because of the expected arrival of large quantities of foreign butter during the past two weeks has practically vanished. It is very peculiar that such should be the case as the 44,000 casks of Danish butter and the 14,500 casks of Holland butter which arrived last week are not as yet entirely unloaded. However, it is now apparent that a high percentage of that butter will be placed in storage and therefore will have little effect on the market at the present time. One additional factor which has tended to greatly alleviate the feeling of uncertainty that has prevailed is the report of the federal Bureau of Markets which was released recently. That report shows that there are about 38 million pounds of butter less in storage at the present time than at the same season one year ago. The report makes it appear that there is a dangerous shortage of butter in the country at present and that the incoming foreign butter should be a welcome acquisition. It is now fairly certain that shipments of Danish and Holland butter during the next few months will be of very little consequence. England will take practically all the surplus of Denmark and Holland is absorbing all that is being produced in that country.

The market is showing considerably more activity at present than during last week. The principal reason for that is the fact that speculators are buying butter in greater quantities than at any other time during the season. In addition, receivers have placed large quantities of their butter in public warehouses awaiting the time when prices will be higher. As a result of the disposal of butter in these two ways, stocks have been greatly reduced with the result that demand and supply are about equal which is a condition that always tends to produce an optimistic feeling in the market. Were it not for the fact that very little foreign butter will be shipped to this country during the next few months, the feeling would be entirely different. Receivers now feel that there will be a consistent active market throughout the balance of the year.

From Monday until Thursday of last week, the market was as inactive as at any time since the reaction after the railroad strike in the early spring. Buyers were waiting to see what the effect of the arrival of extremely large quantities of foreign butter would be on the market. The price decline from Monday until Thursday was 1¾c. On the latter day, a stronger feeling began to be in evidence as speculators were more active than they had been for some time. On the following day the price advanced ½c. There was no change on Saturday but on Monday there was a further advance of ½c. While there was no change in the quotation today, the market was firm and fairly active and there are indications that further advances will materialize during the course of the next few days. It is apparent that while the market is firm a certain degree of assurance is still lacking because of the presence of so much foreign butter in the city. However, it is generally agreed that as soon as that butter is safely tucked away in storages buying will continue with great activity. Established quotations today are: Extras (92 score), 57c; higher scoring than extras (93 score or higher), 57½@58c; firsts (90—91 score), 55@56½c; firsts (88—89 score), 53@54½c; and seconds (83—87 score), 49@52c.

W. B. LIVERANCE.

New York Milk Committee

An announcement has just been received from the New York Milk Committee that they have established a Service Bureau as an aid to communities in need of better official control of their milk supplies. The bureau is the result of a recommendation made by the National Commission on Milk Standards at its meeting held in New York City during the latter part of May. This assistance may be secured by writing the Service Bureau, New York Milk Committee, 30 Broad St., New York City.

It is the purpose of the Service Bureau to help preach the gospel of clean, safe milk for infants and children by emphasizing throughout the continent the fundamental principles contained in the reports of the National Commission on Milk Standards. The sanitary character of a milk supply is a vital factor in the public health problem of every community and these reports contain suggestions that have been a great help in drafting effective milk legislation in the states of New York, California, and all the cities therein, the Local Government Board of England, besides a great many other cities in America.

Through the meetings of this commission, unanimous reports and recommendations have been obtained. These have been published at various times by the U. S. Public Health Service and furnished to American cities for the first time a basis for uniform standards and grades of milk.

The chief features of the work of this commission have been as follows: A standard time and temperature for the pasteurization of milk; the recommendation that all milk be pasteurized excepting milk corresponding to certified milk in character; that milk be graded into at least three grades—A, B, and C—according to its sanitary character and that each grade be distinguished by its own label on the final container; a standard method for determining the sanitary character of milk by the examination for the number of bacteria.

Montana Guernseys Average over $400 at Sale

The second pure-bred Guernsey sale in Montana brought an average well over $400. This was held by the Bitter Root Guernsey Breeders' Association and was their first sale.

The Bitter Root Guernsey Farm paid $1,000 for Inez Morrill of Cold Brook Farm, a three-year-old heifer, thereby setting a new record price for dairy cattle in that state. The association employed a representative to purchase Guernseys on the Atlantic Coast about three months ago. These arrived in Montana June 4th and after that time were prepared for sale.

The following lists all animals selling for $400 or more and gives the names of their buyers, all being in Montana:

Arthur Schmidt	
Von Don Feldors	$430
Country Maid of Highland	725
Bitter Root Guernsey Farm	
Spots Simplicity	$440
June of Broad Vista	900
Inez Morrill of Cold Brook Farm	1,000
J. W. Randles	
Von Don Sina	$450
Walter Benedict	
Polly's Crensa of Cold Brook Farm	$575
Fernleaf's Helen Marshall	550
Raydame's Lady Corfu of Ayersdale	435
J. Haley	
Nepaul's Takomah	$725
Von Don Stella	440
Durrell Whitcroft	
Grace Berry of Cold Brook Farm	$600



Balmangan Vera, owned by Middlesex Meadows Farm, which J. G. Watson, Secretary of the Ayrshire Breeders' Association, describes as a "typical representative of the modern Ayrshire". She calved in March and made, up to May 1, 2,249 lbs. milk. She is now milking 50 lbs. per day.

EDITORIAL COMMENT



WIRELESS SERVICE FOR FARMERS

Why not make the service of wireless telegraphy available to farmers? The range of benefits it could bring to him is without limit. The fact that this wonderful invention is not already saving agriculture millions of dollars is no reason for its not being adopted now. Its use is practical and its help is needed.

It is not contemplated that each farm house shall become a wireless station. Though the cost of a receiver is not great, it is hardly practical now for one of each farm family to be able to take messages. But arrangements could surely be made which would give each county or even each local community a receiving station. Why cannot the offices of county agents be equipped for this service which has so great practical possibilities?

The importance of agriculture justifies the adoption of anything which will stabilize production and marketing. We cannot afford such "post mortems" as, "No, I lost money on my cattle. Struck a glutted market and the price slumped," or "practically lost my first alfalfa crop. Cut it just at the worst time. Wish I could have known it would rain." These losses are now accepted as inevitable—as part of the tribulations of farming. They can be greatly lessened. Why not furnish a service which will give the farmer early news of the markets and the most timely weather forecast possible? By telephoning his county agent he should have such advice available as "Ship today. Market seems promising," or "Delay cutting clover. Rain due tonight." It would net a great saving to the country.

CO-OPERATION

To be successful in co-operative enterprises, farmers must expect to make some sacrifices. They must contribute something to the business which they are trying to build co-operatively. Many co-operative creameries, cheese factories, and other institutions have failed because the farmers are not willing to make the sacrifices necessary to success. A person must have faith in himself and in his neighbors and in the industry in which he is engaged in order to make a success of co-operation. There must be a willingness upon the part of those who have bound themselves together for the purpose of conducting an enterprise to not only invest money, but time and effort.

It must be ever borne in mind that great business has not risen without tremendous effort. Someone is sacrificing, working, planning. It is not enough to believe in co-operation, to advocate it, to attend meetings, to make a successful co-operative institution, but there must be a contribution of materials, of effort, of thought.

Mr. A. J. McGuire, who is in full sympathy with the co-operative creameries of Minnesota, writes in The Farmer of a patron of a successful co-operative creamery, that shows what must be done in order to make the co-operative creamery a success. He says: "Up in the northern part of the state of Minnesota, there is a little co-operative creamery that has, perhaps, the smallest business of any creamery in the state. It was probably built too soon, but it has held its own and it is now in position to begin making real progress. One farmer, who was particularly anxious about the success of the creamery, was the first man to deliver cream. On the day the creamery was to open for business he was there at sunrise, and to do this he had driven 14 miles with a yoke of oxen. He believed a co-operative creamery would be a good thing for the community and during the lean years that followed he stood firmly by that belief. He has since bought a farm nearer town and oxen are no longer his means of travel, but his faith in the co-operative creamery has not changed."

No co-operative effort would fail if all the patrons of a co-operative institution would show the same devotion, had the same faith, and were as willing to make the same sacrifice as the man who carried his cream 14 miles by oxen and was at the creamery at sunrise. It must be ever borne in mind that a successful enterprise depends upon the energy and the intelligence that is put into it. Great institutions do not rise simply by thinking about them, dreaming of them—but by hard work and faithful support, well directed.

LIVE STOCK EXPORTS PROMOTED

A very practical service for live stock breeders of the United States is that performed by the Bureau of Markets in acquainting South American countries with the quality of animals here available for export. Sales amounting to about $400,000 have been completed during the past six months, largely through the work of the Bureau's representatives. The field is so promising that the work will be continued and increased in the expectation that an export trade of large proportions will be developed.

Last year two commissioners were sent to Brazil, Uraguay, Paraguay, and Argentina. Two more have recently sailed to continue the work begun, secure new contracts, and find markets for all breeds of live stock. The Bureau contemplates establishing a permanent office in South America through which an export trade may be promoted.

Not the least valuable part of the equipment of these export commissioners is a pamphlet in Spanish and Portuguese published by the Bureau. This is replete with attractive illustrations of prominent animals of the different breeds. It shows where each breed may be found in largest numbers, outlines several reasons for the superior qualities of animals bred in the United States, gives information respecting exporting, and offers the aid of government employees to prospective purchasers in locating animals and arranging for shipping.

Examination of our farm flocks and herds demonstrates the acute need for the wider use of improved breeding animals and emphasizes the fact that there is ample room in the United States for all high class breeding stock. But foreign sales are stimulating and encouraging to breeders and may tend to awaken a keener domestic appreciation of the worth of our breeding stock. The Bureau's export activity is commendable.

JUSTICE DEFEATED

With the assistance of petitions circulated at so much per name and signed by barbers, merchants, and other uninformed individuals, as petitions are usually signed, James Dorsey has had his sentence of eight years in the federal penitentiary commuted to four years by President Wilson.

Just what argument may have been presented to the President to exercise his clemency for this man who grew wealthy through his dishonest and unlawful sales of tubercular cattle, we are unable to say. It took considerable time after his guilt was known to get the necessary legal action and, with his ill gotten gains, Dorsey was able to put up a good fight though eventually found guilty and his sentence affirmed by the higher courts.

Readers of Hoard's Dairyman are familiar with all the details of the case, but they will be interested in the statement that the redoubtable Judge Kenesaw M. Landis of Chicago gave in his court in criticism of the President's action.

"Dorsey sold," said Judge Landis, "about 12,000 head of cattle a year and made about $120,000 a year. Finally he was brought to trial for his fraudulent practices and he was sentenced to eight years in the penitentiary. The sentence was affirmed by the court of appeals, but sentence was stayed a number of times. Finally, through the oversight of some one, Dorsey was placed in the penitentiary.

"When the President of the United States stops in the midst of great affairs to cut this sentence in two, I wonder what frame of mind he must have been in. I suppose Dorsey's pardon is about ready. However, I am going to watch that man and this case with great interest."

It took the government several years to get the kind of evidence it needed and it was not until early in 1918 that Dorsey was found guilty in the court of Judge Landis of using the mails to defraud. Even then he did not begin to serve his sentence until June 4, 1919, and now will be eligible to parole on October 4, 1920. No reason is given, so far as we are advised, for the action of the President.

Again, as in the case of Mr. Jelke, the wealthy oleo manufacturer, who was sentenced to prison for violation of the oleo law, justice has been defeated through executive clemency and violators of the law go practically unwhipped. We need more strength of moral fiber, and less weak-kneed sentimentality for the guilty.

ANOTHER "MILK TRIAL"

In another column appears a statement from the New Orleans Item for June 19th which, according to I. S. West, secretary of the Louisiana Dairymen's Co-operative Association, sets forth the situation existing there at that date. An indictment has been brought against three dairy farmers for "willfully, knowingly, and unlawfully conspiring to restrain trade and commerce among several states" to keep up the price of milk. To be indicted has ceased to be an innovation for dairy farmers. A court trial for seeking a fair price for their product through organization is a favorite "indoor sport". Whenever a district attorney desires to serve the "peepul" for the purpose of gaining a few city votes, he indicts a few dairymen and hauls them through the courts.

No particular harm is done except the inconvenience and unpleasantness of court proceedings thrust upon busy men. When the facts concerning the production of milk and the proportion of retail price which is paid the farmer are heard before a fair tribunal, only one verdict is heard—that of "not guilty". In some cities the indicted dairymen have never been called to trial—in others they have only been forced to listen to the political palaver of vote-seeking public officers before being freed of the charges made.

If the Attorney General of Louisiana would investigate the court findings at Cleveland, Chicago, and the Twin Cities, for example, he could save honest men the embarrassment of court publicity and the state of Louisiana the expense of trial proceedings. If there are no worse crimes for his attention than those committed by organizations seeking to gain a fair price for milk sold from the farms of Louisiana, there is no need for his services and he would serve his state well to resign at once.

Cane Seed Meal

What is the value of ground cane seed for cow feeds and what proportions would you advise feeding ground cane seed, ground barley, bran, and cottonseed meal. Bran is $3.75 per cwt., cottonseed $4.25, and barley $3.75.

La Mesa, N. M. G. A. S.

Cane seed meal is very high in its carbohydrate content and may well be compared with such feeds as barley and corn. In the ration, it may be fed as a supplement to these feeds or may replace them.

The combination of feeds which will give best results in this ration depends quite largely upon the roughages available. We presume these cows can be furnished a liberal supply of alfalfa. This is a choice roughage and will give as good results as any other single feed. It should be supplied in as large amounts as the cows will consume.

A satisfactory grain mixture may be made from 200 lbs. of ground cane seed, 200 lbs. of ground barley, 200 lbs. of bran, and 100 lbs. of cottonseed meal. High testing cows should have this mixture at the rate of one pound for each three or three

and one-half pounds of milk produced and low testing cows at the rate of one pound for each three and one-half or four pounds of milk produced.

Calf Feeding in New Zealand

HOARD'S DAIRYMAN:—The government of New Zealand appears to be somewhat in doubt of the economic wisdom of the wholesale slaughter of dairy calves now prevalent in the Dominion. This is attributable, no doubt, to the greatly enhanced values of milk and milk products. In the flourishing dairying (butter) district of Waikato, the establishment of the dried milk industry (both whole milk and skimmilk powder) has brought a slaughter that has been and is appalling. The estimate is a slaughter during a season of 30,000 to 40,000 calves. In the Taranaki district, where the greater part of the cheese made in the dominion is produced, the slaughter is as great or greater. An estimate is 40% of the calves born on the dairy farms. Hog production is dwindling rapidly in New Zealand from the same cause. The government has had some interesting experiments made in order to ascertain how calves can be reared on a minimum milk diet, and the best substitutes that can be used for this purpose. It is not with the idea of condoning niggardliness in this matter so much as to arrest the great waste of calves, that is now becoming a potential menace to the industry, that these experiments have been carried out. I was recently at Ruakura in the Waikato where the tests were tried on the State Farm. Other tests were conducted at Wereroa, in the Wellington District, which I did not visit. From the superintendent of the Government Experimental Farms, Mr. J. L. Bruce, and from Mr. A. Green, director at Ruakura, I gathered particulars, first of the tests as a whole and secondly the tests at Ruakura. They were given very readily when I explained that they were for Hoard's Dairyman.

The two government farms are situated some 300 miles apart, the first inland in a mild and humid climate, and the second in the south of the north island of New Zealand near the sea coast. In both experiments the calves were placed in fresh, clean paddocks with abundant water supply and salt licks. The utmost care was taken to insure absolute cleanliness of all feeding utensils. This last condition Mr. Bruce makes a *sine qua non*.

At Ruakura the calves were turned into paddocks down in western rye grass and red clover, sown the previous season. Mr. Bruce insists that the calf paddock should always be in new grass, well limed. It is not the general custom of this country to house cattle at any time of the year, but at Ruakura the calves were housed at night. The Wereroa experiments were conducted under practically the same conditions as those at Ruakura, and calves were bought at the local sales, just such as are usually offered with no particular breeding or anything of a pedigree. They cost but a few shillings a head.

The results of the experiments are as follows, pounds sterling being converted into dollars at the normal exchange rate of $4.88:

RUAKURA:—Sixteen calves bought and divided into 4 groups. Group 1: 8 pounds whole milk daily for two weeks, 8 ounces whole linseed, 2 ounces wheaten flour, 15 pounds skimmilk for 15 weeks. Average daily increased weight per calf, 1.61 pounds; gross weight all calves, 770 pounds. Group 2: 8 pounds whole milk daily for two weeks, 7½ ounces linseed meal, 12 ounces bean meal, 8 pounds skimmilk daily for 2 weeks, the water for remainder of 17 weeks trial period. Average daily increased weight per calf, 1.36 pounds; gross weight all calves, 650 pounds. Group 3: 8 pounds whole milk daily for two weeks, 8 ounces oat meal, 4 ounces crushed linseed, 15 pounds skimmilk. Average increased weight per calf, 1.54 pounds; gross weight all calves, 733 lbs. Group 4: 8 pounds whole milk daily for two weeks, 9 ounces crushed linseed, 15 pounds skimmilk. Average daily increased weight per calf, 1.77 pounds; gross weight all calves, 847 pounds. The cost of feed for each group was as follows: Group 1, $8.16; Group 2, $6.77; Group 3, $9.50; Group 4, $8.28. The cost of the feed is governed by local conditions.

WEREROA:—Sixteen calves bought and divided into 4 groups. Group 1: 8 pounds whole milk for two weeks, 16 pounds skimmilk for two weeks, 3 ounces linseed meal for 13 weeks. Average daily increased weight per calf, 1.51 pounds; gross weight all calves, 718 pounds. Group 2: 8 pounds whole milk for two weeks, 16 pounds skimmilk for two weeks, 1 pound crushed oats for 13 weeks. Average daily increased weight per calf, 1.71 pounds; gross weight all calves, 822 pounds. Group 3: 8 pounds whole milk for two weeks; 16 pounds skimmilk, 1 quart linseed gruel for 15 weeks. Average increased daily weight per calf, 1.61 pounds; gross weight all calves, 770 pounds. Group 4: 8½ pounds whole milk for one week, 16 pounds skimmilk for one week, 9 ounces bean meal, 6 ounces linseed meal, well cooked and served with 3 quarts warm water daily for 15 weeks. Average daily increased weight per calf, 2.31 pounds; gross weight all calves, 1,077 pounds. The cost of feed for each group was as follows: Group 1, $4.29; Group 2, $4.77; Group 3, $6.56; Group 4, $4.32.

New Zealand. GEO. OSBORNE.

Hard Seeds in Legumes

HOARD'S DAIRYMAN:—Seedsmen and seed analysts have long been puzzled to know what agricultural value to assign to what are known as "hard" seeds, varying percentage of which is found in samples of lots of legume seeds, particularly in those of alfalfa and the clovers.

The period required to obtain germination test on clovers has been fixed by seed analysts at five days. All viable seeds in any given sample should have thrown out vigorous roots and shoots in that time. Any which have not done so are either "hard" or decayed.

"Hard" seeds are those which fail to show any signs of germination at the end of the five days but which show absolutely no signs of decay. Study and experimentation have shown that these "hard" seeds are the best matured and contain the highest amount of reserve food material. Apparently the better matured they are the harder the seeds become. The harder they get the less permeable the coats become. Just how long the hard coat of one of these weeds will prevent the absorption of water, without which there can be no germination, it is impossible to tell. Apparently it depends upon the degree of hardness. A sample of alfalfa with a high percentage of "hard" seeds sent to Dr. Noble, director of the seed laboratory at Tharand, Germany, was placed under ideal conditions for germination and occasional seeds are still germinating although it has been over thirty years since the sample was placed in the germinator.

Other experimenters have shown that seeds of alfalfa and the clovers will retain their vitality for many years when buried in the soil at so great a depth that heat and air are not sufficient to bring about germination. Dr. Duvel of the United States Department of Agriculture has recently dug up such seeds which had been buried for sixteen years and found them to germinate freely. A sample of hard red clover seed was buried beside one of ordinary seed. The ordinary seed germinated 91 per cent and the hard seed 92 per cent. These seeds were buried so deeply they could not germinate but when brought to the surface after being buried so long, germinated even better than if they had been kept under favorable storage conditions above ground.

It is because it seems impossible to know just what will happen when these hard clover or alfalfa seeds are sown in the soil that seed analysts are puzzled to know what agricultural value to assign to them. It seems clear that these hard seeds are a provision of nature to perpetuate the species, a certain percentage of the seeds remaining dormant for varying periods of time.

Whether this is true or not, so far as the seed dealer and the farmer are concerned, the problem as to what value to give such seeds is still unsolved. It may be possible that action of soil acids or possible abrasion or scratching of the seed coats during the process of seeding may make some of the hard seeds permeable and hence germinable. No doubt the action of frost might crack the coats and make it possible for the seed to absorb moisture and germinate if there was enough moisture in the seed. But these hard seeds seldom contain enough moisture so that frost action can affect them. If they will not absorb moisture there will be no value in sowing the seed in the fall or very early spring in the expectation of obtaining a better germination of the seed through frost action.

In the Northern Mississippi Valley the season of 1919 was especially favorable for the complete ripening of the clover seed crop. There was plenty of moisture during the early part of the growing season followed by dry weather during the time the seed was forming and filling. Frosts came late so there was nothing to interfere with normal and complete ripening of the seeds. These conditions were especially favorable for the production of a high percentage of hard seeds, especially in the Wisconsin clover seed crops. Germination tests in the state seed laboratory show percentages of a hard seed content approximate 20% on the average and in some cases reaching 42%.

When the seed dealer knows that the hard seeds are among the best developed and contain the highest amount of reserve plant food it seems to him an injustice to require him to label this seed with the actual germination tests which will necessarily be low. In other words, if the sample tested shows an actual germination of 78% and 22% of the seed remain "hard" the seed must be labeled with a germination of 78%, this in spite of the fact that when the hard seeds do germinate they will produce the best matured, most vigorous plants of any seed in the sample.

To the user of the seed, however, the proper labeling of the seed is extremely important. If the hard clover seeds lie dormant in the soil for more than two years, which investigation has shown to be more than probable, then the hard seeds are of no value to the Wisconsin farmers who almost universally turn down their grass land after two years of hay production.

Even were these seeds to grow after being three weeks or a month in the soil, the other clover plants, the nurse crop of grain and weeds, would smother the young plant and prevent its development. It seems, therefore, that until further investigational work, under conditions closely approximating farm practice, has been done, hard seeds in clover and other legume seeds must be considered of little agricultural value.

A. L. STONE.

Wisconsin College of Agriculture.

[Editor's Notes:—In reply to our inquiry as to whether the trouble of hard seeds, particularly clover and alfalfa, cannot be overcome by scarifying, Professor Stone states that it would accomplish this purpose. "But," he says, "the article was written very largely for the farmers who produce and make use of their own seed or sell to their neighbors. Scarifying would undoubtedly be profitable where the quantity of seed is sufficiently large to warrant it and where facilities for scarification are available without making the cost of the seed prohibitive."]

Next Winter's Ration

Kindly give your opinion as to the most economical feeds to purchase for the coming winter. The roughage will consist of a good supply of corn silage and clover and alfalfa hay, in about equal amounts, but in a limited quantity. We have plenty of oats on hand, also three tons of oil meal purchased at $67 per ton. Our herd is of heavy producing Holsteins, milking forty to sixty pounds daily.

Oconomowoc, Wis. M. F. H.

It is impossible to predict winter prices of feeds accurately. In general, it has proved to be the best practice to purchase concentrates about this season each year. Some unusual factors influence present markets, however, and may operate to lower prices later in the year. Because of these uncertainties, we cannot calculate the quotations which may be made later on concentrates.

This inquirer is following what Hoard's Dairyman considers to be the only practice consistent with good dairy farming, namely, that of raising as large a part of his dairy ration as possible and furnishing his cows, as a basis for their ration, liberal amounts of corn silage and a legume hay. He does well to feed his clover and alfalfa as liberally as these hays will be consumed. If the supply is not sufficient to last throughout the winter, more should be purchased. These hays furnish nutrients at a lower cost than they can be purchased in concentrates. Holsteins should handle around 40 lbs. of silage per day economically.

In addition to this, the heavier producing cows, that is, any cow producing more than about 30 lbs. of milk per day, will pay for a supply of concentrates. With the oats and oil meal, a high carbohydrate feed such as corn, hominy, or barley is needed. A good mixture may be made from 400 lbs. of ground barley, ground corn, or hominy; 200 lbs. of ground oats; and 100 lbs. of oil meal, this to be fed at the rate of one pound for each three and one-half or four pounds of milk produced.

If our correspondent can secure a good price on cottonseed meal, we advise him to plan to use this feed, either with his oil meal or to replace it entirely with some cows. In the herd will be some animals for which such a mixture as recommended will be too laxative through combining silage, alfalfa, and oil meal. Such cows should have cottonseed meal instead of oil meal.

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Conn.	Canaan	B. F. Dibble	June	304	47	81	W. A. Rand
Kans.	Jackson County	A. H. Lauridsen	"	88	12	50	R. A. Gilliland
Wis.	Rockfield	Wm. F. Liesener	"		55	70	P. W. Kramer
"	Mondovi	Myrt VandePlash	"	376	140	96	Saxe & Bourgette
"	Whitewater	A. F. Probst	"	527	48	82	Dee Glidden
"	Wood Co. No. 2	Clarel Stowe	"	512	53	60	Frank Wolf
Minn.	Pioneer	H. C. McMurray	"	934	118	76	T. A. Stowick
N. H.	Claremont & Lebanon	A. E. Norman	"	350	37	59	W. E. Beaman
Iowa	Monona—Farmersburg	Ernest Lihn	May	335		58	R. Eiffert
"	"	Ernest Lihn	June	344		61	G. A. Sabbann
W. Va.	Ohio County	Luke W. Frame	"	307	48	70	H. C. Garrison
N. H.	Coos	W. J. Abbott	"	575	51	61	C. W. Clarke
N. Y.	W. Broome No. 2	J. H. Sherwood	"	508	45	54	R. J. Loomis
Ohio	Butler—Road	F. L. Rostocil	"	255	70	96	M. O. Fay
"	Geauga Co.	C. M. McEwen	"	291	32	61	W. A. McLaughlin
Pa.	Starrucca	J. H. Curtis	"	475	45	60	A. W. Downton
"	Wilmot	E. S. Fanning	"	350	29	62	Keeney Bros.
Iowa	Tri-County	Ralph Houser	"			71	Fred Barnes
Wis.	Hebron	John Vanderberg	"	491	21	63	John Schollar
Mich.	W. Allegan Co.	C. P. Robb	"	231	25	56	J. D. Wedge
Wash.	Wahkiakum Co.	W. J. Carter	"	547	233	76	Mrs. M. Westerlund

Association Notes

Canaan, Connecticut:—A pure-bred bull was placed at the head of a grade herd during June. Market milk testing 3% sold for $2.94 per cwt. and 4c per point above this test. Feeds are rated as follows: Mixed hay, $30 per ton; cottonseed meal, $84; Schumacher, $72; gluten, $84; mixed feed, $69; oil meal, $68.

Jackson County, Kansas:—A quarter interest in a $5,000 bull was purchased by D. Coleman and Sons at St. Paul to head their Holstein herd. A registered bull calf and four heifers have been sold by one member and two others have each sold a bull calf. Another member has purchased three more registered cows to add to his Jersey herd. A Jersey cow club for boys and girls was organized with 14 members enrolled. A registered Jersey of a value not to exceed $350 is given to each member on proper security. Each cow will be tested for one year, either semi-officially or in association work. In June 3.5% milk sold for $2.90 per cwt. The creamery paid 54c per lb. for fat and butter retailed for 50c per lb. Corn chop sold for $3.60 per cwt.; bran, $3.00; oil meal, $4.50.

Mondovi, Wisconsin:—Twelve head of grade and scrub heifers and cows were sold in June, and three pure-bred Holstein cows, three pure-bred heifers, one pure-bred Holstein bull calf, five pure-bred Jersey cows, and one Jersey calf were bought into the association. The creamery paid 64c per lb. for fat in June and the cheese factory paid 65c in May. Milk retails for 10c per quart.

Whitewater, Wisconsin:—Nine unprofitable cows were sold during June. This association is one hundred per cent free from scrub sires. Pasture is in fine condition. June market milk testing 3.5% sold for $2.75 per cwt. and 4c per point was paid for fat above this test. The condensery paid 78c per lb. for fat and the creamery paid 76c per lb. Milk retails for 13c per quart, butter for 65c per lb., and cheese for 30c per lb. Oil meal is rated at $66 per ton; bran, $53; ground oats, $60; corn and cob meal, $58; silage, $7; hay, $40.

Wood County, No. 2, Wisconsin:—The average of this association for June is 817 lbs. milk, 28.57 lbs. fat, with an average test of 3.5%. A census of the sires in the association shows that 30 pure-bred and 15 grade sires are being used.

Pioneer, Minnesota:—June market milk sold for $4.83 per cwt. The creamery paid 72c per lb. for fat and milk retailed for 13c per quart. Pasture is rated at $2.00 per month, bran at $54 per ton, and oil meal at $70.

Monona—Farmersburg, Iowa:—Two carloads of cottonseed meal were bought at a saving of $20 per ton.

Claremont and Lebanon, New Hampshire:—One unprofitable cow has been disposed of and three unprofitable cows sold at good prices. One excellent pure-bred bull was purchased by a member. Both associations are using only pure-bred sires. Great efforts were made by the farm bureau to promote the keeping of pure-bred stock and some good results have already been obtained. One member recently installed a milking machine and is well satisfied with results. Three other members are installing light plants. Very little haying has been done so far, weather conditions being unfavorable. June market milk sold for $3.50 per cwt., 3.7% test required and 4c paid for each point above. The creamery paid 75c per lb. for fat, milk retailed for 14c, and butter for 70c. Feed prices are: Bran, $67 per ton; cottonseed meal, $92; linseed meal, $80; corn meal, $82; ground oats, $75; ready mixed rations, $83 to $87; Stork Feed, $80.

Western Broome No. 2, New York:—A meeting of the association was held June 4th for the purpose of closer co-operation, to become better acquainted and to organize for the following year. Pasture became short during the month and many were forced to feed grain and hay to their cows. Market milk testing 3% sold for $2.83 per cwt. in June, 4c being paid for each point above. Milk retailed for 13c per quart, butter for 60c per lb., and cheese for 32c per lb. Gluten is rated at $78 per ton; hominy, $82; cottonseed meal, $80; wheat bran, $70; hay, $40 delivered.

Butler Road, Ohio:—Four unprofitable cows were sold during June and ten pure-breds bought. The association is improving very fast and meeting with success. June market milk testing 3.5% sold for $3 per cwt. and 5c per point above this test. The condensery paid 54c per lb. for butterfat. Feed prices are: Larro Feed, $79 per ton; oats, $32; corn, $50; oil meal, $80; cottonseed meal, $80.

Geauga County, Ohio:—In June market milk sold for $3 per cwt., a test of 3.5% required. Unicorn is rated at $3.75 per cwt.; Union Grains, $3.80; hominy, $3.65; gluten, $3.80; bran, $2.65; oil meal, $3.80.

Western Allegan County, Michigan:—Since the association started five months ago, eight unprofitable cows have been sold. A few separators have been adjusted to do more efficient work. June market milk testing 3.5% sold for $2.75 per cwt., 4c to 6c per point above being paid. The creamery paid 58c per lb. for butterfat and milk retailed at 12c per quart. Cottonseed meal sold for $83 per ton; Unicorn, $80; Larro, $80; bran, $63; corn and oats, $90; hay, $25; oil meal, $85; middlings, $65; silage, $8.

Dodge County Central, Minnesota:—During June there were 438 cows tested, the highest cow producing 75.68 lbs. fat in 2,220 lbs. milk. The high herd average was 43.99 lbs. fat.

Douglas County, Colorado:—This association started work June 10th with twenty-four members. Mr. Sherman, an experienced tester from New York and Illinois, is conducting the work and reports eighteen members using pure-bred sires. Every member has a silo and five are using milking machines.

Otero County, Colorado:—G. M. Dickson is the owner of the high herd of ten cows in this association. These cows averaged 816 lbs. milk and 30.3 lbs. butterfat for the month of June. R. K. Huff owns the high cow which produced 1,287 lbs. milk and 42.74 lbs. butterfat. Four new cement silos have been constructed. Pasture is good and the average feed cost per 100 lbs. milk is 95c. The association is being reorganized for another year.

Platteville, Boulder, & St. Vrain Valleys, Colorado:—This association includes part of the old Boulder Association (discontinued last month) and Platteville, Ft. Lupton, and Brighton districts. Thirty per cent of the cows in the association are pure-breds. Forty-eight cows produced over 40 lbs. butterfat, twenty-two over 50 lbs., and eight over 60 lbs. H. S. Andrews is owner of the high cow, a Holstein which produced 1,626 lbs. milk and 71.5 lbs. fat for the month. Mr. Vollmar owns the high herd. His twelve cows averaged 993.8 lbs. milk and 47.5 lbs. fat. This record is surpassed by only one herd in the state.

Colorado gives the following "Cow Tester's Formula" as "a fine way to kill a dairy enterprise": "Use oleo and nut butters on your table daily. Creamery butter is too expensive for farmers and dairymen to use. Still you wish to see the city families pay the prices and consume more dairy products. Don't allow your children and your family to drink your own product—milk. Instead use tea and coffee. This helps the southern countries to get rich."

Starrucca, Pa.:—Three per cent market milk sold for $2.83 per cwt. in June, 4c being paid for each point above this test. Milk retails for 9c per quart, butter for 65c per lb., and cheese for 45c. Gluten sells for $3.75 per cwt. This month completed the yearly records of the Starrucca Association. The leading cow for the year is owned by W. W. Utter. This cow produced 13,930 lbs. milk, 473.4 lbs. fat, at a net profit of $303.47. The second cow, owned by A. W. Downton, made 12,867 lbs. milk, 471.7 lbs. fat, at a net profit of $265.32.

New Orleans Milk Producers Indicted

The following is a statement sent by I. S. West, Secretary of the Louisiana Dairymen's Co-operative Association. It is taken from the New Orleans Item for June 19:

An indictment charging three prominent dairymen of Louisiana with conspiracy to keep up the price of milk was returned Saturday by the federal grand jury.

They are I. S. West of Baton Rouge, secretary of the Louisiana Dairymen's Association, Peter Fabacher of Baton Rouge, and J. P. Wallace of Kentwood.

They are charged with "wilfully", knowingly, and unlawfully conspiring to restrain trade and commerce among several states" to keep up the price of milk.

Two States Involved

The alleged offense is declared to have taken place in Louisiana and Mississippi, which would make it interstate, and therefore, a federal matter.

A few months ago, Attorney General of Louisiana investigated reported action of Mr. West and other dairymen.

The present charge is a development of the recent milk fight. In April of this year, a large distributor of milk announced an eight-cent reduction per gallon in the price of milk he would give the farmers. This would have put milk two cents a quart cheaper.

Dairymen said they couldn't produce at that price. A number of meetings were held, at which production costs were discussed. Mr. West and the others named in the indictment are charged with developing a conspiracy at those meetings to refuse to sell milk at the reduced figure.

Dairymen did stop shipping, but Mr. West contended at the time it was individual action on their part following the discussions of the costs of production. It was reported that a number of farmers sold their cattle to the butchers and turned them out to grass, rather than sell at the reduced price, which they contended was a money-loser to them.

In the milk fight that followed, the local distributor imported milk from Chicago. The Louisiana dairymen were beaten.

The only reduction in the price of milk in New Orleans this year has been that two cents which was sliced off the farmer's pay check. The extra penny which the local distributing agent in question added for his own account when the farmers were given an increase the year before, is still on.

Michigan Farmers Round-up

Plans are completed for the second annual farmers' round-up at the Chatham, Mich., Experimental Station August 11th and 12th. This gives promise of being the greatest agricultural meeting yet held in the Upper Peninsula. A great many farmers are expected to attend from all counties in the Upper Peninsula and all agricultural organizations are co-operating to this end.

The state club leaders will have a two days' summer camp. Home demonstration agents and girls' club leaders will have a special two days program. Alger County is making effective entertainment preparations. An 800-lb. ox has been ordered for a barbecue. There will be stump blasting, dairy, and hog and sheep demonstrations. President F. S. Hedzie, Dean R. S. Shaw and Director R. J. Baldwin will speak.

Michigan. D. L. McMillan.

Westover Appointed Guernsey Representative in West

Mr. E. L. Westover, for several years in charge of dairy extension work for the Oregon Agricultural College, has accepted the position of fieldman for the Pacific Northwest for the American Guernsey Cattle Club. He begins his new work August 1.

This field appointment is the first made in accordance with the extension plans laid by the Club at its last annual meeting. Mr. Westover, already familiar with the dairy situation in the Northwest, will devote his efforts to developing Guernsey breeding communities.

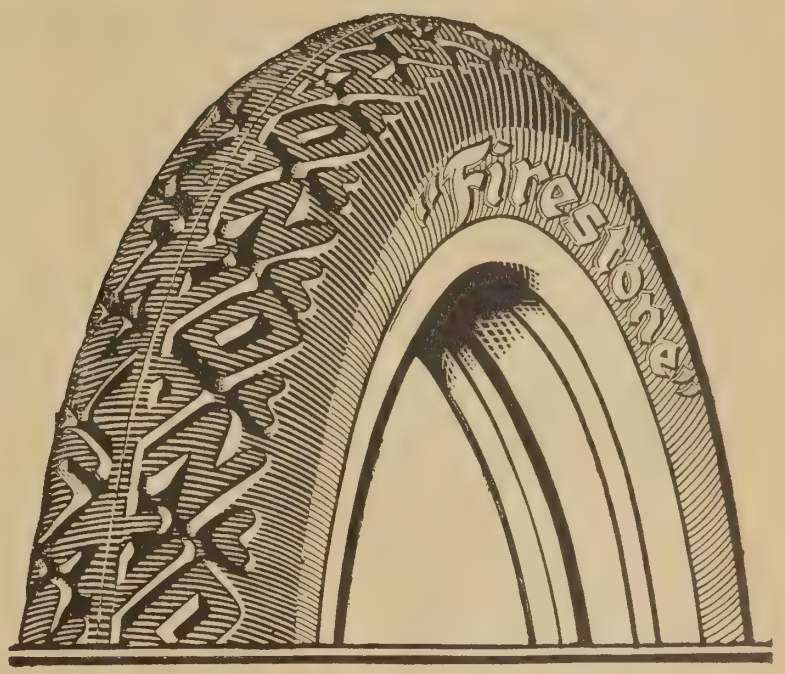
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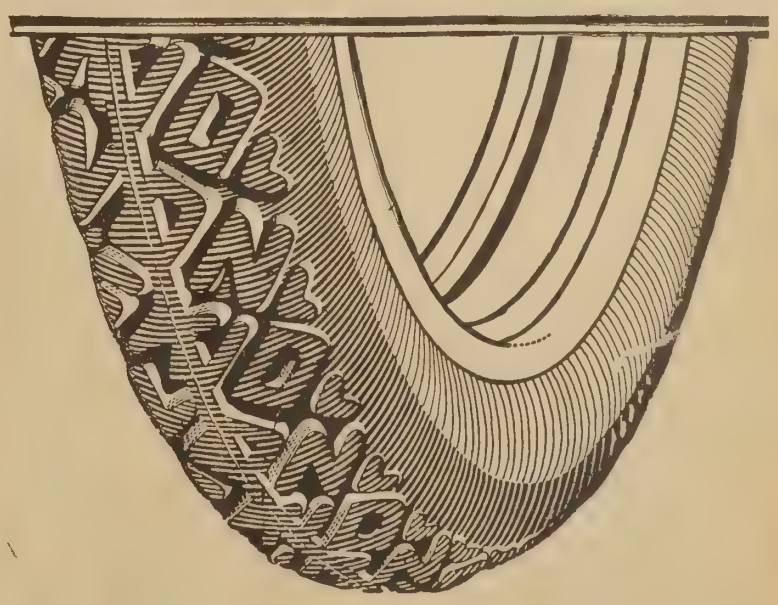
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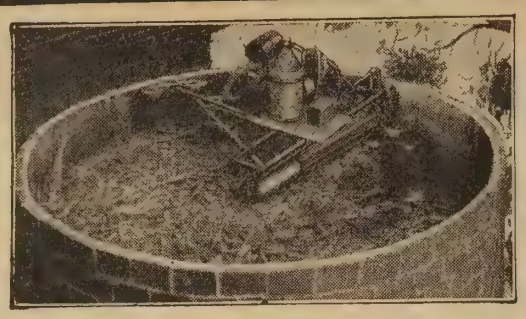


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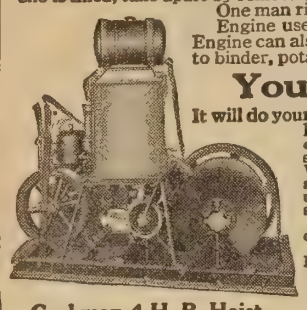
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(Continued from page 35)

the Chamber of Commerce in organizing the company.

Farmers who keep the cows secure all the milk and butter that the cows produce and one-half the value of the offspring. The male calves are to be sold before they are a year old and the money divided. The females are kept for a period of five years at the expiration of which time a big sale is held. The money received from the offspring is to be divided between each farmer and the company, and the company dissolved.

Farmers are required to purchase stock in the company to the value of $100 for each cow they receive, and are urged to buy as much stock as they can finance. On this stock the farmers participate in the dividends of the company, the same as any other stockholder. The stock not purchased by the dairymen taking cows is sold to local farmers and business men. About one-half the money has been subscribed in the country and one-half in town.

The company owns high quality bulls which are used to breed their cows. The animals are cared for by a keeper employed by the association, who is provided with a motor truck and upon request of the farmer belonging to the company, the keeper transports a bull to their farm and breeds the cow. Far Oak Sir Homestead Rue, a son of Piebe Laura Homestead King, was recently purchased from the Minnesota Holstein Company as one of the herd sires. The bulls to be used by the company are all yearly record animals and all the females are to be tested on a yearly record basis some time during the five-year period.

This organization gives the small dairyman a splendid opportunity to breed pure-bred cows. These animals in general will produce more milk or butter and return better profits than would a like number of the grade cows common in this community, and half of the offspring from the pure-bred cows will be of greater value than all the offspring from the grade cows. As the cows remain the property of the company, it relieves the individual from much of the risk incident to purchasing pure-bred cattle. The organization by its size and nature enables the individual to sell surplus stock and bull calves to good advantage. The company gives the small breeder an opportunity to breed his cows to a sire of quality that hitherto has only been available to the man with a large herd. It places the man with a few pure-bred cows on a level with the large breeder.



MR. T. A. TRULL, COW TESTER FOR THE BOURBON COUNTY COW TESTING ASSOCIATION

Bourbon County, Kansas, of which Fort Scott is the county seat, has been working toward the development of the dairy community for the past four years. At that time some of the leaders in the community found that the continuous cropping system followed by many farmers, in which corn or the sorghums had been grown for years, was leading to agricultural bankruptcy; they found that crop yields were decreasing and the land was getting poorer. They looked around, got expert advice, considered the few local examples available, and started out to build a dairy community.

The distribution of the pure-bred cattle was one of the events in the work that gives evidence as to the progress that is being made. In the past four years a large condensery has been built at Fort Scott; the building of hard surfaced roads to facilitate the transportation of milk has been pushed rapidly; large numbers of Holsteins have been introduced; and the use of pure-bred Holstein bulls on the better grade Shorthorn cows is assisting in developing profitable dairy cattle. A cow testing association has completed one year's work and started on its second year, and another association is to be organized shortly.

Perhaps the most noticeable result of this work is in the spirit of the community. A feeling of doubt and lack of confidence in the future of this county has given way to a spirit of confidence in the community and faith in the future.

Red River Guernseys

The annual picnic and sale of the Red River Valley Guernesy Breeders' Association, Minnesota, was held on June 8th at the Burr Oak Farm, owned by Albert Johnson. Harry Woolson is president and Leonard Houske is secretary and treasurer. These officials have worked hard to make the meeting a success and judging from the attendance and prices their efforts were well awarded.

The prices of the animals sold ranged from $115 to $350, which is a very good record for the first sale of Guernseys held in Pennington County.

The Guernsey breeders of Pennington County, Minnesota, are doing much to boost the Guernsey breed in the Northwest by showing a car load of their finest animals on the show circuit in this part of the state. This car load was loaded in Thief River Falls, June 29th. After making this circuit the car will return to Thief River Falls in time for the Pennington County Fair, August 4, 5, and 6.

The herds are appropriately and attractively labeled with signs of the individual owners and one large sign advertising Pennington as the Guernsey center of the Northwest, coming from a locality with more accredited herds than any other county in the United States.

Idaho Wants Testers

HOARD'S DAIRYMAN:—The Extension of the University of Idaho is in need of official testers and cow testing association supervisors. The salary paid is $75 a month for the association work and $3 a day for the official testing work. We want men who have had experience in dairying and who can make the Babcock test for milk. The expenses of the testers are all paid by the associations and board and room is furnished.

Boise, Idaho. F. R. CAMMACH,
Field Dairyman.

The Power You Turn into Light

It takes power or "energy" to produce light. With old-fashioned lighting it took *human* energy. The more light you had, the harder you *worked* for it. The great advantage of electric light is that it requires mechanical instead of human energy and, when NATIONAL MAZDA lamps are used, it takes only a little even of mechanical power!

NATIONAL MAZDA lamps are so economical, use so little electricity, and produce such brilliant, eye-helping illumination that they are used as standard equipment with fully nine-tenths of the lighting plants now being installed.

You will do well to specify NATIONAL MAZDA when you buy new lamps. They may be obtained from the man who sold you your plant or from the NATIONAL MAZDA agent where you see the Blue Carton displayed.

NATIONAL LAMP WORKS *of* General Electric Company
72 Nela Park, Cleveland, Ohio

Each of these labels represents a Division of National Lamp Works equipped to give a complete lighting service



NATIONAL MAZDA LAMPS

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Chronic Cough

I recently bought a Jersey and heifer calf. The calf was dropped on April 28th, and is in the pink of condition. The cow seems to have a cough, sometimes she will go a week without coughing, then she will cough continually for a few days and stop. I noticed recently at times her nose seems to run, but this very little and can't be noticed unless you pay particular attention to it. She eats heartily and is a heavy milker, though this is her first calf. In spite of this cough she doesn't seem to be on the decline and on the contrary she seems to be getting in better condition as time goes on. I am at a loss to understand just what can cause this cough. She has had it for some time, and judging from all appearances and condition she is far from looking like a tubercular cow.

Hammond, La. A Subscriber.

Tuberculosis in all probability is the cause of the cough and other symptoms described. In all such cases the first step should be to have the tuberculin test applied by a qualified veterinarian. It is the only way of determining whether or not the disease is present. We should advise testing by the intradermal method at this time of the year. Write again if necessary after the test has been applied.

Abortion

Please tell me best method of preventing and curing contagious abortion. Is vaccination for abortion successful?

Frederick, Wis. J. B.

Vaccination, thus far, has not proved satisfactory but it is along that line that a successful treatment eventually will be achieved. Isolate affected cows and have them disinfected by a veterinarian. Also cleanse, disinfect, and whitewash the stable under his supervision. Before breeding any cow or heifer, flush out her vagina every other day for 2 or 3 weeks with lukewarm boiled water containing 30 grains of permanganate of potash to the gallon and continue the injections for 3 weeks after service. Disinfect the bull with a like solution before and after each service.

Milklessness

Upon the farm that I am operating, there is a young Jersey cow that has always been giving a good flow of milk when she was fresh. She became fresh about two months ago, and is in a good pasture and is practically dried up, or gives a very small mess of milk. She is an unusually good fresh cow for giving milk and I thought possibly that you could suggest something that could be done to restore the normal flow of milk.

The cow did not have as much silage as usual last winter but was fed largely on clover hay, and remained in good flesh during the winter and I do not understand why she should fall off on her milk so soon after freshening.

I have a mare, whose colt died soon after birth, and wish to know whether anything should be fed to the mare or anything done with her to prevent the milk from affecting her system.

Jim Falls, Wis. F. F. A.

A chill or shock at calving time often leads to such suppression of milk. Allowing a calf to nurse may reestablish milk secretion, but not if garget (mammitis) happens to be the cause and it is a common one.

A little milk should have been stripped away at increasing intervals and warm camphorated oil or vinegar and water applied to the udder twice a day until milk secretion ceased; the mare meanwhile being allowed dry feed.

Ducks Dying

I have a flock of ducks which are all pretty big. They all have been healthy until the past week and one by one they have been dropping off. They will fall over on their backs and cannot get up and when I help them up they fall over again. It seems they have no control of their legs; they will not eat and soon die. If you could inform me what is the cause and also what to do for them, it will be greatly appreciated.

Townsend, Wis. H. B.

It would be impossible to confidently diagnosis the disease that is killing your ducks, as a post mortem examination would be necessary to a correct determination. It would be well, therefore, to open one of the ducks and if you then cannot decide what is the matter, arrange to send one of them to the state agricultural experiment station, veterinary department, for examination. Meanwhile, give the ducks a change of yard and feed. It seems likely that they have taken some poison or other deleterious matter that has caused fatal derangement of the digestive organs.

Abortion

We have contagious abortion in the herd and have been fighting it for six months or more. Part of the time through a local veterinarian and part of the time with the carbolic acid treatment. I am not getting results except it seems that the lysol treatment prevents getting the cows in calf. Do you think it would have that effect? Is there any cure for it? I can not separate the infected cows from the well ones. We have a small place with only one barn and one small pasture. I have got to stamp out the disease or quit the business. Which shall I do?

Illinois. H. R. S.

As often stated here, there is no specific remedy for the contagious abortion disease, which also causes barrenness or shy breeding, but it may die out in 18 months to 2 years if you can combat it properly by disinfecting methods. At least separate the affected from the unaffected cows and heifers by a partition in the stable and fence in the field.

Have the veterinarian treat the womb and ovaries of each affected cow according to modern principles. Mere flushing out of the vagina will not suffice. That, however, should be done every other day for two or three weeks before again breeding a treated, affected cow, or a non-affected heifer. For flushing purposes, use a solution of 30 grains of permanganate of potash and 1 gallon of lukewarm boiled water. Use a similar solution to flush out the sheath of the bull before and after each service. The veterinarian also should instruct you how to properly cleanse, disinfect, and whitewash the stable.

A mixture of 1 part of compound cresol solution in 30 parts of water, or 5 ounces of formaldehyde in 1 gallon of water will serve well for disinfecting of floors, gutters, and other parts of the stable. The carbolic acid, if given at all, should be given from the end of the second month to the end of the seventh month of pregnancy in the case of heifers and throughout pregnancy in the case of affected cows. It has not, however, proved successful on trial at the experiment stations, but many breeders believe it well worth trying. Write to the experiment station of your state and Department of Agriculture, Washington, D. C., for bulletins on abortion.

Georgia Jersey Jubilee

The Georgia Jersey Jubilee and the first consignment sale of the Georgia Jersey Cattle Club held July 5 was a success in every way.

The Jerseys were the best ever offered for sale in Georgia and the quality was appreciated as the 42 head sold for $17,965, an average of $428. This is the highest average of any Jersey sale ever held in the southeastern states.

Fully fifteen hundred people were there to enjoy the program, the barbecue, and watermelon cutting. It was a Jersey day and will always be a bright spot in Jersey history.

Roscoe H. Luke, of Thomasville, delivered the address of welcome and Professor Milton P. Jarnagin of the Georgia State College of Agriculture responded. Mr. Frank C. Baldwin, proprietor of Snowden Farm, Virginia, represented the American Jersey Cattle Club and gave an instructive talk in which he outlined practices which his experience as a breeder has taught him are necessary for success. He emphasized the necessity of breeding and selecting for type as well as for production. He urged each beginner to choose a family and stick to it. The necessity for breeders working together was clearly pointed out.

As soon as the program was over and on schedule time the barbecue and watermelon cutting was announced. The people of Thomasville had expected a large crowd and there was food enough and to spare.

At the beginning of the sale the secretary of the Georgia Jersey Cattle Club spoke for a few minutes on the things the club is doing and how it can help the breeder. He asked all who wanted to join to do so. They came so fast that he had to have help in recording them. Twenty-five joined, each paying in his ten dollars. The club is not talking co-operation; its members are busy co-operating.

The cattle were, on the whole, in good condition. The breeders who had fitted their offerings most carefully were well repaid for it. Forty-two head sold for $17,940, an average of $427.14 each. No animal sold for less than $200.

There were buyers from Georgia, Florida, Alabama, and Texas.

Following is a list of animals selling for $400 or above and their purchasers:

Dr. J. C. Woolridge, Georgia	
Betsey's Oxford You'll Do	$825
Thos. W. Holloway, Georgia	
Majesty's Egyptian Lass	$900
Thomasville Live Stock Co., Georgia	
Tycoons Oxford Triumph	$1,000
W. A. Watt, Georgia	
Fannie Steel 2d	$725
A. M. Cope, Alabama	
Egyptian Dulcet	$500
P. J. McCollum, Georgia	
Eminent's Louise Geier	$425
Eminent's Golden Della	430
Dr. T. R. Crovatte, Georgia	
Rayol Duchess of St. L.	$425
W. H. Emmet, Georgia	
Rosa Gold's Jewell	$460
J. D. Holman, Alabama	
Viola's Oxford Warder Lady	$685
Elsie's Sister of H. S. F.	425
L. J. McPhaul, Georgia	
Raleigh's Mabelle of B.	$425
P. K. Yonge, Florida	
Raleigh's Elena of Brookhill	$400
Eminent's Dainty Lady	430
Eminent's Juliet Raleigh	600
C. M. Shackelford, Georgia	
Eminent's Little Duchess	$400
C. W. Cochran & Bro., Georgia	
Raleigh's Clothilde Dame	$460
Tippin's Fairy Queen	700
Neel Bros., Georgia	
Royal Lassie	$425
Imp. Alice Verbena	750

Georgia. W. H. HOWELL.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

Silos At Half Price

I must clear my present warehouse before winter. About 200 silos left, which I will sell at half price as long as they last. Silos are well known make, new, built of genuine Clear Oregon Fir, and absolutely first class in every way. You have as good a chance at these as anyone else if you get your order in before they are gone. No partiality shown big buyers. Everybody treated fairly. Orders filled in order of their receipt.

M. L. SMITH, *Manufacturer's Agent*

118 Flood Building

MEADVILLE, PENNSYLVANIA



Sequel's Glenwood of Linwood 41767

Sire, Imp. Clara's Sequel 29414, sire of 30 A. R. daughters averaging 500 lbs. fat. Dam, Ideal of Alfalfa Farms 40750. She has three A. R. records: 452 lbs. class G, 740 lbs. class A, 690 lbs. class AA. I am offering the following bulls by the above sire. Their dams have large records and are sired by Langwater Frenchman, Langwater Frederick, and Governor of the Chene:

Eugene of Linwood 7 months, dam 752 lbs. class AA class leader
Edgar of Linwood 11 months, dam 540 lbs. class B
Edward of Linwood 11 months, dam 421 lbs. class G
Emery of Linwood 11 months, dam 514 lbs. class A
Edwin of Linwood 10 months, dam approximately 590 lbs. fat class FF
Elmer of Linwood 8 months, dam 485 lbs. class G
Ernest of Linwood 8 months, dam 566 lbs. class B

Sale List Homer F. Rundell, Livingston, Wis.

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls, also heifers and young bulls by them. Don't forget the date. Send for catalog.

Jean Du Luth Farms, Duluth, Minnesota.

5-10 Well Bred Heifers

Several Good Young Bulls

are what we are offering just now. The heifers are registered two-year-olds bred to freshen this fall—several are daughters of Sir Ormsby Homestead Butter Boy, a 35-lb. bull of Homestead Jr. De Kol breeding.

The young bulls up to 9 months old are from A. R. O. dams and several are by "Butter Boy". One is by King Bess Burke Ormsby, a 42-lb. grandson of S. P. O. M. and Spring Brook Bess Burke.

They are priced to sell. Write or, better still, come and see them.

ANDREW FRANK, FOX LAKE, WIS.

The 25th Sale of the Pure-bred Live Stock Sales Co.

of Brattleboro, Vermont

On Tuesday and Wednesday AUGUST 3rd and 4th, 1920

Will consist of upwards of 100 head of Holstein-Friesian cattle of all ages and both sexes.

Take a few days off and see the historical Deerfield and Connecticut Valley.

The grandeur of the Green Mountains beckons the tourist from far and wide.

Edgemoor Guernseys Average $962

THE sale of 62 Edgemoor Farm Guernseys at Waukesha, Wisconsin, July 22, brought a total of $59,695, an average of $962.82. Imp. Itchen May King and 29 of his daughters and granddaughters featured the auction, the former going to F. E. Fox and Goodhand Kingston & Son of Wisconsin for the top price of the day, $6,100, with Wm. Jones and McKerrow Farms runners-up. The twelve daughters returned an average of $1,012.50. Twenty animals out of the 62 brought $1,000 or more.

Imp. Donnington Goldie 5th, first prize cow at National Dairy Show in 1917 and 1919 and third cow in Class E with a record of 796.52 lbs. fat was highest priced female. F. J. Reuping of Wisconsin made the last bid of $5,200, J. L. Hope of New Jersey contending with a bid of $5,100. This is the highest valuation yet placed on a Guernsey cow in the Waukesha sale pavilion. The second female in price was ten-year-old Imp. Mildred II of Les Godaines. She has a record of 702.24 lbs. fat made as a five-year-old and was first prize cow at the Panama-Pacific Exposition and first prize Advanced Registry cow at the 1917 and 1919 National Dairy Shows. Jones & McKerrow, Wisconsin, are her new owners.

Wisconsin and Minnesota bought the offering, the former taking 47, the latter 14, the only Edgemoor Guernsey going outside these two states being purchased by C. L. Hill of Wisconsin for A. C. Haskell of Georgia. Two Wisconsin show herds took the greatest number of good ones, building and filling out their entries for the fall shows. Goodhand Kingston & Sons paid $2,200 for a three-year-old daughter of Imp. Itchen May King, besides taking a half interest in the old sire himself. Jones & McKerrow took four at $1,000 or more, including the ten-year-old cow and a $2,000 senior yearling daughter of Royal Rose King of Edgemoor. Radisson Farm and A. C. Loring of Minnesota were the heaviest Minnesota buyers.

This sale was a consignment from the Edgemoor herd of California, offered because of shortage of labor. It was shipped to Waukesha and sold under the management of F. E. Fox. Arthur Klussendorf had charge of it in its fitting and was responsible for the excellent condition in which these animals went on the auction block. Some inferior individuals were offered but the run of the sale ranked it as one of the best Guernsey auctions yet held. It proved a highly favorable advertisement for this great California herd.

Benjamin, Love, and Jones sold, with F. E. Fox in the box.

The following lists all animals selling for $750 or more, with their buyers:

Goodhand Kingston & Sons, Wisconsin	
Itchen Queen of Edgemoor	$2,200
Lillian of Edgemoor	975
Mary's Sumac of Edgemoor	1,000
Jones & McKerrow, Wisconsin	
Eidelweiss of Edgemoor	$2,000
Spring Maid of Edgemoor	1,350
Imp. Mildred II of Les Godaines	2,700
Century Girl of Edgemoor	1,000
H. A. Kuhtz, Wisconsin	
Imp. Grade Fort Pride III	$1,000
Fedora of Edgemoor	1,325
Fox & Kingston, Wisconsin	
Imp. Itchen May King	$6100
Radisson Farm, Minnesota	
Dolly Varden of Edgemoor	$1,000
Gloriana of Edgemoor	850
Renown of Edgemoor	1150
R. K. Overton & Son, Wisconsin	
Caprice of Edgemoor	$1,275
F. W. Brandt Wisconsin	
Rainbow Girl of Edgemoor	$1,250
P. H. & C. H. Kuhtz, Wisconsin	
Laurette of Edgemoor	$975
Imp. Modesty of Edgemoor	825
A. C. Loring, Minnesota	
American Girl of Edgemoor	$1,000
W. E. Fisher, Wisconsin	
Imp. Bohemian Girl of Edgemoor	$1,725
Wm. Konrad, Wisconsin	
Susette of Edgemoor	$1025
T. H. Marsden, Wisconsin	
Royal Dame of Edgemoor	$1,475
W. G. Jamison & Sons, Wisconsin	
Danseuse of Edgemoor	$750
F. J. Reuping, Wisconsin	
Imp. Donnington Goldie 5th	$5200
L. E. Hageman & Sons, Minnesota	
Margy's Beda	$1,000
Konrad Bros., Wisconsin	
Duchess of Maple Hill	$2,000
Mrs. F. E. Fox, Wisconsin	
Imp. Hon. Lady Jebb of Chese Farm	$825
L. O. Jacob, Minnesota	
Show Girl of Edgemoor	$800



IMP. ITCHEN MAY KING, SOLD JULY 22 TO KINGSTON & FOX FOR $6,100

The Hired Man Speaks

HOARD'S DAIRYMAN:—The article on the front page of the Dairyman of June 25 on "The Farm Labor Problem" hits the nail squarely. The true reasons for the scarcity of hands on the farm are revealed in that article, and my experience as a hired man on the farm leads me to heartily coincide with the author. The truth was never more forcibly given.

During my experience as a hired man I have made it a point and special effort to study the cause of the shortage of farm labor. You can neither curb human nature nor can you trifle with it. You can't stop a good man with ambition and pride from going where he can see the desire of his heart. The farmers, as a rule, are to blame themselves for the shortage of farm help. Not all farmers are alike, thank God for that. How many farm homes are pleasant places to work? What is there to attract a full interest in the work? Just ask every man that has left farm work and gone to town, and the shop, and then form your own conclusion.

There are bad farm hands, but who raised them? Were they born and reared on the farm? If so, what kind of training did they get? The golden rule could very profitably be used on the majority of farms where help is hired.

How does a good hired man with any brains and ingenuity like to carry ensilage to 35 or 50 head of cattle from Pennsylvania to Indiana in a bushel basket? How does he like to pump water by hand? Come to this section and I will show you what greets your eyes while working on the farm. I will show you a large hog wallow that you have to jump into to open a gate that is tied shut with wire. A load of dirt or two would fill the wallow and the tobacco that is chewed would make a good gate, if the "farmer" had the money the tobacco cost. I have seen "Tight Wad" and "Scrub" farmers make their own butter and sell it all, and buy oleo. Does that encourage a farm hand with high ideals to love the farm and the noble cow?

Order and system, good tools to work with, a place to take a bath, a good light to read by, and some time for recreation, a good pay for good service rendered, social advantages, and scenery that is pleasing to the eye—the lack of these are some of the many reasons that men leave the littered up farms and go to the city.

Ohio. G. B. C.

DAIRY MARKETS

CHICAGO, July 21—Butter—Creamery, extras, 55c; standards, 55c; dairy, firsts, 49@54c; seconds, 44@48c.

Eggs—Ordinary, 40@41c; firsts, 42½@44½c.

Cheese—Twins, 22¼c; Young Americas, 25c.

MILWAUKEE, July 21—Eggs—Fresh firsts, recandled, for city trade, 44@45c; checks, 29@30c; dirties, 31@32c.

Butter—Creamery—Tubs, 56c; prints, 57c; extra firsts, 54@55c; No. 1 packing stock, 38c; No. 2. 20@30c.

Cheese—Twins, 23@23½c; Daisies, 24@24½c; Longhorns, 25@25½c; Young Americas, 25@25½c; fancy Brick, 27@28c; Limburger, new, 1 lb. 31c; Limburger, new, 2 lbs., 30c.

NEW YORK, July 21—Cheese—Dull; state milk; common to specials, 20@28c; skims, common to specials, 5@18½c.

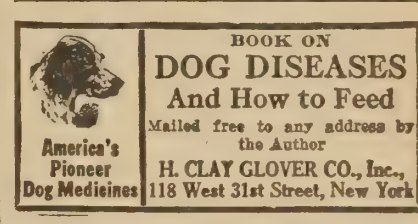
Butter—Firmer; receipts, 8,412 pkgs.; creamery, extras, 57½@58c; state dairy, tubs, 45@56½c; imitation creamery, prints, nominal.

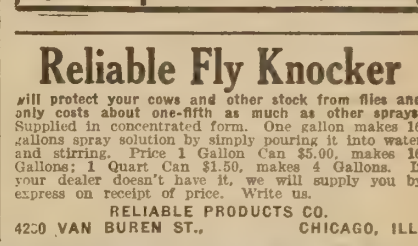
Eggs—Firm; receipts 13,832 cases; nearby white fancy, 65@67c; nearby mixed fancy, 46½@58c; fresh firsts, 47@53c.

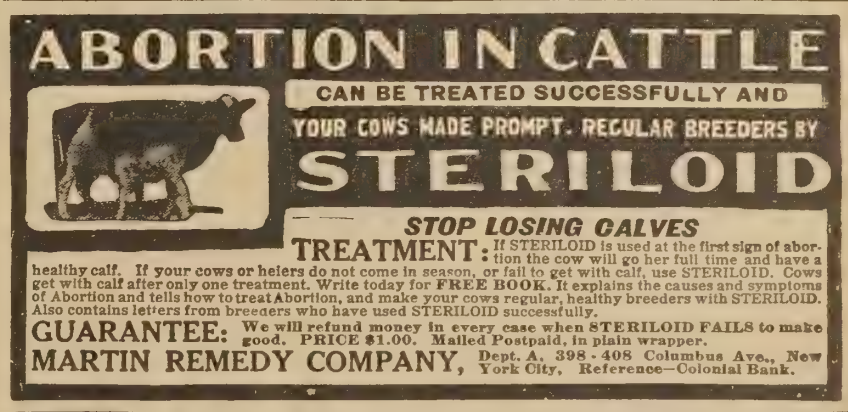


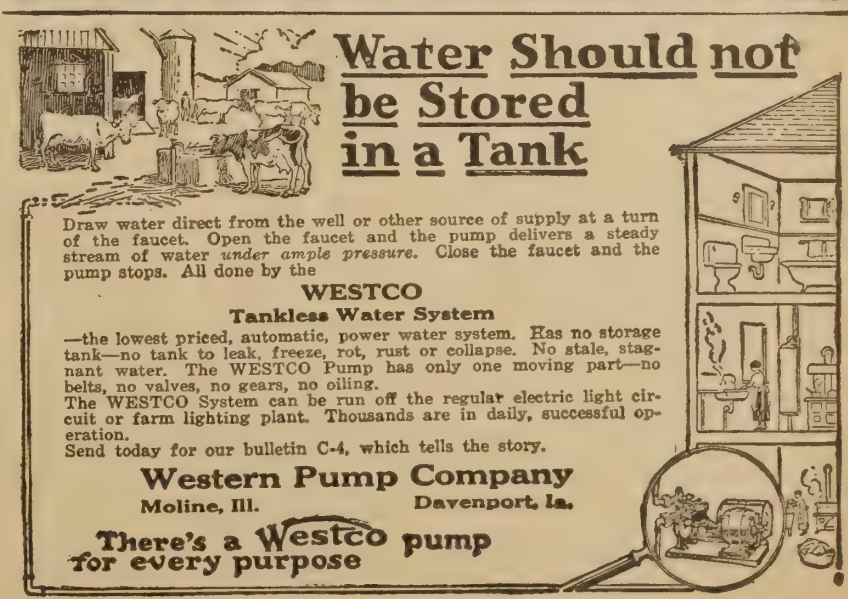












HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

What California Pig Club Boys are Doing

Thirty pig club boys in Kern County, California, have compiled a report of their work for 1919 in a most interesting manner. The pig club boys will be interested in reading the bulletin they have put out.

The following is the summary by their local club leader, H. K. Dickson:

"The conclusions which one can safely draw after carefully studying the 30 boys' club reports on their 30 litters of pigs, and after watching these pigs develop during this last fall and winter seem to be as follows:

"First: Once the average pure-bred gilt is in good condition, weighing 300 to 350 pounds when a year old and bred to farrow at the age of fourteen months, she will hold her weight and develop a satisfactory litter of embryo pigs if she is pastured on alfalfa and receives from a pound to two pounds of mixed grain per day. Some gilts seem to do very well on this amount of feed even when in a small dry pen. However, a run of alfalfa pasture gives them a chance to get the necessary exercise and also the valuable green feed. The substituting of a pound of bran for grain during the last week before farrowing has proved very successful.

"Second: In gilt litters of 7 pigs the average weight per pig at birth is from 2¾ to 3 pounds each. Our gilts have averaged 7½ pigs each at birth and have raised 6¾ pigs each to weaning. In most cases in which only 7 pigs were born the gilt raised the full 7 to fine mature pigs. In litters which started with 10 or 11 pigs the usual thing has been for accident of some nature to kill pigs enough to bring the number down to 6 or 7. Our medium sized litters of 6 or 7 pigs to start with have proved most satisfactory from every point of view.

"Third: A sow raising a litter of 7 pigs should receive 3 or 4 pounds of grain per day for the first week after farrowing, and then the feed should be increased to 7 or 8 pounds by the end of the second week. The grain mixture should be at least ½ wheat middlings or some similar mill feed, with the other half ground corn or barley, or a mixture of the two. About 1 pound of tankage should accompany the grain rations. If skimmed milk is available, it should be used in making a slop of the middlings. Then the tankage is not as necessary. Alfalfa pasture is a very valuable feed for the sow during the full time that she is nursing the litter. It supplies green feed, protein, and exercise.

"Fourth: In some cases it seems advisable to increase the sow's grain ration to 9 and even more pounds per day, but this is usually not necessary and may even be dangerous, as too much feed sometimes causes the little pigs to scour. The remedy is to cut down the quantity of the sow's feed or change her ration to a new grain mixture.

"Fifth: The little pigs should have a separate trough of their own paneled off from the mother's by the beginning of the third or fourth week. Great care should be taken not to allow any of the slop or wet mill feed used in the little pigs' trough to sour. The little pigs should only be given as much or a little less slop than they will clean up at the time of feeding. Wet mill feed sours in the troughs in a few hours and the sour food causes indigestion and stunts little pigs. The pigs' trough should be thoroughly cleaned and washed out every few days. Disinfecting at the time of washing with a little sheep dip helps to keep the troughs from souring.

"An important item to note in the paneling off of a trough or self-feeder for the little pigs is to be sure that the lower board of the panel is high enough from the ground so that the little pigs never have to bend their backs to walk under it. A better plan is to cut a tall, narrow opening at one or both ends of the panel, so that the pigs can go through the opening into the enclosure, but narrow enough to keep the sow out. Pigs which crawl under panels, fences, or wires become sway backed or have a distinct drop behind the shoulders.

"Sixth: A self-feeder for little pigs is a very satisfactory way to feed them dry ground grain. Feeding dry grains helps to keep the little fellows from getting stunted by gorging themselves with slop. It also helps them to grow evenly. We are strong believers in self-feeders.

"Seventh: Little pigs at the age of 70 days can easily be made to weigh 55 pounds each without becoming fat or soft. Many litters with good care will average 60 to 65 pounds each at 70 days. Pigs which make such gains are most desirable for breeding animals, since they develop into even adults without having any part of their bodies stunted. In fact, our fastest growing pigs are very often our best pigs. There seems to be no argument for retarding a pig's growth below the limits noted. We would like to have all of our pigs average at least 60 pounds at 70 days.

"Eighth: The average cost of producing a pound of pork on pigs up to 70 days of age is a little less than 10 cents. In every case in which the boy forced his pigs as fast as they would grow, his cost per pound was 10 cents or less, even going below 8 cents in some cases. When the pigs were grown slowly so that their weight at 70 days was less than 45 or 50 pounds, the cost per pound gained was more than 10 cents per pound and the resulting pig showed various degrees of stunting which lowered his value. In every case the records show it does not pay to skimp on feed and stunt the pig. We have had little trouble in selling well grown out pigs at $50 each when 10 to 12 weeks old, but the pigs of the same breeding which only weigh 40 to 45 pounds at 70 days look just enough poorer so that people are not anxious to take them. We aim at having our pigs weigh 60 pounds each at 70 days and to be fast growing pigs throughout the whole period. Then they will not be little fat lumps due to forcing during the ninth and tenth weeks.

"Ninth: In comparing our results with those ordinarily reported by the producers of grade hogs or stock of a low degree of quality we can say definitely that pure-bred hogs of quality do prove themselves of superior value when considered simply as pork producers. Hogs of good blood do make it possible to use $60 corn at a profit when fat hogs are selling at 15 cents per pound. They make greater gains per pound of corn fed than the ordinary grade or scrub hog. The boys' club is anxious to see hundreds of pure-bred sows, of selection and quality, used as the production stock on the ranches which are producing fat hogs. Then we will have the class of pigs which can most economically use our grain. We will cut down cost of production and increase the quality of our pork products. We will be proud of Kern County's fat hogs. They will lead in California."



THE KIND OF PIGS AND BOYS TO RAISE

A Good Poultry Record

HOARD'S DAIRYMAN JUNIORS:—Last winter you asked me for a letter about my poultry record. I could not get my record sheets then, but now that I have them perhaps it will not be too late to let you hear from me.

On January 1st, 1919, I had 70 hens and by Dec. 31st, I had 107, which made an average of 68 hens for the year. This is the flock record as sent out by the Ohio State University:

Number of hens	68
Eggs per hen	129
Purchases	$150.48
Sales	335.70
Inventory gain	76.85
Gross gain	262.07
Feed cost per dozen eggs	.207
Profit per hen	3.85

The flock ranked tenth in egg production in the state, there being 41 farms in the list. I have both Single Comb White Leghorns and Rhode Island Reds. I had taken a correspondence course in poultry with the university and followed their instructions in regard to feeding.

I have a heifer which will be fresh in June, and my cow will be fresh in July. I think I will sell the cow and calf as I want to use the money for school. My prize cow came fresh a few months ago, and I had a fine heifer calf which we call Winner. I expect to take her to the fair next fall and I hope she will prove true to her name. Good luck to all the juniors.

Ohio. RUTH I. BEHNER.

Junior Dairy Clubs in Tennessee

The club boys and girls in half a dozen Tennessee counties have begun junior dairy club work in a definite way and from the increased interest in dairying generally this work will spread to the other counties. The object of these clubs as outlined by the University of Tennessee is, (1) to educate farm boys and girls in dairying; (2) to teach a means of providing cash income; (3) to raise more dairy cattle; (4) to place dairy cattle on a relatively larger number of farms; (5) to encourage a greater use of dairy products in the home.

A three-year plan which will enable the boy or girl to own and develop a calf through the first three years of its life and give the training in handling calves, yearlings, and two-year-old heifers in milk, is the adopted plan. The clubs are divided into three yearly contests as follows:

First year contest begins when the calves are first purchased and ends with a calf club show, or when the calves are approximately one year old. Club members should begin with calves six to eight months old, but calves only a few days old, which would otherwise be killed by dairymen to conserve the market milk supply, may be used if club members have milk available for calf raising.

Second year contest begins when the calves are approximately one year old and ends with a heifer club show, or just before they are due to freshen.

Third year contest begins when the heifer freshens and continues for one year or through the first lactation period, at which time a dairy cow show may be held.

A club or an individual member may start work on any one of the three years and continue the other two in logical order.

The county agricultural agent, after considering the needs, demands, and markets for dairy cattle and dairy products, requests the assistance of the club and dairy specialists; assistance in the organization and management of the club, the selection and purchase of the cattle, furnishing literature and information regarding the care, feeding, and management of the calves.

The county home demonstration agent will assist club members during the third year in the use and management of dairy products in the home. She obtains all necessary information from the home economics of the dairy specialist.

The standing of individual members the first and second years and the awarding of prizes are based on the following method of grading; individuality and condition of animal,

60%; methods of feeding and rations used, 20%; report, 20%. The basis of grading the third year is individuality and condition of animal, 30%; production milk and butterfat, 30%; exhibit of dairy products, 20%; report, 20%.

Through the co-operation of banks, schools, school superintendents, cattle breeders, and breed associations, it is expected (1) that club boys and girls will gain a better knowledge of dairying; (2) that their efforts will be made profitable; (3) that good dairy calves will be saved from slaughter; (4) that more dairy cattle will be raised on small farms; (5) that more milk and its products will be used in the homes.—G. L. HERRINGTON, Club Specialist.

Pennsylvania Boys in Dairy Cattle Judging Contest

The second annual state championship judging contest was held at the Pennsylvania State College in connection with the Summer Farmers' Week on June 23rd, in which sixteen counties were represented by twenty teams. A team from Wayne County won the contest with a score of 731 out of a possible 900 points and will represent Pennsylvania at the National Dairy Show at Chicago. The team was composed of Friend E. Uhl, Rush Osborn, and Ross Simonds.

Professor A. L. Beam, assisted by other members of the Dairy Husbandry Department, had charge of the contest which was conducted according to the rules of the National Dairy Show. Three classes were chosen from the college herd to conform as closely as possible to the ideals of the breeds. The ring was composed of a class of Holstein cows, one of Guernsey cows, and one of Holstein heifers, the variations in each class, between animals, being practically equal.

The following counties were represented by teams in the contest: Wayne, Center, Tioga, Erie, Sullivan, Cumberland, Mercer, Susquehanna, McKean, Indiana, Lackwanna, Cambria, Blair, Lycoming, Monroe, and Juniata.

Not only was the winning team awarded a trip to the National Dairy Show but they also led in the judging of Holstein-Friesian dairy cattle, for which the Holstein-Friesian Association presented them with a beautiful silver loving cup.

The Center County team won second place and will represent Pennsylvania at the Eastern States Exposition in September.

A mock sale was conducted as a price determining contest in which the following boys valued the ring nearest the figure set by the ten prominent Holstein breeders and were awarded ribbons: First, Friend E. Uhl; second, Rush Simonds; third, Ross E. Osborn; fourth, Stanley Fuhrer; fifth, John Metzker.

Pennsylvania. A. BARNHART.

Your Worst Enemy

I am more powerful than the combined armies of the world.

I have destroyed more men than all the wars of the nations.

I am more deadly than bullets, and I have wrecked more homes than the mightiest of siege guns.

I steal in the United States alone over three hundred million dollars each year.

I massacre thousands upon thousands of wage earners a year.

I lurk in unseen places and do most of my work silently.

You are warned against me, but you heed not.

I am relentless.

I am everywhere in the house, on the streets, in the factory, at the railroad crossings, and on the sea.

I bring sickness, degradation, and death, and yet few seek to avoid me.

I destroy, crush, or maim; I give nothing, but take all.

I spare no one, and I find my victims among the rich and poor alike, the young and the old, the strong and the weak. Widows and orphans know me. I loom up to such proportions that I cast my shadows over every field of activity from the turning of the grindstone to the moving of a railroad train, from the rocking of a boat to the spinning of a top.

I am Carelessness.—"Bindery Talk."

Junior Letters

Hoard's Dairyman Juniors:—How are you getting along with your spring work and your gardens? I was going to have a garden with carrots, onions, cabbage, parsnips, and peas, and so on, but I have changed my mind about it and I planted just potatoes and a little bit of sweet corn. I wish some of the junior girls would write to me and tell me what they planted in their gardens.

We have two cows and a year-old heifer and a two-month-old bull calf. Our cow's names are Daisy and Maudy. Our heifer's name is Spotty. The bull calf's name is Tommie. We have two pigs which we bought last fall.

My father doesn't know how to milk yet, but he was learning today. He did pretty well for the first time. He was learning to milk on Maudy. She stood still while he milked, but when my mother came to milk her she started to kick and stepped on her toes and spilled part of the milk.

I wish good luck to all the juniors and that some of them would write to me. My address is Box 44, Dover, Wis. Theresa Ralrisitz.

Hoard's Dairyman Juniors:—I am going to tell you about my experience in raising chickens. When I first got them they were one day old and so I took them and put them in a lamp brooder with a nice, warm fire under them. It is heated like this: I dig a hole under the brooder big enough to get the lamp in and out easily. A hole about two by three inches is cut in the bottom of the brooder when it is made and a piece of tin nailed over it so that the wood will not burn. Then I put some clean sand in the bottom of the brooder on the tin. That is the way they keep warm. I left the lamp under them about two weeks. When I started to feed them I fed just a little baby chick scratch feed, then I feed them boiled eggs about two or three weeks, then started feeding a wet mash and am feeding that now. I started with 118 and have 91 left, which is pretty fair. As my letter is getting long I think I will close, hoping any other junior raising chickens good luck.

Oakdale, Cal. George French.

Hoard's Dairyman Juniors:—I now have all our cows tested; the herd averages 4 per cent. Is not that pretty good? One of the cows tested 6.2% and some of them only tested 2.2%. I have just learned how to operate the tester. It is surely interesting to run one and I have persuaded dad that it pays to test.

I expect we will have a sale soon; am going to sell my heifer, also my colts.

Papa bought a new Sedan the other day and it runs like a top. I ran it about twenty miles yesterday; drove it in and he drove it back out. He also ordered a tractor. It will be here soon. We sure need a good tractor as all the volunteer wheat has come on and we have about 400 acres of wheat and only 40 to list up.

Kansas. L. W. Mowry.

Hoard's Dairyman Juniors:—I have been in your club some time and enjoy reading the junior page that appears in the Hoard's Dairyman each week. On this page are a good many interesting and true things. The stories about Bob Ramsay are especially good.

Last month I bought a cow. She cost me a price that may seem too much so I will not write it. I bought a cow April 12, 1918, for $150. She was fully three-fourths Holstein, and nine-tenths white. I sold her on May 10, 1919, for $180. Besides the $30 clear money she paid for herself, her keeping, the interest at 7%, and I had $30 in the Savings Bank. The cow I have now is even whiter than my first one was as she only has a bit of black on her ears. I like them a little blacker than that, but they give a good lot of milk and that is the main part of a cow, so I can not kick.

Since I wrote last we have sold the home place of eighty acres and bought a farm five miles northeast of Lawrence on the Kaw Valley Interurban route from Kansas City to Lawrence. This is very handy. We ship our milk to the Myer Sanitary Co. in Kansas City. It leaves our place at 9:30 a. m. and is in Kansas City by mid-afternoon. We milk 18 cows at present and get on an average of 50 gallons of milk a day. In our herd of Holstein cows are 3 pure-breds and about 35 high grades. We keep a pure-bred sire all the time. We have built a 6-room bungalow, a 30x40-ft. dairy barn, and a milk house. The man we bought the place of had not improved it any to speak of for the last 15 years. The fences were very poor, and things down and out in a general manner. We have put up a mile of fence and still have some to put up. We raise cane entirely for our silo.

I go to school in town. I plan to go to high school next fall. After that course is completed I would like to go to the state agricultural college at Manhattan.

I would like to hear from some of the juniors who are interested in Holstein dairy cattle. My address is R. F. D. No. 7, Lawrence, Kansas. Raymond E. Gardner.

Hoard's Dairyman Juniors:—I have been reading the junior letters and find them very interesting. I have never written before but would like to join your club. I like to read the letters of Jimmy Greene and Bob Ramsay.

I passed the eighth grade this year with one of the highest averages in the township. I expect to take up the high school work this fall.

I live on an eighty-acre farm three miles from town. We are engaged in the dairy business with the Holstein-Friesians. We have four pure-bred cows and four heifers. We erected a large barn sixty-six feet long and thirty feet wide for them last summer. I milk three cows and feed all the cows grain night and morning.

We are expecting an electric plant to arrive one of these days.

I hope to see this letter in print. Well, as my letter is getting rather long I will close wishing all the juniors good luck. I wish some of the juniors would write to me and I will be sure to answer them. My address is R. F. D. 2, Box 17, Ringsted, Iowa.

Opal Kyhl.

Hoard's Dairyman Juniors:—We have eleven head of cattle; nine are Holsteins and two are Jerseys. We are milking five. We have six horses and six pigs, forty-five head of sheep, some of which are lame. We put out forty acres of corn and it is all large enough to plow. Also put out thirty acres of oats. Have about thirty acres of hay and fifty-four of wheat. We live on an eighty-acre farm and rent a hundred and sixty acres across the road. I have two grade Holstein heifers and an 11-year-old driving colt. I will not break him yet. My heifer will be fresh this fall.

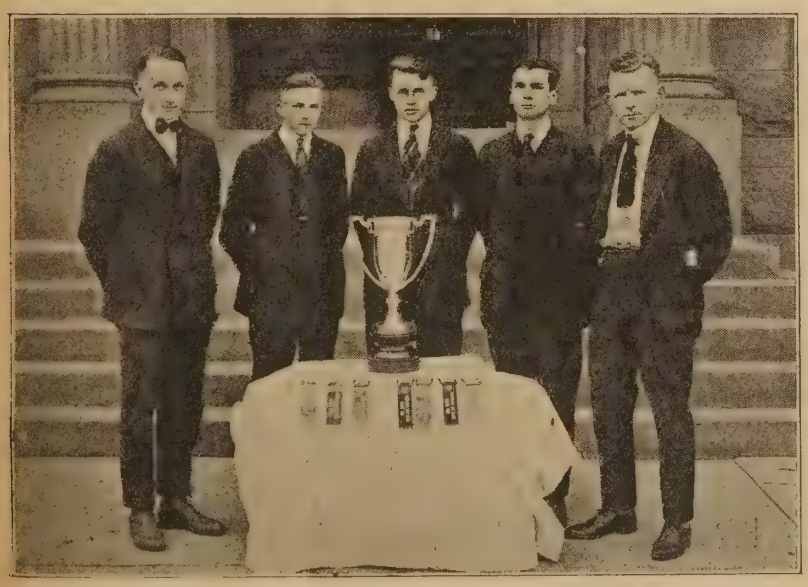
We live near the conservation district. The land in the district will be flooded when the dams are completed.

One day you asked in the junior department what we read. I read the farm papers and dailies mostly.

I think four milkings a day are all right when on test or any other time for the calves eat whenever they are hungry.

I will write to anybody that writes to me. My address is R. 4, Sidney, Ohio.

Ralph M. Williams.



HOLSTEIN-FRIESIAN ASSOCIATION CUP WON BY WAYNE COUNTY TEAM
From left to right: Mr. Jacobs, coach, R. Simonds, R. E. Osborn, F. E. Uhl, Mr. Wakeley, coach.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

Some very fine Holstein calves; will ship C. O. D. subject to inspection. $30.00, we pay express. Write for full particulars. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 4*

High grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Mo. 19*

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

Holstein and Guernsey pure-bred and grades. Write me. If it is 1, 100, or 1,000 head I can please you. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Holstein and Guernsey springers and fresh cows; also high grade calves either breed, two months old, $35 each. We pay express. CLOVER VALLEY HOLSTEIN FARM, Whitewater, Wis. 21-10

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Bulls of serviceable age, sired by Sir Ormsby Elgin Pietertje, one of the best bred Minnesota sires and from high producing dams. Prices reasonable. Write for breeding and photo. McNELLY & HARPER, McIntosh, Minn. 25-4

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 26-4

20 high grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old. $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Buy Dodge County, Minnesota, Holsteins. Our wide acquaintance makes it possible for us to furnish Holstein cows and heifers in carload lots. We have on hand at present, milking and springing cows, also a fine lot of two-year-old heifers, everything tuberculin tested, subject to 60-day retest and guaranteed as represented. BRINGGOLD, ROUND & FAIRBANKS, West Concord, Minnesota. 26-4

For Sale—Two pure-bred Holstein bulls, excellent breeding, one serviceable and one seven months old. Send for pedigrees and prices. STATE NORMAL SCHOOL, A. N. Johnson, Mgr., River Falls, Wis. 1-2

Registered Holstein bull 2 months old, almost **white, sire's G. G. dam Aaggie** Cornucopia Pauline, dam 12 lbs. butter on short pasture, quick sale, $40.00. FOUR SQUARE FARM, **Wellsville, Mo.**

Registered Holstein bull calf. Dam's record 23.47 lbs. Sire's two nearest dams 26.17 lbs. Priced to sell immediately. $75.00. JOHN BLUHM, Smithton, Mo. 1-2

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

Southern Holsteins. Did you know that there are good calves from Advanced Registry cows raised in the South? I have calves, both sexes, from cows with records as high as 26 lbs. and sired by a half brother to Sir Skylark Ormsby, the sire of Duchess Skylark to Sir Skylark Ormsby, the World's Record Butter cow. Herd under Federal supervision. For description and prices write KING L. BANKS, Raines, Tenn. 1-2

Holstein bull, Ormsby, 2 years old. Excellent individuality and backing. $250 for quick sale. C. J. WILL, Waukesha, Wis. 2-2

For Sale—60 large Holstein heifers to be fresh September and October, 22 young cows also to freshen September and October, 15 pure-bred Holstein cows and heifers. J. A. KNORR, Blanchardville, Wis. 2-3

STOCK FOR SALE

For Sale—Forty-eight high grade Holstein cows, three to seven years old. All sound, good size, to freshen this fall. $140 tested and loaded. Sixteen registered pure-bred Holstein cows, three to eight years old, four fresh and balance coming fresh soon. $4,800. I will take draft stallion as part payment on these. F. G. KNAPP, Hudson, Mich.

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

5 registered Holstein heifers. One from an 18-lb. yearling, one from an 18-lb. 2-year-old. Good individuals and nicely marked. $850 takes the bunch. Write for descriptions. CLARK AND RHODE, Urbana, Ill. 2-2

Registered bull 17 months old. Sire's ten nearest dams beyond his dam averaged 1,007 lbs. butter year. Dam made 696 lbs. butter in year. $200.00. Also some fine bull calves by same sire. W. J. OSBORN & SON, Oxford, Wis. 2-2

Three hundred high grade and pure-bred Holsteins of all ages. Write for prices. FRICK & HOESLY, New Glarus, Wis. 2-spl

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Registered Guernsey cows for sale. Reasonable. O. P. HUFFINE, Van Wert, Ohio.

Three registered Guernsey bulls, sired by a son of Langwater Heroine, 805.64 lbs. fat, Class D. Government accredited herd. M. M. HOLLINGSWORTH, Landenberg, Pa. 2-2

For Sale—Several registered Guernsey bulls 7 to 12 months, grandsons of Imp. Clara's Sequel and Langwater Frenchman. Dams 500 to 752 lbs. fat. See display ad page 50. Sale list. HOMER F. RUNDELL, Livingston, Wisconsin. 2*

For Sale—Fine 4-year-old Guernsey bull with pedigree. I. N. RICE, Desplaines, Ill.

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write us for photos, and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

A few head registered Guernseys. Cows and heifers with A. R. backing at reduced prices. BARRETT & WOODRUFF, Andover, N. Y.

Ready for Service—Have several high class young bulls. Most are from high producing A. R. dams. Will be year old in July, August, and September. May Rose and May Rose Glenwood cross. Prices are low for quality. FRISSDALE FARM, R. 1, Hopkins, Minnesota. 25-4

Jersey Bulls, 2 to 9 months old, out of high producing dams. Priced to sell. For prices and pedigrees write FRED HISKETT, Sampsel, Mo. 26-3

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

For Sale—36 choice Durham heifers, milking strains. CHAS. W. O'NEILL, Bridgeport, Wisconsin.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

David W. Williams, Lake Forest, Ill., can buy you pure-bred dairy cattle of any breed. 4*

STOCK WANTED

Wanted—Pure-bred Ayrshire, Guernsey and Holstein females. Give age, breeding and price. DAVID W. WILLIAMS, Lake Forest, Illinois. 4*

Wanted—Pure-bred Holsteins on shares or trade for horses. Best references. GEO. WHITE, Kramer, N. Dak. 2-2

HORSES

For Sale—Twenty grade Percheron horses, three to seven years. Who knows of market for them? GEO. WHITE, Kramer, North Dakota. 2-2

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

For Sale—Pure-bred Duroc Jersey boar pigs, Pathfinder breeding. Also a few choice pure-bred Poland-China pigs for sale. STATE NORMAL SCHOOL, A. N. Johnson, Mgr., River Falls, Wis. 1-2

Durocs—Spring boars at $25 and $35. MARELLA FARM, Hagerman, Ida. 1-2

Berkshires—A few choice pigs of early spring farrow, either sex, 125 lbs. and up. LOUIS FAWCETT, Stanley, Wis.

For Sale—Choice big type Poland-China spring pigs. Not related. Also bred sows for fall litters. CHAS. W. O'NEILL, Bridgeport, Wis. 2-2

PONIES

For Sale—Spotted Shetland pony. Quiet, for children. Also pony one year old. CHAS. W. O'NEILL, Bridgeport, Wis.

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

POULTRY

Eggs—From prize winning stock, bred for egg production. White Plymouth Rock, S. C. Rhode Island Reds, S. C. White Leghorns. Price very reasonable. Write for mating list. ABTS STOCK FARM, Columbus, Nebr. 10*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 23-6

RABBITS

Rabbits, Pet Stock—Read The Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

FOXES

Wanted—Red Foxes; state age, sex and price. W. C. WILSON, Stephen Girard Bldg., Philadelphia, Pa. 2-6

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MACHINERY

For Sale—A 12-25 Avery tractor, which has only filled three silos, at $800 quick sale. Also an 18-horse power Advance Rumely steam engine, new grates and flues at $600. WHITEWATER GARAGE, Whitewater, Wisconsin.

For Sale—A Fordson tractor complete with governor and pulley. One McCormick corn binder. One Plymouth silo filler with carrier. One Janesville corn planter. One tandem drill to tractor. All of these nearly new at a bargain. M. BODENHEIMER, Green Bay, Wisconsin.

Used Sharples milking machine for sale. Two units. MARK SKODSHOLM, 725 16th Ave., Council Bluffs, Iowa.

For Sale—A Roesch temperature controller made by the G. J. Tagliabuc Mfg. Co., and a cypress tank, made of 3-inch lumber, 5x4x3 feet. The equipment was used only a few weeks to pasteurize milk in bottles, but can be used for canning, sterilizing, etc. WM. SIEDENTOPF, Miles City, Montana. 2-2

For Sale—One 1920 Empire Milking Machine, consisting of one double unit, one type B double cylinder pump and 2½ H. P. engine. This machine has been used only one week and is right in every way. First check for $295 takes this outfit. Address B. W. WILCOX, Sugar Grove, Warren Co., Pa. 1-3

For Sale—One new De Laval centrifugal milk clarifier No. 111. One new Victor No. 2 combined churn and butter worker. 60-gallon capacity. One Alaska large type copper cooler 2½ feet by 10 feet. Address BIRTCHERD DAIRY, Norfolk, Va. 1-4

For Sale—One 17-inch Gehl silo filler, used very little. Equipped complete with 36-inch blower pipe, distributor and about 40 feet belting, price $250. E. A. POTTER, Janesville, Wis., Magnolia Road.

Three-unit Hinman Milker for 22 cows. In good condition. First check for $100 takes it. CHAS. GRIESE, Union, Ill.

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

LIGHTNING RODS

Lightning rods, exclusive agency and quick sales to live agents selling "Diddie's Universal Rods". Our copper tests 99.96% pure. Write for agency. Prices are right. L. A. DIDDIE CO., Marshfield, Wis. 13-24

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

Still in the Lead—The Perfection or Wasson stanchion improved with or without frame. STANLEY C. SWIFT MFG. COMPANY, Cuba, New York. 22-spl

PATENTS

Patent Your Inventions. Call, write BLACK, OLESON, ALLEN & THORNE. Patents, trademarks, patent causes, 154 W. Wis. Ave., Neenah, Wis., or Second National Bank Bldg., Washington, D. C. 25-4

SILOS

For Sale—Indiana stave silos, 10x20, 12x24. LUCIE KEVIL, Princeton, Ky. 24*

FARMS FOR SALE

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red, White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Hardwood cut-over land, silt loam, clay subsoil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4. NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Cortland County good farms for sale. Write GEORGE V. CLARK, 13 North Church St., Cortland, N. Y. 17-13

Farms in Southeastern North Dakota in the famous James River Valley, Stutsman County. Must be sold immediately. Write for big free list. JOHN B. FRIED LAND COMPANY, Jamestown, North Dakota. 21-8

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

Real Farm Bargains in Wisconsin. Send for new free list. Liberal terms. LOEBHAMMEL REALTY CO., (not Inc.), Medford, Wisconsin. 24-5

160-acre farm, highly improved, good buildings, complete, $20,000. 70-acre farm adjoining city limits, complete, $16,000. Write for other bargains. WM. ALBRECHT, JR., Wausau, Wis. 25-6

For Sale—Modern dairy farm and beautiful country home in Maryland, on state road, 117 acres, wonderful spring water, Kewanee water system, Delco lights, 2 new tile silos, extra tenant house, hot water heat, concrete horse barn, 26 concrete stanchions, new concrete calf barn, 14 box stalls, individual drinking cups, everything new and recently painted white. Immediate possession. Address GEORGE M. EVANS, Elkton, Maryland. 25-5

Clovercrest Farm for Sale—320 acres of very rich silt loam practically all under cultivation, well tiled, rotated hay and pasture land, 30 acres of alfalfa. Twelve-room, two-family house, dairy barn 36x74, barn 50x52, silo 16x50, hog house 24x42, large corn crib, hen house, granary, machine shed, power house, and milk room including milking machine. Delco light plant and water system. A fine dairy or stock farm. Must be seen to be appreciated. EARL D. OLIVER, Amboy, Minnesota. 26-4

I know of some exceptional farm bargains in New York State, small and large. Fine buildings, spring water, alfalfa land, good roads. Eighty to hundred twenty per acre. Easy terms. These are unusual bargains. Write me. BOX 256, care Hoard's Dairyman. 26*

140 acres first class, gently rolling land, fine buildings and location in Central New York State for $12,000. Part cash, balance easy. Write for full particulars. FORT & WILDER, INC., Oneida, New York. Members of the Farm Brokers' Association, Inc. 26-4

For Sale—Several improved farms and 10,000 acres cutover land, silt loam, clay subsoil; near Ladysmith, Rusk County, Wisconsin, in heart of dairy country, good roads, schools and churches; easy terms. Write for information. MANNING & HOOD, Ladysmith, Wisconsin. 26-4

For Sale—One of the best dairy farms in Michigan. 210 acres, two sets of buildings. 70 acres alfalfa and other growing crops, fully equipped. Will give immediate possession. Write for particulars and price. Address BOX 52, Lansing, Michigan. 26-3

Own a home in Eastern Kansas—Wheat, corn, clover, alfalfa land. Ottawa the county seat, Franklin Co., 10,000 population. University, excellent schools, manufacturing interests, mill, creamery and condensery. Fine location. Buy now. Write for free booklet and new list No. 457. Farms and city property for sale. FRANK B. MANSFIELD, Ottawa, Kansas. 26-3

Fine opportunity for dairyman—640 acres in Leavenworth County, Kansas, 34 miles from Kansas City, Mo., and 5 miles from condensery, lime stone land, fine blue grass and alfalfa; 200 acres under cultivation for silage and feed. Modern dairy barn for 80 cows, 3 silos, 170 acres now in wheat, will make 25 bushels per acre, will be put back into alfalfa. Owner will furnish land and cows for half proceeds, or will sell on payments covering a long period of years. WHITSED LAMING, Tonganoxie, Kansas. 1-4

For Sale—640 acres splendid land, 60 miles from Chicago and good gravel road. Eight-room house, barn and outbuildings. 300 acres fine blue grass, balance in corn, oats, wheat, rye and barley. This farm can be bought on very liberal terms, at $85 per acre. There is no encumbrance on the farm. One hundred and fifty head of Holsteins on place. Address GEORGE BRAZELTON, R. 3, Morocco, Indiana. 1-2

For Sale—In order to settle an estate we are offering four farms of 160, 480, 570, and 1,100 acres of black prairie alfalfa, corn, clover and stock land. Richest lime soil in the south, located close to Aberdeen, the most beautiful city in the South in the heart of the famous black prairie alfalfa belt. Will make special price and easy terms to responsible buyer. A. E. WISHART, Aberdeen, Miss. 1-2

Maryland Farm for Sale—140 acres, 20 acres timber, 30 acres meadow, balance rich level land, on macadam road, 52 acres wheat, and other crops. 10-room house, 2 sleeping porches, good outbuildings, plenty of fruit, watered by springs, and branches; fine community; 43 thousand feet of lumber and all crops. $10,500 takes all. We have many others; send for our catalogue. CAUGHY, HEARN & CO., 220 E. Lexington St., Baltimore, Md. 1-4

For Sale—Good farm Western New York. Particulars. FITZPATRICK, 52 Arlington, Buffalo, N. Y. 1-2

FARMS FOR SALE

New York State, greatest guaranteed farm bargains. Before buying send for my list at once. FRANK J. BASLOE, Herkimer, New York. 1-2

Shawnee, Oklahoma, center of a great dairy country. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla.

For Sale—Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

For Sale—240 acres cutover land in upper Wisconsin dairy belt. 2 miles from railway station, stores, churches, etc. Gently rolling, easily cleared. Buy it. F. X. NELESSEN, W. Wrightstown, Wis. 1-2

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

100 acres—6 miles from town, good roads, good 10-room house, good 50x60 barn, two smaller barns, outbuildings, black clay loam tiled, 76 acres under cultivation, 20 acres saw timber, balance pasture. Without help, must sell. $125 per acre. MICHIGAN FARM AGENCY, Box 928, East Lansing, Mich. 24-spl

130 acres level, black clay loam, 2½ miles from county seat, gravel road, large 9-room house, 30x60 gambrel and 54x62 gambrel roof barns, granary, tool shed, and all the necessary outbuildings, all buildings painted and in good condition. Good orchard, good fences, well drained, 100 acres under cultivation, 30 acres pasture and timber. This farm is in a high state cultivation and is in every way a No. 1 farm. Price $135 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 16-spl

New York Farm Agency, Westfield, New York, sells farms. Old folks die at about 100. Have to quit. Opportunity for young men. Come East! 10-spl

For Sale—145-acre fruit and dairy farm. $1,700 annual apple crop. 20-room house. Large outbuildings. Aged owner sacrifices for $6,500. SCOFIELD FARM AGENCY, Chatham, N. Y.

155-acre dairy farm, large house and barns for $3,000. XAVER LONG, Berkshire, New York.

Productive Delaware river valley farm of 440 acres under high state of cultivation. Finest dairy section in the world. 18-room house, hot and cold water, house and buildings electric lighted. 140 acres of fine loam flats, fine, well watered pasture of 210 acres. Lumber and wood on property. Tractor, plows, harrows, wagons, sleighs, 4 horses, 18 pigs, 75 cows, Guernseys and Holsteins. Cuts 150 tons hay, large acreage now in corn. Large barn, outbuildings, garage, silo and etc. Write H. H. BOGART, Downsville, N. Y.

Choice dairy farm of 170 acres near Syracuse, New York. $24,000 equipped. M. VOORHEES, Memphis, New York. 2-5

Eighty acres rich clay loam soil, Fond du Lac County. Great corn and alfalfa land. Fully equipped. With or without personal. See with growing crops. No agent's commission. HENRY MICHELS, Fond du Lac, Wisconsin. 2-3

Colorado Farms—Excellent dairy location, 15 miles from Denver, the West's dairy Product market. We can sell from 80 to 4,000 acres irrigated, non-irrigated and pasture lands, First class improvements, including stock farm set. On Lincoln Highway, trolley line and railway. Send for Booklet L. THE ADOLPH J. ZANG INVESTMENT COMPANY, Owners, American Bank Building, Denver, Colorado. 2-2

Dairymen—Get posted advantages South Florida. Milk highest priced, produced cheapest, pasturage year 'round. IDEAL FARM CO., Box 948, Lakeland, Florida.

200-acre farm with 4 horses, 17 cattle, tools, crops. In world's greatest dairying section, close railroad, all conveniences; machine-worked fields, 40-cow spring-watered pasture, big woodlot; fruit orchard; 300 sugar maples; 7-room house, big basement barn, spring water, other buildings; to settle affairs quickly owner includes all live stock, complete machinery, tools, Ford automobile, etc.; quick action price $6,000, only $2,000 cash, balance easy terms. Details of this and smaller farms at $1,400, easy terms, page 32 Strout's Big Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150DL Nassau St., New York City.

Farm Bargains—60 miles Twin Cities. Free list, map. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

For Sale—Money making dairy farms in Delaware County, New York. C. E. KESEBERG, Western Representative, Sheboygan, Wisconsin.

Virginia Dairy Farm for sale—663-acre highly improved live stock and dairy farm. 350 acres cultivation and pasture 300 acres fine marketable timber. Buildings modern, silos, deep artesian water. Mile town C. & O. Railroad and 22 miles east Richmond, city 200,000 population. Rare bargain quick sale. Particulars write O. D. BERROTH, Providence Forge, Virginia.

$17.00 per acre buys 1,400 acres in northern Michigan on railroad; large clearing; big barn; two houses; some bargain, write today. R. R. FORWARD, Duluth, Minn. 2-spl

WANTED TO RENT

Wanted to rent before Oct. 1, with option of buying. Moderate sized poultry and fruit) dairy, or general farm with good buildings) Location on or near stream or lake desirable, also power line. Send full particulars, section and township location, pictures of buildings, rental value, and sale value and terms. ARTHUR H. BROOKS, Zion City, Illinois.

FARMS WANTED

Farm Wanted—Must be over 300 acres with large number milk cows and fully equipped. Cash deal. Also people who want smaller farms. WALTER MILLER, 320 Brumder Bldg., Milwaukee.

SEEDS

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 3*

FARMS FOR RENT

For Rent—Dairy farms. We are adding two more farms March 1, 1921. They will be operated as pure-bred Holstein farms. Tenants to furnish horses, machinery, all labor. We furnish the land and capital for one-half the cattle and, if necessary, will back the right man for most of the capital necessary to purchase his half of cattle on such liberal terms that the cattle will pay for themselves. This is a great opportunity for the right man—especially if he has experience in making records—to become associated with the largest pure-bred Holstein organization in the country. Fertile farms, good location, milk factory market. Selling organization that relieves you of all care or worry about the selling end. In fact, the chance of a life time. Please give full particulars about yourself and your references in first letter. WOODLAWN FARM, Sterling, Ill. 2-2.

Over 100 acres fine land, 17 miles macadam roads to City Hall, Philadelphia. 1½ to large manufacturing town of Ambler. Modern cow barn, 48 standing, 4 box stalls. Milk room, feed room, cement floors. Large implement and tool house. Large hollow tile slate roofed house (not finished inside.) Macadam roads each side and through farm. Very moderate rent, desirable tenant. Immediate possession. Rent free for one year. FARM, 2024 N. Tenth St., Philadelphia, Pa. 25-4

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

Creamery for sale—Owing to ill health I desire to sell my plant, one of the largest private plants in the state of Vermont. Been in operation 27 years old and still doing a good business. Good home over creamery. Address HARRINGTON CREAMERY, Bethel, Vt. 2-4

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

PRINTING

Hoard's Dairyman Art Dept. designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cts. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wis. 8-tf

MISCELLANEOUS

Loan Wanted—$8,500 to $11,000, excellent security. MARELLA FARM, Hagerman, Idaho. 2-2



Advertising in this department is 7c per word. Remit in advance.

POSITIONS WANTED

Highly experienced farmer, dairy and cattle man wants position as manager on modern dairy farm where he has a chance to stock the place with thoroughbred Holsteins. Only A-1 proposition considered. Address BOX 279, care Hoard's Dairyman. 1-3

Wanted—Position by married man on stock farm where house is furnished. Have had experience with pure-bred stock. Can give references. IMES CUNNINGHAM, Northfield, Minn. 1-2

Single man, middle aged, 20 years charge dairy herds, first class milker and feeder. State your best proposition, wages and board. M. L. RILEY, Barrington, Ill.

Position wanted by young man as manager or herdsman. Single. Experienced graduate. References. Address BOX 287, care Hoard's Dairyman.

Wanted—Position by a general working manager, A-1 dairy farmer in every way, married, 36 years old. Have 20 years' practical experience in dairy and general farming; willing to take fifty-fifty share proposition on furnished place. Give wages and full particulars in first letter. Willing to go anywhere. Address ROUTE 1, BOX H. G. D., Lenexa, Kans.

Position wanted as farm manager or superintendent of pure-bred stock farm by practical and scientific farmer in live stock breeding and feeding; college graduate; A-1 calf raiser; capable of managing men, producing certified milk, caring for and operating modern farm machinery; lifetime experience as farmer. Had charge of government dairy and experimental work during war; married, no children; thirty-three years old; honest and industrious with no bad habits. Best references as to ability and character. LOGAN J. RIDINGS, Augusta, Ill.

Wanted—For dairy farm in Montana, single man to work in barn and field. Must be good milker. $100 per month, room and board. Address BOX 280, care Hoard's Dairyman. 2-2

Wanted—Situation as housekeeper on large dairy farm, or gentleman's estate. Good cook, reliable and experienced housekeeper, young widow, two children, school age. Have held such a position for a year, having full charge of farm house. References given. Address answers to MRS. ANNA SEGERQUIST, 1017 E. Blaine Street, Seattle, Washington.

POSITIONS WANTED

Wanted—Experienced cow testers, for cow testing association in Sonoma and Marin Co., California. State experience, references and salary. PETALUMA CO-OPERATIVE CREAMERY, Petaluma, Cal. 2-2

Farm Manager with broad farming and pure-bred stock breeding experience open for position. Very successful Guernsey and Berkshire breeder. Have developed well known stock farms. Progressive, can organize, good executive, married, age 35 years. English American. Highest references. Address BOX 283, care Hoard's Dairyman.

Correspondence invited with parties wishing a practical manager and herdsman combined. Will run upon shares from next spring. Agricultural college training, Swede, married, best references. Address BOX 285, care Hoard's Dairyman.

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work. Salary $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spl

Wanted—Work by young man of 20 to deliver milk route. Four years' experience, best of reference. Write ERNEST RUMME, Ft. Dodge, Iowa.

HELP WANTED

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Wanted—An experienced herdsman to take charge of herd of 100 Holstein and Guernsey cows on Sept. 1st next. Dairy farm located in Virginia, 70 miles from Washington, D. C. Prefer a man familiar with Sharples milking machine. State application, experience, salary wanted and references. J. CLIFFORD MILLER, Brandy Sta., Va. 1-2

Wanted—Two experienced A. R. O. milkers on modern breeding farm doing seven-day and semi-official work under modern conditions. CLOVER LEA FARMS, W. W. Walker, Austin, Minn. 1-2

Wanted—Man to milk test cows. Must be good dry hand milker, one who has had experience or young man interested in good Jerseys, a young experienced man preferred. If we can get the right man we can use him as assistant herdsman and will pay accordingly. Address ALLEN DALE FARMS, Shelbyville, Kentucky. 1-4

Wanted—Manager for 60-acre farm breeding pure Guernseys and having 8 acres of fruit. Buildings and equipment new and modern and land in good condition. Location in Northwestern Pennsylvania near railroad and trolley. Address BOX 259, care Hoard's Dairyman. 1-2

Experienced bottling room man, single or married, on farm to handle about 500 quarts of milk per day, not pasteurized, and take care of necessary machinery. EDW. FREESE, Aurora, Ill. 1-2

Herdsman wanted—Single man for small herd Holsteins, located northern Ohio. Must have had some experience and plenty of ambition. At present can board only but later will supply house if services prove satisfactory. Looking for man of good character and natural ability to whom I will offer a permanent proposition with interest in herd. Send full information in first letter. Address BOX 263, care Hoard's Dairyman. 1-2

Manager for farm in Barron County, Wisconsin. Must understand farming, poultry and dairying, and be married. Children no objection. Must be worker as it is not an office position. All modern buildings and equipment. State nationality, religion, wages desired, past experience and full particulars in first letter. An excellent opening for industrious general farmer. HENRY L. STOUT, McCormick Bldg., Chicago. 1-3

Wanted at Once—Single or married man to feed and milk Guernsey cows on test. Good wages and big opportunity for right man. State experiences, age and reference in first letter. WARE SHOALS FARMS, Ware Shoals, So. Carolina. 1-2

Wanted—Single men to milk and care for ten cows three times a day. Must be good dry hand milkers. Also one man to feed calves and young stock. $65 per month, board, room and laundry. CLEVELAND CITY FARMS, Warrensville, Ohio. 1-2

Wanted—Man who likes dairy work, as second man in first class Holstein dairy. Board and room furnished. Excellent conditions. Healthful climate. State institution three miles from good town. Single man or can use married man if the wife will help in the boarding house. Write wages wanted and experience and qualifications in detail in first letter. W. P. SNYDER, SUPT., North Platte, Nebraska. 1-2

Wanted—Single man for milk house and creamery work. Give references and wages expected. SPRING GROVE FARM, R. R. 7, Ft. Wayne, Indiana. 1-2

First class herdsman and assistant wanted in pure-bred Holstein herd of 30 head, herdsman to milk and care for seven or eight cows on semi-official test, milking four times a day. Both must be good feeders and understand their business in every detail. Wages $100 and $75 and board, respectively. Position open at once. LILLIBERK FARMS, Homer, Mich.

Wanted at Once—Man and wife on dairy farm. Woman to run boarding house. State wages wanted and give references in first letter. H. R. SEARLES, Rochester, Minn.

Wanted—Reliable, educated, American woman housekepeer on stock and dairy farm in western Oregon. Good climate. Good home. Good wages. LOCUST HILL FARM, McMinnville, Oregon. 2-2

HELP WANTED

Wanted—Herdsman for small herd registered Holsteins. A. R. O. work required. Wages $100, room and board. Two weeks' holiday on full pay when man stays a year. Herd is situated on large cattle ranch, 40 miles from railroad. Man must be good feeder for records and good calf feeder. Bonus paid for good records. Reply to R. G. DOUGLAS, Sanborn Ranch, Rush, P. O., Colorado.

Wanted at Once—Working foreman, with help of his own. If right man, will lease ranch for 5 years on share basis. Will hire him now to take care of alfalfa and wild hay crop. State wages, give reference from good business men. TRIANGLE RANCH, Cottonwood, S. D.

Herdsman Wanted—Single herdsman at once to take charge of Guernseys. Must have experience and a good calf raiser. ADAMS & SWAIN, Algona, Iowa. 2*

Wanted—Married man to milk, and operate small creamery near Memphis, Tenn. Must be good dry hand milker. No creamery experience necessary. Wife to board single men if any. Give reference and wages expected. GAYOSO FARM, C. H. Crabill, Mgr., Horn Lake, Miss.

Working farm superintendent for 175-acre dairy farm near Detroit. Must be a capable farmer as well as an experienced cow man, and able to handle men. Prefer married man. Farm equipped with all modern conveniences and devices. State age, experience, education, references, and salary desired. Address BOX 284, care Hoard's Dairyman.

Wanted—Young man for year round job on Holstein farm. Milking machine used. Satisfactory wages. W. J. PESTER, Whitewater, Wisconsin. 2-2

Wanted—Single man for general farm work. Must be capable and willing to work. Milking machine used. Good wages. State full particulars in first letter. No cigarettes. Iowa County, Wisconsin. Address BOX 281, care Hoard's Dairyman. 2-2

Wanted—Good all round man. Wages $75.00 and board. PETER C. KROON, Mgr., L. G. Kaufman Farm, Birch, Mich.

Wanted—Manager, married, hustler. One familiar with tractor, milking, testing and the general handling of registered cattle, and who can get best results. Position open August 20. State salary wanted, age, number in family, etc. Location near Lake Geneva, Wis. Address BOX 286, care Hoard's Dairyman.

Herdsman Wanted—Single or married man with small family to take care of registered Guernsey herd. Must be experienced and a man who will take interest in his work and show results, as we are soon to restock with some good animals and start A. R. work. This is a good opportunity for a live and energetic man as we offer good home and wages with excellent treatment. State wages, experience and details to JOHN J. COSTOFF, Supt. Beechwood Farms, Sharpsburg, Pa. 2-2

I want to hire by the year a young Dane or Swede and his wife to assist in the conduct of my 13-acre raspberry farm. Must be able to handle a plow well, be a hard worker, and not afraid of a twelve-hour day when necessary. Will furnish a house, garden, milk, fruit, and a good salary to the right man. Permanent job. E. R. THOMAS, Sumner, Wash. 2-3

Cow Waters Herself



with this wonderful new **Libbey Automatic Water Bowl.** Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

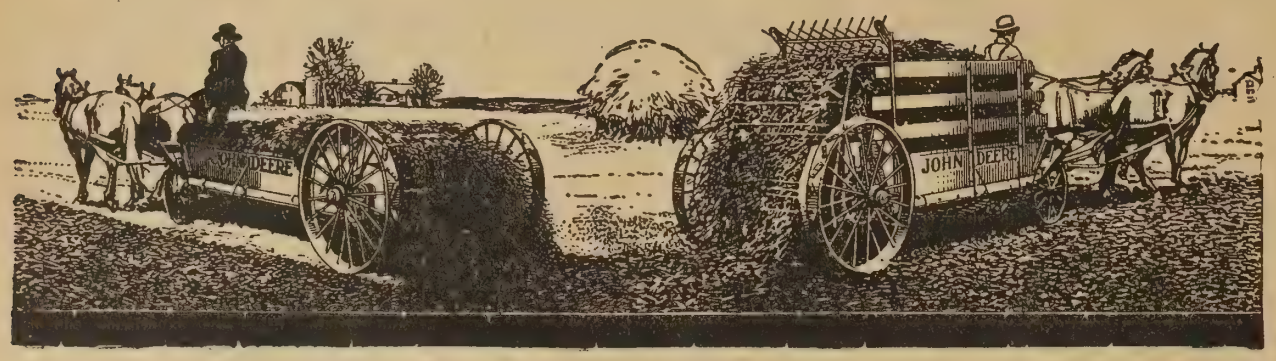
HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

Get Double Use and Double Profit From Your John Deere Manure Spreader



SPREADING manure is only one of the money-making jobs you can do with the John Deere Spreader. Get the straw spreading attachment at slight additional cost and you have a perfect straw spreader.

The John Deere Spreader equipped for straw spreading is not a two or three-man outfit. One man can put on the attachment, load the spreader, and spread the straw perfectly with no extra help—a big advantage during the present period of farm help scarcity.

The straw spreader operates just like the John Deere Manure Spreader. Set the feed lever for the kind of spreading desired, throw the machine in gear and drive the horses or tractor—the spreader does the rest.

It's only a 30 minutes job to take off the straw spreading attachment preparatory to manure spreading—you get a perfect two-in-one machine.

This NEW SPREADER BOOK Will Interest You —It's FREE

This booklet not only fully illustrates and describes the John Deere Manure Spreader and straw spreading attachment, but also tells all about manure and straw, when and how to spread it to get the most out of these valuable fertilizers. Drop a post card today—ask for Booklet SS414.

Manure Spreader Advantages Not Disturbed In Making It Possible To Spread Straw

You get the beater on the axle which makes extreme simplicity possible; enclosed drive gears running in an oil bath; the low down, easy-loading feature; high drive wheels which lighten the draft and furnish extra traction; and all main working parts mounted on the axle where they can't get out of line to cause binding, heavy draft and breakage.

It is not at all uncommon to see two and three John Deere spreaders on one farm where that number is required—there's a reason. Its good working qualities combined with extra years of service and low cost of upkeep, make the John Deere a mighty profitable spreader investment—doubly so since the perfection of the straw spreading attachment.

Remember this, spreading straw is profitable—straw has as much fertilizing value as the average barnyard manure—and has the added advantage of being excellent material for top-dressing fall seeded crops, alfalfa and clover. You can't afford to waste it.

If you now own a John Deere Spreader see your John Deere dealer about the straw spreading attachment. If you are needing new spreader equipment, don't fail to look into the many advantages of the John Deere as a machine for spreading both manure and straw.

JOHN DEERE
JOHN DEERE MOLINE, ILL.
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

"Going All Around"

says the Good Judge



I find men are taking to the Real Tobacco Chew.

The good, rich taste lasts so much longer that you find it saves you money to use this class of tobacco. Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

RIGHT CUT is a short-cut tobacco
W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

New Hampshire Guernseys Sold in Washington

(Continued from page 37)

head brought $425, and its members, of all ages from two months up, brought an average of $335 from seven different bidders. Other feature individuals were Harbor Hill Pioneer, a bull tracing to Imp. Masher's Galore on both sides of his pedigree and with dams averaging 615.4 pounds of fat in the first two generations; and Matilda of Antrim, a four-year-old bred to freshen in July. The former brought $410 and will be used by J. B. Vance, Frank Majewski, F. L. Purviance, R. N. West, R. T. Peterson, and E. W. Petzel, in the bull club mentioned above. Matilda of Antrim brought $570 from Wallace and Fordyce, a new Guernsey breeding firm, which topped the sale and also purchased the largest number of animals (seven) and was the heaviest purchaser with a total of $2,640. Roy Bush of Outlook was second in number purchased, amount paid for individual, and total purchases. The 40 head brought $12,185, an average of $305 per head.

The officers of the association are H. E. Angel, president; A. L. Wallace, vice-president; R. N. West, secretary-treasurer; and F. A. Majewski and J. B. Vance, directors.

With a total of about 150 head, Yakima County is now ranked third in the state of Washington as a Guernsey breeding center by Mr. Musser, who regards the recent importation as one of the most important live stock events of the year in this state. Although the Canterbury Shakers did no official testing, individuals from that herd which have been purchased elsewhere have made fine show and production records, and the longevity of the herd, coupled with the fact that it has been producing 90 per cent female calves, is regarded by the extension specialist as of great value to the Yakima breeders. Yakima is a great beef and dairy cattle center, its production of alfalfa, corn, and sugar beets being excelled by no district in the Northwest or perhaps in the country. Guernseys are destined, as a direct result of the work of the association, to become important factors in the agricultural activities of what has heretofore been principally a Holstein stronghold.

Government Publications

The Dairy Division gives the following list of publications of the U. S. Department of Agriculture of interest to milk dealers, available for distribution as long as the supply lasts:

1. "Monthly List of Publications." This is issued each month and gives a list of all publications of the Department issued during the current month. Any bulletins on this list can be obtained by applying to the Division of Publications, Department of Agriculture, Washington, D. C. The list can be obtained by applying to the same address.

2. "List of Farmers' Bulletins." This is a list of all Farmers' Bulletins that are available for free distribution. Division of Publications, Department of Agriculture, Washington, D. C.

3. "Publications of the Department of Agriculture Relating to Dairying." A list containing the names of the most recent bulletins on subjects relating to dairying. Obtained from Library, Dairy Division, Washington, D. C.

4. "Price List 38" gives the titles of all circulars and bulletins of the Bureau of Animal Industry that can be obtained at prices of from 5 to 10 cents each. Superintendent of Documents, Washington, D. C.

5. "Health Officer Letters," Dairy Division, Washington, D. C.

6. "Milk Plant Letters," Dairy Division, Washington, D. C.

7. "Monthly Report of Milk Prices in United States" shows prices received and paid for milk by milk dealers throughout the country. Issued each month by Bureau of Markets, Washington, D. C.

8. "Market Reporter." Issued weekly by Bureau of Markets. Statistics on production, storage, prices, etc., of farm products including dairy products.

9. "Monthly Condensed Milk Report." Bureau of Markets.

10. "Monthly Cold Storage Report" includes dairy products. Bureau of Markets.

11. "Daily Butter and Cheese Market Report." Bureau of Markets.

12. "Weekly Report and Cheese Review." Bureau of Markets.

13. "Monthly Report of Exports of Dairy Products." Bureau of Markets.

14. U. S. Department of Agriculture Bulletin No. 849, "City Milk Plants, Construction and Arrangement".

A Tri-county Picnic

The Marathon—Lincoln—Langlade Tri-county (Wis.) Jersey Breeders' Picnic held June 19th at the farm of Chas. Shotte was a glorious success. There was a good representation from the three counties participating, some journeying as far as forty miles to reach the picnic grounds. An estimated attendance of three hundred were there.

A short address of welcome was made by Mr. Schotte, the president of the Langlade County Association.

Mr. Wm. Bewick, county agent of Langlade County, expressed his thankfulness for the fine day and the size of the crowd. He mentioned Jersey quality and said he had observed that Jersey breeders, also, as well as their breed of cattle, surpassed in the quality of support rendered to the cause of progressive agriculture.

Mr. A. J. Peterson, secretary of the Marathon—Shawano Jersey Association, and a strong Jersey man, spoke. He said he was a satisfied man in regard to present conditions, also for the reason that he is a breeder of Jerseys. But, he pointed out, Jersey breeders are apt to be too satisfied for the good of their breed, and, for that reason, do not agitate the Jersey subject sufficiently. He told how some other breeds are apparently more successful, owing to the publicity they are getting and the money spent in advertising.

Mr. George Curtis, one of the best Jersey breeders in Lincoln County, after some short preliminary remarks, tackled the Jersey subject by saying that it is not enough to own just Jerseys, we must have good ones and pay attention to blood lines and breeding. Praising the spirit that urged the instigators of the Tri-county picnic and predicting as well as hoping that there would be more such in the future, he volunteering all of his powers to make them successes.

Miss Brady, the home demonstration agent for Marathon County, spoke well of pure-bred cattle and especially the Jersey. Miss Brady stated that women are willing to co-operate with men on the farm, but conveniences in the home should not be lost sight of, such as water system, laundry, and kitchen conveniences, in a farmer's absorbing occupation of improving his stock and farm conveniences. The speakers drove home the fact of the value of milk and other dairy products as health and nourishment—giving elements to old and young. She told of experiments that had proven the superiority of whole milk over other kinds of food. She deplored the use of other forms of butter (imitations) instead of the real article, for the food value is not nearly so great in the imitations.

County Agent F. G. Swoboda of Marathon County made the statement that community breeders' associations and breeders of good stock are the best citizens in existence in point of progress. It is this class that has put Wisconsin on the map. In speaking of associations, the speaker said it is not merely holding a successful summer meeting and an annual winter meeting that is sufficient; these associations must do other work and keep right on their jobs. He said that June is the month of breeders' picnics, and that farmers should not regard other work as more important than joining with their neighbors on such occasions.

Mr. Swoboda rapped the farmer who sells his dairy products and buys butter substitutes for home use, as a poor example for keeping up dairy popularity and prices. We should advertise our products and thus educate the masses to their use.

Mr. Charles A. Peterson, sent as a representative of the American Jersey Cattle Club, was then introduced. Mr. Peterson said there is a conception that Jersey sentiment is declining, but this conception is wrong, as the Jersey never was as popular as now and the Jersey cow's popularity is going to increase. He said that the Jersey is the supreme cow for the pioneer farmer. Mr. Peterson complimented the Langlade County Association as having done more than any other Jersey Association in the state. He said record prices are being paid at sales, and that if other breeds seem to be getting the best of it—Jerseys keep advancing with the rest of them. He told how to advertise Jerseys. Mr. Peterson, being actively engaged with Jerseys and farm bureau work, closed his address by telling something of the farm bureau and the great work it is doing in getting farmers and their different associations together.

Wisconsin. W. M. BEWICK.

SWINE

Cedar Crest Farms

Berkshires for Sale

Open and Bred Gilts at Reasonable Prices

J. K. Dering, Owner, Lake Villa, Ill.

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois.

ISLAND FARM DUROCS

We are offering a few choice spring pigs, either sex, at $30 each at weaning time. Write us your wants.

ISLAND FARM, - Floodwood, Minn.

Alfamarl Springs

OFFERS FOR SALE

Rex of Alfamarl Springs by Union Star, a richly bred Yeksa bull whose dam, Reunion, made 576 lbs. fat at three years; out of Goldie Belle, a good daughter of Tricksey's Sam. He is ready for service.

F. M. TESS, Mgr., - Troy Center, Wis.



Green Valley Cherry King 2nd, No. 260435n.

SPECIAL PRICE

on Duroc pigs of May and June farrow. Sired by State Fair winners. Gilts bred for fall litters. Write for Catalog and price list.

We deliver the Hogs, before you pay.

GREEN VALLEY STOCK FARM

BOX 6, LOUISVILLE, ILLINOIS

BROWN SWISS



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

15,540.9 lbs. Milk
613.60 lbs. Fat

Is the average official production of his two nearest dams. This Brown Swiss bull is 16 months old and ready for service.
Two other fine yearlings and several younger bulls. Entire herd FEDERALLY ACCREDITED. Write for pedigree and prices.

WALHALLA FARMS, Middleburgh, N. Y.

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.

JERSEYS

JERSEY BARGAIN

Four milking, one heifer bred, two calves. All females, young herd, line breeding, Tormentor strain. Make inquiry why only $1200.

W. W. WOOD, ARENDTSVILLE, PA.

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.
Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.
Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.
Price, $150 f. o. b. cars our station.

Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

"OUR MAJESTYS SOLD"

And This "RALEIGH WILL SELL"

Bull, just 10 months old, and a clipper.
Sire—Grandson of Mable's Raleigh and Rozel's Noble.
Dam—By son of Financial Raleigh. She traces 3 times to Financial King breeding. Now on R. of M. test and making good.

G. D. GILBERT, Manager.
Ceylon Court Farms, Lake Geneva, Wis.

Hillcrest Jersey

Bull calf, 6 mos. Sire—Figgis Wingold. Dam—on R. of M. cow sired by grandson of Golden Fern's Lad. For particulars and price write

ROLLIE VANDERVORT, TOMAH, WIS.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY, BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. **R. C. Green & Son, Albion, Wis.**

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.

J. Q. EMERY & SON, - Edgerton, Wisconsin



Raleigh's Derry King

Dropped June 21, 1919, solid fawn color, well grown, well bred, toppy bull. Sired by a grandson of Mabel's Raleigh and Noble of Oakland. Dam is of Eminent breeding and has a record of 485 lbs. 15 ozs. butter, Class AA. This bull's pedigree is full of records and blue ribbons. Do you want him at $200, crated F. O. B. Eagle? U. S. Accredited Herd.

W. M. KNIGHT, OAK GROVE JERSEY FARM, Eagle, Waukesha Co., Wisconsin.

Tierra Bella Stock Farm

Public Sale of Registered Chester White Hogs

We have reserved 40 choice Chester Whites, including 16 tried sows and fall gilts bred to Jumbo for fall litters, 10 big type fall boars sired by Pay Streaks Monarch, a good son of the Grand Champion Pay Streak, also 14 spring sows and boars sired by these big type boars. Everything will be registered and immuned by the double treatment. Write now for catalogue and plan to be our guest at Mauston, Wisconsin. Sale day August 14th.

V. C. TIEDT - - - - - - - - - - MAUSTON, WIS.

Duroc-Jerseys Are Prolific and Profitable



They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Durco-Jerseys.

WRITE FOR BOOKLET—"DUROC-JERSEY HOGS ARE PROFITABLE"
published and mailed free by the largest swine record association in the world (over 10,000 members) for the benefit of hog raisers everywhere.

THE NATIONAL DUROC-JERSEY RECORD ASSOCIATION
Dept. 300—PEORIA, ILLINOIS

Who Pays The Price?

All stockmen have losses. Usually they come unexpectedly. That's why live stock insurance is desirable. It protects your invested capital. It reimburses you for loss.

We protect your investment at a cost less than the interest rate on the money you would use to replace a loss. When you lose an animal we pay you the money to replace it. WE PAY THE PRICE.

Insure In A Home Company, Owned by Wisconsin Stockmen

WISCONSIN LIVE STOCK INSURANCE COMPANY

Bank of Wisconsin Building, Madison "Not a Mutual Company"



A good bull is more than half the herd
A scrub bull is mighty near all of it

Start right - put an
AYRSHIRE BULL
at the head of your herd

No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS' last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!

Start right - put an
AYRSHIRE BULL
at the head of your herd





EVER WISH YOU KNEW

—HOW THE—

DAUGHTERS of YOUR BULL WILL MILK?

If you put two or three years into breeding and developing a lot of heifers you want to be very sure indeed that these heifers, after all the time and money you have spent on them, will be profitable producers. You can only be certain of this through the proper selection of your herd sire; and the only dependable way to judge of this quality in your bull is by the official records back of him.

RAVINIA AYRSHIRES

have the world's greatest number of A. R. records and world's records. A Ravinia Ayrshire bull will bring you dependable production together with strength, vitality, and type.

Write us today for our profit suggestions in Ayrshires and for "Why I Chose the Ayrshire".

GOSSARD BREEDING ESTATES

Martinsville, Ind. Preston, Kans. Axial, Colo.

Address all correspondence to General Offices, 1007 So. Michigan Ave., Chicago

AYRSHIRES

1 Registered yearling bull. Also 5 good grade heifers, 2 milking, 3 to freshen in spring. All sired by a grandson of Substantial of Highland, sire of 4 A. R. daughters, among them April Bloom of Highland, 440.25 lbs. fat, brother to Rena Ross family. $600 if taken soon.

Mrs. Aug. Neumann, R. 2, Princeton, Minn.

Summary of Ayrshire Records

During the quarter just finished one hundred and fourteen Ayrshire cows qualified for the Advanced Registry with an average production of 10,731 pounds milk, 429.92 pounds fat.

Gossard Breeding Estates has the leading cow in Henderson's Dairy Gem with a record of 20,042 pounds milk, 803.71 pounds fat, testing 4.01 per cent fat. They also have the leading cow in the senior four-year-old class. Monstone Farm, Massachusetts, also has two class leaders while Skylands Farm, New York, Woronoake Heights, Massachusetts, and Friends Hospital, Pennsylvania, furnish one class leader each.

Sears and Howell of New York completed their first Advanced Registry record on a home bred cow, A4 of Blooming Grove, that finished one of the ten leading records in her class. The number of records completed shows an increase of fifty-seven per cent against the preceding quarter.

The Roll of Honor records for 300-day production show a marked increase. Ninety-seven records have been completed of which twenty-seven were completed during the past quarter. All records completed to date in this division show an average production of 10,019 pounds milk, 404.47 pounds fat.

CLYDE N. SMITH,
In charge, Advanced Registry.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

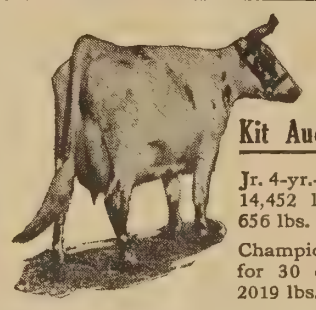
Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS



"Ayrshires of Quality"

Kit Auchenbrain

Jr. 4-yr.-old record 14,452 lbs. milk, 656 lbs. fat.

Champion of Breed for 30 days with 2019 lbs. milk.

Her bull calf, Kit's Surrel, by Surrel for sale.

WEYMOUTH FARMS,
North Weymouth, Mass.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.

Some Nice Young Bulls For Sale.

The best of breeding. **E. N. Manley & Sons, Lyons, Neb.**

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Highland Farm Ayrshires

If you want—

Big Stylish Cows
Big Teats and
Big Production

Get a "Baron" to head your herd. A few choice bull calves by Imp. Baron's Best of Bargenoch, No. 12858, out of A. R. Finlayston dams, for sale.

Lt. Col. John R. Valentine, Prop. Philip C. Palmer, V. S., Manager
Bryn Mawr, Pennsylvania



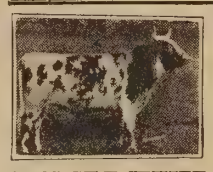
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan

Sons of
Ringmaster's Brae Burn Diplomat
For Sale

GEORGE F. WHITE, WESTFORD, MASS.

Ringmaster's Brae Burn Adonis

Young bull calves by this sire are now offered.

W. Grant Fancher, Essex Co. Training School, Lawrence, Mass.

Brae Burn Farm

Cavalier's Model Champion

1st at National 1919

Heads Our Herd



L. W. NEWTON, ASHBURNHAM, MASS.



SPRING CITY STOCK FARM

We *Breed* and *Develop* Winners
Nine times *Premier Breeder* at National

We can supply your Ayrshire needs with animals bred to win.

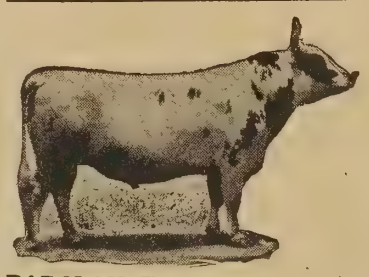
Adam Seitz & Sons, Waukesha, Wis.

MIDDLESEX MEADOWS FARM

SOUTH LINCOLN, MASS.

AYRSHIRES

A. Henry Higginson



FOR SALE

Barclay's "Herd Laddie" 23548

Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.

Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Special Sale Bull Calves

sired by Friendlesshead Victor (Imported) champion two-year-old 1919 Wisconsin, Illinois and Iowa State Fairs, Dairy Cattle Congress at Waterloo, Iowa, and National Dairy Shows, and out of a high producing Advanced Registry cows. At farmer's prices.

ALDEBARAN FARMS, RACINE, WIS.



Economy in Production ← GUERNSEYS → Quality of Products



87 Gold and Silver medals have been offered at the Milk and Cream Show held annually in connection with the National Dairy Show. 71 of the winners have informed us regarding the breed of cattle that produced the products exhibited. The reports show that Guernsey milk and cream won 43.6 per cent of the 71 medals, and other milk and cream to which Guernsey products have been added won an additional 16.9 per cent. Let us tell you why the nation's greatest dairy products show gives highest honors to the products of the Guernsey cow.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 73, PETERBORO, N. H.

The Second Southeastern Guernsey Breeders' Sale

to be Held at Salisbury, N. C., Aug. 12th, 1920

In Co-operation with Rowan County Guernsey Breeders' Ass'n

This offering will consist of thirty-five selected Guernseys, and will come from four different states and about twelve different herds. These animals were selected by a Committee and are pronounced the best bunch of Guernseys ever offered at public auction in the South. They are from herds all under Federal inspection and every animal is guaranteed a breeder. There will be five bulls, whose dams average over 600 lbs. of fat each, and thirty females from six months to four years of age. Among them are daughters of some of the best bulls of the breed and granddaughters of the sensational Guernsey bulls. Two granddaughters of King of Chilmark, one of them bred to a son of Chilmark; eight granddaughters of Itchen Daisy's May King of Langwater, a granddaughter of Dolly Dimple's May King of Langwater, granddaughters of Ne Plus Ultra, granddaughters of Border Raider, and some of the very choicest Guernseys from the best herds in the Southern States. Three splendid heifers bred to a son of King of Chilmark, who is full brother to Lady Du Chene.

We feel that all Guernsey breeders will be interested in the kind of animals that will be offered in this sale and would suggest that you write early for catalog to

C. T. RICE, SALES MGR., OAKTON, VA.
Col. D. L. Perry, Auct.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, Minot, N. D.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd. August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Blackleg

My farmer writes me that blackleg has developed among the cattle in my neighborhood. I thought that blackleg was confined to cattle on the western plains and should be glad to know how far east you have ever heard of its extending.

Chicago. J. D. B.

Blackleg is most prevalent on western farms and cattle ranches, but may occur elsewhere. An error in diagnosis may have been made. It would be well to obtain a detailed description of the symptoms shown by the affected animals. If you send it to us, we shall be glad to give an opinion as to the disease present. It would be better, however, to have the local veterinarian investigate and if necessary vaccinate against the disease. It may be added that anthrax and hemorrhagic septicemia often are mistaken for blackleg, or vice versa.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

In the July 2d Issue

of the Hoard's Dairyman, page 1446 is an account of the Anna Dean Sale. If you read this you will notice that twenty-five daughters of Imp. Goldseeker of Anna Dean Farm sold at an average of $500. I am offering for sale three bulls by same sire as these heifers. One of them out of a daughter of Masher's Sequel with a record of 635 lbs. of fat. On the inside cover of the Guernsey Breeders' Journal, the last issue, you will find a picture of this cow's sister. I am also offering for sale a daughter of Imp. Clipper that sold for $1,950.00 at this sale.

W. W. CLARK, - Vesper, Wisconsin

Waldwic Guernseys FOR SALE

A few choice young bulls, sired by son of "Imported Itchen May King" and from dams making good A. R. records. Also few well bred cows and heifers.

EDGAR P. SAWYER, OSHKOSH, WIS.

CITY HOME FARM GUERNSEYS

Fine registered Guernsey bulls of serviceable age and younger of most fashionable breeding. Priced right. Can also spare a few fine females.

F. W. MEYER BARRON, WIS.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

ALBAMONT GUERNSEYS

Superior young bulls two to twelve months old, rich in May Rose blood. Several are

Sons of Don Diavolo.

Send for sales list. J. C. HAARTZ, 10 High St., BOSTON, MASS.

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137

Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 860 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association
Appleton, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

We are now offering a few well bred

May Rose Bull Calves

Sired by Langwater Renown 39636 and out of Daughters of Pencoyd's Golden Secret 16550. The dams are on test and doing very well. Also *an extra fine Yearling*. Now fit for light service. He is fawn and white, with clear nose. Anyone wishing to get the blood of this great family will do well to consider the above breeding. For price, pedigree, and all particulars address

GREEN MEADOW FARM,
Walter Jauncey, Mgr., Williamstown, Mass.

The Mixter Farm

325 GUERNSEYS 325

Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.

HARDWICK, MASSACHUSETTS.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

Your Opportunity

to obtain the blood that breeds on, sons of

Langwater Raritan

the only GUERNSEY BULL that has a full sister (Langwater Nancy) with 1000-lb. fat record.

Send for sale list.

Herdlea Stock Farms, - New Hope, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

HOLSTEINS

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb. 4-5; Apr. 1-2; June 3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peidora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write O. L. Reamer, North Liberty, Ind.

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed to have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Buy Selected Holsteins

We fill orders for pure-bred Holsteins, high grade dairy cattle and choice young stock with carefully selected animals.

It will pay you to write us.

GUST MELSTER & SONS, CAMBRIDGE, WIS.

Young Sons of SIR BESS JEWEL ORMSBY

The records of his eight nearest dams average better than 30 lbs. He is a son of Sir Pietertje Ormsby Mercedes 37th. Dams are A. R. O. and untested daughters of Hillvale Sir Ormsby. Write for descriptions or come and see them.

T. J. Jones, - Wales, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

Sales Management

If you are thinking of selling out, we can place at your disposal the principles and practices which have made Waukesha sales a success. No sale too small, none too large. Book your sale now. Holstein pedigrees, $1.25. Headquarters for sale catalogs. Write for free booklet.

WAUKESHA SALE & PEDIGREE CO.
Waukesha, - - Wisconsin

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Warwood Farm

Has for sale

Holstein Bulls

from two to twelve months old, of excellent breeding.

FRED C. LANDORF, Foreman, Lisle, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Grandson of King Segis Pontiac

Ready For Heavy Service

We have for sale a 2-year-old grandson of King Segis Pontiac from one of our best "all the year" A. R. O. cows. He is a splendid individual, well marked and very well grown. Priced to sell. Also have a few bull calves. Write today.

PINEHURST FARMS, ROCKFORD, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.-072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

ALFAKORN FARMS'

SALE LIST

Fifteen Richly Bred Heifers

All from A. R. O. dams, seven are half-sisters, being granddaughters of King Segis Pontiac. All bred to our Junior herd sire, a 35-lb. son of King Segis Pontiac Alcartra; some are granddaughters of King of the Pontiacs.

Two granddaughters of *Maud Burk* and from *A. R. O. dams.*

A yearling daughter of a *40-lb. bull* and bred April 9th to a *42-lb. bull,* and a wonderful individual.

Also a granddaughter of *The Milk and Butter King,* and every dam in four generations is A. R. O.

Also a half-sister to *Carnation King Sylvia, every dam A. R. O.* and a heifer of wonderful quality.

A granddaughter of King Korndyke Sadie Vale from a 31-lb. sire and a 24-lb. cow.

A 27-lb. cow in calf to our 38-lb. herd sire.

THIRTY YEARLINGS AND QUITE A NUMBER OF HEIFER CALVES
A FEW EXTRA WELL BRED BULLS AND REAL BULLS

—COME AND SEE US—

F. B. GREEN & SONS, Evansville, Wisconsin

HOLSTEIN BULLS

Ormsby Bred Ready For Service

om A. R. O. Dams Running on the 10-month test.

We are now able to offer bulls that are well grown, straight, deep bodied individuals, that combine in the closest possible degree, the blood that has made Minnesota famous. They are priced from $200 and up and we will make a lot price to breeders' clubs or county agents desiring bulls of the best breeding to place on the farms of their counties. We are also able to offer a few cows, to freshen in the fall, to the service of our herd sire, he by the only living son of PIETERTJE MAID ORMSBY and out of the highest record daughter of KING SEGIS PONTIAC COUNT.

Write or come and see us, farm just outside of city limits of St. Paul.

RAMSEY COUNTY HOME, - North St. Paul, Minn.



BEECHER WYTHE 2ND

Butter 7 days 19.65, milk 534.6 at 15 years of age, 75 days after freshening; 19.1 lbs. butter, 548 lbs. milk, 109 days after freshening.

At 14 years of age, Grand Champion Cow of Indiana 1918; 22,554 lbs. of milk, 800 lbs. of butter, as a ten-year-old. Dam of 12 consecutive heifer calves and one bull calf. Nine A. R. O. daughters.

2 Serviceable Bulls For Sale

Sired by King Colantha Lyons, a 35.68-lb. son of King Lyons, he by the great King Segis.

No. 1. Born April 18, 1919. Two-thirds white, nicely marked, good individual. Dam: 16 lbs. butter in seven days at 24 months. His grandam, Beecher Wythe 2nd. This cow has produced over 100 tons of milk and is now nearly 16 years old, is still milking at a great clip. Price $500.

No. 2. Born March 11, 1919. Five-sixths white, good individual. His dam, 13 lbs. butter at 2 years. Price $250.

M. J. SEBERGER
Schererville, - Indiana



"SPOT"

Eli Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois

BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

Combining Type, Size, Constitution and Production.

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.

"The Home of Sir Johanna Fayne Segis Pontiac"

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

For Your Herd Sire—A Son of Matador Segis Walker

Out of Hazelwood Alban Ormsby



EAR TAG ■ 1033

MATADOR SEGIS WALKER ORMSBY. Born 11-7-18.

Sired by MATADOR SEGIS WALKER, senior herd sire at our Seattle farms. He has 28 A. R. O. daughters, 23 averaging in two-year-old form over 20 lbs. butter from over 400 lbs. milk. Three of his daughters in three-year-old form averaged 30.30 lbs. butter from 531.2 lbs milk. His first three daughters in 2-year-old form to finish for 365 days averaged 798.68 lbs. butter from 20,761.5 lbs. milk. We now have 11 of his daughters on yearly test from which we expect good results.

His dam, Hazelwood Alban Ormsby, as a 4-year-old, made 23.71 lbs. butter from 460 lbs. milk. Her dam, Hazelwood Hartog Alban De Kol, has a record of 23.71 lbs. milk as a four-year-old. She is by a brother of Marion Walker Pietertje, who has a record of 31.63 from 560.70 lbs. milk in 7 days and 121.15 lbs. butter from 22,070 lbs. milk in 30 days.

An excellent sire of good breeding. He is beautifully marked and about three-fourths white. Very straight, with a good middle. Shoulders smooth and even. His dam is due again in August and we expect her to make a creditable record, but the bull is offered at $750. Can be seen at Oconomowoc, Wis.

Write today for our new sales list No. 103 offering for sale sons of Carnation King Sylvia, Avon Pontiac Echo and Matador Segis Walker.

Eastern Office: 711 Consumers Chicago, Ill.
Western Office: 711 Stuart Bldg., Seattle, Wash.

Carnation Stock Farms

FARMS
Washington Farm, Near Seattle
Eastern Farm, Oconomowoc, Wis.

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.



W. J. Gillett & Sons, Rosendale, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly.

S. A. BAIRD & SON, WAUKESHA, WIS.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams aver-age over 87 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

2500 Healthy Holsteins 2500
Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.
Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.
S. T. JONES, - R. 8, Watertown, Wis.

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. CHRIS. INDERMUEHLE, R.1, Juneau, Wis.

JOHANNA BOY TWISK

heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. Nothing for sale at present.
T. W. LUCK, R. 1, HORICON, WIS.

LEVEL-LAY FARM HERD

headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.
E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

Check Or Bond Buys Dandy Bull Calf

Born June 20, 1920. His dam and sire's dam average over 30 lbs. butter and 657 lbs. milk. Dam and granddam have good yearly records. Rich in Pontiac Korndyke and King Segis blood. Dark in color. Cut price. **Chic Dairy Farm, - - Juneau, Wis.**

This space reserved for
EMIL REX, IRON RIDGE, WIS.
Nothing for sale at present

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 862 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.
OTTO F. BRANDT, - HORICON, WIS.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.
150 head in the herd—tested annually.
HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.
S. L. De Smidt, Manager. - - - - - - - Burnett, Wisconsin.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY — WISCONSIN

DO YOU KNOW?

That there are 40 bulls with 30-lb., 40-lb. or 1,000-lb. yearly record dams in service in WAUKESHA COUNTY?
That there is more long and short time production work done in WAUKESHA than in any other county in Wisconsin, the greatest dairy state in the Union?
That WAUKESHA contains more tuberculin tested cattle than any other county in the world?
That WAUKESHA breeders have more dollars invested in Holstein-Friesian cattle than any other county in the world?
That WAUKESHA COUNTY produced the highest priced dairy cow in the world?
That bred for production stock pays?
WAUKESHA BREEDERS can supply your Holstein wants.

Tuberculin tested herds—State and Federal.

Individuality Short and long time production records.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin. - - Office 254 Broadway

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.
F. H. HEMBROOK Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address
C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

Oconomowoc, Waukesha Co., Wis.

ORMSBY BULL • Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Minnesota Holstein Breeders' Association

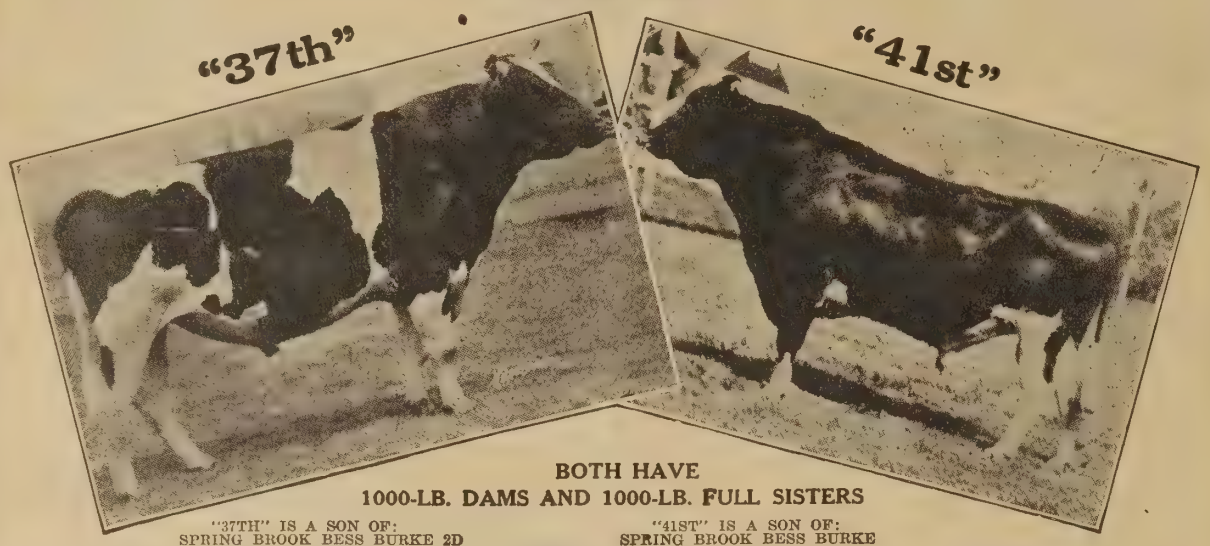
Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

SIR PIETERTJE ORMSBY MERCEDES

"THE WORLD'S GREATEST YEARLY RECORD SIRE"

OUR HERD SIRES



BOTH HAVE
1000-LB. DAMS AND 1000-LB. FULL SISTERS

"37TH" IS A SON OF:
SPRING BROOK BESS BURKE 2D
Butter, 365 days 1,290.91
Butter, 3 years 3,380.14
"The World's Largest Dairy Cow"

"41ST" IS A SON OF:
SPRING BROOK BESS BURKE
Butter, 365 days at 9 yrs. 1,094.16
Butter, 3 years 2,903.93
"The Greatest Mother of the Breed"

E. C. SCHROEDER FARMS, - MOORHEAD, MINNESOTA

(A FEDERAL ACCREDITED HERD)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

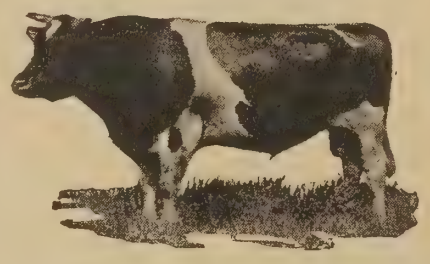
Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

Do You Need a Bull?

I am offering a splendid yearling for sale. He is growthy, well marked, and as straight as a line. His dam is a 24-lb. 4-year-old daughter of Sir Veeman Hengerveld and his sire a 28-lb. son of King of the Black and Whites. His 11 nearest dams average 28 34 lbs. in 7 days. Several younger bulls for sale.

E. J. BROSIOUS, STILLWATER, MINN.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams. For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Type

King Segis Pontiac Fayne Star is "The best individual King Segis Pontiac Count ever sired." His sons are like him. They are listed in our bull circular. Yours, with no obligations. But you will have to send for it.

FLECKS FARMS, - Faribault, Minn.

Grandsons of
Duchess Skylark Ormsby and of S. P. O. M. 38th.
for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM.
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

FRED S. BALL

SPECIAL HOLSTEIN AUCTIONEER

I sell a big per cent of all the Imported sales in the south-west. Wire early for dates as I sell every day in sale season. **EL RENO, OKLAHOMA.**

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

SOUTHERN BREEDERS

If you are in the market for a bull of serviceable age don't overlook this opportunity to get an acclimated bull of real show type, from a 17-pound junior three-year-old.

Herd under State and Federal supervision.

Also calves from Ormsby dams by a 32-pound grandson of MAY ECHO SYLVIA. Visitors always welcome. Photo and pedigree on application.

BOSTWICK & SON, - ARDMORE, OKLA.

Yearly Record Blood

Bull calf born Dec. 19, 1919. Sire Maplecrest Avalon, whose four nearest dams average 1,067 lbs. butter in a year, three of them being 1,200-lb. cows.

Dam by a son of Dutchland Creamelle Korndyke Lad with five dams in her pedigree over 1,000 lbs. butter in a year. She is now on yearly test as a senior two-year-old and is proving a very persistent milker. The calf will have nine dams in his pedigree that will average 1,085 lbs. butter in a year, an unusual combination. Price for prompt sale, $200.

AVALON FARMS, E. D. Curtis, owner, Bantam, Conn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Mankato Holstein Farms

are combining the best of Ormsby breeding through the sons of these great proven long distance sires: Sir Pietertje Ormsby Mercedes, Ormsby Korndyke Lad, King Korndyke Colantha Ormsby. These great sires have 22 daughters over 1,000 lbs. and 35 over 30 lbs.

A Federal Accredited Herd.

Marlow & Randall, - Mankato, Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

Here's Your Chance to Get a Choice Bull

From a sire whose 4 nearest dams averaged 29 lbs.

❖ Born November 1916 ❖ Born February 1917 ❖
Black and white Black and White
Born May 1917
❖ Black and White ❖
3 Choice Bargains

L. H. HUNTER, RANDOLPH, MINN.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams sire a 31.42-lb. grand son of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT STILLWATER, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.



Facts in BLACK & WHITE

How a Purebred Holstein Sire Increases Profits

Here is just one instance of the results obtained by the Iowa Agricultural Experiment Station in tests covering ten years. A scrub cow had a record of 4,588.4 lbs. milk and 201.67 lbs. fat at 6 years of age. Her daughter by a purebred Holstein bull produced as a 4-year-old, 6,822.8 lbs. of milk and 283.75 lbs. of fat, an increase of 49 per cent in milk and 41 per cent in fat over the dam's best record.

That evidence, easily verified, should be pondered over well by farmers and dairymen who are desirous of more profit per cow, but who are putting off buying a Purebred Holstein Sire. Send for our extremely interesting booklets today. It means money to you.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

A Good Consistent Pedigree

Isn't it worth more than a high record or two in a weak pedigree, which shows no certainty of transmitting Production?

We offer *3 SERVICEABLE BULLS* with good solid pedigrees.

No. 1—Double grandson of 40-lb. sire, from a 22.6 Jr. 2-yr.-old, 7 nearest dams average 23.7, all above 21 lbs. No. 2—Son of No. 1, A. R. O. dam, 15 nearest dams average 21 lbs. butter, 520 lbs. milk. All tested. No. 3—Yearling sired by No. 1, 7 nearest tested dams average 23.46. Priced for quick sale.

BROOKENS BROS., PARKER, S. DAK.

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH

WHEATFIELD FARMS

A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.

Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS

J. C. Dold, Owner. **R. F. D. No. 14, LA SALLE, N. Y.**

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

A King of the Pontiacs, Bull

Sire, Terracelawn King Pontiac; His sire, King of the Pontiacs; His dam, a 32-lb. daughter of Hengerveld De Kol. His first two daughters average more than 23 lbs. at two and a half years. Dam of calf a sister to the great 40-lb. cow, Otego Valley Christmas Belle, has 21.73 lbs. at three and a half years and is an excellent prospect for a 30-lb. record.

Calf was born Oct. 19, 1919, is a splendid individual, nearly white and well grown. Price $250. Address

S. J. Burton & Son, Worcester, N. Y.

2 Choice Bulls for Sale

No. 1. Born Dec. 19, 1919, good individual, good length, and a straight top line, three-fifths white. Dam, A. R. O. 18.10 lbs. butter as a senior yearling, milk 400 lbs., and daughter of 35.68-lb. bull, King Colantha Lyons. Sire, King Korndyke Gem, whose dam's A. R. O. record is 32.74 as a 3-year-old. Price $225. No. 2. Born January 9, 1920. A good, growthy fellow, heavy body, about three-fifths white. Dam, A. R. O. 22.50, milk 520 lbs. Sire, King Colantha Lyons, a 35.68-lb. bull. Price $225. Pedigree and photo on request. An accredited herd.

MICHAEL SEBERGER SCHERERVILLE, IND.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie, A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

King Segis Bred Bulls

We have a limited number of calves and yearlings of KING SEGIS breeding.

Each individual has been picked from heavy producing dams and sires, many with large A. R. O. records and containing the best foundation blood of the breed.

Prices are reasonable. Write for pedigrees.

G. G. BURLINGAME, - CAZENOVIA, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

WOODCREST SIR CLYDE

FROM A 33-LB. AND 970-LB. DAM



His 18 A. R. O. daughters, headed by a 30-lb. 3-year-old, and including 13 2-year-olds from 20 to 25 lbs., average 22.01 lbs. butter at 2 years, 10 months.

A son of the great Alma Clyde, whose yearly record of 970 lbs. butter from 22,560 lbs. milk, was debarred from 8th Ass'n prize, 1911-12, and who is dam of a 30-lb. daughter and three great sons. His sire's dam, former world champion from 7 days to 6 months.

Three daughters sold at auction the past season averaged $2,050 each.

Write today about one of his good sons from a yearly record dam.

HOME FARM HERD

(Established 1881)

W. B. Barney & Sons, Chapin, Iowa.

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.



Revere Model Patriot Truck hauling milk at the University of Nebraska State Farm

PATRIOT

Motor Trucks

Where hauling is reasonably light — a ton or under—and you want speed — up to 25 or 30 miles an hour — the Revere Model Patriot will be just the truck you need.

Built for Country Roads

For all-purpose farm work —on the farm as well as on the road—getting a full load to market, up to two or two and a half tons—and standing up splendidly for the rough and ready farm work—you will find the Lincoln Model Patriot a wonderful value. It is probably the most useful all-around truck for farm work ever built.

For continuous and heavy hauling —getting good big loads of two and a half to four tons over the road day after day, Washington Model Patriot is a star performer.

Built for Farm Loads

The Patriot has standard wagon tread, plenty of road and field clearance, lots of power for mud, ruts, hills, plowed ground. Flexible construction enables it to stand strains, jolts, twists without injury, making it the ideal truck for field work. It will go anywhere a wagon will go, and many places a team cannot go.

If contemplating purchasing a truck at any time ask for our Book on the Patriot

Patriot Mctors Company, *Manufacturers*

1351 P Street, Lincoln, Nebraska

Revere Model	Lincoln Model	Washington Model
1500 to 2500 lbs. Capacity	3000 to 5000 lbs. Capacity	5000 to 7500 lbs. Capacity

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READING ROOM
AGR. BLDG.
URBANA ILL

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX FORT ATKINSON, WIS., AUGUST 6, 1920. Number 3

RESEARCH WORK OF DAIRY DIVISION

A. M. LOOMIS

THE research work now in progress in the Dairy Division of the Bureau of Animal Industry in the United States Department of Agriculture has reached a point where there are indications of results of far reaching interest and commercial value to the whole industry of dairy farming. This statement has probably always been true of this work, since its inception in the first days of the Department of Agriculture, but it is especially true at this time, and it is worth while at this time to call especial atttention to it. The work of the Department has grown to such huge proportions that even the most successful and the most commendable single pieces of work are lost to sight, unless singled out, and commended by those most interested in them. In these days of measuring results by financial returns, purely scientific attainment is also often neglected. In the work of the Dairy Division at this time, there is both a sufficient scientific merit and a sufficient financial merit to warrant double attention.

Some of the most important of these projects are being carried on at the dairy farm owned and operated by the Dairy Division at Beltsville, Maryland, but a half hour's automobile ride from the Department buildings in Washington, D. C. Space here does not permit a mention even by name of many of the projects under way, but I wish to give just a brief survey of a few of them which seem at this time to promise most.

At the farm at Beltsville, there is a large herd of Holsteins, Guernseys, and Jerseys, extensive buildings and equipment equal to the best to be found anywhere, in addition to the special equipment needed in the many interesting experiments going on there. Among these herds are many animals of exceptional merit, of high type, and high production. Among these is the Holstein cow, Calamity Wayne Pauline 2nd, the champion butter cow of Maryland, with a milk record of 22,547 pounds of milk, and a butterfat record of 855 pounds in a year. Duchess Calamity Wayne is also a fine cow, with a 55-pound per day record with first calf. There are four daughters of Homestead King, a well known Minnesota sire in the herd, one with a 20,000-pound milk record and a 625-lb. butterfat record. Among the famous Jerseys is Little Gladis of Hillside, daughter of Hillside Torono, a Hood Farm Jersey sire, and three other daughters of this sire. H. T. Converse, formerly of New Hampshire, is herd manager.

The animals in this herd are being used in several of the projects to which reference was made above. One is a study of the principles of animal breeding. Another is a study of feeding dairy cattle, now in the seventh year. Still another is a study of the problems of housing and care of dairy cattle, now in its eighth year. A very interesting project is the farm dairy feed production project, and the silage investigation which has now been transferred into the Research Laboratory from the experiment farm.



A PROMISING TRIO

The project which, however, seems to have the greatest immediate scientific and commercial possibilities is the study which is being made by Professor E. B. Meigs and C. A. Clary, on the "Physiology of Milk Secretion and Nutrition of Dairy Cows", brief reference to which has appeared in an earlier article in Hoard's Dairyman. This was begun in 1915, and four bulletins have already been published covering the work done and discoveries made, but it has remained for the recent past to develop some items of the most definite and general importance. Even at the time this is written these can only be given in a general way.

During the past year discoveries went to the point where the dependence of milk production on a certain percentage of phosphorus in the blood was clearly established. From that scientific data Professor Meigs and his assistant started in to develop systems of rations which would provide the necessary phosphorus in the proper forms, and the most economical manner. Definite results are about ready for announcement on this phase of the work.

A study was made of the influence of feeding different rations during the dry period, and of no grain during that period, on the milk flow after calving, and rations have been worked out which have brought the milk flow of aged cows well up to, and in some cases beyond, the milk record of such cows in their best years. Careful analysis and study seem to point to the controlling influence of various mineral matters in the system, such as was indicated in the previous paragraph dealing with phosphorus. Calcium was the other mineral element the necessity for which was indicated by these studies, and the use of rations properly combining them, fed freely during the period just before lactation was found to have very strong influence on the milk flow for long periods thereafter. Disodium phosphate has been determined on as the form in which these minerals can be added to the feed in the most effective way.

Dr. Meigs is also carrying on at the same time a series of research experiments dealing with the kinds and qualities of proteins in the dairy ration. The special feature of all this work is the blood analysis which is accompanying every test. The fact that different proteins—that is proteins derived from different sources and therefore probably different in character—have different results in flow of milk, was the basis for this work. The investigation has developed that these different proteins produce varying qualities of amino acid in the blood. Further study disclosed the fact that the amino acid in the blood system of a healthy cow decreased as much as 34 per cent before and after milking. No appreciable decrease in amino acid is found in the blood of a cow while dry.

This demonstrated to Professor Meigs that the amino acid in the blood played a vital part in the process of milk secretion, and is the basis of the other work now going on to determine the cheapest and best sources of supply in the dairy ration of those protein feeds which will produce the proper amount of amino acid in the blood of the milking cow. At the same time the physiological study is being continued of the actual process of milk secretion, to work out if possible just the reasons for and the process of the various reactions in the work of the glands of the

(Continued on page 84)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Calf Club in Kentucky

July tenth, fourteen pure-bred dairy heifers were distributed to the children of Oldham County, Ky. The People's Bank of La Grange supplied the money for financing the club. The parents signed the notes with the children and deposited them with the bank; the notes drawing interest at 5 per cent until maturity in three years. The heifers range from six months to a year in age, and cost approximately $200 each. Half of the heifers are Holsteins purchased from Coldstream Farm, the other seven are Jerseys and were purchased from R. J. Shipman.

Merrill Smith was elected president of the Oldham County Calf Club and Mamie Iris Hitt was elected secretary.

This is the largest calf club that has yet been organized in Kentucky and credit for it is due to county agent, J. N. McCarty, and to the following breeders of dairy cattle of the county: Roger Hitt, Fred Von Allman, C. W. Smith, W. W. Hampton, and J. W. Howey.

The calves are high class and it is planned to keep each one in Oldham County so that each may find a useful family of dairy cattle that will add to the fame that this county has gained as a progressive dairy community. The farmers there were the first to organize a cow test association and as a consequence of their leadership three other Kentucky counties now have associations.

J. J. HOOPER.

Here's evidence of a back to the farm movement: About 4,000 disabled soldiers, sailors, and marines, according to a recent census, are taking agricultural training under the federal board for vocational agriculture.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Dairy John's Philosophy

I could stock all the farms in twenty-seven states with farm machinery, if I could only bring back to life the stuff that rust has ruined.

Clearing a ball-room floor, between dances, is not as difficult as clearing one acre of land that has never known the plow before.

No chariot that ever roamed the roads of ancient Greece could compare with a sturdy truck, marketward bound, with the morning's milk.

The Country Trout Stream

The digging for bait by lantern-light.
The start at five a. m.
The hunger at five ten.
The long, hard walk through wet woods.
The first glint of sunlight on the stream.
The whispered advice.
The wriggling worm on the dark waters.
The first disappointment.
The continuation of it.
The three-mile down-stream jaunt.
The sudden appearance of the game warden.
The halting excuses.
The asking to see the license.
The admission that there ain't none.
The summons.
The derisive laughter when you reach home.

"What is that little place?" asked the city visitor, on the big dairy farm.

"A smoke house," was the answer.

"You'll never get me in there with my cigar," went on the visitor, "it's too small and dark. I suppose it's the farmer's way of preventing forest fires."

A Fair Comparison

The calf was skittish as could be,
It kicked the bucket in the air,
It ran like blazes, far and free,
And made the farm hand fellows swear.
But say, youth always has it's fling,
Boys do the same, despite your call.
Why blame the young for anything?
The kindred truth is true of all.

The cow gets peevish, frets a bit,
She flicks blue-bottles with her tail,
And milking! Well, you stop at it,
And catch the overturning pail.
But, say, each one of us we find
One day of grouch and discontent,
We kick and leave a trouble-trail
When, mostly, only good was meant.

The bull snorts fire and rules th' field,
We dodge behind a sheltering tree.
The bark from many a birch is peeled,
And swift tornado rage is free!
But, then, some men we know, give vent
To rage, and leap the pasture bars.
For all life's sweet, sublime intent,
We make the quiet world see stars!

The country mothers are the real powers of the land. Every time you see a really great man, if you look hard enough, you'll find, somewhere, a modest, tender, loving little country woman, as the mother, away back, hiding, modestly.

"What happened to that lightning rod agent?"

"Didn't you hear he was killed by lightning during that last big storm on Hill Creek?"

"Any summer boarders this year?"

"Yep, eight. What'll you ask to take 'em off my hands for the rest of the season?"

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CREAM SEPARATOR

And That's The

DE LAVAL

For Forty Years

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There may be a half-dozen plows, wagons, tractors, autos or other farm equipment to choose between, but no would-be imitator or utilizer of expired De Laval patents has yet produced a cream separator comparable with the De Laval.

First in the beginning, De Laval machines have led in every step of cream separator improvement and development. Every year has presented some new feature or betterment, and the 1920 machines are still better than they have ever been before.

If you haven't seen or tried a new 1920 De Laval machine, any local agent will be glad to afford you the opportunity to do so.

If you don't know the nearest De Laval local agent simply address the nearest main office as below.

The De Laval Separator Co.

165 Broadway NEW YORK | 29 East Madison Street CHICAGO | 61 Beale Street SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

MILK FAIRY PAGEANT

L. R. GADDIS, INDIANA



SPIRIT OF GOOD HEALTH AND ONE OF THE FAT CALORIES



QUEEN OF THE FAIRIES CALLING FAT AND HER CALORIES FROM THE MILK BOTTLE

MILK is not a beverage but a food. To drive this statement home, Miss Orpha Cole, home demonstration agent in Tipton County, Indiana, and a corps of capable assistants staged the Milk Fairy Pageant in Tipton Park, June 25.

A more beautiful day in June could not have been selected, a more ideal spot for the Milk Fairies to tell their story could not have been found. In spite of the busy season, two thousand people assembled to witness this beautiful pageant. A huge milk bottle, nine feet in height, painted yellow and white to represent the proportions of fat, was in the middle of the natural stage. Near this was the orchestra which was composed of a piano, cello, violin, and flute, played by young girls.

"Johnny", who was not fond of milk, was not one of the Boy Scouts, didn't care for games that the average boy cares for, and was not a good student, was called by his mother. He didn't want to get up, he didn't want to drink his milk, he didn't want to go to school so he went back to sleep and dreamed. The pageant was his dream.

The door of the big milk bottle opened, and out walked the Queen of the Milk Fairies, dressed in white and carrying a silver wand. She called forth the protein calories which were the Boy Scouts. They put on a beautiful drill and a snappy foot ball game. The Queen again waved her magic wand and out walked the fat calories. Little tots four and five years old, dressed in creamy crepe paper dresses to represent cream, gave a folk dance.

Vitamines of milk, dressed in blue and green crepe paper; sugar in white with red stripes running round like stick candy; mineral matter dressed in white; and water in green, were then called forth.

The folk dances, the catchy songs telling the story of the different food nutrients had their effect upon Johnny. He wanted to be a strong manly boy, wanted to be a Boy Scout, play foot ball and be a good student in school. He appealed to the Fairy Queen. She called all her fairies and, in their presence, Johnny declared that if milk would do for him all they claimed, he would forever after drink milk.

The staging of the pageant was ideal. Not only was the audience entertained, but the two hundred children who took part in the pageant had a lesson they could not have received in any other way, and each child and parent went home with the determination to "eat more milk".

Upon request, the pageant was repeated a week later in connection with the band concert, the city placing special wiring in the park for the staging.

Miss Cole has been instrumental in placing the hot school lunch in many schools throughout Tipton County, Hot cream soup, chocolate made with milk, and creamed dishes have been served. Later she will conduct a milk campaign throughout the county to encourage a greater use in the preparation of the daily meals, especially in families where there are children.



BOY SCOUTS—EVERY ONE OF THEM DRINK MILK



EXECUTIVE SECRETARY OF THE TUBERCULOSIS ASSOCIATION TELLING WHAT MILK WILL DO IN THE WAY OF BUILDING UP TUBERCULAR PATIENTS

A County League Meeting

H. H. LYON, NEW YORK

COUNTY league meetings are still held, commonly four times a year. It has been apparent all along that close touch of the members with the activities of the head office is of great importance. The county league meeting is a strong link in the chain if it is made strong. At the county meeting some one, either a director or county president, is expected to make a fairly complete survey of the work of the past three months. The next step is to get this to the members in the local leagues. The way to do this is not always clear. This is something that we should be more interested in doing, but it is not my purpose to discuss this now.

What I desire at this time is to mention some of the things that have been taken up at recent county meetings for if it goes into Hoard's Dairyman it reaches many league members and may be of interest to those in other milk producers' associations.

The past three months have been a history making period in the league. The worst grapple of our history has been made and won. It has not attracted the attention that the so-called strikes have, but the fortunate thing about it is that a decision was reached and there was no strike. Last year the dealers came on with a plan for buying milk, the price to be based on the price of butter and cheese with certain minor items to modify these prices. It was tried last summer and with satisfaction to dairymen for the most part although it was hardly thought to be a satisfactory plan to tie up to indefinitely. The dealers then wanted to make a full year test of it and this was agreed to, the last half to the detriment of the farmers. Dairymen lost money for several months at any rate. Possibly they might on some other plan. There certainly was a change in market conditions.

Then came March 7th to 27th. My understanding is that the Chicago producers had a taste of certain dealers' methods about that time and that they were none too well pleased. These same dealers it is said thought to do up both the Chicago dairymen and those here also. My information is that the farmers stood solid about Chicago and they did here.

Through their committee the dealers came on with a new plan for determining the prices. It made prices lower and it took only part of the milk. The plan had to be refused. All milk must be sold. That is fundamental. It is the reason for the co-operative plants that are now being constructed and some operated. If dealers take only what they choose and leave the remainder on the farmers' hands the organization is weakened if not brok-

(Continued on page 80)

Tractor Ignition Difficulties

R. U. BLASINGAME, PENNSYLVANIA

THE tractor engine will run with leaky valves, poorly fitting piston rings, loose bearings, etc., and so on, but when the ignition goes bad the jig is up. There is no half way point with ignition; it is or it isn't.

In an investigation conducted by the United States Department of Agriculture among over 2,000 farmers who used tractors, it seems that most troubles come from the magneto, and the spark plug runs a close second. It is apparent then, that ignition offers most difficulty in tractor operation. In fact, the tractor manufacturers say that they have more calls for service in connection with the ignition equipment than with any other one thing. It is really a very provoking and expensive thing to have the threshing crew standing around with nothing to do but work up an appetite because of a loose connection or an oily carbon brush which prevents the tractor from operating correctly.

To prevent such delays occasioned by trifling troubles, the farmer or his tractor operator has got to acquaint himself with the various troubles and remedies which come to the tractor. An instruction book comes with the tractor and contains information enough to assist the average man in the adjustment, proper care, and operation of his machine. But too often the instruction book may be found in the tool box or lying on the shelf in the tractor shed, unopened, six months or a year after the tractor has become a part of the farm equipment.

The most essential things for success with the magneto are to keep it clean, dry, and lubricated with the *right kind* and *right amount* of oil. The bearings of the magneto are the finest and most delicate of any others about the tractor and they require about 2 or 3 drops of a thin, light, high grade oil each week when the tractor is in constant operation. Probably sewing machine oil is the best grade to use. Ordinary cylinder oil contains too much gum and it is too thick to be used for magneto lubrication. It also is of a mineral origin and has the quality of conducting electric current.

If the engine fails to start or if a cylinder or two is missing, look first to the easiest thing to remove, the spark plug. The porcelain may be broken, or the points may be too close or too far apart or the plug may be full of carbon or grease. Test it by laying it on the engine with the wire connected. If a spark fails to appear at the plug when the engine is cranked, then the trouble may be a loose connection at either end of the wire leading from the magneto to the plug. Or, the trouble may be caused by a broken wire P, Figure 1, or the insulation may be worn or burned. Look at all such places before laying the blame on the magneto. Keep the ignition wires off of the exhaust pipe; the rubber insulation burns readily.

Now, if the trouble is not in the parts mentioned, it must be in the magneto. Then the easiest place to get at is in the distributor cover plate shown at B, Figure 1. This plate is generally held on by two spring clips. In this distributor cover there are five small carbon brushes one at the center and one for each spark plug wire. These carbon brushes are held against the distributor D by fine coil springs. These springs may become weak or the brush may, for some reason, stick in the socket in which it fits. In this case it will not be held against the distributor. If the spring is taken out and stretched a little, it may hold the brush against the distributor.

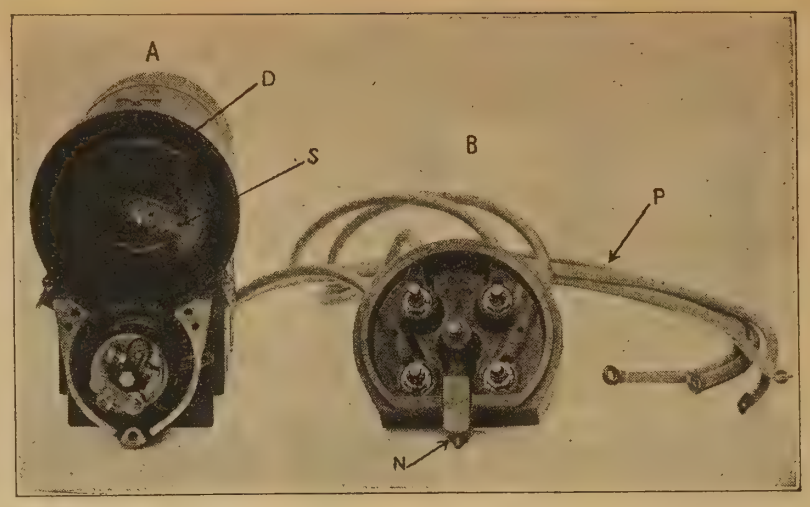


Fig. 1.—N, collector brush; P, broken wire; B, distributor cover plate; D, distributor; S, Brass Segment.

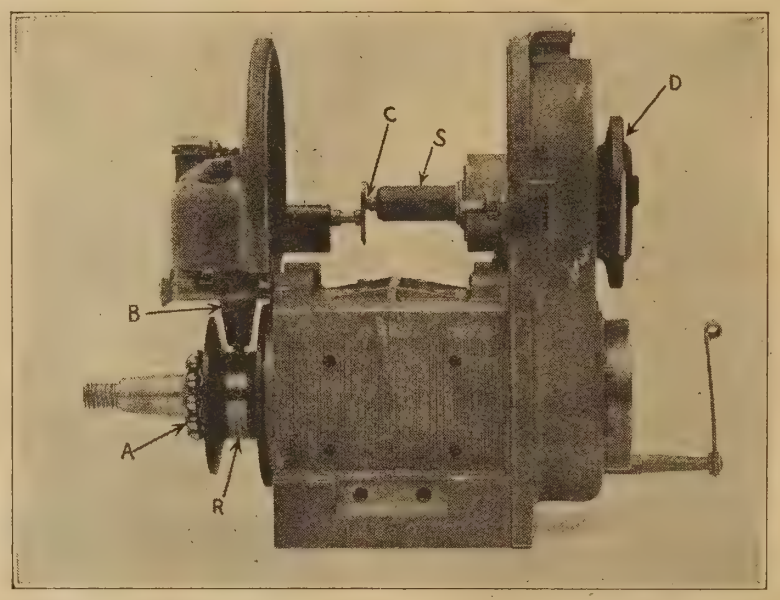


Fig. 2.—R, collector ring; B, collector brush; A, ball bearing; C, carbon brush; S, revolving spool; D, distributor.

If the springs are all right, the brush may be dirty or may have a layer of grease on it. In this case, smooth it up with a fine file or emery paper. The brass segment S may be dirty. It may be cleaned by washing with a rag moistened with some of the oil which is used to lubricate the magneto. In case no trouble is found in the distributor brushes, the difficulty may be in the collector brush N, Figure 1. This is a carbon brush and is held against the collector ring R, by a fine coil spring similar to the brushes in the distributor cover which has been mentioned. Here is where a good deal of the trouble comes. Another view of this collector brush is shown at B, Figure 2, resting against the collector ring. The collector ring R is sometimes called the "slipring" in some of the instruction books.

The ball bearing A, is one of the places to receive oil and consequently the ring R and collector brush B are likely to become covered with oil, especially if too much lubricant is used. If on examination this brush is found dirty, it should be brightened slightly with a fine file or emery cloth. The collector ring may be cleaned with a rag moistened with a light oil.

After the current is collected at the slipring it is transferred through the carbon brush C to the revolving spool S to the distributor D. The brush C is constructed as the other brushes mentioned and may become dirty and fail to transfer the current. To get at this particular brush it is necessary to remove the magnets.

Care should be used in removing the magnets; first mark them so that they go back as they came off; second, as soon as the magnets are removed, place them together as shown at M, Figure 3; third, never pick up screw drivers, wrenches, nails, etc., with the magnets because any piece of hard metal will absorb magnetism from the magnets and weaken them.

If the tractor is to be stored for any great length of time the magneto may be removed and kept in a warm, dry place. Before removing the magneto mark the coupling on the drive shaft in order that the magneto may be placed back in the correct time on the engine. Also, put a tag on each wire and number the tags according to the cylinder, 1-2-3-4, beginning at the end where the engine is cranked.

Before replacing the magneto, attach an insulated wire to the binding posts of the distributor and have one end near some metal part of the magneto about like the spark plug gap as shown at P, Figure 4. Revolve the magneto by hand and if a spark occurs for each binding post, the magneto is in good shape.

It is a good practice to let the magneto alone until something goes

(Continued on page 96)

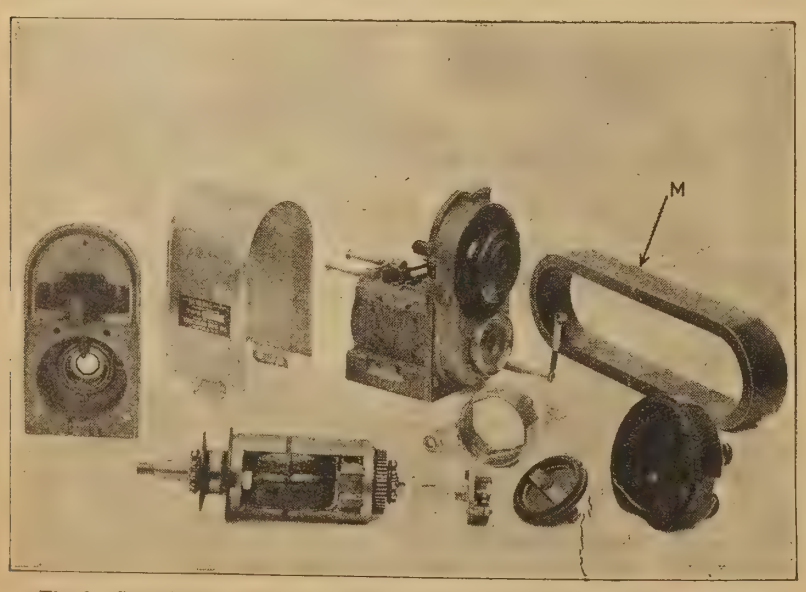


Fig. 3.—Care should be used in removing the magnets; first mark them so that they go back as they came off; second, as soon as the magnets are removed, place them together as shown at M.

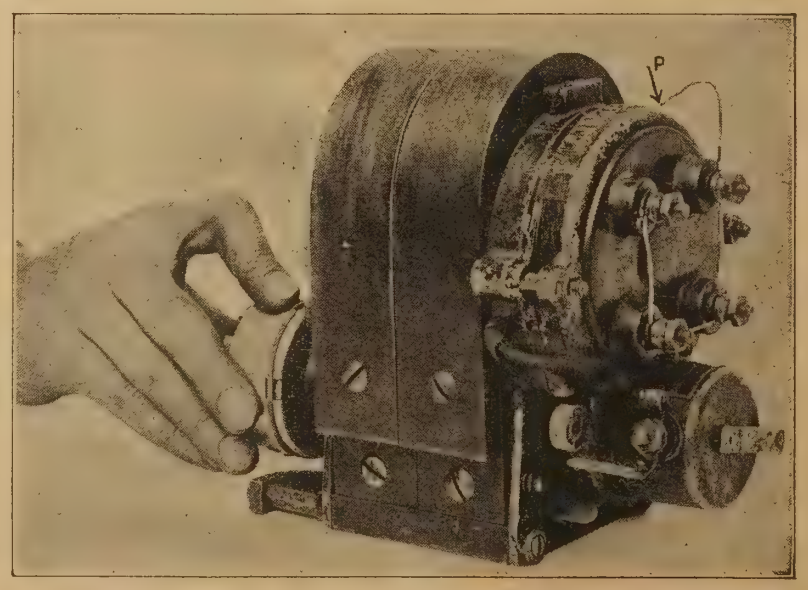


Fig. 4.—Testing magneto. Each post should give spark at end of wire, P, if in good order.

Experiences of a Cow Tester

EDWARD H. ZIEROTH, ILLINOIS

THE cow tester must take the good with the bad, and if he wishes to enjoy his work he must make up his mind to meet all comers. He must remember that he is a missionary, and no missionary that is too particular will ever get anywhere. If he believes that he has finished his duties when he has balanced a few rations and whirled a few bottles in his tester, he has missed his calling. The worse the farm and the farmer the greater his opportunities for doing good, and also the greater his job. He alone of all the extension workers gets to know the farmer in his home, the place where all men show up their true colors. A man might wear a red undershirt all his life and yet you would never know it until you had spent a night or two in his home.

I enjoyed my work as a cow tester because I studied each man and each family individually. If a man was up-to-date in his methods I was glad of the fact and did all I could to keep him at the top. If a man was backward in his methods and did not have as good a home to live in as the rest, I did not cuss my luck for having such a member in my association, but I went after him as well as I knew how and tried to make him see the advantages of better methods. If a man is in a rut, it is his family that suffers most. If the tester can not stand him for one day a month, it is his duty to help that man out of the rut.

The first month or so around I was very careful not to upset the regular run of affairs of the farm and household. Most farmers and most farmers' wives believe that there is a lot of work connected with keeping a cow tester. The first month I made it a point to slip in with as little commotion as possible, do my work as quickly and with as little muss as I could, and then slip out again in the most quiet way I knew how. I wanted the farmer and his wife to say, "Why, that was no trouble at all, I expected it to be much worse than that".

I believe that much of my success was due to the way that I conducted things that first month. After I became acquainted and the people had become used to my ways, I began making suggestions. If the first one worked I made the second one a little stronger. I tried to have the idea develop in the man's mind as if he had thought it out himself. Each man presented an individual problem. The more hard headed he was, the more fun it was to me to get any of my ideas across.

But the members of my association were not hard headed as a rule. I'll put them up against any equal number of farmers in any part of the United States. They always treated me as well as they possibly could. I made myself one of the family as soon as possible and as far as my association reached into each of three counties, I was always called by my first name, from grandma down to the little fellows just learning to walk.

I have had some hard knocks, just as all testers get, but I never allowed myself to grow pessimistic. No matter how hard the knocks were on one day, the next always brought enough good things to make up for them. Most of the discouragement comes the first month around when you come to the fellows that do not know whether they want to come into the association or not. After one has visited each place at least once, matters go more smoothly. If the tester is of the right sort, he ought to have no more difficulties on his third trip around.

I found that after I had been on the job for several months the people were planning many of their parties and good times for that part of the month when I would be around and able to get in on them. I was never lacking for a good time. If there were no parties, or weddings, or what-not, the young people were always anxious to have me go with them to shows and dances in neighboring towns. I certainly had the opportunity of becoming acquainted with a large number of people.

Although most of the housewives denied the fact, I am sure that all of them put on their tables a little bit extra when the cow tester was around. At least I have never had such good meals before or after being on that job. It seemed that every day was Sunday. Many a young rooster crowed his last crow the day I was on the farm. Supper was always made exceedingly good because that was my first meal there that month. Breakfast was made a little better; well, just because they wanted it to be good. Dinner was always well touched up because they had more time to get it ready and because they had to go some to beat the other two meals.



THE COW TESTER'S JOB

Whirling a few bottles is not the big part of the work of the tester. He is a missionary of better dairy farming and has a large opportunity for service. Accuracy in doing the work is important, but there are other things that go a long way to make the tester a better man and the farmer a better dairyman.

I always had a good place to sleep. Once or twice when there was company and the house was crowded, I had to sleep with the hired man, but he was a good fellow in each case and we enjoyed each other's company.

I enjoyed going to every place in my association. Some I liked better than others, to be sure, but as the time came to go to each place I was always anxious to see the people and find out what had taken place in the herd and home since I had been there last.

The tester must never let up on his work. If he lets up on his duties for but one day, it is but one day of the month for him; but for the man whose herd is being tested that day it is the only day in the month when he can get any good out of the tester. No one will remain in a cow testing association just for the sake of belonging to one. If a man is indifferent he must be educated up to the point where he does care. Get him out in the barn and show him how this cow is earning a dollar a day and that one is earning but ten cents. Talk money to him and he will understand.

I was greatly surprised the first month around to find that many men could barely tell their cows apart, much less distinguish them by names. Such men were inferior dairymen. It was always the case that where the man was best acquainted with his cows, he was always the one with the best producing herd. In one particular case a herd that was almost a losing one to begin with, turned out to be one of the most profitable ones after the man learned to know his cows by name and was feeding them according to their production. One herd I found headed by a Hereford bull. That was a shock to me, for I had always thought of the Hereford as the poorest milk producer of all. That was one place where I made a suggestion the first month. I succeeded in getting the Hereford bull replaced by a good grade. Now that same herd has a fine pure-bred bull and several of the finest females in the country. When the tester finds such changes taking place he feels that the time he has spent has been worth while. Whoever the tester may be, I am sure that he gets out of his work as much as does the farmer. I would not exchange my year spent at cow testing work for the best year I had at the university.

Successful Community Efforts in the Show Ring

A. O. COLLENTINE, Extension Specialist, Wisconsin

THE exhibits of cattle at county fairs sometimes reflect badly on the cattle grown in the community. If the prospective buyer were to judge the stock of Green County, Wisconsin, by its showing at its local fair up until last year he would never have tarried long there to satisfy his wants.

Too often the county fair is overlooked as a place to further a breed's interests. This was the case at Monroe, the county seat of the greatest foreign cheese producing county in the United States. Here was a community whose fair vied for first place among county fairs as to attendance, horse races, and general farm exhibits but whose cattle exhibits were shamefully neglected. Year after year the stalls were filled with poorly fitted and ill chosen stock for exhibit. The breeders themselves found little to interest them by going through the barns and were wont to criticize those who had exerted some effort on short notice by the fair officers to make some sort of showing. Occasionally an outside breeder was induced by the fair officers to bring his herd to "fill in" so as not to have the barns empty. Yet with over two hundred breeders of pure-bred Holsteins in the county there wasn't a pair of animals in the entire show ring at the local fair that measured up to the type of stock being bred in the county.



FIRST PRIZE TWO-YEAR-OLD

With a program of work outlined and the fair some months away the committee composed of Albert Babler, Jr., president, and the secretary of the local club, set out to locate among the breeders in the county fit subjects for the different classes. The idea first of all was not to overload any one class but to be sure of enough animals to properly fill the entries and encourage competition. Double the number in most cases were selected so that a "weeding out" later could be brought about and also allowance made for withdrawals. The willingness to fit and show a few head on the part of the owners was truly marvelous. It is rarely possible that any one breeder is in a position to fit and show his entire herd unless he is a professional show man or makes a business of showing. On the other hand, it takes much valuable time for the average breeder to fit a number of animals just to show at one fair. It's a question whether the returns would reflect in increased sales later from his herd. It's not an argument for him to neglect this opportunity to display some of his stock as a means of making his fair a success and to pay a debt that he owes to his favorite breed. A good representative or two from his herd properly fitted and shown by him bespeaks

(Continued on page 96)



FIRST PRIZE COW

WASTE OF WOMAN POWER MENACE TO RURAL LIFE

The waste of woman power is one of the greatest menaces to the rural life of the nation, according to deductions that specialists of the United States Department of Agriculture draw from a farm-home survey conducted in the 33 northern and western states. The survey was made under the direction of Miss Florence E. Ward, in charge of extension work with women, Office of Extension Work, North and West, States Relations Service. The records cover 10,015 farm homes, averaged by taking typical communities of the counties in which the survey was made. Much of the information was gathered personally by home demonstration agents, who are the field representatives of the United States Department of Agriculture and the state agricultural colleges.

Miss Ward points out, from the facts shown by the survey, that a reasonable amount of planning and well directed investment in modern equipment for farm homes would prevent a large part of this wastage of the energy of the nation's rural home-makers. "This is a serious matter," she continues, "because we have a live national problem now in working out the economics of country living in such a way as to make them satisfied to stay on the land and help build it up. Perhaps the greatest factor in bringing this about will be the healthy, alert, and expert home-maker who will see to it that part of the increased income from the farm goes into improvement of the home. At a time like this, when the dearth of farm labor is a limiting factor in production, it is very doubtful business policy for farmers to use increased income to buy more land instead of using a part of it in raising standards of living so that women and young people will not want to go to the cities in search of attractive living conditions and amusement."

Picture of Farm Woman's Work Day

The survey discloses a number of the reasons why many women do not find farm life attractive. The working day of the average farm woman, as shown by the survey, is 11.3 hours, the year round. In summer, it is 13.12 hours. And 87 out of each 100 women have no regular vacation during the year. On the average, the farm woman can find only 1.6 hours of leisure during the summer and only 2.4 hours in winter. Half of the farm women are up and at work at 5 o'clock in the morning.

Four per cent have water in the kitchen, but the other per cent must go to the spring or the pump to bring the water for cooking breakfast. Thirty-six per cent help with the milking. On the average, the farm woman has a 7-room house to keep in order. Seventy-nine per cent have kerosene lamps to trim and fill. Ninety-six per cent do the family washing, about half of them having washing machines and the other half doing the work with tub, wash-board, and boiler. Twenty-six per cent have gas or electric irons to make more comfortable the task of ironing Ninety-two per cent do some or all of the family sewing. Garden work is done by 56 per cent, 94 per cent make all or part of the family bread, and 60% have churning to do. Eighty-one per cent of all poultry flocks are cared for by women. One-fourth of the farm women help to feed and bed the live stock, and 24 per cent of them spend over six weeks in the year assisting with some part of the field work. All of this is in addition to cooking the family meals and caring for the children.

This, of course, is the dark side of the shield. It does not take into consideration the many compensations that come with the woman's daily round of work for the comfort of her family, and anyone who has experienced the satisfaction of living in the open country knows that the average farm woman is more fortunately placed than her average city sister. But the task is sufficiently grinding, as Miss Ward says, to send the farm woman to bed "breathing a prayer that her strength may be equal to tomorrow's duties."

Labor-Saving Equipment Important

What is to be done about it? The Department suggests some very definite things. "The interest of the Department of Agriculture in the returns from these studies as to labor, working equipment, and compensations of the farm woman are as practical," says Miss Ward, "as its interest in farm studies regarding labor, machinery, and crop returns, and for the same general reason." The farm woman's working hours might be shortened, she continues, if the principles of modern business were applied to the farm home. Running water for the 61 per cent who now must carry water, and bath rooms for the 80 per cent who now have none are other things that would lighten the woman's labor and add to her comfort and contentment. Labor could be lessened if the farm house were as well equipped as the up-to-date barn, which the farmer looks upon as so much currency with which to buy efficiency. The installation of modern lighting systems would release some of the time of the women in the 79 per cent of homes where kerosene lamps are used. The initial cost would be small when weighed against convenience and comfort. The installation of heating systems would release some of the time of the 54 per cent of women who care for two coal or wood stoves.

"As power on the farm is the greatest of time and labor saver for the farmer," Miss Ward's report says, "so power in the home is the greatest boon to the housewife." Forty-eight per cent of farms covered by the survey reported power for operating farm machinery but only 22 per cent have this advantage for the home. "That," says Miss Ward, "is a singular fact when we consider that frequently it is a simple matter to connect the engine used at the barn with the household equipment." The washing machine is another labor-saver. Selling the cream to a creamery wherever possible instead of churning it at home is still another. In short, the same sort of intelligence and a fraction of the money applied to making field and barn work convenient would, if applied to the home, save untold drudgery to the women of the farms and would add both to the profit and the comfort of farm life.—U. S. Dept. of Agriculture.

New Guernsey Champion in Indiana



SWEET BELL

Sweet Bell, a Guernsey owned by Killarney Farms, Indiana, has recently completed a record of 13,688.9 pounds milk, 710.93 pounds fat, in Class AA. This performance not only exceeds the previous state Guernsey record by a wide margin, but it entitles the cow to tenth place among the Class AA leaders. The sire of the new state champion is Yeksa of Busy Bell, a son of Skeezicks. Her dam while not a tested cow has two Advanced Register daughters.

Credit is due to John McMinn, the Killarney Farms herdsman, for the champion's splendid performance during her final months. With true Scotch thoroughness "Mac" completed the last five months of the record.—AMERICAN GUERNSEY CATTLE CLUB.

Guernseys Employ Musser

Karl B. Musser has resigned as dairy extension agent for Wisconsin to become a field man with the American Guernsey Cattle Club. He begins his new work at once.

Mr. Musser is Kansas grown and a graduate of the Kansas Agricultural College. In 1914 he obtained his master's degree in dairy husbandry in the University of Missouri under Professor C. H. Eckles. Following graduation he had charge of dairy extension in Connecticut for Storrs Agricultural College, where he was very successful. His work in Wisconsin has been equally effective. He will travel from the Club office and should accomplish worth while results in the eastern territory for Guernseys.

Hens lay when fat—not too fat—and stop when thin. Look for fat on the pelvic bone; if you find it the hen is fat, if you don't the hen is thin.

25 Cords a Day

Easily Sawed By One Man.
Easy to move from cut to cut. Make big profits cutting wood. Cheap and easy to operate.

OTTAWA LOG SAW

Does 10 men's work at one-tenth the cost. Makes work easy. Engine can also be used for running pumps and other machinery. Saw blade easily removed. Write for our low price. Cash or Easy Payments.



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Read This!

This Tells the Story

I have used a set of Dayton Airless Tires, getting 44,000 miles out of the front and 20,000 miles out of the rear tires, the difference in mileage being due to my overloading my Ford Touring Car by hauling three barrels of oil constantly.

The satisfaction of knowing, that when a person starts, he can get somewhere without distress of both body and mind by punctures, blowouts and loss of time, is a compensation in this age of progress, for any difference in price. The fact is, in the long run, the cost of Dayton Airless is about half the pneumatic cost.

Harold T. Smith,
Assistant Treasurer,
Humble & Gulf Coast Oil Co.

Dayton Airless

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30 X 3½
31 X 4
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No Tube
No Air
No Trouble

Puncture-Proof and Easy Riding

Dayton Airless Tires will free you from all tire trouble. They are used extensively on passenger cars and delivery cars.

They prevent delays, save time and save money. On the crowded streets of cities or on lonely roads far from help, Dayton Airless Tires can be relied upon. They never puncture, never blow out, need no pumping and no patching. Piers of live rubber separated by air spaces absorb all jolts and make them easy riding.

Equip Now with Dayton Airless

If you drive a Ford, Maxwell, Chevrolet, new Overland Four, or any car using 30x3, 30x3½ or 31x4 inch size tires, equip with Dayton Airless. They are guaranteed 8,000 miles, but records of users show two, three and four times that mileage.

Mail the coupon for booklet and price list. Investigate the uninterrupted service and lasting economy of Dayton Airless equipment.

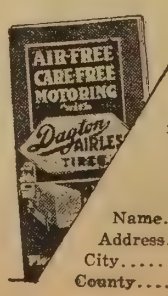
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Use More Milk

There is no article in the human dietary so little understood as milk.

Milk is a real food, just as much, and even more so, than meat. Milk contains all the food ingredients of meat and, in addition, contains a vital food substance indispensable to growth and health. Milk is a perfect food, and a complete food. It is also a protective food, in that it tends to make good the deficiencies of other articles of the diet. Its protein, or muscle-building ingredients, are ideal in quality, its sugar is of the best, its fat is superior to the fat of any other food because of the presence, in large quantities, of this vital substance called fat soluble A, so essential to human welfare, and its mineral matter is most wonderful in promoting growth and repair and stimulating the physiological functions of the body.

The United States government says:

Milk is the best food we have. Give your children milk, a quart a day for every child if possible, a pint without fail. Plenty of milk will help you give all your children, both big and little, the chance for health they ought to have. Buy more milk and less meat and your family will be better fed.

Milk is an economical food, too, one quart being equal in food value to eight eggs, or four-fifths of a pound of beefsteak.

The accompanying chart shows how well it compares with other staple articles of the diet, such as beefsteak, ham, chicken, and the much-talked-of beans.

For milk to be as expensive as beefsteak, it would have to sell at 30c a quart, while if it cost proportionately to eggs, it would sell for 40c a quart, when eggs are 60c a dozen. If milk were sold, in proportion to the selling price of tomatoes, it would sell for exactly $1.00 a quart when canned tomatoes sell at 15c per pound.

These comparisons do not take into consideration the additional vital substances to which we have previously referred, which promote growth and health, neither do these comparisons take into consideration the valuable and superior mineral matter found in milk.

Suffice to say milk is a food. It is economical and everyone, both old and young, should use more milk.—Publicity Department, National Dairy Council.



Students' National Contest Judging Dairy Products

There is nothing in the Annual National Dairy Show that takes precedence, in importance to the industry, over the students' products judging.

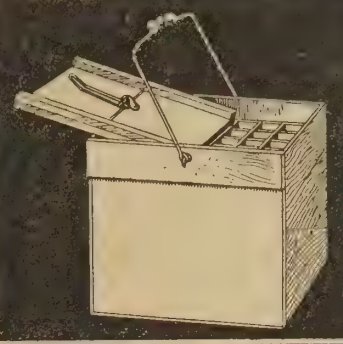
The standing given to our industry by the findings of the leading scientists of the world, in their nutrition experiments, that dairy products lead all human food, makes it extremely incumbent upon the dairy people that they turn out this vital food in a manner calculated to be an aid in encouraging its consumption in all forms. Therefore, to give the young men attending the agricultural colleges an opportunity each year to dig in to the great subject of the market package of dairy products, and to pass upon many samples of manufactured and raw products to supplement their school work in a large way, the National Dairy Show holds an annual competitive judging contest of dairy products under the supervision of United States Dairy Division experts, believing it affords a training, and gives an experience that should develop practical confidence in their judgment, and build men who will exert an influence in the development and improvement of manufacture and marketing our products.

The Dairy Products Contest will be held this year, Friday, October 8th. The awards for this contest are as follows: The J. G. Cherry Company of Cedar Rapids, Iowa, present a silver cup to the team receiving the highest rating in judging butter. Hoard's Dairyman presents a silver cup to the team receiving the highest rating in judging cheese. The J. B. Ford Company of Wyandotte, Michigan, will award a silver cup to the team receiving the highest rating in judging milk.

The National Dairy Association gives a beautiful silver cup, which must be won three times to be held by any one school, to the team receiving the highest rating on judging of all products, and, in addition, the association offers a gold, silver, and bronze medal to the three highest individual students receiving the highest ratings in judging all products.

This contest, and the cattle judging contest by the students, and the junior cattle judging contest by boys and girls who have not yet reached college, will afford three rich days to the coming generation at this year's Show—7th, 8th, and 9th of October. Parents and relatives of the boys and girls who are looking forward to these great events, should be rendering them every help and encouragement, as it means very much more in reality to their young lives than making the base ball or foot ball team at their school, which we do not at all decry but most heartily endorse. However, when we speak of the real things of life, such a contest as the foregoing at the National means most.—National Dairy Show.

You can safely put all your Eggs in one Basket if you use



FARMER'S FRIEND EGG CARRIER

Made of wood, nicely painted and finished, very strong and durable and will last for years. Has adjustable lid and automatic lock. Regardless of quantity of eggs in carrier, they are held firmly—will not jostle and break. Each carrier holds 12 doz.

When eggs are delivered fillers can be folded, placed in bottom of carrier, which can then be used to take home groceries or other purchases.

Prices F. O. B. Chicago

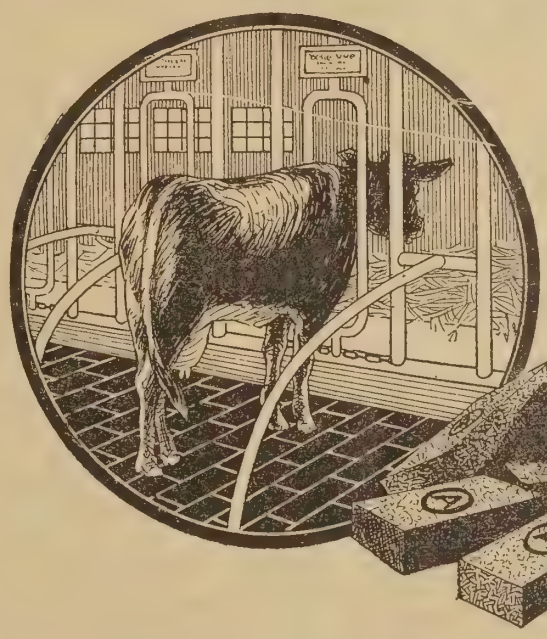
Each	$ .80	4 doz.	$8.80 per doz.
½ doz.	4.50	8 doz.	8.70 per doz.
1 doz.	8.90	12 doz.	8.60 per doz.

Above prices guaranteed until September 4, 1920.

Send for Big Mail Order Dairy Catalogue.

The Creamery Package Mfg. Company

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The Correct Material for Stall Floors

The principal qualities which emphasize the value of Circle A Cork Brick for stall floors in dairy barns are warmth, resilience, nonslipperiness, sanitation and durability. Cows can stand or lie on them—*even in bitter-cold weather*—in comfort and safety without danger of chilled udders. Being nonabsorbent of liquids, they are easy to clean and do not retain odors. And their natural toughness assures long wear.

Circle A Cork Brick are made of ground cork and refined asphalt—nothing else.

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FOR ALL STALL FLOORS

Naturally, you want a copy of the 28-page book, "Better Stall Floors," because it tells in an interesting way of the success dairymen in every part of the United States are having with Circle A Cork Brick. Send for a copy today—there's no charge for it.

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The Prosperous Dairy Farm



WIDE-AWAKE dairy farmers are following the advice of expert authorities and are raising heifer calves. Being good business men, they are developing these calves into profitable cows with the least possible expense. They accomplish this by feeding fresh, warm skimmilk. A cream separator is the only way of securing the sweet, warm skimmilk for feeding, and saving all the butter fat.



Primrose Cream Separators make the dairy farm more prosperous. They have many features which save cream, lengthen the service of the machine and make it easy to operate and care for. See your nearest International dealer or write direct for catalog. Built in four sizes with capacity varying from 350 to 850 pounds of milk per hour.

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Never Take Chances on Butter Color

When you use Butter Color bearing the Dandelion Trade Mark you are getting the benefit our experience of almost 40 years of Butter Color making—and experience does count.

Dandelion Brand Butter Color—Standard of the World

Over 90 per cent of all the successful buttermakers in the United States use Dandelion Brand, and that is one reason why they *are* successful. Better join this band.
Ask your Jobber for latest price of "Dandelion Brand Butter Color."





We guarantee that Dandelion Brand Butter Color is PURELY VEGETABLE and that it meets the FULL REQUIREMENTS OF ALL FOOD LAWS—State and National.
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KEYSTONE COPPER STEEL

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Both farm and city property owners need to know the safety and service of reliable metal roofing.

APOLLO-KEYSTONE Galvanized Sheets insure you satisfaction from all forms of sheet metal work, including Culverts, Tanks, Flumes, Spouting, Gutters, etc. Sold by leading metal merchants. KEYSTONE Copper Steel is also unequaled for Roofing Tin Plates. Look for the Keystone added below regular brands. Send for free "Better Buildings" booklet.



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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Pa.	Indiana County	N. H. Barkley	June	240	3	58	M. S. Grumbling
"	S. Blair Co.	C. H. Detweiler	"		27	63	C. E. Little
"	Troy	W. B. Storck	"	435	71	62	G. L. Wolfe & Son
"	Rome	B. F. Beebe	"	384	56	58	R. J. Taylor
Wis.	Richfield	A. R. House	"	400	55	69	A. Schowalter
Kans.	Oswego Co.	O. L. Norton	May	243	15		
"	Harper Co.	Walter Wentze	"	111	18		A. C. Thompson
"	Shawnee Co.	Louise Krigbaum	"	166	18		I. Romig & Sons
"	Washington Co.	W. O. Skinner	"	128	60		B. D. Sperry
Colo.	Arkansas Valley	H. Heath	June	311	43	96	A. B. S. Co.
"	Douglas Co.	R. E. Sherman	"	395	16	84	E. J. Lindquist
"	Johnstown	W. Geurkink	"	324	65	83	S. F. Gray
"	Platt, Boulder, St. Vrain	Chas. Eweing	"	363	48		
"	Otero County	A. A. Eastman	"	271	3	42	R. K. Huff
Wis.	Rusk County	Wm. F. Trotter	"	399	36	72	A. C. Holden

Association Notes

Vermillion—Champaign County, Illinois:—Owing to flies and short pasture, the average of the association is very low this month. Only one unprofitable cow was milked during June as compared with 31 eleven months ago. The J. B. Raub herd could not be tested this month and the association report, therefore, is not up to the average held in the past.

Southern Blair County, Pennsylvania:—In June market milk testing 4% sold for $3.42 per cwt., 4 cents being paid for each point above. Milk retailed for 14c per quart, butter for 70c per pound, and cheese for 45c per pound. Corn and cob meal is rated at $60 per ton; Larro, $80; Union Grain, $80; bran, $50; oil meal, $75.

Troy, Pennsylvania:—June market milk testing 3% sold for $2.83 per cwt. Feed prices are: oil meal, $3.70 per cwt.; hominy, $4.15; bran, $3.15; Hi-test, $3.70; Unicorn, $4.10.

Rome, Pennsylvania:—Three per cent milk sold for $2.83 per cwt. in June. Butter retails for 60c per pound and cheese for 40c per pound. Pasture is rated at $3; hay, $20 per ton; soiling crops, $8; corn stover, $10; silage, $6; bran, $65; linseed meal, O. P., $80; cottonseed meal, $90; gluten, $75.

Bradford County, Pennsylvania:—The highest cow for the county is a grade Holstein owned by C. S. Chaffee of the Laurel Hill Association. She produced 81.7 lbs. butterfat. The second high cow is a registered Holstein in the same herd, which produced 75.8 lbs. butterfat. The third and fourth high cows come from the herd of C. W. Newman of the Wyalusing Association, with records of 74.4 lbs. and 69 lbs. respectively. Cow testing associations have been in continuous operation in Bradford County since July 25, 1913, when the Bradford County Farm Bureau took this means for live stock improvement. A gradual improvement has taken place, especially in the nmber of pure-bred herds. The Laurel Hill Cow Testing Association, which completed its year's record in June, has established a new yearly record in the county for cow testing associations up-to-date. A grade Holstein, Elsie, owned by C. S. Chaffee, produced 14,890.5 lbs. milk testing 4.1 and yielding 588.11 lbs. butterfat for the year. The seventh association for Bradford County expects to start work this week and will be known as the Towanda Cow Testing Association.

Richfield, Wisconsin:—A basket picnic was held at the Schowalter Farms June 16th for the association. Mr. Schowalter sold at public auction his surplus pure-bred Holstein stock, numbering 15 head, as a total of $4,600.

Arkansas Valley, Colorado:—Feed prices here are: Alfalfa. $15 to $18 per ton; silage, $8; beet pulp, $4 per cwt.; cottonsed meal, $3.95; barley, $2.90; oats, $3.35; maize, $2.05; shorts, $2.60; bran, $2.40; corn chop, $2.65.

Douglas County, Colorado:—This association has been reorganized to include the Parker and Melvine sections. The tester reports 18 members using pure-bred sires, five using milking machines, and every member the owner of at least one silo. The creamery paid 70c per pound for fat during July. Milk retails for 10c to 12c per quart, butter for 70c per pound, and cheese for 45c per pound. Alfalfa is rated at $26 to $35 per ton; bran, $3.25 per cwt.; cottonseed meal, $5 to $5.50; linseed meal, $6; oats, $4 to $4.40; barley, $4.40; corn chop, $3.20 to $4.

Johnstown, Colorado:—June milk retailed for 14c per quart. The condensery paid 68½c per pound for fat. Feed prices are: Alfalfa, $15 to $20 per ton; silage, $8 to $11; dried pulp, $1.75 per cwt.; bran, $2.65; maize, $2.60; cottonseed meal, $4.25; linseed meal, $4.50; Emmerfeed, $3.10; oats, $76 per ton; barley, $67.

Plattville, Boulder, and St. Vrain Vallies, Colorado:—This association has a condensery and a retail milk dairy company market, and milk is sold rather than cream. Feed prices are: Alfalfa, $20 per ton; silage, $7; beet product, $2.25 per cwt.; cottonseed meal, $4.50; linseed meal, $5.20; oats, $4.20; corn chop, $2.80—$3.90; mixed feed, $4.

Otero County, Colorado:—This association is being reorganized for another year's work. The pasture is good and the average cost of milk per cwt. is 95c. The condensery paid $2.60 per cwt. for 3.5% milk in June. Alfalfa is rated at $18 to $22 per ton; bran, $2.70 per cwt.; cottonseed meal, $4; linseed meal, $6.50; oats, $3.65; chop, $3.50; shorts, $3.05.

Rusk County, Wisconsin:—This association was organized and started work March 1, 1920. There are now 36 herds on test. The average production of the association for June was 721 lbs. milk and 27.9 lbs. butterfat.

The Concrete Silo

HOARD'S DAIRYMAN:—I often wonder why it is that farmers get the impression that a concrete silo will crack or is due to crack sometime. Our concrete silo has stood now for nearly five years and there is not the slightest sign of its giving way or settling out of line. I never heard of but one concrete silo that cracked and that was due to faulty construction.

To illustrate the strength of such concrete work, last summer my brother and I built a twelve-foot circular watering tank for watering

live stock. It has a four-inch wall two feet in height which is reinforced both vertically and horizontally with rods we found about the farm. The tank heater I ordered before Christmas did not arrive until in February, after most of our cold weather was over. This tank froze solid to the bottom and the ice stood 12 to 18 inches deep in it. Many declared the tank would break, but it came through uninjured in any way.

Concrete silos are being built here with four-inch walls instead of six as was our first silo. From all appearances, the four-inch wall should be amply thick and strong enough. The chief thing to consider in building a concrete silo of the monolithic type is that of getting it constructed by competent workmen and to have it adequately reinforced.

One may be able to secure the forms and put up the silo himself, but I believe that if a competent contractor can be secured whose charges are reasonable, better results will be had. One contractor I knew of furnished the forms and supervised the work of construction while the farmer furnished what help he could secure to mix the concrete and raise it into the forms with a small gasoline engine. This is a satisfactory arrangement which permits the farmer to cut down the expense of labor charges if he has a son or two and a hired man. It is out of the question for a farmer to buy a new set of forms in order to build his own silo, because the price of the forms is equal to the cost of the silo itself. The forms may be rented, but still one would not care to take the chances of doing so and expect to get his forms back in good condition.

A contractor may be a little difficult to find unless you know how to go about finding one. I wrote to the manufacturers of cement and they very kindly gave me the names of a number of firms which manufactured forms for building concrete silos. I then wrote the form manufacturers who in turn gave the names of a number of contractors and form owners in our vicinity.

That is about the quickest and most convenient way of getting the names of contractors who will be glad to bid on the construction of a silo. In this way you reach men near you so that the forms may be moved easily and quickly.

The best time of year to build is usually just after the harvest in the latter part of July or August if home labor is to be used, because at that time the heaviest part of the summer work is out of the way. There will be time to complete the silo at least two weeks or more before extra early filling time, and give the cement a chance to harden thoroughly. I know of one concrete silo that was built in September and it was filled with corn within a few days after completion without any injury. With both sides of the wall exposed to the air it would seem that curing of the concrete would be very rapid. When good aggregates and a good grade of cement are combined with thorough mixing, the walls become as hard and firm as stone in a very short time. Such walls do not crack when properly reinforced. Concrete makes a permanent, fireproof silo which keeps silage perfectly.

Indiana. J. L. JUSTICE.



Showing method of placing vertical and horizontal reinforcing rods, arrangement of doors, and the plan of attaching concrete chute forms.

Man's Greatest Blessing

This is the gospel of labor—
Ring it, ye bells of the kirk!
The Lord of love came down from above
To live with the men who work.
This is the rose He planted
Here in the thorn-cursed soil;
Heaven is blest with perfect rest,
But the blessing of earth is toil.
—Henry Van Dyke.



Brian, C-816. An eight-room house of the Colonial expression designed for the Curtis Companies by Trowbridge & Ackerman, finished with Curtis Woodwork of architectural character.

Think of your BOOKS when you build



With one door and a pedestal base.

A BOOKCASE should be as much a part of your house as your books are a part of your life. This bookcase will be a beautiful part of your home today and equally as attractive to the next generation. Your children will grow up to love it, and link it with the treasures that it holds. There may be the books that father bought and hoped his children would later read, besides your own well-thumbed volumes of favorite nursery rhymes.

When you plan your house, you can provide a permanent place for your books with Curtis Woodwork. The time to put in a bookcase is when your house is built.

This is bookcase C-575. You can have it, just as you can have china closets, mantels, sideboards, buffets, kitchen dressers, dining alcoves, bedroom dressing tables and tray cases, stairs, doors, windows, and interior trim, built into your house as an integral part of the house itself, a part of the very structure.

This Colonial bookcase is designed to harmonize with all the other Colonial woodwork in a Colonial type of house.

Curtis Woodwork is designed by Trowbridge & Ackerman, architects, of New York, who designed and planned a large number of houses to be built with interior and exterior Curtis Woodwork. These houses range from three to eight rooms and are developed in four architectural expressions—Colonial, English, Western, and Southern. Appropriate woodwork is designed for each type of house.

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All designs of Curtis Woodwork may be seen in the Curtis Catalog, which your lumber dealer can show you. Your Curtis dealer can also obtain for you without charge portfolios of Better Built Homes, designed to include Curtis Woodwork when built. Or you can send us the coupon with 25 cents postage (50 cents in Canada), specifying which portfolio you want. "Better Built Homes," Volume VI, shows exteriors, interiors, and floor plans with complete descriptions of 32 houses of three, four, and five rooms; Volume VII, of 32 houses of six, seven, and eight rooms; Volume VIII, of 32 houses for farm use. If your plans for a home are still in the dream stage, and you feel it is too early to talk to a lumber dealer, then use the coupon for securing portfolios at 25 cents each (50 cents in Canada.)



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A charming six-room house of Southern design with Curtis Woodwork of appropriate architectural type designed especially for it.



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This is an eight-room home of the English type which also has its own distinctive Curtis Woodwork inside and out.

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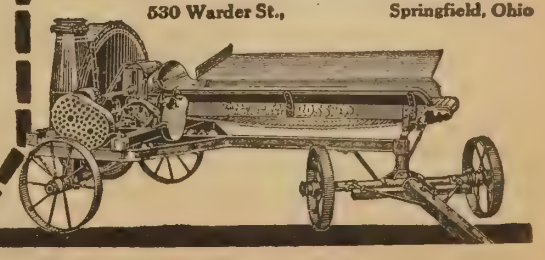
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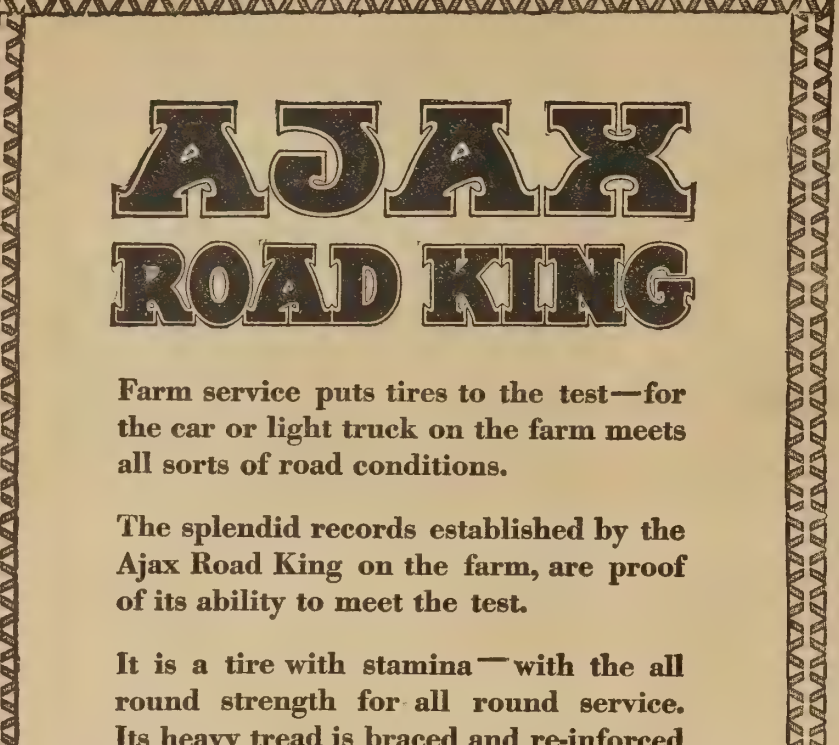
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The Ups and Downs of a Co-operative Milk Plant

HOARD'S DAIRYMAN:—In a fine dairy town not far away there was built some few years ago a creamery capable of handling a large quantity of milk by the farmers of that vicinity. The building was done before the Dairymen's League commenced to function and the action of the farmers was brought about by the continued pressure of the milk dealers of those years. The specific acts that caused the small rebellion of the farmers need not be recited, but any dairyman who has been in the business ten years can readily select some one or more of the customary incidents of those years and not go far astray.

In those days it was hard to get farmers together on any enterprise and it was hard for them to raise the money for payments for stock. It took a great lot of pressure to get a start made among the dairymen and it took an equal amount of exertion to keep the ball rolling until the creamery could be built. All this came to pass, however, but like many another similar plant, it came about that there remained a large indebtedness when the building had been completed. Right here is where so many concerns have gone shipwreck. This one came near it.

Were it not that some lesson may be learned from it, there might not be need of reciting the story. It was before the days of the present membership, co-operation law had been acted, but fortunately a lawyer drew the incorporation papers who knew something of the necessity of making the affair as nearly co-operative as possible. At any rate it would have been quite difficult for any outside corporation to buy up stock and gain control of the property. It is to that fact that the concern remains today in the farmers' hands. Very many others, not a few of them within a few miles from the location of this plant, have had a new lease of life as co-operatives and have then been taken over by some of the regular milk companies or been forced out of business by them not infrequently at a heavy loss to the stockholders.

It is safe to say that a co-operative creamery or station should never be organized under the old stock company laws. A majority of the lawyers of today will insist that there is no other safe method. They say that the old line co-operatives have been tested out, have had court decisions and other experiences until a lawyer knows what to depend upon. The new co-operation law, he urges, is untried and should not be invoked. There is argument in this but the new membership plan has had experience enough to make it fairly safe and it is best to employ a lawyer who is in sympathy with it, or at least, not against it. As stated, this plant is operated under a charter that has as many features of the new law as could be marshalled at the time of its formation.

The creamery and its equipment cost right around $23,000. As a general thing this is about as low a cost as a really good plant can be got ready, indeed in these days of high prices we may expect to pay more. There have been special plants for some particular purpose put in shape for a good deal less. I once knew a butter factory doing quite a business put in shape under the low price era for little above a thousand dollars. In these days when there are large quantities of milk to handle and all sorts of products to be turned out, we may expect plants to cost from $20,000 to $100,000 and occasionally more.

At one time this concern had a debt of $14,000. Two leans had been filed and it began to look like a close down. No trouble at all if the farmers would stay by, but you know about what happens when there is a big debt and uncertainty. The farmers tried to run the business. They could manufacture, but the regular dealers with city connections had the markets. The competitors paid the price, then came back in a few days with additional checks to their patrons, one month with seven cents additional and another thirteen cents. The farmers had to run the business and they must pay interest on the debt if no more. The stock holders' dividends had to be passed. Several trials were made at renting with indifferent success, and the dairymen commenced, or rather continued, desertion. Blue days those for many.

It would be impossible for me to go into all the details but there were few people who could explain just what to do next although enough could say what should have been done. At this juncture something happened. The unexpected is always happening. The big wealthy concern that oppressed the farmers earlier, then oppressed the creamery organization, suddenly announced that they would close their business. This made it necessary for the co-operation to get into action at full blast. They did as well as they could but the management felt greatly relieved when the representative of a high class concern came along and offered to rent the property. It took quite a little experimenting to get under full headway and complete a contract that could be considered satisfactory.

Finally after the plant had been run for a little time the renting company decided that they wanted to lease for a series of years. They proposed to go into condensed, evaporated, and dry milk manufacture and the cost would be considerable for additional equipment. There were a hundred thousand pounds of milk a day available if the entire patronage could be held. Milk companies have had experience in holding patronage and they have various plans for doing it, some of them none too commendable. In this case it would seem as though the plan may be regarded as a fair one.

The plant was rented for fifteen years at a flat rental of seventy-five dollars a month. All upkeep and expenses to be paid by the lessee except those caused by the elements. That was not enough to pay interest on the cost, to say nothing of paying the indebtedness and an occasional new roof, etc. As stated, the renters wanted all the milk. They said they would pay fifteen dollars a month for all additional units of 10,000 lbs. of milk. An average of 90,000 lbs. for a month meant $135 above the flat $75. This, by keeping all the patrons together would bring enough to pay up



FAYNE ARBUTUS DE KOL, HOLSTEIN COW OWNED BY EARL PETERS, MICHIGAN

In seven days she has produced 550 lbs. milk containing 19.28 lbs. fat.

debt. At the present moment there is less than two thousand dollars back, and the lease has yet a long life.

Then there are one or two other chances to smile. A big concern came in at about the time this arrangement has got under way and brought the plant that had been closed by the other big concern. The plant cost originally somewhere around fifty to seventy-five thousand dollars. Much was spent to remodel and improve the plant and then came the drive to get the milk. Bands, halls, speeches, and arguments were made use of. The farmers did not respond greatly. With a very few exceptions they stayed with their own plant and by the concern that rented it. A few small dairies not readily accessible sold to the new company by having their milk hauled for them. Further than that this management had to go out of town and ship in milk by train and truck to keep them going. Both are running, and that is an advantage to the town and helps the farmers to get better tests and terms.

It is well to add that in case of any trouble between dealers and the League the company leasing the creamery is to manufacture for the farmers during any such period. Further all milk is bought through the League in the regular way. No milk is sold to the local people, they only elect where it shall be sold so long as there are buyers at the two plants.

New York. H. H. LYON.

Dairying Thirty Years Ago

Notes from the Issue of Hoard's Dairyman for Thirty Years Ago This Week

"About 7¼ to 8 cents for July cheese, and 20 cents for last week in July butter, is not much calculated to make a dairy farmer think he has missed his calling—if he has good cows. The old cow stands to the front yet, and is the 'color-bearer' for the army of progress."

"With improved dairy herds, and improved methods of manufacture and sale, butter can be made and sold cheaply and yet with a fair margin of profit. The ingenuity of man tends towards the cheapening of all industrial products, and the farmer cannot escape this law. He must move with the 'procession', and he ought to realize that what is done in manufactures and trade can also be done to a great extent in agriculture."

"As we rode home from Baraboo, early last Monday morning, after the terrific storm and copious rains of Sunday afternoon and Sunday night and saw the deplorable condition of thousands of acres of wheat and oats in the shock, we inwardly pitied the owners who insist upon so operating their farms that the work of the year is subject to the perils of a week's weather at the last end; and we congratulated the stock and silo farmer who is far more independent in that he has reduced the perils of harvesting to a minimum, and has also far less risk in growing the crop; for he has the fertilizers from his stock to command growth through the dry time, when the products of the exclusive grain farm wither on the stalk."

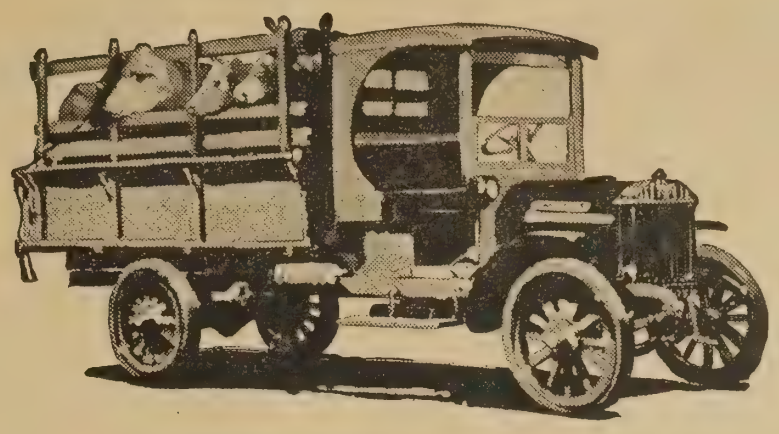
Canadian reader, having trouble in harvesting "10 to 14 ft. corn" for silage and seeking advice, received the following reply: "As yet we know of no more reliable way to harvest such tall corn than to slash it from the hill with a heavy corn knife, and lay it in gavels preparatory to carrying them upon the truck wagon to be hauled to the silo. Late last fall we heard something of the plan of cutting it with a V-shaped boat armed on two sides with a knife. Driving between two rows cut both of them, as a horse drew the knifed boat along. To hold it firmly down, two men stand upon it, and gather the corn in their arms as it is cut. When each gets all he can hold and carry, the horse is stopped, and the bundle is laid down. Whether this has been used enough to call it a reliable way, we hardly know, yet. It it about time for those who know, or those who manufacture such cutters to 'let their light shine', for the benefit of their fellows."

This correspondent said of the use of silos in his neighborhood: "Many farmers here are contemplating the erection of silos, but await the action of the more progressive ones, hoping to benefit by their experience, and in order to avoid some mistakes already made by those who have bought machines that have caused delay and lots of "vexation of spirit". His statement elicited this comment: "Those farmers of 'little faith' could get into the 'kingdom' quicker, through informing themselves,—as the literature of the silo is now plenty and to be had for the asking, of all manufacturers of good ensilage machinery —than to wait to see how their more enterprising neighbors come out."

R. P. McGlincy is quoted as follows: "Dairy farming is being reduced to a science, and the thinking, progressive men in the business are keeping up with the procession, and those plodding members of the fraternity who do not keep up will say that dairying does not pay. And it doesn't pay them, for they do not know how to make it pay."

The following testimony by an Iowa farmer emphasizes the tremendous changes which have been inaugurated in agriculture: "Most of our grievances are imaginary. Were any of you alive in 1842? I lived in eastern Iowa, a territory at that time, and hauled shelled corn from Morning Sun to Burlington—28 miles—and sold it at 6¾ cents a bushel. The very corn was shelled in a washtub. We dressed our own pork and hauled it to the same town for 1½ cents per pound; and made our own clothing, lived on pork, corn bread, and rye coffee, went without shoes, and were very happy."

Plenty of clean drinking water and lots of shade will keep many a valuable hog from getting sick.



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A *good* motor truck would add to your profits even if it did not work for dollars-and-cents less than horses. The 30 to 45 minutes it saves from every hour on the road could well be spent more profitably than on the seat of a wagon. Your products, sooner marketed, would be in better condition; therefore worth more money. Progressive farmers have found that motor haulage actually earns money in many other ways—such, for instance, as minimizing losses due to "shrinkage."

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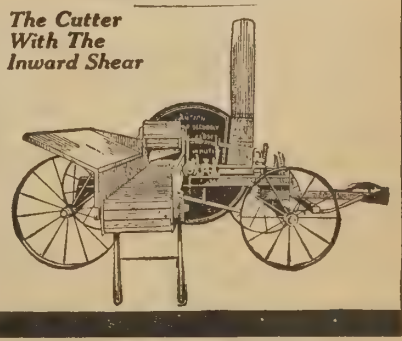
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EDITORIAL COMMENT



It is well to advise the consumer regarding the food value of milk and its products but it is also wise that a higher quality of dairy products be produced. Complaint comes from every source of the poor quality of butter, of its high moisture, of improperly made and cured cheese, and of the low standards of ice cream. There is not one of these products that could not be materially increased without any effort, so far as advertising is concerned, by simply producing a more uniform and higher quality of all dairy products.

Since milk has been pasteurized and bottled there has been a decided increase in consumption, for along with the pasteurization and bottling came the campaign for the production of a higher grade of milk. The man on the farm who produces the milk may feel that he has little to do with increasing the consumption of his product, but if he were fully advised regarding how much more dairy products the consumer will eat when they meet his personal taste, when they are of good quality, he would view his position with more concern. A butter that will score from 92 to 95 will be consumed in much larger quantities than butter scoring from 85 to 90. The same applies to cheese, milk, and ice cream.

It is encouraging to note that many breeders are anxious to place their herds upon the Accredited List. In order to have herds upon this list, the animals must be free from tuberculosis and placed under the supervision of both the federal and state governments. The establishing of tuberculosis-free herds in this manner is dealing with tuberculosis systematically.

Little progress was ever made in the eradication of this scourge until requirements provided that those desiring compensation for animals slaughtered on account of tuberculosis must place their herds under the supervision of the federal and state governments. It is a tremendous undertaking to eradicate tuberculosis from all the cattle in this country but it can be done if every owner is willing to follow out the plans provided.

According to the report of the Bureau of Animal Industry, the owners of 500,000 cattle have placed their herds under federal and state supervision since 1917. On April 10, 1920, 25,793 herds scattered throughout the United States were under the co-operative supervision of the Bureau of Animal Industry and state veterinarians. So far, 2,230 accredited herds containing 60,237 cattle have been established. These herds were all free from tuberculosis and are tuberculin tested every year.

At the present time over 115,000 cattle are on the waiting list to be tested. The work has developed more rapidly than was anticipated by those who are responsible for bringing about accredited herds. It shows that most farmers are willing and desire to have their herds free from tuberculosis as they appreciate it is to their interest to eradicate tuberculosis from their herds.

NOW AND THEN

There is much complaint at the present time regarding our conditions and existing evils. We feel they are to a large extent imaginary and that we over-emphasize our present situation. We appreciate certain business practices could be improved, and that there are evils that ought to be eliminated. But, take it on the whole, we believe the laborer the farmer, and the business man are making greater progress, enjoying larger incomes, saving more than at any other period in our history. This should not lead us to be content, for no great progress is made unless there is a certain amount of discontent to move us forward and upward. But we should not let our present conditions disturb us so much as to make us unhappy or feel that we are going to everlasting smashup. Let us not make mountains out of molehills.

In this week's issue we publish a few statements taken from an issue of Hoard's Dairymain published thirty years ago. There is an item in these notes well worth considering. One man wrote us at that time that he had lived in eastern Iowa in 1842, a territory at that time, and hauled shelled corn from Morning Sun to Burlington—28 miles—and sold it at 6¾ cents per bushel. "The very corn was shelled in a washtub. We dressed our own pork and hauled it to the same town for 1½ cents per pound; and made our own clothing, lived on pork, corn bread, and rye coffee, went without shoes, and were very happy."

It is sometimes well for us to consider what the early pioneer went through, to note how he lived, the prices he received for his products, and to compare that time with the present. Such reflections may lead us to realize that after all we are living at a time when we not only have opportunity for making more money, but opportunity for the greatest enjoyment.

WASTE OF WOMAN POWER

The necessity of modernizing the farm home cannot be overestimated. It is the tendency and almost the universal practice for the farmer to purchase all modern machinery for operating his farm and equipping his barn with every device for saving labor before any attention is given to the purchase of home conveniences for his wife and family. There is a reason for this because improved machinery and better equipment for the barn makes it possible for the farmer to secure a larger return but we believe it is carried too far.

We have had opportunity of late to observe farms well equipped in every respect for field and farm work but the houses had no modern conveniences and yet the farmers were adequately able to purchase them.

The farmer often complains about his long hours in close confinement but we believe on the average the woman's work on the farm is more confining and the hours longer than that of the farmer. We should not look upon the farm as merely a place to make money but rather a place to build a home and a life. This cannot be accomplished until the woman's work is considered of as much importance, if not more, than the man's and when this point of view is taken it will be observed that the conveniences of the household are quite as important as modern machinery and improved methods of doing the work in the barns and fields.

We commend to our readers an article entitled "Waste of Woman Power a Menace to Rural Life", which we publish elsewhere in this issue.

STRIPPING AND TOPPING CORN

Many years ago it was a common practice to top and strip corn. This meant that the stalk above the ear was cut and the leaves below the ear were stripped. The fodder secured in this way made very good feed, but it was expensive from the standpoint of labor, and since the advent of the silo we have heard little about topping and stripping corn.

We have better ways now of securing feed. According to the Progressive Farmer there are still those who advocate the system of pulling fodder which means removing the leaves of the corn and in its condemnation of this antiquated practice it points out that experiments conducted by Croker of South Carolina, Lloyd of Mississippi, and Duggar in Alabama showed a loss of three to nine bushels per acre when the leaves were pulled.

Duggar says the leaves obtained will equal about one-fourth the weight of the grain yield. In other words, the loss in the yield of grain by removing the leaves would be greater than the nutrients secured in the leaves. There is a loss of not only labor, but of food, and it is strange that some agricultural people, as the Progressive Farmer has so well pointed out, should be advocating this method of securing fodder. If more forage is needed and there is no silo, then cut the corn, husk it, and feed the stover to the live stock. The best way, however, of preserving the corn crop is through the silo. A larger percentage of it is saved for animal consumption and there is less loss in handling and preserving it. At the present time we can't imagine any condition where a person would be warranted in topping and stripping corn or pulling the leaves as it is termed in the South.

POLITICS AND MILK

The differences which have existed between the milk producers' organizations and the distributors may to a large extent be attributed to political office seekers. It was remarked to us recently that if the political agitators would withdraw from the forces which are trying to regulate the price of milk, there would be little or no friction between the milk producers' associations and the distributors. To be a success in politics requires publicity and since milk is such an important food, the interest of every consumer is affected whenever there is an advancement in price.

The political agitator is shrewd enough to see that he can gain for himself headlines in the daily paper by saying something against the advancing price or make it appear that either or both the producer and the distributor of milk are guilty of illegal conduct and that he is trying to force them to act legally. These men, who seek office by such tactics, are a menace to the public and it is to be regretted that the actual facts concerning the cost of producing and distributing milk cannot be set forth before the consumer in order that he may understand why it has been necessary to advance the price.

The chief politician is not concerned about sober facts and neither are many of the daily papers. The desire is for headlines. We hope the time may come when truth, justice, and useful information will sell as many papers and gather as many votes as meaningless headlines and worthless talk. It would be a relief to the dairy industry if these would-be savers of the consumer would find some other field for publicity and give the milk producers and distributors a rest for a period of time.

WHY PURE-BREDS

Why do men engage in the breeding of pure-bred animals? In the census report taken of the Holstein-Friesian Association of America we find various reasons given for engaging in the breeding of pure-breds. The following are some of them:

"I engaged in the breeding of pure-breds because I could feed and care for them just as economically as grades and their offspring is worth more money."

"More profitable than grades. A good demand for all surplus stock. Also it is interesting to breed and develop pure-bred Holsteins."

"Wanted better cattle."

"I like their looks best and their money making."

"Want to breed the cattle that most buyers want to buy."

"To get the money and for the love of the cattle."

"First, because I consider they are the only cattle for milk production. Second, most of my neighbors are raising Holstein stock and I consider it good policy to work with my community on all lines."

It will be observed that these men selected pure-bred cattle because they consider them more profitable than scrubs or grades. It is pleasing to us, however, to observe that the breeding of pure-breds creates a greater interest in their work. In the conduct of any business, the monetary return must not be lost sight of. It is only the dreamer—the pure idealist—who ignores money returns. Those engaged in business appreciate that it is the dollar that measures their success, although it may not be the best measure of human endeavor or of service rendered.

There are no objections to a man making money providing he renders a service. He is entitled to earn and the man who does not have this desire is not, as a rule, a good citizen. In connection with the desire to make money, it is most wholesome to develop an interest in the work of developing

animals or machines which are most efficient. Invariably when there is an interest in work, drudgery is removed. It is highly desirable to make work both profitable and pleasant. If a person is not happy and contented in his work, there is little opportunity for happiness in life.

Cost to Feed Calf

Please tell me the approximate cost to feed a calf and feed and house a horse for one month.
Willmette, Ill. C. F. B.

Our inquirer must appreciate that the cost of feeding a calf varies greatly under different conditions. Not only may it cost him considerably more or less than it will some other dairy farmer but there is a great variation on his own farm. In a general way we believe it will cost about $60 a year to feed a calf from birth to the time it is a year old, making the average cost throughout the first year about $5 per month.

Variation in the cost of keeping a horse is quite as great but we give the estimate of the monthly cost as being about $15 to $18.

Breed Secretaries

Can you give me the addresses of the various national breeders' associations?
Osceola, Wis. I. W.

The following are the addresses of the secretaries of the five dairy breeds:

F. L. Houghton, Holstein-Friesian Ass'n. of America, Brattleboro, Vermont.

W. H. Caldwell, American Guernsey Cattle Club, Peterboro, New Hampshire.

R. M. Gow, American Jersey Cattle Club, 324 West 23rd St., New York City.

J. G. Watson, Ayrshire Breeders' Ass'n., Brandon, Vermont.

Ira Inman, Brown Swiss Breeders' Ass'n., Beloit, Wisconsin.

Sudan Hay vs. Legumes

Please inform me regarding the relative feeding value for Holstein cows of alfalfa, clover, and sudan grass hay. We can grow sudan grass quite successfully here and clover and alfalfa are very uncertain. If sudan grass hay compares favorably with clover or alfalfa as a dairy cow roughage it would be much more profitable for us to grow it.
Chillicothe, Mo. J. M. B.

Sudan grass resembles timothy and Johnson grass much more closely in its chemical analysis than it does alfalfa or clover. It is fully as high in carbohydrate value as the two legume hays but much lower in its content of protein. It is about equal in feeding value to millet. Under most dairy farm conditions it will be very much less valuable in the dairy ration. If it is possible to feed rather liberally of high protein concentrates, its low amount of protein can be balanced in the ration in that way. If alfalfa or clover can be purchased at reasonable prices their use will be more economical than buying large quantities of high protein concentrates to make up a protein deficiency in the roughage.

Choosing a Breed on Records

Please give me the milk and butterfat records of the four breeds. I have a neighbor who gets some funny ideas. A year ago he was in favor of the Holsteins but now, according to him, they are the very poorest breed in the world and not only that but he claims to have a comparison of the four principal breeds in which the Holstein stands last in both milk and butter.

Please give me a good grain ration for a 5-month-old pure-bred calf, male. He has all the skimmilk he will take.
Bloomingdale, N. Y. S. F. W.

The highest records made by the four dairy breeds are listed in the following table:

Breed		Lbs. milk produced	Lbs. fat produced
Holstein	Duchess Skylark Ormsby	27,761.0	1,205.00
Guernsey	Murne Cowan	24,008.0	1,098.18
Jersey	Plain Mary	15,255.9	1,040.07
Ayrshire	Garclaugh May Mischief	25,328.7	894.91

In making a comparison of breeds beware of the use of record animals. Because one particular cow may make a great production is very little indication that the breed to which she belongs may excel other breeds. From an intensive study of dairy cattle we have arrived at the conclusion that there is rather small difference in the productive capacity of the several breeds—rather, we hold that the variation to be given greatest attention lies within the breed. A beginner does well to see to it that in the selection of his cows he secures good individuals of any one breed. He need then have no fear of unfavorable comparisons with the production of other breeds.

Our correspondent's neighbor is wrong if he considers the Holstein to be an inferior producer of milk and butterfat, yet we warn again against choosing this breed simply on the production of Duchess Skylark Ormsby.

This five-month-old calf has reached an age when he should make good use of such roughage as good quality clover or alfalfa hay. Skimmilk fills a place of its own and is of very great value in calf feeding. Our inquirer should see to it that he does not overfeed the calf with skimmilk, however; 18 to 20 lbs. being a maximum amount of feed for a day. In addition to this hay and milk a mixture of equal parts of corn and oats should give good results. The addition of a little oil meal may have a tendency to give the calf a sleek appearance. With a calf of this age, we would not grind the grain mixture.

How Much Feed to Buy

One of the dairymen in this county has requested me to get your opinion on the balancing of a ration for dairy cows weighing about 1,400 lbs., and giving about 25 to 30 lbs. of milk daily.

The home-grown feeds are: Alfalfa hay, oats, corn and cob meal. In addition to these, he intends to buy oil meal, and he wishes to know if, at the present prices, it would pay him to purchase bran also. He has nine cows and would like to know how much bran and oil meal he would have to purchase for these cows, provided the feeding periods would be four or six months.
Green Lake, Wis. J. L.

It is very difficult to tell a dairyman exactly how much feed he should purchase. He can come near calculating it, however, if he can estimate at all closely the quantity of milk his nine cows will produce throughout the period for which he will purchase feed.

Alfalfa hay makes a splendid basis for his ration. It should be supplied in as large amounts as his cows will consume. He will cut down the amount of concentrates necessary to maximum production if he will be liberal in his supply of this protein roughage. A good concentrate mixture to supplement the hay may well be made from 400 lbs. corn and cob meal, 200 lbs. ground oats, and 100 lbs. oil meal, this to be fed to Holstein cows at the rate of one pound for every 3½ to 4 lbs. of milk produced. It should be supplied to high testing cows at the rate of one pound for every 3 to 3½ lbs. of milk produced. It may prove that a combination of alfalfa and oil meal will be so laxative that it will pay to supplement or replace oil meal with cottonseed meal for some of the cows in this herd. If the supply of oats is adequate there is no advantage, at present prices, in substituting it with bran.

Fairness of Lease

I am renting a farm on halves. I am to furnish my team (3 horses), one-half of all live stock—cattle, sheep, pigs, poultry, etc., and receive one-half of increase and one-half of receipts from all sources. I am also to furnish one-half of all tools, seed, fertilizer, feed, etc., and do all the work. I do not feel that this is fair. Would you give your opinion as to whether you consider this fair or not.
Michigan. SUBSCRIBER.

The terms of the lease above described are more liberal to the tenant than usual, in that the owner is furnishing a half of the work equipment. In most dairy farm leases the owner furnishes the land, the buildings, the permanent equipment, one-half the productive live stock, one-half the purchased feeds, seed, and fertilizer, makes all permanent improvements and large repairs, supplies, fencing material for repairs or extensions that tenant erects, pays half the threshing and silo filling expense, etc. The tenant supplies all the work stock, horses, equipment, and tools; hires all labor to do the usual farm work, keeps weeds cut along fence rows and lanes, and in general does all the work needed in proper operation of the farm. The horses are fed from the undivided feed as also all the live stock on the farm. The income from the farm is divided half and half, or the products or live stock to be sold are divided on this basis. The increase in stock is also divided on the half-share basis.

All lease contracts vary from this form in certain details. Occasionally the farm owner offers a very liberal lease in order to attract a particularly efficient renter or for some other personal reason. We have known of cases where the owner has supplied all the productive live stock and a part of the farm machinery, at the same time securing one-half the farm income and the increase.

Different types of farm leases were quite fully described in our issue for February 6, 1920. This issue also contains a general discussion of the basis of a lease that is fair to the owner, the tenant, and the land.

Demand for Beet Pulp

The excellent inquiry for dried beet pulp has rapidly exhausted the domestic supply this year. Bids from stockmen and jobbers for larger quantities than were formerly contracted for were received by the larger manufacturers who had difficulty in taking care of their regular trade.

While the average price received for domestic beet pulp was $51 per ton f. o. b., the factory, brokers, and jobbers during the period of feed scarcity were offering as high as $60 per ton. Jobbers were quoting to the trade at that time at $66 per ton. The small feeder was, however, unable to purchase his requirements at the latter figure because it represented carload price, sight draft basis. Less than carload lots were sold in certain sections at prices as high as $75 to $80 per ton. For instance, the price at Jacksonville, Fla., this week for ton lots is $77.

The domestic supply of beet pulp depends largely on contracts placed by the factories with the farmers to grow sugar beets. A certain acreage is contracted for and the production of beet pulp will be either large or small, depending on the tonnage of sugar beets produced on such acreages. Droughts, excessive rains, and insect pests materially affect the production and the resulting supplies of beet pulp.

Formerly most of the beet pulp was sold in a wet state, but, largely due to the high prices paid for concentrates, factories were equipped with facilities to preserve the pulp and ship it dry to various sections.

Beet pulp was received by stockmen with such favor that the supply has not been equal to the demand and it is no unusual occurrence at present for this feed to be quoted at prices relatively higher than those asked for feeds which it was intended to substitute. In the Southeast, for instance, 36 per cent protein cottonseed meal is quoted freely at $68 per ton in ton lots, while $10 per ton more is asked for beet pulp.

It is interesting to note that dairying interests in Europe have been for years large purchasers of the cottonseed cake and meal, both because of its excellence as a feeding stuff and its fertilizing constituents, while thousands of tons of beet pulp are being at present imported from Europe. The demand in the South, particularly in the Southeast, for the beet pulp is growing and has, during the past season, been greater than ever despite the fact that stocks of cottonseed meal are comparatively large.

Contrary to the general belief, there is at present no scarcity of beet pulp in the Northeast. Thousands of tons which are reported as being held in Philadelphia, New York, and Baltimore have not been moved on account of inadequate transportation conditions, lack of care, and labor difficulties.

Reports reaching the Bureau of Markets indicate that additional supplies from Europe have been contracted for and are in transit. About $55 per ton c. i. f. New York is asked for July and August delivery while $54 per ton is quoted f. o. b. New York now on docks. C. I. F. offerings should not be confused with f. o. b. offerings, as there is at the present time a vast difference between the two. The f. o. b. offering makes it incumbent upon the shipper to see that the shipment is loaded on cars within contract time, while the c. i. f. offer places the responsibility on the buyer.

The usual differentials between rate basing points do not apply on the imported beet pulp, and therefore rates from point of shipment to destination should be ascertained before it can be determined where requirements can be purchased to best advantage.

It is impossible to estimate how much beet pulp will be imported between now and October 15, the date upon which domestic supplies will probably be available. The volume of business will depend to a large extent on European holdings and the demand for this commodity in this country for the next few months. The foreign exchange situation is naturally an important factor. A few importations are due at southern ports in July.—U. S. Bureau of Markets.

CONTENTS

Research Work of Dairy Division - 65
Calf Club in Kentucky - 66
The Dairy Optimist - 66
Milk Fairy Pageant - 67
A County League Meeting - 67
Tractor Ignition Difficulties - 68
Experiences of a Cow Tester - 69
Successful Community Efforts in the Show Ring - 69
Waste of Woman Power Menace to Rural Life - 70
Guernseys Employ Musser - 70
Use More Milk - 71
Students' National Contest Judging Dairy Products - 71
Cow Testing Associations - 72
The Concrete Silo - 72
Mans Greatest Blessing - 73
The Ups and Downs of a Co-operative Milk Plant - 74
Dairying Thirty Years Ago - 75
Now and Then - 76
Waste of Woman Power - 76
Stripping and Topping Corn - 76
Politics and Milk - 76
Why Pure-breds - 76
Cost to Feed Calf - 77
Breed Secretaries - 77
Sudan Hay vs. Legumes - 77
Choosing a Breed on Records - 77
How Much Feed to Buy - 77
Fairness of Lease - 77
Demand for Beet Pulp - 77
The National Dairy Show as a Service - 78
Washington, D. C., Weekly News - 78
Farmers' Marketing Conference - 79
New York Butter Market - 82
Jersey Cattle Notes - 82
New York Dairy News - 84
Butter and Cheese at the National Dairy Show - 84
Milk Inspectors Meet - 86
Tri-county Holstein Club - 87
California Milk Consumers - 87
The Season of Fairs - 88
Junior Letters - 89
The Grange on Politics - 92
Alfalfa Seeded in Corn - 92
Veterinary—Functionless Quarter—Sore Hand from Milking - 94
Rhode Island Ayrshire Club - 94
Oneida Holsteins Average $300 - 94
Trade Grade Bulls - 95
Don't Take a Chance with Fire - 95

Coming Events

Missouri State Fair, Sedalia, Mo., August 14—21. E. G. Bylander, Secretary.

Illinois State Fair, Springfield, Ill., August 20—28. B. M. Davison, Secretary.

Wisconsin State Fair, Milwaukee, Wis., August 30—September 4. O. F. Remey, Sec.

Iowa State Fair and Exposition, Des Moines, Ia., August 25—September 3. A. R. Cory, Secretary.

Ohio State Fair, Columbus, Ohio, August 30—September 4. E. V. Walborn, Secretary.

Minnesota State Fair Minneapolis, Minn., September 4—11. T. H. Canfield, Secretary.

Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.

Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.

Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.

New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.

Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Washington, D. C., Weekly News

(SPECIAL TO HOARD'S DAIRYMAN)

WASHINGTON, JULY 26—Milk rates, omitted from consideration because of the way they are fixed in the application of the carriers for the general rate increase which is now pending, have come sharply into the center of attention in the proposals made here the day after the award of the Railroad Labor Board was made public in Chicago. The wage award roughly estimated to amount to a six hundred million dollar increase in wages must be added to the increase in earnings of the roads. This was anticipated in every quarter which is considering the matter of freight rates, and was especially brought out in the presentation made before the I. C. C. by Clifford Thorne appearing for the Farm Bureau Federation and others some weeks ago, when he said that if the whole wage claim was granted and the railroads sought to raise it all by freight increases it would take a 55 per cent increase.

To get back to the milk rates. Instead of seeking to raise the whole six hundred millions by more freight increases, the railroad executives in a formal application to be filed with the I. C. C. propose to increase passenger fares twenty per cent, and milk rates from twenty to forty per cent. The balance is to be made up in straight freight rates.

This announcement called attention to one thing which had not been generally understood, that milk rates had not been included in the rates proposed to be increased under the previous application. It is explained that milk rates are a hybrid rate, based on specially fast and unusual service, and are more nearly akin to passenger rates than to commodity rates in general, hence, along with passenger rates were not included in the first increase. Perhaps this is the reason, or perhaps the policy involved that of leaving out one item which enters so closely into the cost of living as milk, was the controlling reason. The increase asked for is estimated to produce nearly if not quite a sixth of the whole of the proposed increase of six hundred million dollars, indicating the tremendous volume and value of the milk traffic.

No objections have yet been filed to this increase, but there is ample reason for filing such objection. It lies in the fact that freight rates on milk are borne, in the first instance at least, if not in the last analysis, by the producer of milk, not by the consumer. That is milk prices are base prices, in the main, paid by dealers at the city milk unloading station. The Dairymen's League, powerful as it is, and the Maryland-Virginia Milk Producers' Association which supplies Washington, bases return to producer on base rate less freight costs. Producers in the fifty-mile zone get the amount of the freight more than their associates living in the hundred mile zone, etc. And therefore this milk increase is just passing another double dose of the burden back to the producer, instead of ahead to the consumer. Increasing passenger rates and increasing rates on manufactured commodities does not entail this particular feature of the freight rate problem.



FAT HOLSTEIN HEIFERS AND STEERS IN THE CHICAGO STOCK YARDS, SOLD TO BELGIUM RECENTLY FOR BEEF PURPOSES

A report of the American Institute of Packers shows that during the first six months of this year there was a decrease of four hundred million pounds of dressed meat produced in the United States as compared with the same months in 1919. The reports are not available to show the decrease in number of calves kept for dairy purposes but all indications point to a decrease.

Dr. W. C. Fowler, health officer of the District of Columbia and uncompromising foe of the dairymen, is responsible for the statement which has appeared in most of the local newspapers that the Maryland-Virginia milk producers have been throwing their milk on the ground rather than permit a decrease in prices here. After a talk with him reporters on the local newspapers call the milk producers profiteers. In response to a letter from The National Grange, Dr. Fowler boasts that he has the information as to the names and addresses of the men who threw the milk on the ground, but refuses to disclose the names. Dr. Fowler says he is not in possession of the facts as to the cost of production of milk here which are necessary to justify the charge of "profiteering". Members of the association deny that there has been any waste of milk, saying that there has been a cream shortage at all times this season, and a milk surplus only a few days, also that at the time of this shortage and at all times there is a demand for the milk for farm feeding which makes it ridiculous to think that any farmer has thrown it on the ground. A dealer might have done this, after the milk had spoiled on his hands, they suggest, but no farmer but can use far more than he can possibly get.

During the past year more than four million gallons of ice cream have been made and sold in the District of Columbia, according to Health Department figures. Local ice cream manufacturers declare that the National Capitol consumes more ice cream than any other city of its size in the United States. The average wholesale price is $1.50 per gallon. It is estimated that the cost to consumers is about eight million dollars. The daily output of the principal factories at this time is 45,000 quarts, not including the hotel and restaurant, and many private stores which make their own supply.

Dr. Frank M. Surface, formerly a statistician connected with the Food Administration, and now connected with Herbert Hoover's Washington newspaper organ, is the author of a vigorous denunciation of the present oleomargarine tax law, in the current issue of this newspaper. He quotes statistics to show the tremendous growth of the oleomargarine business especially in the past four years and then protests against the hardship which the oleo manufacturers undergo because a ten-cent tax is "prohibitive" in the manufacture of colored imitation butter. In the face of the profits and the volume of the industry which he boasts, this argument for the wiping out of the public's most effective method of protecting itself against the substitution of an inferior product for real butter will be judged by the reading public on its own merits.

The National Dairy Show as a Service

The National Dairy Association is one of the many business organizations that have been formed in the past decade by all big business interests, which are all the result of the highly developed condition of our country—such as quick communication with every part of the United States, and the open publicity practiced by all business; so that the man who does not meet with others in his line of business, and help to further business enlightment, is recreant to his duty.

When the bankers, doctors, lawyers, and merchants and manufacturers of every line are holding annual conventions to develop and improve their professions and business nationally, the man in any branch of this greatest of all industries—the dairy industry—who is not willing to join hands with his fellows in the building of a great annual gathering for purposes of comparison and development, is surely living in the dark ages and is not desirous of establishing this industry which God has bequeathed for man's benefit, upon the highest code of ethics and honor.

Let it not be said any longer that any man in the dairy industry is not desirous of supporting an association formed for the benefit of his business, but let it become a mark of honor that each year every dairyman will strive for, to be counted among those present at the National Dairy Show this year in Chicago—October 7th to 16th, inclusive.—National Dairy Show.

Sale Announcements

Aug. 12—Guernseys. Southeastern Guernsey Breeders' Sale, Salisbury, N. C. C. T. Rice, Sale Mgr., Oakton, Va.
Aug. 14—Chester White Swine. V. C. Tiedt, Mauston, Wis.
Aug. 17—Holsteins. Fairview Dairy, Pittsburg, Kansas.
Aug. 19—Holsteins. Hooker & Appleton, Manassas, Virginia.
Sept. 6—Holsteins. Dispersal of F. C. Brinton, Jr., Herd of Registered Holsteins at West Chester, Pa.
Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Janesville, Wis., B. T. Green, Manager.
Sept. 10—Holsteins. Westham Dispersal Sale, Richmond, Virginia.
Sept. 13—Holsteins. Dispersal Dr. R. Ivey and Dr. S. P. Scherer herds, Fishers, Indiana.
Sept. 29-30—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Holsteins. Dispersal of C. E. Burgess & Sons Herd at Huntington, Ind.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
Nov. 16-17—Holsteins. Second Iowa Breeders' Guaranty Sale at Waterloo, Ia. C. H. Jenness, Sec.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.

Farmers' Marketing Conference

"The farmers of the Middle West have had co-operative grain elevators for thirty years without even making a dent on the market, and the trouble is you are speculators and not marketers," declared Aaron Sapiro of San Francisco, addressing a conference of farmers' organizations and farmers' co-operative marketing associations in session at Chicago to consider means for the stabilizing of markets for grain and live stock. Mr. Sapiro is attorney for fourteen of the largest California producers' co-operative marketing associations, which he declares are organized on the American plan of co-operation as applied to marketing.

"You are organized on a Roachdale plan which is an English consumers' co-operative buying plan and not a producers' marketing plan," continued the speaker. Mr. Sapiro then related the experience of the California raisin growers who, after repeated failures to realize cost of production, in 1911 united in a co-operative selling agency having control of over 77% of the California raisin crop. The result was undreamed of prosperity. Fresno, California, he says, was converted thereby from a city of poverty to the most prosperous city of its size in the United States. The Raisin Growers' Association has no capital and operates without profit. It exercises absolute control over the products of its members. The same idea has been successfully applied to practically all other California products both perishable and non-perishable.

As a solution of the grain marketing problem in the mid-west, Mr. Sapiro advocated organizing in each state a grain growers' association and the federation of these associations in a national organization, which would act as a selling agency for all grain grown by members of the state associations. This association would sell direct to millers and distributors; the entire proceeds, less actual cost of handling, being returned to the producers. He advocated the formation of a separate corporation with capital to take over and co-ordinate and standardize the local elevators, these elevators to do the warehousing of the crop, receiving in return fair interest upon the capital invested.

"The farmer is essentially a producer and not a marketer," declared Mr. Sapiro. "Marketing is expert work and should be done by experts. The trouble with the farmer is that he has not been willing to pay a fair price for expert service. You have no right to expect a fair price for wheat if you are not willing to pay a fair price for brains."

Mr. Sapiro does not advocate undertaking the marketing of live stock in a similar way until after all the packing plants are made public utilities.

The conference is the most important gathering of farmers ever held for the purpose of considering marketing problems. Practically all the state farm bureaus, state granges, state farmers' unions, equity societies, state associations of co-operative grain and live stock shippers in the mid-west are represented.

The morning session was addressed by Ben Drake, of St. Paul, Minnesota, president of the Equity Co-operative Exchange; Frank Myers, Ft. Dodge, Iowa, secretary of the Farmers' National Grain Dealers' Associations, and C. H. Gustason of Omaha, Nebraska, president of the Nebraska Farmers' Union. They all expressed a very earnest desire for some sort of effective co-ordination of farmers' co-operative marketing effort, which would extend the farmers' influence over terminal markets.

At the opening of the afternoon session Secretary of Agriculture E. T. Meredith addressed the conference. He stated that the Department of Agriculture is in touch with all the co-operative marketing enterprises in the United States and is anxious and willing to give information of value in the formation of such associations whenever called upon. He also spoke of the limitations placed upon the work of the department, particularly in securing crop reports, because of inadequate appropriations.

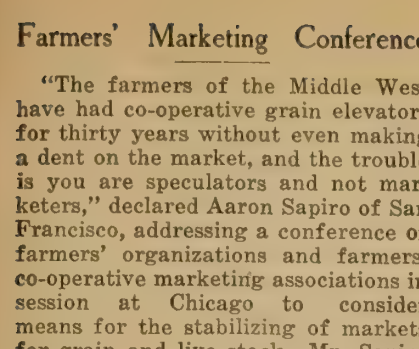
At the business session of the second day Mr. J. R. Howard, president of the American Farm Bureau Federation, was instructed to appoint a committee of seventeen to work out plans for the formation of one or more central organizations through which farmers' co-operative associations can market their grain. The committee of seventeen will be composed of representatives of the leading farm organizations and co-operative grain and marketing agencies in the United States. A convention of these organizations is to be later called to consider the recommendations of the committee.

The committee appointed to make suggestions on live stock marketing problems recommended that a separate conference be held in Chicago in the near future to especially consider this subject. This conferene will probably be held in about 60 days.

The Live Stock Committee was composed of James Plumb, president of the Kansas State Live Stock Association, John G. Brown, president Indiana Federations of Farmers' Associations, James Clemons, National Secretary of the American Society of Equity, Professor H. R. Munford, manager Live Stock Marketing Department of the Illinois Agricultural Association, E. P. Hubbard, president Nebraska Grain and Live Stock Association.

J. W. COVERDALE, Secretary,
American Farm Bureau Federation.

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No. 6

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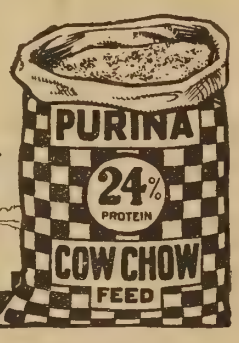
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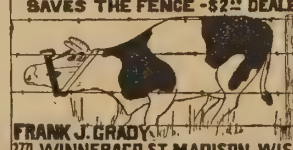


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FRANK J. GRADY
2771 WINNEBAGO ST. MADISON, WIS.

A County League Meeting

(Continued from page 67)

en. Finally the compromise was made by which the league accepted a price for April that was irritating to the farmers, that price being $2.55 basis. Some of the dealers repudiated the contract and for a time refused to take all the milk. Measures had to be taken and finally all came in as agreed.

May had its troubles but the April price was finally accepted by both parties for May. It was thought that the difficulty had been passed, but in making the June agreement it developed that a more serious situation had to be faced than at any time before. Dealers would not at first agree to any price but finally mentioned $2.43. It had to be refused. The league committee purposed $2.74. They were ignored and an attempt made to go over their heads to the directorate. The attempt failed for the directors and county presidents upheld the committee. It was considered impossible to avoid a clash and as the market conditions altered the committee advanced to $2.83 for June, figuring on a cost of production basis. The conference board appeared contemptuous. As it is now understood, certain of the dealers failed to uphold the conference board and desired terms for four months proposing to take their own course irrespective of the board. This quickly settled the crisis but not until almost the last day. Plans had been made to hold the milk on June first but this course was not necessary. The league required the settlement to be in writing and the one cent commission paid in all cases, which condition is now binding until October first.

Promoted Farmer Picnics

Summer outings, picnics, etc., are perfectly proper for farmers. They should be promoted by farmers. It may be that the local organization, such as the league or the grange, should be the promoter, or perhaps the county bureau may have a hand in it. In certain sections it has come to be customary for a creamery association buying the milk of the farmers to put on these picnics. There may be cases where this is perfectly legitimate, but in the case of some of the powerful concerns that are more or less interested in getting the upper hands of the farmers' organization such offers should be rejected.

We are fast accumulating facts from the picnics held by one of these powerful companies to show that there are ulterior motives for these. It is not altogether for the purpose of cultivating friendly relations with their patrons but to create prejudice against the league, apparently. We are told repeatedly of statements made by the speakers at these gatherings claiming that league officers are faulty and delinquent and that the dealers are always the farmers' real friends. In some cases this does no harm further than to create disgust on the part of the farmer, but sometimes it does serve to cause the farmer to feel that his affairs are not looked after properly.

I am not saying that the farmer should shut his eyes and assume that the league management is always right. No such body can always be right. It is proper for the farmer to question the acts of his agents and see if they are all that should be expected, but he is in a much better frame of mind to do this on the square before he has heard the tales of some prejudiced extremist on the platform.

The advice has been given to keep entirely away from all such picnics. In a few cases the farmers have sent formal notice, I am told, that they will attend no such meetings. In those cases there is little doubt that the notice was justifiable. It might not be in other cases. I heard a local league man make a statement, a few days ago, in one of our league meetings, of the things that the speaker had said degratory of our executive committee. One of the committee replied that he wouldn't call the speaker a liar, but would say he was completely mistaken. Mr. Gladstone once refused to call his opponent a liar, but insisted that he had made the statements that a man would make if he were lying.



MEMBERS OF "THE HUNDRED PER CENT PURE-BRED HOLSTEIN HEIFER CALF CLUB" OF DOUGLAS COUNTY, NEBRASKA, ON THEIR RECENT VISIT TO FRIESLAND FARM OWNED BY DR. B. B. DAVIS, NEBRASKA

It is not my intention to show our men always right, but to voice a caution against insidious deception and the creation of unjust prejudice.

Raising Money for the G. L. F. E.

In New York State there has been for some two or three years what is called the Grange Exchange. This had headquarters at Syracuse and under the conditions which have obtained it has done well. On binder twine and seed corn it has achieved successfully. On some other items it has been more or less successful.

It will be remembered that the league previously tried out the feed business and failed. Hardly more than that can be said of the Exchange. It had only $30,000 working capital and when the manager went into the markets to get feeds he found that he either couldn't get the feed or the price was fixed against him. In some cases the wholesaler quoted the local dealer in the town where the exchange sold feed some four dollars a ton less than he sold to the exchange in ten or twenty-car lots. In other cases the local dealer got a check for two to four dollars a ton on the car of feed that was bought through the Grange Exchange. It was evident that more money would be needed for capital.

A few weeks ago representatives of the grange, the league, and the bu-

reaus got together and decided to reincorporate at a million dollars so as to enable the Exchange to go back to the farmers' elevators in the West and buy their entire output. These elevators have been unable to sell to us in the East a car or a few cars because the big dealers gave them the same kind of dope that they gave the Grange Exchange, or worse. If our new exchange can protect the farmers' organization in the West and can buy of them, then further if they can buy gluten and cottonseed and linseed oil meal from some concerns in a way to protect them, it is quite possible that they may buy as well as any wholesaler or jobber. When that comes about our dairy farmers can be supplied as well as any dealer.

The problem right now is to raise the necessary money for this new exchange. Sums have been assigned to the various counties to raise. The counties assign to the various townships and committees in those townships go to work and raise the necessary money. In our county we are assigned $30,000. Our county league meeting distributed this to the various towns, my own town getting just about the average, or $1,500. Now we get out our committees and go to the farmers. The stock is for $5 a share and the stock bears six per cent interest. We hardly made a booming success at our county meeting, being able to raise only three thousand out of the thirty thousand. Not many subscribed even two hundrd dollars. It is going to take a good deal of work to sign up the whole amount. A few counties have already gone through the whole deal. Orange did not even stop at $30,000 but made it $40,000. Of course, we did not have a large number present, and also, of course, we are going to raise every cent of our quota.

In many cases the leagues hold regular local meetings. In most cases they will hold special meetings to take up and explain the exchange and appoint committees to raise any balance that may be lacking. It is important that this shall be done now as soon as may be if we are to get the business doing something next winter. It is possible that we may be a little late to get all the benefits for 1920—21, yet considerable can be accomplished from now on. The manager of the old Grange Exchange has done very well and his experience will be of great help. There are other experienced men connected with the G. L. F. Exchange.

New York Dairy News

Coal Shortage:—Many creameries and milk plants in New York and nearby states are being handicapped to a considerable extent by the coal shortage. Some plants which were holding contracts for a season's supply at $6.75 per ton were unable to procure it and were obliged to go on the market and pay $11 per ton at the mine in order to continue operations. The dealers claimed they were not to blame as they were unable to get the contracted coal from the mine. If this condition continues, some of the milk and cream shippers are talking of an advance in the charge of pasteurizing in order to compensate for the extra costs entailed by the increased price of fuel.

Cheese Prices:—The cheese price of 25¼ cents, which has been in effect in northern New York for two weeks, was not changed in the meeting of the Gouverneur Dairy Board Saturday, July 10.

The offerings were 3,665 large and 644 singles. One year ago the sales were 4,274 boxes and the price 31 cents.

Twenty-five and a quarter cents was announced as the regular price for cheese on the produce exchange, Saturday afternoon at Watertown, but payment of the usual premiums will bring the actual cost above that figure. Their offerings showed 7,385 boxes.

The Cheddar type skim and part skim cheese have met a very dragging sale so far this season which has placed the dairymen and manufacturers at a decided disadvantage. Those who sold their season's output under contract were fortunate. Most lots are going direct to storage. The difference between special skims and special whole milk flats has lately been from 6 to 9c per pound, whereas for a few years previous it was not uncommon to have special skims sell within 1½ to 3 cents of the top of the market.

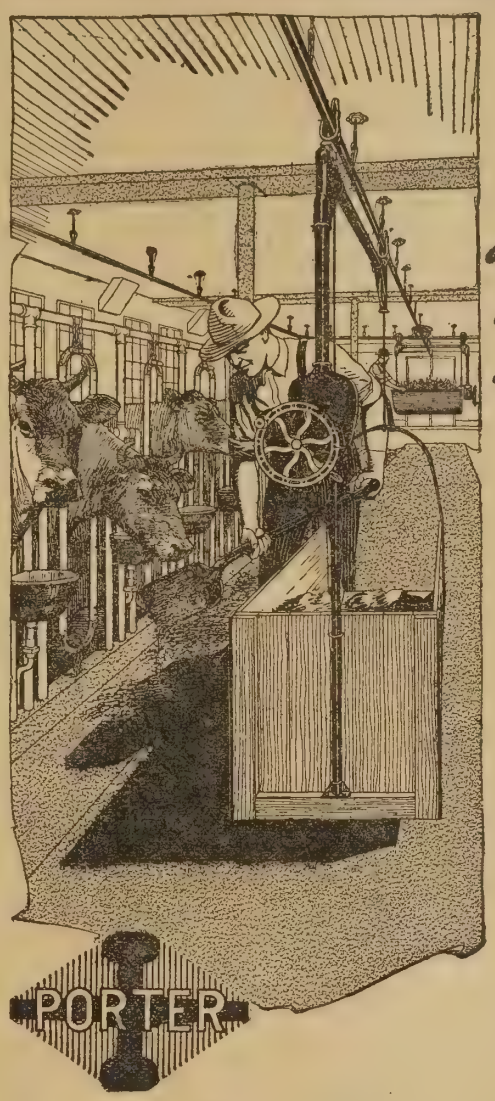
Some concerns that usually make very fine part skims at this season are not now making a box. They state that casein at 12@12½ cents per pound pays better and factories that own the equipment are now making the casein.

Production of cheese in the western part of the state is very light this year. The regular factories are running lighter and the milk stations that produced cheese heavily a year ago, are making practically nothing.

Big Order from Germany:—A contract for 125,000 cases of condensed milk, of 48 cans, each weighing 14 ounces, has been received by the Dairymen's League of New York from Germany. The local plant of the league in Auburn has started to fill this big order. Other co-operative plants of the state will also work on the contract. The order from Germany is the first contract entered into for American products since the war ended and was effected through the American Relief Association. The Auburn plant has been making powdered milk chiefly and the foreign order has amazed and interested hundreds of farmers who have shares in the co-operative association. It was promised them that this industry would be one of the biggest possible in the dairy line and present developments prove that it is rapidly becoming a far bigger thing than the men who backed the movement a year ago ever dreamed of.

New York. E. M. L. BLANCHER.

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products are built to ***use.*** They're as common as your old corn planter—and as practical.

¶ But if you are one of those business farmers who are dairying for profit, if you buy your barn equipment for utility, as you do your farm implements, you'll like the Porter line. It includes every product you'll need to make your barn modern, convenient and profitable, and to keep yourself and your workmen contented.

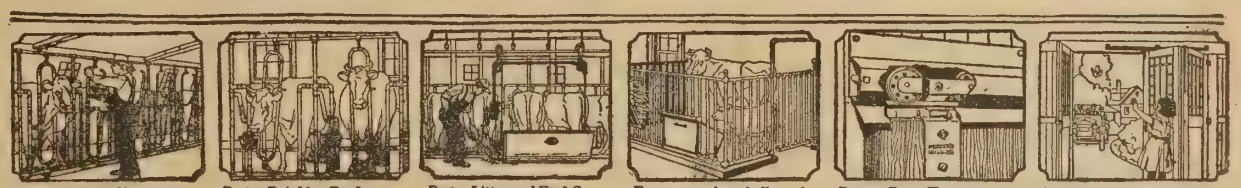
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25	$1.75	500	$21.00
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New York Butter Market

NEW YORK CITY, JULY 27:—The 44,392 casks of Danish butter and 10,854 casks of Holland butter which were unloaded last week have had a marked effect on the butter market during the past week and undoubtedly the influence of the foreign butter will be felt for some days yet. While large quantities of the butter were carted directly from the ocean freighters to storage warehouses and while several thousand of the casks were shipped to adjacent cities, much of the butter is being used by local receivers to supply current demand. As the Danish butter is selling at 54 @55½c, and the Holland butter at a yet lower price it has worked a hardship on domestic butter. At the present time, the market is passing through a slump such as has not been seen before this season. While there has been no great decline in price, there is very little trading and receivers are finding it difficult to finance their businesses as much butter is being received, for which remittance has to be made promptly, and they have found it necessary to place large quantities of their butter in warehouses to make room for the incoming stocks. Banks are curtailing their loans, even to the houses with large financial backing, for the simple reason that money is not plentiful. Receivers have not seen a similar condition for many years.

There has been a slight shrinkage in receipts during the past week or ten days, which, of course, is seasonal. However, reports from the regions of greatest butter production indicate that production will keep up longer than usual this year as the summer has not been hot and there has been a liberal supply of rain in practically all sections of the country. Many receivers are viewing the conditions which prevail at present with considerable alarm as they feel that there will probably be a period of marked depression in the market during the month of August. Their process of reasoning is this: Production will continue at a higher level than usual during August. Speculators will cease operating within a few days, as they prefer the June and July make of butter to that of August for storage purposes. If the speculator ceases to be a factor in absorbing the butter that is now arriving there is bound to be an accumulation of butter in stores in August with a resulting decline in prices. Then, too, local demand will be low as a greater number of city dwellers are leaving the city this year than has been known for some seasons. That condition will continue throughout August, which must have a deleterious effect on the market. The unsettled question at present is: Should the receiver at present force the sale of the butter which he has on hand?

Last week opened with an advance of prices and the market was fairly active. On Monday, the foreign butter was beginning to arrive on the market but it was felt that it would have no permanent effect on the market and both receivers and buyers did not look for a decline in quotations. However, by Wednesday a weakness developed and on Thursday the price fell ½c. That was followed by a similar decline on Friday. While the tone of the market was unsettled on Saturday and Monday of this week there was no change in quotation, but the close student of the market suspected that another decline was imminent as the market was very inactive. A further decline of ½c followed today and there is practically no activity and the market can be said to be very weak. Receivers are scurrying about to find funds with which to finance their holdings so that it will not be necessary to force sales which would have a tendency to ruin the morale of the market. The situation can not be said to be at all satisfactory. Established quotations are: Extras (92 score), 55¼@55½c; higher scoring than extras (93 score or higher), 55¾@56½c; firsts (88—91 score), 52@55c; and seconds (83—87 score, 49@51c.

W. B. LIVERANCE.

Jersey Cattle Notes

For week ending July 16:

Number of animals registered: Bulls, 281; cows, 710; total, 991. Numbers of transfers recorded: Bulls, 303; cows, 1,240; total, 1,543.

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Have you a car—or a horse and buggy?

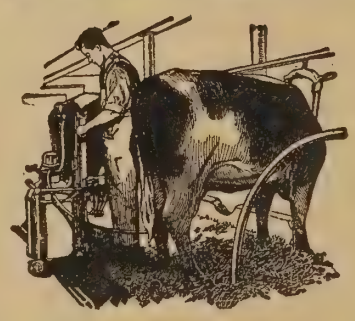
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224F

Research Work of Dairy Division

(Continued from first page.)

udder and other parts of the lacteal system.

There is no doubt of the fundamental character and far reaching value to the industry of this work which Professor Meigs is carrying on. In the estimation of the writer it bids fair to rank beside the pioneer work of Professor Henry and others, and the more recent work of Dr. C. V. McCollum and associates in the studies in animal and human nutrition, for there is no doubt that an intimate relationship exists between the value of the various proteins in a dairy ration, and the value of similar proteins in the human ration.

In addition to this work, there are extensive breeding experiments in progress at Beltsville. A project now in the fourth year, and planned to cover many years longer, is designed to test out the results of line breeding, and of cross breeding. This project has passed beyond the capacity of the Beltsville farm, and several colleges and experiment stations are now co-operating, the Beltsville farm furnishing the bulls, some of the cows, and tabulating all records. Another breeding experiment is going on, closely related to this one, to develop, if possible, a strain which will positively transmit proven production capacity; that is, eliminate the "throw backs".

Reference was made at the beginning to other projects of great importance. Brief mention can be made of the development of a Swiss cheese industry in this country, now past the experimental stage, and in working order in several states. Another project subject even yet to a vast amount of discouragement and ridicule is surely winning out by sheer merit—the utilization of skimmilk. This started as a war-time conservation project, when it was found what a vast waste of skimmilk took place in the nation as a whole. Millions of pounds, it was stated, actually went to waste, while other millions were fed to animals, for which there was other available food, while this most excellent food was needed by starving humanity. So, in spite of ridicule, this work was started and is today one of the big projects of the Dairy Division. The manufacture of cottage cheese in the butter factories, using specialists to inaugurate the work, is the method used, and the whole project was first of all worked out to an absolute success in the Department creamery and cheese factory plant at Grove City, Pa., which makes thousands of pounds of cottage cheese which is marketed in Pittsburg and elsewhere. Supplementing the work on manufacture, came a big public campaign for the use of this wholesome and most valuable food product. It is today wherever it can be bought in an economical package, according to Professor C. W. Larson, dairy expert of the Division, one of the best and most nutritious foods within reach of the American public.

Other phases of the skimmilk conservation include the study of the manufacture here of the Italian cheeses, the manufacture of an albumen cheese, and the recovery of the albumen as a distinct and valuable and palatable food product. This last project has gone through to the point where a method has been perfected and patented to prepare a dried albumen. The development of the whey butter and the sugar of milk industries are too well known to need comment here.

I do not think it is amiss to state here that the total government appropriation available for the Professor Meigs' work on the physiology of milk secretion and nutrition of dairy cows is only $8,000 a year, and that from year to year only. Dr. C. W. Larson, in discussing this, points out that this is the equivalent of a corporation with two billion dollars invested in machinery upon which its entire output was dependent, spending only eight thousand dollars in the study of its machinery and promoting efficiency in production. This is a good comparison. The necessities in the way of supplies and material, to say nothing of the personnel, are so easily understood that it seems incredible that the work can be done at all within this appropriation. In a similar, although perhaps less pointed, way, this is true of all the work in progress.

This brief summary of what is in progress in these lines is, in a way, an anticipation of definite and complete reports which will be issued soon and continued from time to time. My purpose will be fully carried out if dairymen generally will become interested in this work, express their interest to the officials in charge, get in shape to receive and profit by the results which will be announced, and then back their interest and their approval by such definite expressions as will lead to adequate support of the worthy undertakings of this branch of the Department work which is clearly and wholely in the interest of the owners, breeders, and milkers of dairy animals.

Butter and Cheese at the National Dairy Show

The new class made for storage butter at this year's National Dairy Show has, judged by the entries made, received a splendid start—the indications being that the class will grow into the greatest favor and enjoy the largest increase of any of the butter classes next year, taken from the expressed regrets of those who delayed in making their entries this year.

The butter judges for the 1920 National Dairy Show are Mr. O. A. Storvick of Gude Bros. Kiefer Co., New York City, and Mr. C. W. Fryhofer of the Bureau of Markets in New York.

The butter entries close October 2nd, and the butter must be on hand at that time, as well as the entry form properly filled out. There is great delay each year and consequent mishaps to entries because the buttermakers do not follow the rules and give the matter of entry and shipment proper attention.

The cheese judges are: For Foreign cheese, Mr. Fred Marty of Monroe, Wis.; for American cheese, Mr. E. L. Aderhold of Neenah, Wis., and Professor W. W. Fisk of Cornell.

The cheese entries close at the same time as the butter—October 2nd, and there is promised a very large and interesting competition in cheese at the next show.—Publicity Department, National Dairy Association.

It is never too late to learn—to drink milk.



DUTCHESS, A PURE-BRED JERSEY OWNED BY HARRY WHITING, WEST VIRGINIA

This cow leads in the testing associations in that state with a month's production of 1,500 lbs. milk containing 84 lbs. fat.

REPUBLIC TRUCKS



Republic policy of Service to the Owner is founded on the conviction that Service is the truck owner's most vital requirement. Two thousand Service Stations cover the country, backed by seven National Parts Depots, making Republic Service definite, and assuring Republic owners everywhere uninterrupted performance.

Capacities: 1, 1½, 2½, 3½ Tons

Republic Truck Sales Corporation, 933 Michigan Ave., Alma, Michigan

HELP WANTED

Wanted—Experienced herdsman, married, for herd of forty Holsteins. Must know calf rearing and be able to get results. Modern James equipment, running water, electric power, Sharples Milker. Cream sold. Residence seven rooms on small, beautiful lake. One mile to city. Salary $100.00 per month with free house, electric lights, running water and furnace heat. Must board two or three men greater part of year, proper allowance made for same. A good place to make good. Our present herdsman receives promotion. Answer fully as to age, experience, etc. FLORENCE FARM, Florence, Wisconsin. 3-2

Testers Wanted—Experienced men for cow testing association work. Can pay as high as $125 per month and expenses. Write C. S. RHODE, University of Illinois, Urbana, Illinois. 3*

Wanted—Man to drive wholesale milk truck from farm to Minneapolis, do milkhouse work and help to milk. Don't apply unless experienced. Seventy-five dollars per month. J. C. CAMPBELL, Hopkins, Minn.

Wanted—Two single men, one for milk route and one for barn and milk house work. No cigarettes. Our equipment is modern and complete throughout, including litter carrier, drinking cups, milking machines, etc. Willing to pay good wages to right man. State wages expected and give references in first letter. LONE TREE DAIRY, Sidney, Mont.

Wanted—Reliable man who can produce results to take charge of registered Jersey herd. Honest wages and bonus. BROOKE STONER, Hanover, Pa.

Help Wanted—Reliable married man without children to work on small farm. One who can milk. Wife to do general housework. Good wages and entire maintenance. MORGAN HEIGHTS SANITARIUM, Marquette, Michigan. 3-3

Experienced herdsman and feeder at once for one of the best Guernsey herds in Wisconsin. Must be experienced in feeding for high records and able to treat common ailments of dairy cattle. Familiarity with Guernseys desired, but not necessary. Single man, twenty-seven or older preferred. State age, nationality, religion, wages expected, and full account of experience in first letter. H. L. STOUT, McCormick Bldg., Chicago. 3-2

Wanted—A first class man for general farm work about Sept. 1st. Excellent wages to right man. Nice six-room house, garden, etc. GEORGE CURTISS, Stockton, Ill. 3-2

Wanted—Good dry hand milker, barn work only. Herd pure-bred Guernseys, doing testing. Address F.W. DUBOC, Herdsman, Fairydale Farm, Pawling, N. Y. 3-2

(Continued on page 91.)

Milk Inspectors Meet

The ninth annual convention of the International Association of Dairy and Milk Inspectors will be held in Chicago during the period of the National Dairy Show, October 11, 12, and 13. Morning, afternoon, and evening sessions will be held. Good educational matter regarding the supervision and control of milk supplies will be heard.

IVAN C. WELD, Secretary.

A woodlot without a good stand of young trees coming on to take the place of the old ones is like a family without any children. What is going to become of it?

DAIRY MARKETS

CHICAGO, July 29—Butter—Creamery, extras, 56c; standards, 53c; dairy, firsts, 48@52c; seconds, 42@47c.

Eggs—Ordinary, 40@41c; firsts, 43¼@44½.

Cheese—Twins, 22⅝c; Young Americas, 23¾c.

MILWAUKEE, July 29—Eggs—Fresh, current receipts, 44@45c; recandled for city trade, 46@48c; checks, 29@30c; dirties, 31@32c.

Butter—Creamery, tubs, 56c; prints, 57c; extra firsts, 54@55c; No. 1 packing stock, 38c; No. 2, 20@30c.

Cheese—Twins, 23@23½c; Daisies, 24@24½c; Longhorns, 25@25½c; Young Americas, 25@25½c; fancy Brick, 27@28c; Limburger, new, 1 lb., 31c; Limburger, new, 2 lbs., 30c.

NEW YORK, July 29—Cheese—Weak; state milk, common to specials, 20@28c; skims, common to specials, 5@18½c.

Butter—Dull; lower; receipts, 10,726 pkgs.; creamery, extras, 55½@56c; state dairy, tubs, 45@54½c; imitation creamery, prints, nominal.

Eggs—Firm; receipts, 18,317 cases; nearby white fancy, 68@70c; nearby mixed fancy, 48@62c; fresh firsts, 48@55c; Pacific coast, 50@70c.

Public Sale

MONDAY

AUG. 23, 1920

We are offering at public sale our entire herd of 51 head pure-bred and high grade Guernsey and Holstein cattle mostly to freshen for winter milk.

We will also sell at auction on the same day our 160-acre dairy farm located ½ mile from city limits of a growing city. Farm equipped with two residences, 2 barns, one a modern dairy barn, corn crib and hog house. Running water from 3 permanent springs. Corn in field, hay in barn and full tool equipment.

Whitewater Creamery Co.
Connersville, Ind.

Ernella Farm

OFFERS

17 - Females - 17

Six mature cows, 2 to 6 years old, fresh and bred to a 37.14-lb. son of King Segis Champion and a 27-lb. son of King Pontiac Hengerveld Fayne, the $100,000 bull recently purchased by Cold Stream Farms. Eleven yearling heifers, well bred, well grown and nicely marked.

Herd under State and Federal supervision. Bargain prices.

E. S. RACE, - BELVIDERE, N. J.

Registered Guernsey Bull Calf

Born 12-14-19. Dark fawn, white points, solid head. Fine type. Sire, King Masher 5th 18361 A. R. Dam, Glenwood Girl of Springfield 2d 42759 A. R. with 12,978.4 milk, 662.25 fat at 3½ years. Price $250. Write for pedigree.

Broad Acres, Springfield Center, N. Y

Will Sell at Auction

August 17, 1920

My Entire Herd of 36 Head of Holsteins

Fairview Dairy, Pittsburg, Kansas

OKLAHOMA BULL CALVES

from 4 to 16 months of age, well marked, straight and guaranteed right in every way. Several sired by a 32-lb. son of "Champion Echo Sylvia Pontiac" from Ormsby dams. Prices reasonable. Photo and pedigrees on application.
BOSTWICK & SON, Ardmore, Oklahoma.



protect your cows against the usual run down physical condition due to the excessive heat and short pasturage—a condition that always results in a marked falling off in milk production.

You can't afford to let your cows run down now. If you do, your Fall and Winter milk production will be curtailed.

The Missouri Agricultural Experiment Station in circular No. 44 says: "When hot weather and short pastures come the milk flow drops one-half to two-thirds, and the cows are almost dry at the beginning of winter. It is almost impossible to restore the flow of milk to the original amount after it is once allowed to run down from lack of feed. To make large returns from the cow a large yearly production must be had, and to do this the flow of milk must be kept up ten or eleven months in the year.

SCHUMACHER FEED AND BIG "Q" DAIRY RATION

fed regularly when cows are on pasture, increasing the amount as the pasture gets shorter, will keep your cows up to normal production right through the hot Summer months. These ideal feeds will also supply your cows with added vitality to withstand the withering heat of Summer and bring them up to the Fall and Winter season physically fit to give you maximum production. Write for our interesting dairy folder, "LONG TIME MILK PRODUCTION AND HOW TO GET IT." It's FREE.

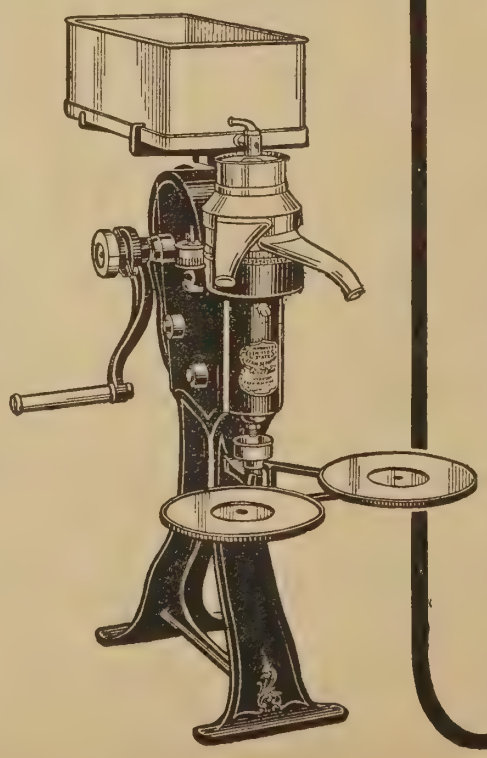
The Quaker Oats Company
Address, Chicago, U. S. A.

Belle Alto Farms Accredited Herd of 80 Guernseys
For Sale:—Grandsons of King of the May 9001 and out of A. R. dams. One bull calf, price $150 and three ready for service, $250 and $300. An opportunity for the best kind of a foundation. BELLE ALTO FARMS,
M. H. McCallum, Mgr., Wernersville, Penn.

Wanted To Buy Jerseys

A few bred heifers or young cows. Tuberculin tested and subject to sixty-day retest. State particulars and prices in first letter.
White Acres Farm, Marshall, Minn.

UNITED STATES CREAM SEPARATOR
WITH PERFECTED DISC BOWL



Perfection—

Is it too much to expect?

A machine may be said to have reached perfection when, through mechanical and engineering excellence, it renders a degree of service in money- and labor-saving never before attained.

Years ago, the United States Cream Separator reached the peak of perfection as a money saver, by winning in open competition the world's record for close separation—a record that still stands.

The perfecting of the United States Disc Bowl is the last big achievement in cream separator building. With this notable refinement, the labor-saving features of the United States challenge and welcome all comparisons.

Those who know the ease of operation, the simplicity of cleaning, say the United States represents perfection in the most important detail of milk handling.

Write for literature today—but be sure to have the United States dealer near you show the machine itself.

Vermont Farm Machine Corporation
Bellows Falls, Vt. Chicago, Ill.
Salt Lake City Portland, Ore. Oakland, Cal.

Tri-county Holstein Club

About 125 people enjoyed the summer picnic of the Tri-County Holstein Club, July 22nd at Bluffton, Ohio. The meeting was held in a beautiful little grove on the farm of Wilbert Schumacher, the secretary of the local calf club. The excellent herd of Mr. Schumacher's was inspected by the party and it was the general opinion that he still has several more in his herd as good or better than the two he sold recently in the Ohio State Sale for a total of $1,210.

After the bounteous picnic dinner the meeting was called to order by President Chas. E. Jameson, who called upon Professor W. H. Palmer, Boys' and Girls' Club leader for Ohio. Professor Palmer in a clear, concise way outlined the method of procedure for organizing a pure-bred Holstein calf club and its advantages. It resulted a little later in the forming of such a club—the calves to be six to nine months old, good individuals with just as much breeding as it is possible to get.

Dr. H. B. Gooding, Tiffin, Ohio, President of the Ohio Holstein Association, gave a short talk emphasizing co-operation among the breeders of Ohio and the importance of keeping the boys and girls on the farm.

Howard Barker, Ohio's Field Secretary, outlined the plans and projects of the Ohio Holstein Association. "In order for the Ohio Holstein Association to be a success," said Secretary Barker, "it is necessary that every county have a well organized county club, and it is the purpose of our state organization to do whatever we can to help organize county clubs and promote them."

Professor R. B. Stoltz in charge of the dairy manufactures at Ohio State University talked to the ladies on "Cheesemaking on the Farm" and gave to them some very interesting and valuable information.

This club is a live one and Holstein breeders of Ohio as well as the United States will continue to hear from them. H. C. BARKER.

California Milk Consumers

HOARD'S DAIRYMAN:—The trouble between California Federation of Housewives' Leagues and milk distributors over prices was no sooner settled this spring than more trouble began brewing. Now it is announced that on August 1st the distributors will inaugurate an advance of two cents a quart on the retail price of milk; and the housewives' associations are not only taking steps to fight any such increase but are demanding that the present price of 15 cents be reduced to 14 cents. The California Federation maintains that a sufficient margin of profit exists at present to cover any increase which may result to the producer in the higher costs of feed and labor.

At present the members of the joint milk committee, which includes Oakland, Berkeley, San Leandro, and San Francisco, are busy framing a program to fight any proposed advance in the price of milk to the consumer. The Richmond Housewives' League has also gone on record as determined to oppose any increase. The Oakland Housewives' League has already addressed a communication to the Producers' and Distributors' Association urging that milk be offered at 14 cents a quart in all the bay cities instead of the present price of 15 cents. This is said to be just a forerunner of what the producers and distributors may expect if they attempt to raise the present price to 17 cents on August 1st, as threatened.

Definite action has also been taken by the bay cities toward ascertaining the cost of milk in order that they may intelligently pass on the proposed request for an advance of two cents per quart. A fund is being raised for employing a certified accountant who is to examine the books of East Bay milk distributors with the object of securing figures regarding cost of feed, labor, overhead charges, etc., in order to arrive at a basis for setting the retail price of milk. Louis Bartlett, mayor of Berkeley, the originator of the plan, says:

"The threatened rise in the price of milk will most likely be put into effect within a short time. We have no correct figures dealing with the cost of distributing milk and therefore we do not know whether the increase is just or not. It will cost us $500 a month to hire a certified accountant to find out. Berkeley will pay $150, Oakland $175, and Alameda $75 toward this fund for a period of six months."

Charles E. Hewes, city manager of Alameda, intimates that when this data has been secured it will not only enable them to judge as to the merits of any proposed increase in the price of milk, but will also furnish them a basis on which to lay plans for taking over the distribution of milk in the three bay cities.

As an off-shoot of this investigation the housewives have discovered that one of the possible reasons for the increasing cost of milk is the loss of bottles through carelessness on the part of customers who fail to return them. A campaign has been started to induce milk users to be more particular about returning all milk bottles. It was also pointed out that in many cases the drivers are partly responsible for being lax in requiring the return of bottles. It was discovered that there is a state law forbidding any one throwing milk bottles in garbage cans and cases were cited where Los Angeles residents were prosecuted under this law. With this movement, the producers' and distributors' associations are heartily in accord.

Oakland, Cal. L. L. D.



Help Is Scarce—
Will Your Silo Stand Empty?

SILO filling time is here. How are you going to get your ensilage harvested and put in? Take a look at that cornfield. Size up the other harvesting to be done right now, and the help you have. What are you going to do?

THE RONNING ENSILAGE HARVESTER is the answer. If you act at once, it can solve your silo-filling problem.

Dairy farmers all over the United States ordered RONNING months ago. You would certainly have placed your order if you had known about the RONNING earlier. Even now we will try to take care of you in time for harvest if you place your order immediately.

Harvest Ensilage at Half the Cost

In one operation the RONNING completely harvests your ensilage from reaping the standing corn to loading the cut ensilage into the wagon-box. Three men and three boys with a RONNING can put up as much ensilage in one day as ten to twelve men can the old back-breaking way. From standing corn to cut ensilage packed away in the silo in thirty minutes—the RONNING is making this possible on many farms. It has a capacity of 70 to 100 tons of ensilage a day. It cuts the cost for labor, horses and time in half.

Write or Wire At Once

With silo filling time upon you, you can't afford to delay. Every day you wait makes it harder. There is a distributor near you who may be able to ship you a RONNING in time for this season. We will put you in touch with him and send complete information. Write or wire us at once. There is no time to lose.

American Harvester Company

1738 Central Avenue **Minneapolis, Minnesota**

RONNING ENSILAGE HARVESTER



Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

The Season of Fairs

The time will soon be here again when everyone spends a few days at the county fair. It is a great place, isn't it, boys and girls? Lots of fun and so many things of interest to see. But don't forget the fair will be just about what the people of the county make it and you happen to be among the people of your county. If everyone is interested, then there is bound to be a good fair. I don't mean just interested to go and see what the other fellow has done but just interested enough to do something for ourselves. You want to learn about new things, then you should be willing to give the other fellow advantage of seeing and learning about the things you do. That is one of the best ways to learn.

Now, there is only one way to do this at a fair and that is to exhibit or show the results of some of your best work in the department which will be open for your entries in the shows and fairs this fall. This should be one of the things uppermost in your minds from now on. We don't want you to miss it and that is why we are telling you about it now. Surely, every club boy and girl expects to exhibit. But it doesn't make any difference whether you belong to a club or not, you can exhibit something anyway. But think about it and lay your plans carefully for making the best exhibit you have ever made. Even if you have already won first money and blue ribbons, there is a chance for you to improve, for to be sure no one has yet reached his ideal in the samples he has exhibited before.

No boy or girl need sit back and say, "I wish I had something to exhibit" for there are so many things to show at a fair. Farm products and stock of all kinds are always included among the exhibits and to be sure, there is something on your farm or in your garden which would make an addition to any junior department of the show. Those who have already exhibited know something about how to put up exhibits. But there are always those who are entering for the first time and it is for these boys and girls that this article is especially written.

The Exhibit in Corn

The corn club boys and girls are bound to exhibit in this class and even if you are not a corn club member, perhaps you can exhibit from dad's stock of corn. I am sure he will let you and he will do all he can to make your exhibit the best. Exhibiting corn is easy but there are a few fundamental things which we must look after when we select ears for the show. The rules for corn exhibits usually say there shall be ten ears in a sample. Now one of the most important things about a sample of corn is to have it represent some standard variety such as Golden Glow, Silver King, Early Yellow Dent, Murdock, Clark's Yellow Dent, Wisconsin No. 25, or perhaps Smut Nose Flint. When the judge goes over the samples he has certain things in mind and these are the things which you should have in mind when you make up your sample.

1. It is of prime importance that the ten ears which you exhibit should be sound and mature.

2. That they are all alike as near as possible so that the sample will be uniform.

3. The ears should be pure. That is, they should show no mixture.

Here is a good way to begin. Select a good type ear for the variety you are exhibiting. One that is good size but not oversized, good shape, straight rows, well formed kernels, no mixture and the tip covered as good as you can get it. This will be the ear that should guide you in the selection of the other nine. So look out what you pick for the first ear because this is the ideal and the others will be matched up to this as nearly as possible. If you do this you are bound to have a nice uniform sample. Nowadays, boy and girl corn growers know so much about corn that they are fully aware that it is rather difficult to keep corn pure when there is more than one variety being grown in the neighborhood. Corn mixes so freely. We must not take it for granted that a variety of corn will keep itself pure because the contrary is quite the case. You can usually locate ears of corn that have mixed kernels.



AN ATTRACTIVE GRAIN AND VEGETABLE DISPLAY

If it is a white variety and it has crossed with yellow corn, then the kernels are bound to show some signs of yellow if they are mixed. This is the way to locate them. Hold the ear in good light and look down between the rows of kernels and if you are careful you will be able to discover any kernels which are mixed. On the other hand, if it is yellow corn you are exhibiting and it is mixed with white corn, the tips of the kernels will look quite white. In either case these ears should not be taken because the judge will say, "this fellow has fallen down on a very important point." Corn for shows must be pure. So look over the ten ears carefully in this respect. Sometimes it is a big temptation when one finds an ear that is very good in other respects but that shows a little mixture, to pick out the mixed kernels. If you do that the judge will be suspicious at once. The kernels should all be present on the ear, and then it would hardly be fair to make up this kind of a sample and that is one thing that we must pledge ourselves to do when we expect to exhibit. We should play square.

But there is such a thing as dressing up a sample of corn before showing it, just as one dresses up and tries to make himself look his very best when he is going to have his picture taken. All of the husks and silk should be very carefully removed so that the ears look clean. Don't leave any pieces of husks sticking between the rows, and the ears should be clean too. That is, there should be no dirt left on them. The shank of the ears should be cut off close to the butts. These are some of the things that I mean by dressing up the sample.

There is usually a class for exhibiting single ears. If you enter this class be sure that you take the most stylish looking ear that you can find, one that is just as near perfect as you can get it. Now, perfection in an ear of corn means some of these things. An ear that comes near to being perfect, first of all, must be well prepared and must be good size for the variety. The kernels should be uniform, the rows straight, the tip and butt covered, the color good and bright, and there should be no mixture. It never pays to select an ear for size alone as some people do. I have known boys and girls to be very disappointed because they didn't win the prize just because they had the largest ear in the exhibit. Size is only one thing and there are others which are much more important. It is not a difficult matter to make up good samples of corn and so we believe that the corn feature of junior exhibits should be well filled.

Exhibiting Pedigree Grains

Usually in the class of pedigree grains the boys and girls are not very well represented. This isn't as it should be, for it is not difficult to make a good sample of grain for show. All you need is grain that is good quality to start with and then a little dressing up will fit it nicely for the show. Oftentimes there is nothing set in the rules of the show as to how much grain shall be in a show sample. If you are in doubt, never exhibit less than a peck. This will show off much better than a quart or a half peck and it makes a much better impression on the judge. Quality is the one thing to look out for. Plump kernels of good quality and color, clean and free from weed seeds, other kinds of grain, chaff, and dirt are the things to look out for. The first thing to do in preparing a sample of grain then is to see that you have good plump grain. The second thing to do is to clean it up thoroughly so that there is nothing present but the grain itself. You cannot be too careful about this. The judge will not stand for weed seeds in a show sample, nor does he like to see chaff and dirt and pieces of sticks present. It might be a good plan after you have cleaned it up as thoroughly as possible to spread the peck of grain out on the table or on a clean floor and look it over carefully so that you can remove any weed seeds which have not been taken out with a fanning mill.

But this is only a part of dressing up the sample. The container in which you exhibit will either add to or detract from the appearance of the sample. Grain samples are best exhibited in nice, clean, white sacks, grain pans, or neat boxes. I really believe that a judge is liable to be influenced by the container in which a sample is exhibited. He is very liable to hurriedly pass over a sample exhibited in a dirty sack no matter how good the grain is. In exhibits of any kind neatness should always be one of our mottos.

Perhaps you have planned on exhibiting some grain in the sheaf. That is a mighty fine idea because sheaf samples of grain when properly put up are very pretty to look at. Most shows nowadays offer prizes on sheaf samples. There are just a few things to know in order to make a good looking sheaf sample of grain. The straw should be left full size and should be stripped clean of the leaves and the heads should be arranged in an attractive way. This does not mean that they should be arranged in any peculiar design. A sheaf sample which is about three or four inches in diameter just beneath the head is large enough. Some people make a mistake by making the samples look too clumsy. Then there is another important point and that is the way the sheaf sample is tied. I have seen sheaf samples of grain that were very good in all respects excepting the matter of tying. Binder twine and white cord should not be used. It is best to use narrow ribbon, either red or yellow in color, or narrow tape of these colors will do. The sample should be tied just as many times as is necessary to make it firm. Usually three or four times is enough—once beneath the heads, once or twice near the middle and again near the butt. The ties should be tight and there should be no ends left on the ribbon or tape. Consequently it is best to tie in a hard knot instead of a bow and cut off the ends of the ribbon.

When a judge awards the prizes and ribbons to sheaf samples he does so upon these points. Quality of grain, attractiveness of the sheaf, and the color of the straw.

Garden Products

Many juniors who have nothing else to exhibit can usually find something in the home garden that would be worth while preparing and, because so many of us are interested in gardens, this class in the show should be well filled. An attractive vegetable display is interesting to everybody and there are some things to know in order to make a garden product exhibit look its best. I am sure there is big opportunity for improvement in this class.

First of all, no matter what the ex-

STATE FAIR
MILWAUKEE
Aug. 30, 31; Sept. 1, 2, 3, 4
Six Days; Six Nights

50 CENTS DAY OR NIGHT
Automobiles Free

SPECIAL RATES ALL RAILWAYS

BEST IN THE LAND
of Cattle, Horses, Sheep, Swine, Poultry; Dairy, Agricultural, Horticultural, Apiary Products; Women's Work, School Work, and THE YEAR'S ROUND-UP of Badger State Boys' and Girls' Club Activities.

EVERY DAY!
ETHEL DARE
GIRL WITH A SPARTAN HEART, Changes Planes 4,000 Feet From Earth!
—ALSO—
MARVEL OF ALL AGES, THE DAREDEVIL SUPREME
LOCKLEAR
in Plane Changes.
(Watch for Dates)

SIX NIGHTS!
WORLD'S GREATEST SHOW
Presenting the
$20,000 Fireworks Spectacle
"SIEGE OF THE DARDANELLES"
500-Foot Stage, 1,000 People, and 25 STAR CIRCUS AND VAUDEVILLE ACTS on two mammoth stages.

MUSIC EVERYWHERE!
Famous Million Dollar Band, with Six Soloists; Eight Other Bands and Orchestras Day and Night.

AUTOMOBILE SHOW and "TRUCK TOWN"
150,000 square feet of exhibits and demonstrations, including all 1921 models.

HARNESS RACING!
MONDAY, WEDNESDAY, THURSDAY, FRIDAY—First Race at 1 P. M.

AUTO RACING!
TUESDAY AND SATURDAY at 2 P. M.—America's and Europe's greatest dirt track drivers and cars.

HORSE SHOW!
STOCK PAVILION
MONDAY, TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY NIGHTS, at 8 o'clock.

50 ACRES OF TRACTORS AND OTHER FARM MACHINERY.

SPECIAL EXHIBITS
U. S. Government, State Marketing, Wisconsin Department of Agriculture, Household, New Era and a score of other added exhibits.

SPECIAL SHOWS
THE C. T. KENNEDY 10-ACRE EXPOSITION.

THE MUDLESS AND DUSTLESS FAIR.
MONDAY, AUG. 30—All Wisconsin School Children Free.

THE WISCONSIN STATE FAIR "Educates, Inspires, Entertains on Biggest Possible Scale."

Learn to be an Auctioneer

Taught by the practical method. By our plan you study at home and receive a part of the commission while learning. Enroll now and be ready for the fall business. Write for our free catalog. Address
Kissling's Auction School of America, Indianapolis, Ind., Dept. F, William O. Kissling, President.

hibit is, quality must never be sacrificed for quantity. Over-sized, coarse vegetables may be interesting to look at but it is seldom a judge awards the prize for size and coarseness, nor does he award prizes for freak-shaped vegetables. It is a great temptation to exhibit the over-sized carrot or cabbage but as a usual thing these over-sized individuals do not have the quality which will win the money. Nor should a few large individuals be exhibited with a number of smaller ones to make up the sample, but look out for quality first of all.

Then the samples should be sound and marketable. Disease spots will count against the sample and here is an impotrant point. Vegetables such as roots like carrots, beets, turnips, and potatoes should be clean. This doesn't mean that they should be scrubbed with water before they are shown. It is rather bad practice to scrub these root vegetables with water in preparing them. It is much better to use a soft brush which will remove all of the dirt. This will usually clean them up sufficiently. It is very seldom that water needs to be used. On the other hand, if the dirt is difficult to remove with a dry brush, then rather than exhibit a dirty sample I would say, wash them very carefully so as not to injure the skins. This is especially true, in speaking of potatoes. Root crops show soft and natural color much better when the dirt has been merely removed with a dry brush. Keep the sample just as uniform as possible, the same as you would in making up a ten-ear sample of corn.

A Matter of Education

Every show should have its educational advantages and hence should be instructive to the visitors. If you put up the right kind of an exhibit it may inspire some other boy or girl to also exhibit some other time. If your samples are good it may be the best advertisement you can get for the sale of your product. Remember, we are not showing just for the fun of trying for a prize. There are some other things to keep in mind as well and I think an exhibitor who exhibits partly to educate has the right idea. With this in mind, all the samples which are exhibited should carry a neat label telling just what each is. For the other fellow is very liable not to know what he is looking at unless it is labeled. And it is well to make your own labels too. If you refer it to someone else, they are not liable to be well made. Labels are best made on small white cards. They should be plainly written or printed and only the necessary words to describe the exhibit or tell what it is should be used. Judges notice all of these little things which add to the appearance of a sample, so let's be careful in this matter as well.

Junior Letters

Hoard's Dairyman Juniors:—Papa and I replanted corn this morning. We haven't had any rain for about three weeks and the ground was getting very dry. If it does not rain tomorrow we are going to plant tobacco. I now have thirty-eight little ducks. My two old ducks have laid 128 eggs. I have 32 setting now. I feed the little ducks chopped onion tops and corn meal dampened and they surely like it. We have a pond on the place that is full of tadpoles. The ducks go down there and surely have a fine time.

Papa bought three little heifer calves in Washington two weeks ago. They are Holsteins which have not been registered as yet. We are feeding them on calf meal and they are growing fine.

Maryland. Alfred J. Heine.

Hoard's Dairyman Juniors:—I will tell you about my calf. Her name is Alfa. She has not been bred yet. We find it is best to wait and breed heifers when they are about 2 years old. We have about 15 acres of corn out. We had a tractor to plow for us today. We have a now corn plow; it is fine.

Wishing the juniors good luck.

Illinois. Floyd Nidey.

Hoard's Dairyman Juniors:—I am 11 years old and go to a school of six pupils.

We have 35 head of stock, calves of all, excluding four horses and two pigs. We are milking twenty-four cows of which I milk seven.

I own a calf which cost me twelve dollars. I give it five quarts of milk a day but I am cutting her down gradually to one quart.

This morning I hitched my calf, Jeff, who is named after Jefferson, to a little cart with a rope. I helped her at first to pull my brother but she started like the wind. She went around the corner and knocked the carriage and all head over heels.

If any of the juniors want to write to me my address is R. F. D. 1, Jefferson, N. Y.

Alfred E. Eisenhardt.

Hoard's Dairyman Juniors:—I am through with my work so I thought I would write. I would be very glad to become a Hoard's Dairyman junior and receive a fob, button, and creed. My father's name is Latimer Bixler, my age is 13 years and our favorite dairy breed is Guernsey.

My pigeons are doing fine. I have about 25 pairs all colors. Most of them are brown but some are red. I have 5 pairs of white ones, the rest are spotted. My father tends market and then he takes them along for me to York. I get from one to two dollars a pair for them.

My letter is getting rather long so I think I will close for this time.

Pennsylvania. Clark E. Bixler.

Hoard's Dairyman Juniors:—It is very hot here. It is now 5:00 p. m. and 82 degrees in the shade.

I have 65 Plymouth Rock chickens. I have sold my rabbits and am going to buy a Hereford calf with the money. Papa sold 10 of his cows last winter, averaging about $125 apiece. We are milking seven cows now and will be milking 14 by fall. We have 6 small calves.

Our cows are on sweet clover pasture and like it fine. We raised over $20,000 worth of seed last year.

I will close wishing the juniors good luck and write me. My address is R. F. D. 2, Stuart, Nebr. Lyman Jillson.

Hoard's Dairyman Juniors:—We are two boys of 7 and 9 years of age. Our father is a breeder of pure-bred Holstein-Friesian cattle. We have to feed the calves night and morning and we also have 10 sheep and 7 lambs which we have to watch morning and night while they are feeding. We like to take care of the sheep and calves and see how fast they grow.

Walter and Harold Rabenhorst.

Wisconsin.

Hoard's Dairyman Juniors:—It has been some time since I have written. I am fourteen years old and will be a Sophomore in Kinsman high school next term. I live on a small farm in northeastern Ohio. There are 75 acres, 35 tile drained and the remaining 40 in pasture. I have a goat whose name is Nanny. She has gray hair and is rather small for her age. I keep her merely as a pet.

I have a small truck garden. I try to keep it clean but we are having rather wet weather here and the weeds grow pretty fast. Our chickens will be out of the shell by Tuesday. They are all White Leghorns. We have 800 eggs set in two incubators. I have engaged fifteen chickens as soon as they are ready to leave the brooder. I think I will raise them and sell them this fall.

I have bought four pigs from my father. They are half Berkshire and half Chester White. I think I would like caring for them very much. I will keep account of the cost of feed, etc., and when I sell them I can tell just what my loss or gain is as the case may be. If I am successful this year I will try again.

I would like to work out some this summer but my garden and chickens and pigs will take some of my time. Besides there is considerable work at home here for me to do. I milk four cows which are all Jerseys. We also have a 12-24 three-bottom plow tractor.

Won't some of the juniors write me? I would be delighted to hear from you. My address is Kinsman, Ohio. Ector Ogilbee.

Hoard's Dairyman Juniors:—I have been hoeing corn about all this week for my father.

In your letter you asked about my setting hen. Well she hatched 11 chickens but one died.

I am going to sell my steers this fall I guess. They are growing pretty well.

In my garden I have corn, beans, potatoes, turnips, and tomatoes. My father planted two acres of sweet corn and over one acre of fodder corn. I have been hoeing in my own garden tonight.

I wish the juniors good luck.

Maine. Horace Hopkins.

Hoard's Dairyman Juniors:—I have been reading the junior department for some time and would like to join. So this is my first letter.

I am 13 years old. I have been on a farm for three years so I don't know much about it. Last year I joined the pig club and won $23. I went in again this year, too. With the money I won last year I bought a sheep which had a lamb which is quite big now.

We are putting in hay this week. On the fourth of July our corn was over the tongue of the cultivator.

My address is R. F. D. 1, Janesville, Wis.

James True.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

Some very fine Holstein calves; will ship C. O. D. subject to inspection. $30.00, we pay express. Write for full particulars. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 4*

High grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Mo. 19*

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

Holstein and Guernsey pure-bred and grades. Write me. If it is 1, 100, or 1,000 head I can please you. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Holstein and Guernsey springers and fresh cows; also high grade calves either breed, two months old, $35 each. We pay express. CLOVER VALLEY HOLSTEIN FARM, Whitewater, Wis. 21-10

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 26-4

20 high grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old. $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Buy Dodge County, Minnesota, Holsteins. Our wide acquaintance makes it possible for us to furnish Holstein cows and heifers in carload lots. We have on hand at present, milking and springing cows, also a fine lot of two-year-old heifers, everything tuberculin tested, subject to 60-day retest and guaranteed as represented. BRINGGOLD, ROUND & FAIRBANKS, West Concord, Minnesota. 26-4

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

Holstein bull, Ormsby, 2 years old. Excellent individuality and backing. $250 for quick sale. C. J. WILL, Waukesha, Wis. 2-2

For Sale—60 large Holstein heifers to be fresh September and October, 22 young cows also to freshen September and October, 15 pure-bred Holstein cows and heifers. J. A. KNORR, Blanchardville, Wis. 2-3

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

For Sale—Twelve high grade Holstein cows, some fresh, others to freshen soon. Write WALTER W. MAAS, Route 5, Merrill, Wisconsin. 3-3

High grade Holstein cows and heifers bred to registered sires, due to freshen this fall, in any number desired. J. D. BRINGGOLD & SON, West Concord, Minn. 3-2

For Sale—Registered Holsteins: 14 females, from calves to 4 years old, 7 milking. 1 bull, 2 years old, Sady Lyons Korndyke, whose 6 nearest dams average 30 lbs. in 7 days. Females of Pontiac De Kol breeding and high producers. An exceptionally fine young herd. All for $3,000.00. W. J. TODD, Newport, Wash. Co., Ohio.

Grade Holsteins—Three good cows. Two extra large heifers. Due in 4 weeks. $700.00. EDWARD BREWIN, Sullivan, Wis.

Thirty head of yearling Holstein grade heifers. Federal tested. Well bred, nicely marked, average six hundred pounds. This carload at seventy-five dollars each on board cars here and cheap. JOHN K. CORBETT, Lancaster, Pennsylvania.

STOCK FOR SALE

5 registered Holstein heifers. One from an 18-lb. yearling, one from an 18-lb. 2-year-old. Good individuals and nicely marked. $850 takes the bunch. Write for descriptions. CLARK AND RHODE, Urbana, Ill. 2-2

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

For Sale—Not culls, but our entire herd of registered Holstein cows and heifers. The large producing kind. Priced right. HERSHFELT BROTHERS, Carlyle, Illinois.

Cows for Sale—100 head of Holstein springers, to freshen from one week to three months. Will sell singly or in car lots. A. E. LEWIS, Lancaster, Wisconsin. Long distance phone 114R. 3-3

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

Notice—We can furnish a car of nice, straight registered Holsteins. Tuberculin tested and guaranteed against a 60-day retest. A. W. STRONG & SON, Vernon, N. Y. 3-2

For Sale—Ten pure-bred Holstein heifer calves all well marked from one to four months old. Eight sired by a good son of Woodcrest Sir Clyde, other two from good bulls, some from tested dams. For immediate sale of bunch $80.00 apiece. ROBERT I. BACKUS, Heuvelton, New York. 3-2

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Two pure-bred Holstein bulls ready for service sired by 40-lb. bull. Also younger calves priced cheap. CHERRY VALLEY STOCK FARM, Waukesha, Wis.

32 registered milking Shorthorn cows; 24 registered Holstein cows and large heifers; 25 high grade Holstein cows, none over 6 years; 28-lb. bulls. Priced to sell on sight. CORNUCOPIA CATTLE CO., Fort Morgan, Colo. 3-2

High grade Holsteins—40 high grade Holstein cows and heifers at prices that are right. PAUL C. SPIEGELBERG, Stratford, Wisconsin. 3-4

Registered bull 17 months old. Sire's ten nearest dams beyond his dam averaged 1,007 lbs. butter year. Dam made 696 lbs. butter in year. $200.00. Also some fine bull calves by same sire. W. J. OSBORN & SON, Oxford, Wis. 2-2

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Three registered Guernsey bulls, sired by a son of Langwater Heroine, 805.64 lbs. fat, Class D. Government accredited herd. M. M. HOLLINGSWORTH, Landenberg, Pa. 2-2

For Sale—Several registered Guernsey bulls 7 to 12 months, grandsons of Imp. Clara's Sequel and Langwater Frenchman. Dams 500 to 752 lbs. fat. See display ad page 50. Sale list. HOMER F. RUNDELL, Livingston, Wisconsin. 2*

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write us for photos, and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

For Sale—15 head of good dairy cows consisting of 8 head of high grade Guernseys, 7 Jerseys. DR. E. G. L. HARBOUR, Lawrence, Kansas. 3-3

For Sale—Four-year-old herd bull Beauty Eagle Duke of Riverdale 40151. His three nearest dams averaged 582.42 lbs. B. F. A sure breeder. Price $300 F. O. B. H. C. WINSLOW, Hillandale Guernsey Farm, Paeonian Springs, Va. 3-2

Registered Guernsey bull calves for sale. Out of A. R. dams. Sired by grandson of "Itchen May King". ANTON O. BERGE, Valders, Wis. 3-4

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

High quality grade Guernsey heifers, 4 to 10 months old. B. McADAM, Mosinee, Wis. 3-4

STOCK FOR SALE

For Sale at Farmers' Prices—Registered Jersey bulls (Golden Maid's Prince blood lines). Four months to year old. Price on application. CRYSTAL BROOK STOCK FARM, R. F. D. 5, Elgin, Illinois.

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

David W. Williams, Lake Forest, Ill., can buy you pure-bred dairy cattle of any breed. 4*

STOCK WANTED

Wanted—Pure-bred Ayrshire, Guernsey and Holstein females. Give age, breeding and price. DAVID W. WILLIAMS, Lake Forest, Illinois. 4*

Wanted—Pure-bred Holsteins on shares or trade for horses. Best references. GEO. WHITE, Kramer, N. Dak. 2-2

HORSES

For Sale—Twenty grade Percheron horses, three to seven years. Who knows of market for them? GEO. WHITE, Kramer, North Dakota. 2-2

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

For Sale—Choice big type Poland-China spring pigs. Not related. Also bred sows for fall litters. CHAS. W. O'NEILL, Bridgeport, Wis. 2-2

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

POULTRY

Eggs—From prize winning stock, bred for egg production. White Plymouth Rock, S. C. Rhode Island Reds, S. C. White Leghorns. Price very reasonable. Write for mating list. ABTS STOCK FARM, Columbus, Nebr. 10*

RABBITS

Rabbits, Pet Stock—Read The Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

FOXES

Wanted—Red Foxes; state age, sex and price. W. C. WILSON, Stephen Girard Bldg., Philadelphia, Pa. 2-6

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MACHINERY

For Sale—A Roesch temperature controller made by the G. J. Tagliabuc Mfg. Co., and a cypress tank, made of 3-inch lumber, 5x4x3 feet. The equipment was used only a few weeks to pasteurize milk in bottles, but can be used for canning, sterilizing, etc. WM. SIEDENTOPF, Miles City, Montana. 2-2

For Sale—One 1920 Empire Milking Machine, consisting of one double unit, one type B double cylinder pump and 2½ H. P. engine. This machine has been used only one week and is right in every way. First check for $295 takes this outfit. Address B. W. WILCOX, Sugar Grove, Warren Co., Pa. 1-3

For Sale—One new De Laval centrifugal milk clarifier No. 111. One new Victor No. 2 combined churn and butter worker. 60-gallon capacity. One Alaska large type copper cooler 2½ feet by 10 feet. Address BIRTCHERD DAIRY, Norfolk, Va. 1-4

Perfection Milker. Two double units all complete with pump, tank, gauge, cocks, piping for 18 cows. In excellent condition. Used 9 months. Price $295. DONALD SNYDER, Stockton, Ill.

For Sale—Eagle tractor, 16-30. Used little. Fine condition. Less than half price. J. THORN, Bristol, Wis.

For Sale—Pine Tree Milker, one double unit. Complete to connect to any single pipe line. Used only 30 days—like new. Price $90.00. C. ROBINSON, 54 Brick St., Freeport, Ill.

For Sale—One Disbrow churn size D 4, working capacity 45 to 200 lbs. In good repair and only run about six months. Reason for selling putting in larger one. First check for $60 takes it. THE WINDSOR CREAMERY, Windsor, Ill. 3-3

Three-unit Hinman Milker complete. Good as new. D. OFFRINGA, Ames, Iowa. 3-3

For Sale—Good second hand threshing outfit, cheap. 20 H. P. Simple Advance engine, rear mounted. 36x60 Rumely separator completely equipped, also water tank and drive belt. All in fine running order ready to go. We also have several other smaller rigs on which we can make immediate delivery. Write or telephone. SCHMIDT ALBRECHT CO., Watertown, Wis.

For Sale—8-16 horse power International Harvester, 4 cylinder tractor with plows and disk in good condition, 3 bottom Oliver tractor plow, used for demonstration only; 2 16-inch Rowell silo fillers new. Write R. H. LEAVITT, Beloit, Wis.

For Sale—A two-unit Hinman milking machine complete. Used four months. Have two machines, reason for selling. Price $100. O. L. JANNEY, Fairview Stock Farms, Alexandria, Ind. 3-2

For Sale—Complete B-L-K Milker. $200 if taken at once. JOHN C. MILLER, JR., 238 North Ave., Mt. Clemons, Mich.

SILOS

For Sale—Indiana stave silos, 10x20, 12x24. LUCIE KEVIL, Princeton, Ky. 24*

FARMS FOR SALE

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red, White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Hardwood cut-over land, silt loam, clay subsoil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4. NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Cortland County good farms for sale. Write GEORGE V. CLARK, 13 North Church St., Cortland, N. Y. 17-18

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

160-acre farm, highly improved, good buildings, complete, $20,000. 70-acre farm adjoining city limits, complete, $16,000. Write for other bargains. WM. ALBRECHT, JR., Wausau, Wis. 25-6

For Sale—Modern dairy farm and beautiful country home in Maryland, on state road, 117 acres, wonderful spring water, Kewanee water system, Delco lights, 2 new tile silos, extra tenant house, hot water heat, concrete horse barn, 26 concrete stanchions, new concrete calf barn, 14 box stalls, individual drinking cups, everything new and recently painted white. Immediate possession. Address GEORGE M. EVANS, Elkton, Maryland. 25-5

Clovercrest Farm for Sale—320 acres of very rich silt loam practically all under cultivation, well tiled, rotated hay and pasture land, 30 acres of alfalfa. Twelve-room, two-family house, dairy barn 36x74, barn 50x52, silo 16x50, hog house 24x42, large corn crib, hen house, granary, machine shed, power house, and milk room including milking machine. Delco light plant and water system. A fine dairy or stock farm. Must be seen to be appreciated. EARL D. OLIVER, Amboy, Minnesota. 26-4

I know of some exceptional farm bargains in New York State, small and large. Fine buildings, spring water, alfalfa land, good roads. Eighty to hundred twenty per acre. Easy terms. These are unusual bargains. Write me. BOX 256, care Hoard's Dairyman. 26*

140 acres first class, gently rolling land, fine buildings and location in Central New York State for $12,000. Part cash, balance easy. Write for full particulars. FORT & WILDER, INC., Oneida, New York. Members of the Farm Brokers' Association, Inc. 26-4

For Sale—Several improved farms and 10,000 acres cutover land, silt loam, clay subsoil; near Ladysmith, Rusk County, Wisconsin, in heart of dairy country, good roads, schools and churches; easy terms. Write for information. MANNING & HOOD, Ladysmith, Wisconsin. 26-4

Fine opportunity for dairyman—640 acres in Leavenworth County, Kansas, 34 miles from Kansas City, Mo., and 5 miles from condensery, lime stone land, fine blue grass and alfalfa; 200 acres under cultivation for silage and feed. Modern dairy barn for 80 cows, 3 silos, 170 acres now in wheat, will make 25 bushels per acre, will be put back into alfalfa. Owner will furnish land and cows for half proceeds, or will sell on payments covering a long period of years. WHITSED LAMING, Tonganoxie, Kansas. 1-4

Maryland Farm for Sale—140 acres, 20 acres timber, 30 acres meadow, balance rich level land, on macadam road, 52 acres wheat, and other crops. 10-room house, 2 sleeping porches, good outbuildings, plenty of fruit, watered by springs, and branches; fine community; 43 thousand feet of lumber and all crops. $10,500 takes all. We have many others; send for our catalogue. CAUGHY, HEARN & CO., 220 E. Lexington St., Baltimore, Md. 1-4

For Sale—Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

Choice dairy farm of 170 acres near Syracuse, New York. $24,000 equipped. M. VOORHEES, Memphis, New York. 2-5

Eighty acres rich clay loam soil, Fond du Lac County. Great corn and alfalfa land. Fully equipped. With or without personal. See with growing crops. No agent's commission. HENRY MICHELS, Fond du Lac, Wisconsin. 2-3

Colorado Farms—Excellent dairy location, 15 miles from Denver, the West's dairy Product market. We can sell from 80 to 4,000 acres irrigated, non-irrigated and pasture lands. First class improvements, including stock farm set. On Lincoln Highway, trolley line and railway. Send for Booklet L. THE ADOLPH J. ZANG INVESTMENT COMPANY, Owners, American Bank Building, Denver, Colorado. 2-2

Would you like fine farm near city markets, among western people; good soil, for cost of buildings? Write NEW YORK FARM AGENCY, Westfield, New York. 11-spl

Map of Wisconsin—Homeseekers get complete up-to-date pocket map showing marked auto trails. 10c postpaid. Also free list of splendid farms in corn and clover belt near Twin Cities. BAKER W 76, St. Croix Falls, Wisconsin. 21-spl

$6,800 buys real bargain. 80-acre improved farm, short distance from Duluth; large barns; hay carrier; dandy house, hardwood floors; horse barn; chicken house; ice house; horses; cows; chickens. Can buy easy terms. Write today. R. R. FORWARD, Duluth, Minn. 1-spl

For Sale by owner 588 acres, 3½ miles from town 200 acres, black, balance post oak and sandy. About ½ open, balance small timber. 9-room house, barns 34x55 and 40x40. 2 never failing springs. $20,580. E. L. BARKER, Forest, Miss.

FARMS FOR SALE

To settle an estate of 360 acres, 22 miles from Denver on State Highway. Corn, alfalfa, grain crops. Trucks put our milk on Denver market. Nine-room house, modern water system. $85 per acre. Also 640 acres adjoining making 1,000 acres at $45. ⅓ cash, balance ten years 6%. O. S. VARNER, Parker, Colorado.

For Sale—600-acre central New York dairy and grain farm, near towns, schools and macadam roads. 200 acres tillable, 200 acres woodland, pasture for 150 head, cuts over 100 tons hay, several thousand feet timber, variety of fruit. Improvements cost over $20,000. Income from milk about $1,000 per month. 80 cattle, horses, poultry, farm machinery. All for $15,000 down, very easy terms on balance. Address OWNER, Box 291, care Hoard's Dairyman.

Real Farm Bargains in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (not Inc.), Medford, Wisconsin. 3-4

2 Splendid Dairy Farms near Minneapolis. Get views, details. BORER, Security Bldg., Minneapolis.

443-acre New York State farm for sale. Best farm in county. One mile to town on good roads. $20,000. Modern buildings; water in house and barn; 4 silos and plenty to fill them. Farm will carry 150 head of stock; 150 acres of big crops, 50 registered Holsteins, 6 fine horses, Fordson tractor and all farm equipment. Good timber. All for $38,000. Easy terms. Address BOX 296, care Hoard's Dairyman.

Two limestone, alfalfa, dairy farms. One hundred acres, new up-to-date buildings, 70 acres now in alfalfa, on macadam road and trolly. Three hundred fifty acres, four sets improvements, two large dairy barns, nearly two hundred acres alfalfa now growing, might divide into smaller farms. Both near Syracuse. Holstein and alfalfa center of the East. Farmers' half million dollar milk plant just completed. Will sell on reasonable terms and interest rate. Come see most productive soil, highest markets, finest community anywhere. W. A. WITHROW, Route Four, Syracuse, N. Y. 3-2

100-acre alfalfa farm 3 miles from Cazenovia village. Seven miles from state school, buildings in good repair, plenty of running water. R. D. LEE, Cazenovia, N. Y.

For Sale—At a bargain, highly developed, profitable, large dairying property, improved, equipped, and stocked in a practical commercial way. Large fertile acreage. Good roads, and near to a large southern city. The present owner has, for many years operated this property, as a dairy, at great profit. Has raised all necessary feed, and has sold his milk at wholesale at 44 cents per gallon or $5.12 per hundred pounds. He has a full head of highly bred stock; no labor troubles; and the enterprise is in every way, profitable. Circumstances (not related to this property) have suddenly developed, making it necessary to sell. This is an unusual opportunity for the purchase of a practical profitable dairy, conveniently located, a mild climate, in a community favored with educational, church and city advantages. J. A. CONNELLY & CO., 34 North 7th St., Richmond, Virginia.

For Sale—My farm of 120 acres, soil black loam with heavy clay subsoil; good nine-room house with furnace, hip roof barn with fixtures, cement silo and milk house, all other buildings in good condition; good fences, good orchard, house faces south with nice door yard and shade trees. F. F. ROCKWELL, Clinton Junction, Rock County, Wisconsin. 3-2

80-acre dairy farm. Beautiful farm home. Orchard, spring. Fine buildings. Best dark clean soil. Fine location. Near this city. $13,000. S. L. KRAUTH, River Falls, Wis.

159 acres, 100 cultivation, remainder pasture. Good 6-room house; new barn; 125-ton silo. Abundance water. 4 mile town. Possession now. Price $12,500. Good terms. Come at once, or write for new list. CLAUDE ANDERSON with Mansfield Land Co., Ottawa, Kansas.

232-acre farm with horses, 25 cows, tools, crops, big steady income, near town, close creamery; broad machine-worked fields, 40-cow, spring-watered pasture; 2-story, 10-room house, spring water, maple shade, big stock barn, silo, water supply, poultry house; owner unable occupy throws in horses, cows, 3 yearlings, 2 2-year-olds, machinery, tools and part growing crops; less than $30 an acre for everything, easy terms. Details of this and another at $2,900 page 29 Strout's Big Illustrated Catalog Farm Bargains 33 States, copy free. STROUT FARM AGENCY, 150 DL Nassau St., New York City.

For Sale—160 acres land. 30 acres under cultivation, balance used for pasture. About 50 acres is sandy loam, balance clay and clay loam soil. Address BOX 293, care Hoard's Dairyman.

352-acre dairy and stock farm, Waukesha County, Wis. Heart of dairy country, crops corn, rye, wheat, oats, clover, alfalfa. 104x42 modern, fully equipped dairy barn and milk house. 16x40 stone silo. Hog and hen houses. Other buildings. Modern eight-room house. Large fields; woven wire fences; good pasture. Two power wells, springs and creek. Might subdivide. Address BOX 294, care Hoard's Dairyman.

Canadian Farms—1,120 acres. No waste land. Close to town. Excellent large house and barns. Ample water. Grain and live stock farming. $50 an acre. Terms and description on request. 320 acres, 300 cultivated. 3 miles from town. Good house and barn, ample water. Suitable for mixed farming. $35 an acre, 25% cash. Other desirable farms also. Write C. C. JACKSON, 437 Tenth St., Brandon, Manitoba.

Alfalfa farm for sale of 100 acres on good road 2 miles east of the beautiful village of Cazenovia, N. Y. 20 miles from Syracuse on good road. 12-room house with light, also 8-room house, new outbuildings in A-1 condition, plenty of good water and shade. Will sell with or without stock, tools and crops. Reason for selling is ill health, possession any time. R. D. LEE, Cazenovia, N. Y.

For Sale—Farms. Near Madison University, Wisconsin and railroad, model dairy farm, beautiful location, modern home, all conveniences, productive soil, good improvements, profitable business. Address BOX 299, care Hoard's Dairyman.

Good Central Ohio farm of 96½ acres, all level, eight-room house, two good barns with Delco light. M. L. MIZER, Stone Creek, Ohio.

FARMS FOR SALE

For Sale—240-acre irrigated farm in famous Smith River Valley, Montana. Adjoin county seat town, all advantages, alfalfa and clover, grains, tools, etc. Fine modern, new improvements. A money maker. Price $125 per acre including crops, hay in barn and stock, etc. Registered Holsteins and personal property at bargain if wanted. MARK HUNT, White Sulphur Springs, Mont.

Choice Farm for Sale—Part of original Gale farm one mile west of Galesville. Fertile black loam, level. New improvements, orchard, and berries. On state highway and truck line. Near school and market. All city deliveries. Ideal for general or truck farming. A beautiful place in the heart of a beautiful country. Will sell crops and personal property. The best buy on the market. CHAS. S. PARKER, Owner, Galesville, Wis. 3-2

Thoroughbred Holstein farms from owners. $12 per acre and up. With or without stock and tools. L. A. YORK, Hubbardsville, N. Y.

For Sale—Farm 200 acres, good tillable land, colonial dwelling, dozen rooms, all modern improvements, electric light, bath, toilets, completely furnished, fine order. Immediate possession. Connecticut, Hartford, New Haven, New London, hour distant. Satisfactory terms. Owner, McGEE, 284 Lafayette Street, New York City.

To Farm Buyers—Write to us today for particulars in regard to a very desirable farm in Broome County, on good road, near this city and we will send you diagram and full information. McKINNEY & CO., Binghamton, New York.

Greatest stock and dairy district on earth. You cannot go wrong if you buy your future farm home in Aitkin County, Minnesota. Rapidly becoming America's greatest farming center. Our free information will tell you how to secure one of these farms on a small down payment and easy terms. Write L. B. ARNOLD, Land Agent, 154 Wolvin Bldg., Duluth, Minnesota. 3-4

Join Our South American Colony. Choice land $5.00 per acre. For literature, address BOX 277, Gridley, Calif. 3-4

240 acres, mostly alfalfa, plenty of water, buildings in good repair, a bargain if taken at once. Possession to suit the buyer. Want to sell direct and save middle man's profit. Do not write, but come, I mean business. R. D. LEE, Cazenovia, N. Y. 3-3

FARMS FOR RENT

For Rent—Dairy farms. We are adding two more farms March 1, 1921. They will be operated as pure-bred Holstein farms. Tenants to furnish horses, machinery, all labor. We furnish the land and capital for one-half the cattle and, if necessary, will back the right man for most of the capital necessary to purchase his half of cattle on such liberal terms that the cattle will pay for themselves. This is a great opportunity for the right man—especially if he has experience in making records—to become associated with the largest pure-bred Holstein organization in the country. Fertile farms, good location, milk factory market. Selling organization that relieves you of all care or worry about the selling end. In fact, the chance of a life time. Please give full particulars about yourself and your references in first letter. WOODLAWN FARM, Sterling, Ill. 2-2

For Rent Live Stock Shares—Two-hundred-acre dairy farm. Renter must have cash for equipment and own help. ALVIN GREENE, Morris, Ill.

Dairy for Rent—Completely equipped dairy in Virginia. Fine route established. Great opportunity for a man with ample help and $3,000 to $4,000 to pay for live stock. Dairy 24 years in business, near large city. All best machinery furnished. Two large silos; 100-acre farm with all fields planted. Address LOCK BOX 199, Petersburg, Va.

Ideal dairy farm for rent on shares. Renter must have some cash to buy in. Possession at once. Fine chance. CHAS. W. O'NEILL, Bridgeport, Wis. 3-2

For Rent—Five-hundred-acre farm near school and creamery. Owner furnishes all cattle, hogs and sheep, tenant can handle. Income and increase evenly divided. Excellent buildings including barn 34x120, two dwelling houses. Tenant must have plenty of help. Address BOX 292, care Hoard's Dairyman.

Dairyman to operate southern dairy on shares, wanted. Must have some capital. Best testimonials required. Milk 80c per gallon. Write quick and fully. R. L. STROUD, Chapel Hill, North Carolina.

FARMS WANTED

Wanted—To buy an equipped dairy farm in New York State. Address BOX 295, care Hoard's Dairyman.

BUSINESS OPPORTUNITY

Creamery for sale—Owing to ill health I desire to sell my plant, one of the largest private plants in the state of Vermont. Been in operation 27 years old and still doing a good business. Good home over creamery. Address HARRINGTON CREAMERY, Bethel, Vt. 2-4

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

PARTNER WANTED

Dairy Partner Wanted—Have a 100-acre farm, 20 acres fruit trees, 10-room house with electricity and bathroom, furnace, etc. One mile from city. Modern barn with running hot and cold water, litter carrier milking machine, etc. About twenty head pure-bred Holsteins, 4 work horses, pigs and poultry. Want farm family with several children, all interested in dairying. Must buy one-half interest in feed and tools, but not in stock. Requires about $1,500 cash. Will give one-half. Possession on November 1st, 1920. No letters answered unless you give full information, age, how many in family, experience, references, etc. Previous tenant on place 6 years and made money. Address PINE LODGE FARM, Sheboygan Falls, Wis. 3-2

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Agents—Mason sold 18 sprayers and auto-washers one Saturday; profits $2.50 each; square deal. Particulars free. RUSLER COMPANY, Johnstown, Ohio. 25-spl

LIGHTNING RODS

Lightning rods, exclusive agency and quick sales to live agents selling "Diddie's Universal Rods". Our copper tests 99.96% pure. Write for agency. Prices are right. L. A. DIDDIE CO., Marshfield, Wis. 13-24

FEED BAGS

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

We pay 14c for beet pulp bags. Proportionate prices for other sizes. Better write for price list now. LARIMER BAG COMPANY, Washington, D. C. 19-spl

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Wanted—Carload lots of alfalfa and straw. Quote delivered prices first letter. F. MARQUARDT, Morris Plains, N. J. 25-spl

TOBACCO

Kentucky Tobacco, natural leaf; 10 lbs. $3.00; 20 lbs. $5.00. R. F. VEAL, Sedalia, Kentucky. 3-2

SEEDS

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 8*

For Sale—Pedigreed Michigan Red Rock wheat and Rosen rye. Choice selected seed. Early orders solicited. FRED A. LUTHER, Broadview, Hart, Michigan. 3-2

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

PRINTING

Hoard's Dairyman Art Dept. designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cts. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wis. 8-tf

MISCELLANEOUS

Loan Wanted—$8,500 to $11,000, excellent security. MARELLA FARM, Hagerman, Idaho. 2-2



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Wanted—Reliable, educated, American woman housekepeer on stock and dairy farm in western Oregon. Good climate. Good home. Good wages. LOCUST HILL FARM, McMinnville, Oregon. 2-2

Wanted—Three men—dairyman, hogman and general farmer—on profit sharing plan worked out with state university whereby each man should make more than prevailing wages. Good herds, good equipment, fair school, church and good living conditions. Monthly guarantee. Give experience and references. OLUSTEE MANOR FARM, Olustee, Fla. 3-2

Good position open with large ice cream manufacturing concern for young man, agricultural college graduate; must be familiar with handling butterfats. State experience and salary desired. BOX 288, care Hoard's Dairyman. 3-2

Wanted at Once, assistant herdsman. Guernseys. State wages and experience first letter. LLOYD RUNDELL, Roberts, Wis. 3-2

Herdsman—Dairyman wanted for good herd of 30 Holstein cows. Must be clean and neat, both in appearance and work. Give salary expected, age, references, whether married or single and when at liberty. Address J. R. SMITH, MGR., Box 326, Colver, Cambria Co., Pa. 3-3

Wanted—At once, a good man to work in dairy barn. Must be good dry hand milker and a good worker. Must be steady. State wages wanted in first letter. Steady job to right party. C. H. HICKS, Marshalltown, Iowa.

Wanted—Experienced, practical head farmer for large institution farm. Full maintenance and salary commensurate with qualifications. Give age, civil condition, experience and references in first letter. CONNECTICUT STATE HOSPITAL, Middletown, Conn.

Wanted—Single man to milk string of Holsteins on semi-official test, 3 milkings. Want man competent and willing to work up to assistant herdsman in herd of 250 head. Institution herd; no barns to clean; no cattle to clean; annual vacation on pay; good place to work; good opportunity for right man. State wages and send references. H. B. HOWELL, Farm Mgr., State Hospital, Warren, Pa.

HELP WANTED

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Wanted—Man to milk test cows. Must be good dry hand milker, one who has had experience or young man interested in good Jerseys, a young experienced man preferred. If we can get the right man we can use him as assistant herdsman and will pay accordingly. Address ALLEN DALE FARMS, Shelbyville, Kentucky. 1-4

Manager for farm in Barron County, Wisconsin. Must understand farming, poultry and dairying, and be married. Children no objection. Must be worker as it is not an office position. All modern buildings and equipment. State nationality, religion, wages desired, past experience and full particulars in first letter. An excellent opening for industrious general farmer. HENRY L. STOUT, McCormick Bldg., Chicago. 1-3

Herdsman Wanted—Single herdsman at once to take charge of Guernseys. Must have experience and a good calf raiser. ADAMS & SWAIN, Algona, Iowa. 2*

Wanted—Single man for general farm work. Must be capable and willing to work. Milking machine used. Good wages. State full particulars in first letter. No cigarettes. Iowa County, Wisconsin. Address BOX 281, care Hoard's Dairyman. 2-2

Herdsman Wanted—Single or married man with small family to take care of registered Guernsey herd. Must be experienced and a man who will take interest in his work and show results, as we are soon to restock with some good animals and start A. R. work. This is a good opportunity for a live and energetic man as we offer good home and wages with excellent treatment. State wages, experience and details to JOHN J. COSTOFF, Supt. Beechwood Farms, Sharpsburg, Pa. 2-2

I want to hire by the year a young Dane or Swede and his wife to assist in the conduct of my 13-acre raspberry farm. Must be able to handle a plow well, be a hard worker, and not afraid of a twelve-hour day when necessary. Will furnish a house, garden, milk, fruit, and a good salary to the right man. Permanent job. E. R. THOMAS, Sumner, Wash. 2-3

Wanted—At Thornhill School, which cares for boys who are wards of the Juvenile Court of Allegheny County, Pennsylvania, married couples preferably without dependent children to take charge of cottages in which about twenty of these boys live and care for and train them for good citizenship. Compensation $75 to $90 per month for the couple with furnished quarters, food, fuel and lights, thus relieving them from any outlay for rent, food, fuel and lighting and all other items of household expense. Only people of recognized character and interested in helping boys desired. Address SUPT. THORNHILL SCHOOL, Warrendale, Pa. 23-spl

Wanted—Single herdsman, must have experience in A. R. O. and semi-official work and be good calf feeder. Excellent herd Holsteins to work with. Every opportunity for success for a man who thinks cows. Wages $100 per month to start with, board and room. Give full particulars first letter. STUBBS FARM CO., Mulvane, Kans.

Wanted—A farm manager, first class, thoroughly experienced man. None other need apply. State experience, references and salary expected. Address BOX 289, care Hoard's Dairyman. 3*

Wanted—A single man by September 1st to feed and care for test cows, must be a good responsible man with reference. Give full particulars in first letter and wages expected. C. A. PARKS, Maple Lawn Farms, Assumption, Ill.

Wanted—Experienced dairyman and wife. 25 to 30 cows, calf feeding, etc. Woman to do cooking and washing of milk utensils. State wages wanted. W. C. JONES, Wise River, Montana.

Wanted—Young man for year round job on Holstein farm. Milking machine used. Satisfactory wages. W. J. PESTER, Whitewater, Wisconsin. 2-2

POSITIONS WANTED

Highly experienced farmer, dairy and cattle man wants position as manager on modern dairy farm where he has a chance to stock the place with thoroughbred Holsteins. Only A-1 proposition considered. Address BOX 279, care Hoard's Dairyman. 1-3

Wanted—For dairy farm in Montana, single man to work in barn and field. Must be good milker. $100 per month, room and board. Address BOX 280, care Hoard's Dairyman. 2-2

Wanted—Experienced cow testers, for cow testing association in Sonoma and Marin Co., California. State experience, references and salary. PETALUMA CO-OPERATIVE CREAMERY, Petaluma, Cal. 2-2

Married man, twenty-five, wants position as herdsman on large dairy farm. Can operate mechanical milkers. Always lived on farm. State wages and particulars. Address BOX 290, care Hoard's Dairyman.

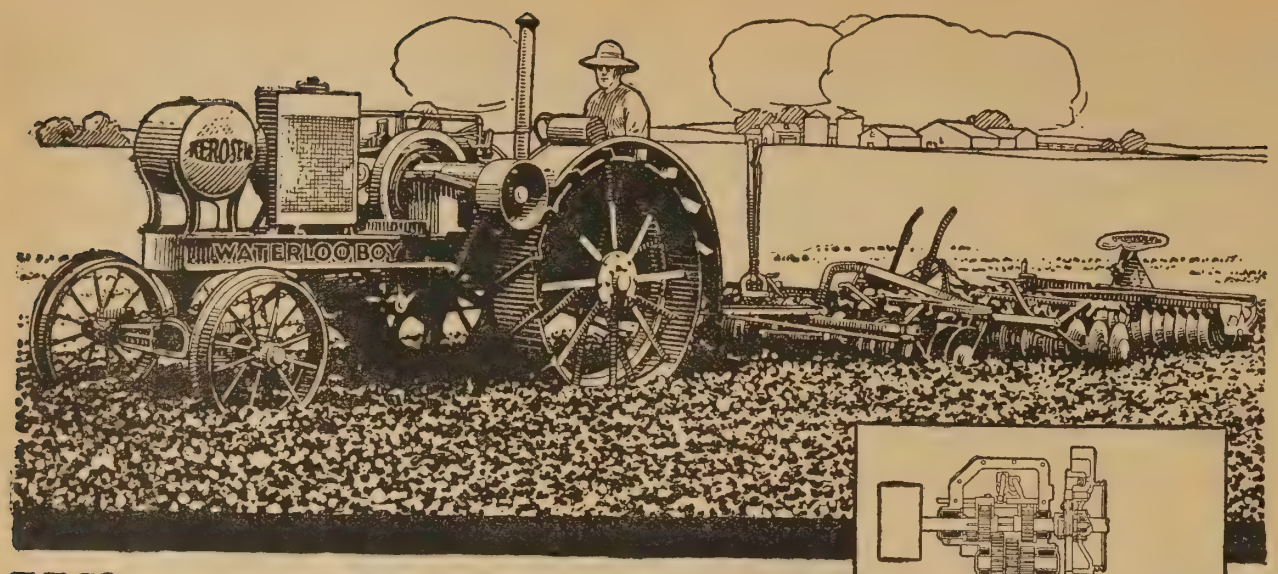
Position wanted as manager on dairy farm from now until spring and then run upon shares. Swede, agricultural training, married, references. Address BOX 298, care Hoard's Dairyman.

Farm manager (married) wishes position. Last employer says, "I know of no one who has more knowledge or is more familiar with the practical and technical matters connected with farm work and the live stock industry." If interested address with particulars, LEWIS DAYTON, Broadalbin, N. Y.

Married herdsman wants position, capable of taking full charge. 15 years' experience, prefer location near city in Wisconsin. Present employer sold out. Would consider equipped farm on share basis. In answering state wages and particulars. BOX 300, care Hoard's Dairyman.

Farm manager, agriculturist, good executive, scientific and practical in all branches modern farming, dairying. Address BOX 297, care Hoard's Dairyman.

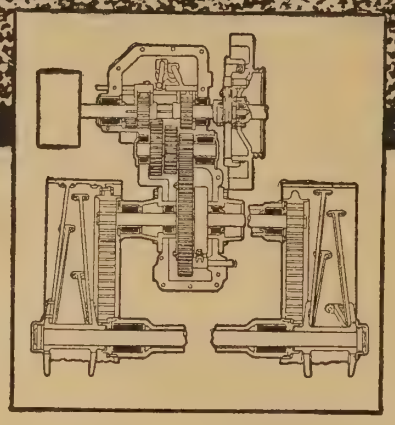
Other Classified Advertisements will be found on Page 86.



Why the Waterloo Boy Gives Maximum Power At Drawbar and Belt

The engine of any tractor will deliver its maximum power only when shaft and axle bearings run without friction. Friction means wasted motor energy.

The Waterloo Boy Tractor is equipped with heavy-duty roller bearings. Friction is reduced to the minimum. Engine efficiency is increased. Maximum power is delivered at drawbar and belt.



The small shaded portions in the above illustration show the exact location of the heavy-duty Hyatt bearings on the Waterloo Boy. They reduce friction, thus giving maximum drawbar and belt power. All the gears shown above are enclosed in a dust-proof case, and run in oil.

WATERLOO BOY
BURNS KEROSENE COMPLETELY

Eleven Hyatt roller bearings are used on the Waterloo Boy. Three are on the engine extension shaft which operates the belt pulley, and carries the high and low speed gears. Two are on the intermediate shaft, whose gears transmit tractive power to the differential. Four are on the differential shafts, which drive the tractor, and two on the rear axle, carrying the rear weight of the outfit. These particular bearings have an established reputation for their special ability to reduce friction and conserve power.

The Waterloo Boy engine is placed crosswise on the tractor frame. This eliminates bevel gears. Bevel gears cause friction. Waterloo Boy drive is direct through straight gears, another power-conserving feature.

There are many other superior features of Waterloo Boy construction and operation. Its simplicity and accessibility, its powerful 12-25 H. P. engine, its ability to burn kerosene and burn it right, a pump, fan and radiator cooling system, all contribute to make the Waterloo Boy an especially good tractor for your farm.

We have a booklet describing the Waterloo Boy fully. You will want to read it. Address John Deere, Moline, Illinois, and ask for booklet WB. 714.

John Deere Implements, and Waterloo Boy Tractors and Kerosene Engines are distributed from all important trade centers. Sold by John Deere dealers everywhere.

JOHN DEERE
JOHN DEERE MOLINE, ILL.

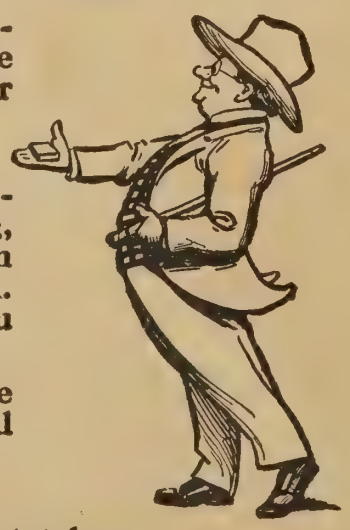
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

"Nothing Like It"
says the Good Judge

A little of this real tobacco gives a man more satisfaction than he ever got from the old kind.

The full, rich, real tobacco taste lasts so long, you don't need a fresh chew nearly as often. That's why it costs you less.

Any man who uses the Real Tobacco Chew will tell you that.



Put up in two styles

RIGHT CUT is a short-cut tobacco

W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

The Grange on Politics

The National Grange has issued the following statement which is of interest to farmers generally:

"The Washington office of the National Grange has been called on several times to take part in political contests, either where present members of Congress are being opposed by so-called farmer-labor coalitions, or are being favored by farmer organizations.

"To all such calls there is but one reply, and this statement is issued that there may be no possibility of a misunderstanding, reiterating the substance of what was stated in a previous bulletin issued from this office two weeks ago. The Grange, whether in its subordinate bodies, its county, or its state, or its national organization, does not participate in partisan politics. The organic law of the grange prohibits a grange from taking part in political nominations or during its sessions discussing political candidates. This organic law governs the National Grange as well as the smallest subordinate grange. It applies to the grange in any and every organized form, and to every grange officer acting in a grange capacity.

"Guided by a clear understanding of this rule of conduct, the Grange has refused to enter into co-operative relationship with other organizations seeking political results, or with any labor organization. There are two reasons for this. First, the principle of refraining from political activities. Second, the clear belief of the Grange that just now labor organizations are guided by narrow motives of class selfishness, and led by radical leaders seeking political changes detrimental to the principles of our government, and to what the Grange conceives to be true Americanism.

"The principle upon which the Grange rule is based in this political action should grow out of unselfish consideration for the greatest good to the whole people; not the selfish interests of a class or group. The Grange as an organization, therefore, refrains from joining any partisan appeal, or any group coalition, and is opposed to principles and to candidates for any purpose other than the best interests of the whole public.

"Least of all will the Grange enter into the most objectionable of all political activities, the dealing and dickering between the parties, threatening class opposition, or playing one against the other, with the promise of influencing votes in large blocks to the party or the candidates who promise them most. That form of non-partisanship is the opposite of the principle which actuates the Grange 'the greatest good of the greatest number'. It is deliberately calculated for the special benefit of the best organized minority. The Grange as an organization refuses to be drawn into partisan politics. Its individuals are left free, and are urged by every teaching of the order to exercise every privilege and every duty of citizenship, and to do so in freedom guided by their own individual judgment.

"A newer generation not familiar with the history of the 'groundswell' of the seventies, or the 'Farmers' Alliance' of the eighties, is now active in public affairs. This wave of farmer activity in politics which is now at its crest is neither novel nor different. The Grange has lived through two such experiences, witnessed the rise and wane of these efforts, measured their results, and has seen its own organization and membership weakened by the failure to achieve anything tangible. It is sound judgment, based on the 'wisdom of the past' that keeps the Grange out of politics now. History proves that the fraternal, educational, social, and co-operative efforts of the Grange win far more for country people and country life than political activity or political office. For fifty-three years the Grange has fought for wise legislation, for sound policies of government, and for honest and economical administration, willing to let the electors of the nation chose the men to make and administer the laws, without the attempted domination of any class, clique, or group of the citizenship."

Alfalfa Seeded in Corn

HOARD'S DAIRYMAN:—In the last Hoard's Dairyman an inquiry is made about seeding alfalfa in corn. We have just seeded alfalfa in our corn. This is the third time we have done so. We do not recommend this as the best method, but we cannot seed in grain nor can we afford to miss a crop. The corn should be well worked early and kept clean. Cultivate the last time with a harrow-tooth cultivator and seed with a wheelbarrow seeder. Do not stir the ground after sowing or some seed will be covered too deep. The corn is cut off for silage and the corn stubbs are harrowed down when the ground is frozen.

Wisconsin. CHAS. M. FOX.



"We Do the Best We Can"

—you expect us to earn our board and a profit for you from the milk we produce. To do this we must have the proper feed all year 'round. The feeds you put before us must be something more than just milk makers. They must build flesh, bone, meat. We must be in good healthy condition all the time.

Pasturage alone, during the summer is not the right feed for us. While it stimulates milk flows it hasn't enough of other ingredients to keep us in tip-top bodily condition to enter the winter season strong and healthy enough to keep on giving down milk in quantities profitable to you.

Feed us, during the summer a ration of

International Special Dairy Feed

The Great Milk Maker

This is a feed made from carefully selected materials scientifically blended in just the right proportions to build bone, muscle and heat as well as supplying the elements that make milk. It produces the most milk we are capable of giving down, naturally.

The men who are at the head of the International Sugar Feed Company and the men who sell International Feeds to your dealer are practical feeders. Thousands of dairy farmers all over the country are feeding *their* cows International Special Dairy Feed and making big profits.

International Special Dairy Feed is absolutely guaranteed to increase our milk flows. You can't lose. Feed us a trial ton and watch us "perk up" and make your milk checks bigger.

If there is no International dealer near here write to the Company. They will supply you promptly. Their address is



INTERNATIONAL SUGAR FEED CO.

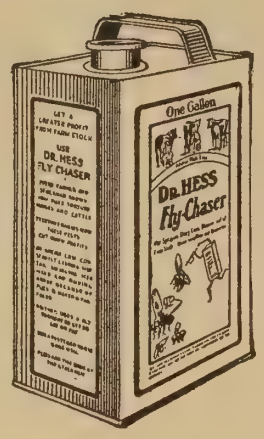
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Live Agents Wanted


Gilbert Hess, M. D., D. V. S.

Dr Hess Fly Chaser

Drives away flies and mosquitoes.
It is long lasting.
It has a pleasant odor.
It will not taint the milk.
It will not stain the animal.
It will not gum the hair.
It cleanses the skin.
Guaranteed or money refunded.



Spray cows before milking with Dr. Hess Fly Chaser; see the good results in the milk pail.

Spray your horses in the morning and at noon; they will perform their work in contentment.

Ask the Dr. Hess dealer in your town. He has Dr. Hess Fly Chaser in convenient sized cans.

Dr. Hess Fly Chaser can be applied with hand spray, cloth or sponge.

DR. HESS & CLARK, Ashland, Ohio



Protect Her Health

DON'T risk losing a valuable animal. A Pilling "Easy-to-Use" Cattle Case will equip you to relieve promptly milk fever, bloat and other cattle troubles. One animal saved will repay you many times. Prepare *now* for emergencies.

Pilling "Easy-to-Use" Cattle Case



Case No. 2 contains a complete milk fever outfit, syringes, cattle trocar for bloat, several special instruments for treating teat troubles and other helps for the stockman. Purchased separately, these would cost $18. Price, complete with case and "Easy-to-Use" directions, $12.50, delivered by parcel post. Order today. Send for booklet on Cattle Instruments—describes Milk Fever Air Treatment.

G. P. PILLING & SON CO.
Instrument Makers for More Than a Century
2300A Arch Street Philadelphia, Pa.

Cattle Case No. 2



RIPPLEY'S FLY REMOVER SAVED $225

in milk for a customer who used it

On Five Cows for 90 Days

Kills and keeps off animals Flies, Mosquitoes, Ticks, Lice and all Insects. Cows give 25% more milk, as they are protected and fed quietly all day. Horses work and drive better. Hogs and Poultry are free from lice. No Gad Flies or Warbles to bother where it is used. 1 gal. and Sprayer for applying, $2.50; 5 gal. and Sprayer, $7.50; 10 gal., $12; 25 gal., $28; 50 gal., $55. Four gal. Sprayer for applying on Dairy Herds, $9.50. Money returned if animals are not protected. One gallon protects 250 cows. Order from ad, terms cash—catalog free.

Rippley Manufacturing Co., Box HD Grafton, Ill.



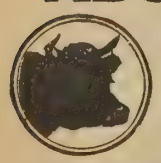
ABSORBINE STOPS LAMENESS

from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar troubles and gets horse going sound. It acts mildly but quickly and good results are lasting. **Does not blister or remove the hair** and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.50 a bottle delivered. **Horse Book 9 R free.**

ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; heals Sores. Allays Pain. Will tell you more if you write. $1.25 a bottle at dealers or delivered. Liberal trial bottle for 10c stamps.

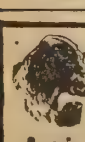
W. F. YOUNG, INC., 254 Temple St., Springfield, Mass.

ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis



BOOK ON
DOG DISEASES
And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

America's Pioneer Dog Medicines

A Guaranteed Remedy for

Contagious ABORTION

Are you letting this scourge cost you calves, milk and cows? If your cows are affected, stamp it out.

ABORNO

the guaranteed treatment for Abortion, has been successful on thousands of cows. Give it a chance in your herd. Easily administered by hypodermic syringe—acts rapidly on germs in the blood. Can't harm the cow.



Write for our booklet and guarantee.

ABORNO LABORATORY
Section A LANCASTER, WIS.

Lump Jaw

The farmer's old reliable treatment for Lump Jaw in cattle.

Fleming's Actinoform

Sold for $2.60 (war tax paid) a bottle under a positive guarantee since 1896—*your money refunded if it fails.* Write today for FLEMING'S VEST-POCKET VETERINARY ADVISER A book of 197 pages and 67 Illustrations. It is FREE.

FLEMING BROS., Chemists, 255 Union Stock Yards, Chicago



VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Functionless Quarter

We have a valuable two-year-old pure-bred Holstein heifer that is due to calve in about two months. She is in splendid condition and bagging up nicely in three quarters, but one front quarter is not developing as it should though it does not seem to be entirely "bad" only is flabby and not so large as the others.

We have been massaging it daily for fifteen minutes and think it shows some improvement.

Ada, O. A. BROS.

Derangement of the nerve and blood supply of the quarter explains such a condition in many cases, but in others, and they are common, the cause is an attack of garget, often unnoticed, and induced by sucking of the teats by calves in the early days of life. That pernicious habit should be stopped the moment it is observed, else udders will surely be ruined.

Massage the quarter three times a day and each evening rub in warm melted lard containing a teaspoonful of pure turpentine to the ounce. Stop for a few days if the skin becomes irritated. If organic disease is not present, this treatment may stimulate nerve and blood supply so that the quarter will develop and yield a fair amount of milk at calving time. There is nothing certain as to that, however, and many cases of the sort prove incurable.

Sore Hand From Milking

Have you ever known of the udder of a cow "poisoning" the hand of the milker?

After a long period of milking test cows last winter that portion of the hand above the thumb and first finger began "breaking out" with fine blisters, followed by a dry "cracking" condition similar to salt rhume. At first I thought it due to the excessive use of a bag balm we were using. It was very persistent and yielded to treatment very slowly; and I did not get entirely free from it until relieved from milking. And now every time I go in on "relief" for a day or more it returns with increasing severity.

Woronoco, Mass. R. M. O.

Both cowpox and ringworm are contractable by man from an affected udder. Impetigo is another skin disease (pustular) contracted by men who handle cattle. In a condition such as you describe, however, you should at once see a specialist in diseases of the skin and have him determine what is wrong and what should be the best treatment.

Rhode Island Ayrshire Club

A representative gathering of breeders and others representing various organizations in Rhode Island interested in pure-bred Ayrshire cattle, met in Providence, July 19th, for the purpose of forming a Rhode Island Ayrshire Club. Mr. L. W. Lloyd, of the Rhode Island State College of Agriculture, explained the object of the meeting and the importance of forming a Rhode Island Ayrshire Club, not only from the standpoint of the breeders interested in pure-bred Ayrshire cattle, but for the benefit of the entire dairy industry in this state.

As explained in the preliminary call for the meeting, Rhode Island has been known for many years as having a considerable number of Ayrshire cattle on its farms. The Ayrshire is particularly adapted to the general farming conditions found in Rhode Island, with its generally poor pasturage and rough soil; the Ayrshire breed being especially noted for its hardy, vigorous constitution and its ability to thrive where some breeds would find the conditions impossible.

Mr. Clyde N. Smith, representing the National Association, outlined a plan of organization and submitted a draft of by-laws recommended. After full consideration and certain modifications the same was accepted and the election of officers resulted as follows:

Geo. H. Pettee, president; Joseph E. Fletcher, vice-president; J. Foss Magoon, secretary and treasurer; and J. F. Comstock, auditor.

Rhode Island. H. H. HAWES.

Oneida Holsteins Average $300

Thirty Holstein breeders of Oneida County, New York, united in an annual sale held July 30th. They consigned a uniformly good lot of cattle which sold at an average of $301.27. Eighteen head were sold to out of state buyers. Peter C. Petersen of Wisconsin topped the sale by paying $750 for a yearly record bull bred by Frances M. Jones. C. S. Muke, also of Wisconsin, secured four head. H. B. Sweet of New York was the heaviest buyer, taking six head for $1,890.

The STANDARD FARM PAPERS

BEST— for the Reader therefore—
BEST— for the Advertiser

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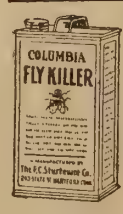
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Columbia Fly Killer

kills every fly it strikes, also destroys lice on animals and poultry. If your dealer won't supply you send direct. Sent prepaid on receipt of price. ½ gal., 90c; 1 gal., $1.50; 5 gals., $6. Salesmen and agents wanted.

F. C. Sturtevant Co., Hartford, Conn.

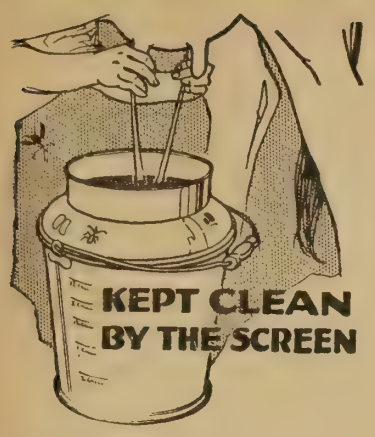
Reliable Fly Knocker

will protect your cows and other stock from flies and only costs about one-fifth as much as other sprays. Supplied in concentrated form. One gallon makes 16 gallons spray solution by simply pouring it into water and stirring. Price 1 Gallon Can $5.00, makes 16 Gallons; 1 Quart Can $1.50, makes 4 Gallons. If your dealer doesn't have it, we will supply you by express on receipt of price. Write us.

RELIABLE PRODUCTS CO.
4230 VAN BUREN ST., CHICAGO, ILL.

DAISY FLY KILLER PLACED ANYWHERE ATTRACTS AND KILLS ALL FLIES. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or 5 by EXPRESS, prepaid, $1.25.

HAROLD SOMERS, 150 De Kalb Ave., Brooklyn, N. Y.



No Dirt or Impurities can drop into the milk when a Non-Spill Sanitary Dairy Pail is used. A closely woven brass sieve with a non-splash rim protects the milk from contamination. The switching of the cow's tail cannot throw dirt into the pail. Flies or germ-laden insects cannot fall or crawl into the milk.

This New Pail is Spill-Tight. If it is kicked over a valve automatically closes the outlet. No milk can be spilled. This non-spill feature alone will pay for the pail several times over in one summer season by saving the milk when the cow kicks.

It Is Strong, Durable and Will Last many seasons. It is made of heavy charcoal tin plate, and holds 3 gallons. It is absolutely sanitary. Every part can be taken out and washed *clean*. Nothing is hidden or unreachable.

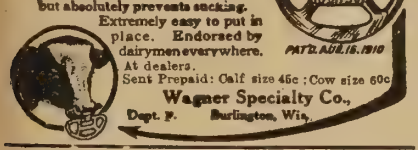
Your local dealer has it or will get it for you. It's a Schlueter metal product.

Dealers: Write for our special proposition. Your customers will want Non-Spill Sanitary Dairy Pails.

Non-Spill Sanitary Dairy Pail Co.
4636 N. Broadway : St. Louis

"Kant-Suk" Calf Weaner

LIGHT—strong—humane! Cannot possibly injure cow or calf. Being made with a hinge-joint, it swings out of the way when calf eats or drinks, but absolutely prevents sucking. Extremely easy to put in place. Endorsed by dairymen everywhere. At dealers. Sent Prepaid: Calf size 45c; Cow size 60c



Wagner Specialty Co.,
Dept. F. Burlington, Wis.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

KING SEGIS PATENT LOCK

Ear Tags, Bull Staff and Rings. Description and prices sent on application. 300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business.



H A Mover, Syracuse, N.Y.



Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

CORN HARVESTER

That beats them all. One horse cuts two rows. Carries to the shock. Worked by 1, 2 or 3 men. No danger. No twine. Free trial. We also make Stump Pullers and Tile Ditchers. Catalog Free. Agents Wanted.
H. S. BENNETT & CO., WESTERVILLE, OHIO

Trade Grade Bulls

In a recent meeting of the board of directors of the Pettis County, Missouri, Holstein-Friesian Company, the work that the government and state are doing to eliminate the grade and scrub sire was discussed. The board agreed that this was work of immense importance to the dairy industry and expressed a willingness to co-operate in the campaign. Just how to help was the question when it was suggested that we trade some of our young bulls for grade or scrub bulls. It was finally voted to offer to exchange a pure-bred bull calf to any one using on their dairy cows a beef bred bull of any breed or a grade Holstein bull if he is a year old or older. They will devote twenty-five bulls to this cause between now and January 1, 1921, the first twenty-five applicants getting them. This removes the last excuse for at least twenty-five men for not building up their herds. Even if they have cows of mixed breeding, by the use of a good pure-bred bull, they will soon have a herd of high grade cows.

To appreciate what the offer really means one should know about this great Pettis County herd. Their original cows, 100 head, were selected in Wisconsin by Professor C. H. Eckles, then of the Missouri Agricultural College, and in the last three years have been kept in a cow testing association and the poor producers weeded out. The herd has increased to 200 head. Their three herd bulls cost the company $6,000. One is Brookings Cornucopia whose dam, College Belle Wayne, produced 28.29 pounds butterfat in 824 lbs. milk in seven days, a world's record at that time. She has almost an 800-pound butterfat record in a year and three daughters with nearly equal records. This bull has 11 A. R. O. daughters and is a show bull. Another bull is Admiral Walker Prilly with 42 A. R. O. daughters. His dam was Lottie Walker Spoffard who five times produced over 24 pounds butterfat in seven days and has a record of over 25.6 pounds fat. Their other bull is a son of the King of the Pontiacs from a daughter of Tidy Abbekerk Prince. The King of the Pontiacs is recognized by all as the greatest bull the breed has ever produced, having 265 A. R. O. daughters or more than twice as many as any other bull. He also has a "44-pound" daughter and more than 30, "30-pound" daughters. Tidy Abbekerk Prince has 86 A. R. O. daughters and is considered one of the foundation families. This bull which is a fine individual cost the company $3,400 when only 18 months old. A part of this herd will be at the State Fair at Sedalia this fall.

C. M. LONG, County Agent.

Don't Take a Chance With Fire

"It never pays to take a chance with fire," says a circular issued by the Forest Service, United States Department of Agriculture, in its campaign against forest fires. "If you have got to gamble take a 'flyer' on the stock market or play the ponies, but don't take a chance on fire."

"Every thousand feet of green timber near your home is worth at least $10 in wages to you and your neighbors, besides its stumpage value to its owner. If it is on national forest land, you are part owner, and if it is destroyed by fire, you lose both values.

"Burned timber pays no wages," the circular says. "The prosperity and development of your locality is going to depend upon keeping that timber green.

"Don't take a chance with fire yourself, and don't let your neighbor do it. When you burn brush take every precaution to obey the law and see that your neighbor does. Remember that your home and his can go up in smoke from one piece of carelessness.

"The biggest fires in history were started by those who didn't think the woods would burn. Be as careful of fire as you are of powder; it's just as dangerous."

When writing advertisers please mention Hoard's Dairyman.

RED POLLED

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls, also heifers and young bulls by them. Don't forget the date. Send for catalog.

Jean Du Luth Farms, Duluth, Minnesota.

BROWN SWISS

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 **Peoria, Illinois.**



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.

RA INMAN, Secretary Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

For Sale

2 splendid Brown Swiss bulls, ready for service; best blood in America. For quick sale will accept any reasonable offer. Address

J. F. SCHOELLKOPF
Marine Trust Building, - Buffalo, N. Y.

15,540.9 lbs. Milk
613.60 lbs. Fat

Is the average official production of his two nearest dams. This Brown Swiss bull is 16 months old and ready for service.
Two other fine yearlings and several younger bulls. Entire herd FEDERALLY ACCREDITED. Write for pedigree and prices.

WALHALLA FARMS, Middleburgh, N. Y.

Undefeated Show Bull

for sale. Because of sickness it is impossible for us to show this year and we are offering Gallatin Brownie for sale. He was undefeated at 4 state fairs, Waterloo and the National in 1919. Grand champion at the National. Now 3 years old and in even better show form. His dam is on official test and going strong.
We also have several very promising yearlings and bull calves, good show prospects.
HULL BROS., - PAINESVILLE, OHIO

Closing Out Auction Sale

The Trustees of the Estate of the late Theodore N. Vail will sell at Public Auction

Wednesday, August 25, 1920

AT ONE P. M.

At Speedwell Farms, Lyndonville, Vermont

His Well Known Herd of

Registered Brown Swiss Cattle

The herd consists of forty head. KUNDRY, the three-year-old world's record cow of the breed, two of her daughters and a son are a few of the attractive offerings in the same. Nine daughters by the great bull Tom Phyllis. Several fifty-pound cows in the herd.

For Catalogue Address

WILLIAM S. DUNN, Sale Manager, Middleburgh, N. Y.

Geo. Bain, Auctioneer

Successful Community Efforts in the Show Ring

(Continued from page 69)

his faith in growing animals eligible to the show ring and brings his stock in competition with his fellow breeders and under the criticism, either favorable or otherwise, by his community and the judge.

After the list had been completed a majority of the men found that the committee had selected one or several in some cases from among his herd to be fitted. This the breeder did willingly with the understanding that his winnings were to be divided 50-50 with the county club, which in turn was to provide help and feed to care for stock while on the grounds. The owner was to show his stock on judging day and to display them in the parade. Each farmer identified himself as a breeder of true to type individuals through representation of his herd, and advertised himself as a breeder by placards displayed near his stock.

Anyone visiting the Green County Fair last fall would have thought he had lost his way when he entered the grounds. Almost unknown to himself he was following the crowd which seemed to be elbowing and pushing its way toward the dairy barns. Here he found every stall filled. Imagine, if you please, the tops of some thirty or forty herds represented in various classes fitted and groomed to perfection, every animal a fitting contestant for the ribbons and their owners in friendly rivalry glibbly discussing the outcome of the morrow's judging.

Friday found Professor G. C. Humphrey, College of Agriculture, who judged the stock, fairly mobbed by interested spectators while he worked from early in the morning until well into the afternoon placing the winners. Take the aged bull class with seven contenders for honors. Then the "get of sire" and the sire and his get with twenty-eight representatives, a class seldom found in county fair lists. In short, using Professor Humphrey's own expression, "the entire Holstein exhibit would have fared well at the state fair."

What caused this transformation? To ask this question and then not to answer it would leave too much in doubt and probably reflect unjust criticism on the heretofore passive disposition of the breeders themselves. In short, to co-operate is to strengthen. The same efforts that have been exemplified in the operation of the co-operative Swiss cheese factory which has spelled success for the dairymen since the manufacture of cheese had its inception into the county brought success in co-operative showing of stock at the fair. Each breeder caused his efforts to be unified with those of his neighbors in furthering through the County Holstein Breeders' Club the breeds' best interest.

The Board of Directors at a special meeting in the spring revised the fair premium list which had become obsolete from lack of use. Too often, as was the case with this premium list, many premiums are offered that afford nothing to encourage the exhibitor. To induce a breeder to show an aged bull, for example, and to popularize that class was to add the "get of sire" and the "sire and his get" with commensurate offerings for this class. With the revision and re-classification of the list came the responsibility of justly filling and providing entries. Many times breeders are too busy to give the necessary time to the showing of their stock at fairs. Some men are utterly lacking in the knowledge of what constitutes a fit contestant for honors in the ring, which fact brings about the necessity of co-operative showing under competent direction. Therefore, in fairness to the exhibition as a whole some discrimination must be affected which insures success along this line. It is unfair to exercise this just prior to the opening of the fair since it results in dissatisfaction and dissension among the breeders showing. Take the matter of fitting, many men do too much a day or so before the opening of the fair and too little at an earlier date. When one stops to figure the importance a competent judge places on the matter of quality, conditioning, and general conformation it behooves those in charge to lay plans well in advance of the fair. Over 175 head in the parade, decorated with their respective winnings and preceded by the band, made this day one to be remembered by the exhibitors and cherished by the officers of the fair who had given the stock show their loyal support.

Community breeders' clubs could adopt some such plan as this to make their fairs successful and as a booster for their particular breed. Considerable breed rivalry already exists in some counties and a very creditable showing of stock could be affected by each community fitting and showing its particular breed and vieing with each other for honors at their local fair. The state fair and finally the National Dairy Show should later find the winners of each local fair contending for the highest honors.

Tractor Ignition Difficulties

(Continued from page 68)

wrong, except to remove it when the tractor is to be stored. However, any careful workman may take the magneto apart and put it back in good shape.

The farmer has got to become as familiar with his tractor as he is with the milk sheet if he is to get the most out of it. When the magneto goes back to the factory for repairs, nine times out of ten all it needs is a good cleaning and maybe a carbon brush or two. Such repairs take an hour or two and the job costs the farmer a good big sum.

SWINE

Alfamarl Springs

Offers for sale Rex of Alfamarl Springs by Union Star, a richly bred Yeksa bull whose dam, Reunion made 576 lbs. fat at three years; out of Goldie Belle, a good daughter of Tricksey's Sam. He is ready for service.
F. M. TESS, Mgr., - TROY CENTER, WIS.



Green Valley Cherry King 2nd, No. 260435n.

SPECIAL PRICE

on Duroc pigs of May and June farrow. Sired by State Fair winners.
Gilts bred for fall litters. Write for Catalog and price list.

We deliver the Hogs before you pay.
GREEN VALLEY STOCK FARM
BOX 5, LOUISVILLE, ILLINOIS



MISS NARCISSE 4th
R. M. 9,495.5 lbs. milk, 621 lbs. butter as a sr.3-yr.-old.

JERSEY CREST FARMS

Offers Her Son—Ready For Heavy Service

Narcisse's Varsity Diamond is a splendid individual, solid color, 2 years old. We have withheld him from sale until now in order to test his dam, a double granddaughter of Keepsake's Golden Lad. His sire is Favorite's Golden Lad from Lad's Golden Favorite, 822 lbs. butter R. M., one of the best daughters of Keepsake's Golden Lad. Herd under federal supervision. Write for complete information.
Jersey Crest Farms, - Oconto Falls, Wis.

Tierra Bella Stock Farm

Public Sale of Registered Chester White Hogs

We have reserved 40 choice Chester Whites, including 16 tried sows and fall gilts bred to Jumbo for fall litters, 10 big type fall boars sired by Pay Streaks Monarch, a good son of the Grand Champion Pay Streak, also 14 spring sows and boars sired by these big type boars. Everything will be registered. Write now for catalogue and plan to be our guest at Mauston, Wisconsin. Sale day August 14th.
V. C. TIEDT • • • • • • • • • MAUSTON, WIS.

ISLAND FARM DUROCS

We are offering a few choice spring pigs, either sex, at $30 each at weaning time. Write us your wants.
ISLAND FARM, - Floodwood, Minn.

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

JERSEYS

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.
Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.
Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.
Price, $150 f. o. b. cars our station.
Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

"OUR MAJESTYS SOLD"

And This "RALEIGH WILL SELL"
Bull, just 10 months old, and a clipper.
Sire—Grandson of Mable's Raleigh and Rozel's Noble.
Dam—By son of Financial Raleigh. She traces 3 times to Financial King breeding. Now on R. of M. test and making good.
G. D. GILBERT, Manager.
Ceylon Court Farms, Lake Geneva, Wis.

Cedar Crest Farms

JERSEYS

We have a few young cows and heifers for sale. Write for particulars.
J. K. Dering, Lake Villa, Ill.

Hillcrest Jersey

Bull calf, 6 mos. Sire—Figgis Wingold. Dam—on R. of M. cow sired by grandson of Golden Fern's Lad. For particulars and price write
ROLLIE VANDERVORT, TOMAH, WIS.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter; Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.
Address: J. Q. Emery & Son, Edgerton, Wis.

GUERNSEYS

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137
Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.
U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

Your Opportunity

to obtain the blood that breeds on, sons of

Langwater Raritan

the only GUERNSEY BULL that has a full sister (Langwater Nancy) with 1000-lb. fat record.

Send for sale list.
Herdlea Stock Farms, - New Hope, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.
SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.



Economy in Production ← GUERNSEYS → Quality of Products



Guernseys produce large quantities of milk and butterfat when given a fair chance. For example, ten leading cows average 19,960.96 lbs. of milk and 997.56 lbs. of butterfat. Send for our free booklets.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 74, PETERBORO, N. H.

The Second Southeastern Guernsey Breeders' Sale

to be Held at Salisbury, N. C., Aug. 12th, 1920

In Co-operation with Rowan County Guernsey Breeders' Ass'n

This offering will consist of thirty-five selected Guernseys, and will come from four different states and about twelve different herds. These animals were selected by a Committee and are pronounced the best bunch of Guernseys ever offered at public auction in the South. They are from herds all under Federal inspection and every animal is guaranteed a breeder. There will be five bulls, whose dams average over 600 lbs. of fat each, and thirty females from six months to four years of age. Among them are daughters of some of the best bulls of the breed and granddaughters of the sensational Guernsey bulls. Two granddaughters of King of Chilmark, one of them bred to a son of Chilmark; eight granddaughters of Itchen Daisy's May King of Langwater, a granddaughter of Dolly Dimple's May King of Langwater, granddaughters of Ne Plus Ultra, granddaughters of Border Raider, and some of the very choicest Guernseys from the best herds in the Southern States. Three splendid heifers bred to a son of King of Chilmark, who is full brother to Lady Du Chene.

We feel that all Guernsey breeders will be interested in the kind of animals that will be offered in this sale and would suggest that you write early for catalog to

C. T. RICE, SALES MGR., OAKTON, VA.
Col. D. L. Perry, Auct.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.

August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

CLELAND FARMS
GUERNSEYS

We offer a family of four, three full sisters and a 3-mo.-old daughter of one. One 6 mos. old. One now on test in Class G. One carrying second calf, and due Dec. 17th. Splendid individuals on good breeding. Pedigrees and price on request.

CLELAND FARMS, Chagrin Falls, O.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are ...gh grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.2 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale.
(Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Waldwic Guernseys FOR SALE

A few choice young bulls, sired by son of "Imported Itchen May King" and from dams making good A. R. records. Also few well bred cows and heifers.

EDGAR P. SAWYER, OSHKOSH, WIS.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock

Wern Farm, Waukesha, Wis.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.

Send for sale list.

M. L. Welles, Rosendale, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

OAKS FARM GUERNSEYS
COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

ALBAMONT GUERNSEYS

Superior young bulls two to twelve months old, rich in May Rose blood. Several are

Sons of Don Diavolo.

Send for sales list. **J. C. HAARTZ, 10 High St., BOSTON, MASS.**

The Mixter Farm
325 GUERNSEYS 325

Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.

HARDWICK, MASSACHUSETTS.

Hillswold Farm
Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right. and animals guaranteed to suit. **W. A. Cloues, Mgr.**

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

We are now offering a few well bred

May Rose Bull Calves

Sired by Langwater Renown 39636 and out of Daughters of Pencoyd's Golden Secret 16550. The dams are on test and doing very well. Also *an extra fine Yearling*. Now fit for light service. He is fawn and white, with clear nose. Anyone wishing to get the blood of this great family will do well to consider the above breeding. For price, pedigree, and all particulars address

GREEN MEADOW FARM,
Walter Jauncey, Mgr., Williamstown, Mass.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Let Us Supply You With Guernseys

OUR GUERNSEY CATTLE ARE BRED FOR TYPE AND PRODUCTION. We can supply you with ANY NUMBER, MALE OR FEMALE, GRADE OR REGISTERED.

Our 175 members are ready to supply your demands at the most reasonable prices considering the excellent quality of stock offered.

Do you want a high class Guernsey bull, out of a high producing dam? Write us. Are you in the market for a carload of grade cows and heifers? Write us. Are you planning a foundation of pure-breds? Write us.

Come to the County or write your wants.

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary. - - WAUKESHA, WISCONSIN.

LONE TREE FARM
GREEN LAKE, WIS.

Has in its Herd 15 A. R. Guernseys and 11 R. of M. Jerseys
And Carries About 16 Cows on Test.

To inquiries for BULL CALVES we give full, honest particulars and stand behind every animal sold.
Jersey Sire—A Son of Pogis 99th. Guernsey Sire, Langwater Islander.

The Waupaca County Guernsey Breeders' Association

offers for sale high grade Guernseys from one of the oldest and largest Guernsey sections of the state of Wisconsin, also from a County ranking second in the state for the number of herds under Federal Supervision to eradicate Tuberculosis. Cow testing association work was early established and is being maintained in this Guernsey territory. WRITE US.

L. S. MURAT, Pres., E. A. HOTZ, Sec'y. - - Scandinavia, Wisconsin



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd





Four World's Record Cows at Ravinia

You Want Bigger Cream Checks

You may like a cow for her looks but she pays for her feed bill in milk.

Ravinia Ayrshires

are beautiful to look at too; but the big thing about them is that they "milk like a pump."

They have proved this by the world's records they have made; and will prove it to you in the bigger cream checks you get from them and from the herd you can breed out of them.

We can tell you some things about increasing your cream checks that you ought to know, and we'll be glad to do it. Get some paper and write us a letter right now about your breeding problems.

GOSSARD BREEDING ESTATES
Martinsville, Ind. Preston, Kans. Axial, Colo.
1007 South Michigan Avenue, Chicago



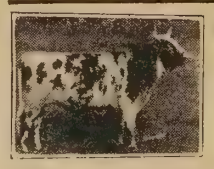
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan

Sons of
Ringmaster's Brae Burn Diplomat
For Sale

GEORGE F. WHITE, WESTFORD, MASS.

Brae Burn Farm

Cavalier's Model Champion



1st at National 1919
Heads Our Herd

L. W. NEWTON, ASHBURNHAM, MASS

Ringmaster's Brae Burn Adonis

Young bull calves by this sire are now offered.
W. Grant Fancher, Essex Co. Training School, Lawrence, Mass.

MIDDLESEX MEADOWS FARM

SOUTH LINCOLN, MASS.

AYRSHIRES

A. Henry Higginson



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

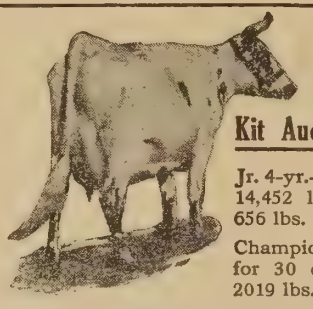
Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS



"Ayrshires of Quality"

Kit Auchenbrain

Jr. 4-yr.-old record 14,452 lbs. milk, 656 lbs. fat.

Champion of Breed for 30 days with 2019 lbs. milk.

Her bull calf, Kit's Surrel, by Surrel for sale.

WEYMOUTH FARMS,
North Weymouth, Mass.



FOR SALE

Barclay's "Herd Laddie" 23548 Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 384 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp. A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

AYRSHIRES

1 Registered yearling bull. Also 5 good grade heifers, 2 milking, 3 to freshen in spring. All sired by a grandson of Substantial of Highland, sire of 4 A. R. daughters, among them April Bloom of Highland, 440.25 lbs. fat, brother to Rena Ross family. $600 if taken soon.

Mrs. Aug. Neumann, R. 2, Princeton, Minn.

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 496 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

Highland Farm Ayrshires

If you want—
Big Stylish Cows
Big Teats and
Big Production

Get a "Baron" to head your herd. A few choice bull calves by Imp. Baron's Best of Bargenoch, No. 12858, out of A. R. Finlayston dams, for sale.

Lt. Col. John R. Valentine, Prop. Philip C. Palmer, V. S., Manager
Bryn Mawr, Pennsylvania

Some Nice Young Bulls For Sale.

The best of breeding. E. N. Manley & Sons, Lyons, Neb.

Keep Tab on Your Cows!

Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. Hoard's Dairyman, Fort Atkinson, Wis.

WOODCREST SIR CLYDE FROM A 33-LB. AND 970-LB. DAM



His 18 A. R. O. daughters, headed by a 30-lb. 3-year-old, and including 13 2-year-olds from 20 to 25 lbs., average 22.01 lbs. butter at 2 years, 10 months.

A son of the great Alma Clyde, whose yearly record of 970 lbs. butter from 22,560 lbs. milk, was debarred from 8th Ass'n prize, 1911-12, and who is dam of a 30-lb. daughter and three great sons. His sire's dam, former world champion from 7 days to 6 months.

Three daughters sold at auction the past season averaged $2,050 each.

Write today about one of his good sons from a yearly record dam.

HOME FARM HERD
(Established 1881)
W. B. Barney & Sons, Chapin, Iowa.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

365-Day Milk Production

STILL ANOTHER ONE

Grandson of Sir Pietertje Ormsby Mercedes 44th out of a granddaughter of Lord Homestead Netherland De Kol, born Jan. 4, 1920.

Handsome calf beautifully colored, more white than black, well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within reach of the farmer or small breeder.

CERRO GORDO FARMS, - Mason City, Iowa.

FOR SALE

BULL CALF

Born Nov. 21, 1919.

Sire, Hengerveld Springville Pietje 262747, whose sire is Prince Hengerveld Pietje No. 50582. Sire's dam a handsome 4-year-old with a 22-lb. record. Calf's dam is a 3-year-old, untested, but showing wonderful producing qualities. Her sire is Case King Segis No. 172192, whose sire was the great $50,000 bull, King Segis Pontiac Alcartra. Our herd is absolutely free from tuberculosis and abortion. This calf is a wonderful individual and guaranteed to please. A check for $260 will deliver this calf to your station.

NEVER FAIL STOCK FARM,
Verne L. Eakes, Prop., Route 6, Iowa City, Iowa

HOLSTEIN BULLS

Ormsby Bred Ready For Service

from A. R. O. Dams Running on the 10-month test.

We are now able to offer bulls that are well grown, straight, deep bodied individuals, that combine in the closest possible degree, the blood that has made Minnesota famous. They are priced from $200 and up and we will make a lot price to breeders' clubs or county agents desiring bulls of the best breeding to place on the farms of their counties. We are also able to offer a few cows, to freshen in the fall, to the service of our herd sire, he by the only living son of PIETERTJE MAID ORMSBY and out of the highest record daughter of KING SEGIS PONTIAC COUNT.

Write or come and see us, farm just outside of city limits of St. Paul.

RAMSEY COUNTY HOME, - North St. Paul, Minn.

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH

WHEATFIELD FARMS

A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.
Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS
J. C. Deld, Owner. R. F. D. No. 14, LA SALLE, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*
At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*
2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

FOR SALE

2 Choice Holstein Bulls

One age 11 months with 23-lb. dam, sire 31-lb. son of King of the Pontiacs. No. 2. Age 6 months, dam 27-lb. 4-year-old, sire 31-lb. son of King Walker Segis.

CLARK & SICKMON, HONESDALE, PA.

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, Raymond, Iowa

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandeburg, Mgr.

M&P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

King Segis Bred Bulls

We have a limited number of calves and yearlings of KING SEGIS breeding.

Each individual has been picked from heavy producing dams and sires, many with large A. R. O. records and containing the best foundation blood of the breed.

Prices are reasonable. Write for pedigrees.

G. G. BURLINGAME, - CAZENOVIA, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

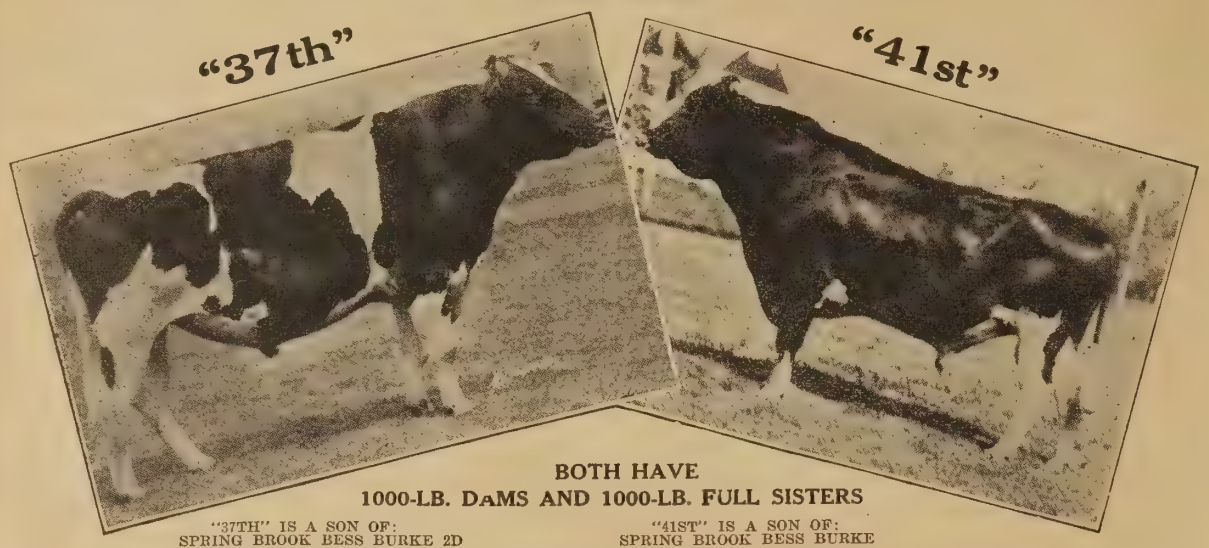
Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

SIR PIETERTJE ORMSBY MERCEDES

"THE WORLD'S GREATEST YEARLY RECORD SIRE"
OUR HERD SIRES



BOTH HAVE
1000-LB. DAMS AND 1000-LB. FULL SISTERS

"37TH" IS A SON OF:
SPRING BROOK BESS BURKE 2D
Butter, 365 days 1,290.91
Butter, 3 years 3,380.14
"The World's Largest Dairy Cow"

"41ST" IS A SON OF:
SPRING BROOK BESS BURKE
Butter, 365 days at 9 yrs. 1,094.16
Butter, 3 years 2,903.93
"The Greatest Mother of the Breed"

E. C. SCHROEDER FARMS, - MOORHEAD, MINNESOTA
(A FEDERAL ACCREDITED HERD)

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

Empire Stock Farm
William Schmidt, Prop. St. Peter, Minn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Minnesota Holsteins

For Your Next Herd Sire



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Do You Need a Bull?

I am offering a splendid yearling for sale. He is growthy, well marked, and as straight as a line. His dam is a 24-lb. 4-year-old daughter of Sir Veeman Hengerveld and his sire a 28-lb. son of King of the Black and Whites. His 11 nearest dams average 28 34 lbs. in 7 days. Several younger bulls for sale.

E. J. BROSIOUS, STILLWATER, MINN.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams. For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Mankato Holstein Farms

are combining the best of Ormsby breeding through the sons of these great proven long distance sires: Sir Pietertje Ormsby Mercedes. Ormsby Korndyke Lad, King Korndyke Colantha Ormsby. These great sires have 22 daughters over 1,000 lbs. and 35 over 30 lbs.

A Federal Accredited Herd.

Marlow & Randall, - Mankato, Minn.

King Segis Pontiac Fayne STAR

is one of the highest record sons of King Segis Pontiac Count. We think he is the best individual son of his famous sire. He is siring the kind of calves you would expect him to sire. Now is the best time to get one of his sons. All ages. Nothing cheap for sale.

FLECKS FARMS, FARIBAULT, MINN.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Here's Your Chance to Get a Choice Bull

From a sire whose 4 nearest dams averaged 29 lbs.

❖ Born November 1916 Black and white ❖ Born February 1917 Black and White ❖
Born May 1917
❖ Black and White ❖
3 Choice Bargains

L. H. HUNTER, RANDOLPH, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

FRED S. BALL

SPECIAL HOLSTEIN AUCTIONEER

I sell a big per cent of all the Imported sales in the south-west. Wire early for dates as I sell every day in sale season. EL RENO, OKLAHOMA.

Pine Row Holsteins

Bull calves from A. R. O. dams sire a 31.42-lb. grand son of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT STILLWATER, MINN.



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.
Address correspondence to Axel Hansen, formerly with John B. Irwin.

A SON OF THIS GREAT SIRE

AT THE HEAD OF YOUR HERD WILL MEAN DOLLARS IN YOUR POCKET



MATADOR SEGIS WALKER, Jr. 6-year-old

DON'T OVERLOOK THIS YOUNGSTER

E. T. 1061. MATADOR SEGIS WALKER HARTOG. Born 4-27-19.
This young bull is 90% white. His sire is MATADOR SEGIS WALKER, who at the present time has 29 tested daughters, and still a Junior 6-year-old bull. We have over 125 of his daughters in our herd and about 50 will freshen during the year, from which we expect great results. 28 of his daughters in two-year-old form average 20.08 lbs. butter from 405.59 lbs. milk. 3 of his daughters in three-year-old form average 30.03 lbs. butter from 531 lbs. milk. His first three 2-year-old daughters to finish yearly work averaged 798.68 lbs. butter from 20,761.5 lbs. milk. We predict MATADOR to be one of the youngest century sires of the breed.
His dam, HAZELWOOD AAGGIE HARTOG, has a very creditable record of 24.94 lbs. butter in 7 days. She will freshen again in May and is a very good prospect. We will run her for a year. She is a very good show animal, very large and weighs 750 lbs. In fact, she is one of the good foundation cows in our herd. She is beautifully marked, just as straight as a string, the real dairy type, and her son is a chip of the old block. Don't overlook this bull, for he is going to make some one a great future herd sire.
Price on him for immediate sale $750.00

Write today for our new sales list No. 103 offering for sale sons of Carnation King Sylvia, Avon Pontiac Echo and Matador Segis Walker.

Main Office:
811 Consumers Bldg., Chicago, Ill.
Western Office:
811 Stuart Bldg., Seattle, Wash.

Carnation Stock Farms

FARMS
Western Farm, Near Seattle, Wash.
Eastern Farm, Oconomowoc, Wis.

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.



W. J. Gillett & Sons, Rosendale, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly.

S. A. BAIRD & SON, WAUKESHA, WIS.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke age over 37 lbs. butter in 7 days. Come

dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams aver- and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

2500 Healthy Holsteins 2500

Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.

Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

HORICON BELLE HOLSTEINS

Herd headed by Pabst Korndyke Baldwin, a son of Korndyke Segis Johanna and from a 32-lb. granddaughter of King Pontiac Champion. Five females in my herd average 24.12 lbs. butter as 2-yr.-olds.

E. F. KUEHN, - - HORICON, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked—out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

Check Or Bond Buys Dandy Bull Calf

Born June 20, 1920. His dam and sire's dam average over 30 lbs. butter and 657 lbs. milk. Dam and granddam have good yearly records. Rich in Pontiac Korndyke and King Segis blood. Dark in color. Cut price. **Chic Dairy Farm, - - Juneau, Wis.**

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 8-month-old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 862 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY

WISCONSIN

DO YOU KNOW?

That there are 40 bulls with 30-lb., 40-lb. or 1,000-lb. yearly record dams in service in WAUKESHA COUNTY?
That there is more long and short time production work done in WAUKESHA than in any other county in Wisconsin, the greatest dairy state in the Union?
That WAUKESHA contains more tuberculin tested cattle than any other county in the world?
That WAUKESHA breeders have more dollars invested in Holstein-Friesian cattle than any other county in the world?
That WAUKESHA COUNTY produced the highest priced dairy cow in the world?
That bred for production stock pays?
WAUKESHA BREEDERS can supply your Holstein wants.

Tuberculin tested herds—State and Federal.

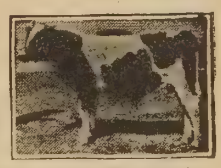
Individuality Short and long time production records.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin. - - Office 254 Broadway

Head Your Herd With a Bull!

Get a son of King Superba out of one of our good cows. King Superba's offspring won first and second in get-of-sire and calf herd at the Wisconsin State Fair, 1918. His four daughters sold in the Waukesha Sale, Nov. 1919, averaged $959. King Superba's dam was the first cow to be strictly officially tested for the entire year. She produced 1231 lbs. butter, 26,433 lbs. milk as a four-year-old. She has twice produced over 33 lbs. butter in 7 days. If you wish to combine individuality and production, head your herd with a Son of King Superba. We now offer a number of his choice sons, serviceable age and younger, out of dams with records up to 24 lbs. Several of the dams are on yearly test. Don't wait. Come and see them now.

BAIRD BROTHERS, WAUKESHA, WISCONSIN.



One of the sons of King Superba. They are all excellent individuals.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms. H. J. Sedgwick, Limeridge. Wis.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

Oconomowoc, Waukesha Co., Wis.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

2 Choice Bulls for Sale

No. 1. Born Dec. 19, 1919, good individual, good length, and a straight top line, three-fifths white. Dam, A. R. O. 18.10 lbs. butter as a senior yearling, milk 400 lbs., and daughter of 35.68-lb. bull, King Colantha Lyons. Sire, King Korndyke Gem, whose dam's A. R. O. record is 32.74 as a 3-year-old. Price $225. No. 2. Born January 9, 1920. A good, growthy yellow, heavy body, about three-fifths white. Dam, A. R. O. 22.50, milk 520 lbs. Sire, King Colantha Lyons, a 35.68-lb. bull. Price $225. Pedigree and photo on request. An accredited herd.

MICHAEL SEBERGER SCHERERVILLE, IND.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write C. I. Reamer, North Liberty, Ind.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed to have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

5-10 Well Bred Heifers

Several Good Young Bulls

are what we are offering just now. The heifers are registered two-year-olds bred to freshen this fall—several are daughters of Sir Ormsby Homestead Butter Boy, a 35-lb. bull of Homestead Jr. De Kol breeding.

The young bulls up to 9 months old are from A. R. O. dams and several are by "Butter Boy". One is by King Bess Burke Ormsby, a 42-lb. grandson of S. P. O. M. and Spring Brook Bess Burke.

They are priced to sell. Write or, better still, come and see them.

ANDREW FRANK, FOX LAKE, WIS.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Buy Selected Holsteins

We fill orders for pure-bred Holsteins, high grade dairy cattle and choice young stock with carefully selected animals.

It will pay you to write us.

GUST MELSTER & SONS, CAMBRIDGE, WIS.

ORMSBY BULL · Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's, Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Warwood Farm

Has for sale

Holstein Bulls

from two to twelve months old, of excellent breeding.

FRED C. LANDORF, Foreman, Lisle, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Grandson of King Segis Pontiac

Ready For Heavy Service

We have for sale a 2-year-old grandson of King Segis Pontiac from one of our best "all the year" A. R. O. cows. He is a splendid individual, well marked and very well grown. Priced to sell. Also have a few bull calves. Write today.

PINEHURST FARMS, ROCKFORD, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb.4-5; Apr.1-2; June3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.-072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter ard over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS



The Wisdom of Keeping Strictly Dairy Cows

The class of cows that should be kept for dairy purposes is well illustrated by a farm survey made by P. H. Ross, county agent of Leavenworth County, Kansas, in which he states: "Blood will tell." The greatest producers and the most profitable producing cows always have been and always will be of dairy breeds, bred to produce milk and butter economically. Fifty-nine farms included in this survey were dairy farms, and the comparison with other breeds in producing milk and profits, showed $38 more return for the Holstein-Friesian per year per cow than the other breeds, and more than three times as great an income per cow as did the dual purpose cows.

Send for the valuable Holstein booklets. They are sent free.

The Holstein-Friesian Association

101 Hudson Street, Brattleboro, Vermont.



BEECHER WYTHE 2ND

Butter 7 days 19.65, milk 534.6 at 15 years of age, 75 days after freshening; 19.1 lbs. butter, 548 lbs. milk, 109 days after freshening.

At 14 years of age, Grand Champion Cow of Indiana 1918; 22,554 lbs. of milk, 800 lbs. of butter, as a ten-year-old. Dam of 12 consecutive heifer calves and one bull calf. Nine A. R. O. daughters.

2 Serviceable Bulls For Sale

Sired by King Colantha Lyons, a 35.68-lb. son of King Lyons, out of a 29-lb. daughter of King Segis.

No. 1. Born April 18, 1919. Two-thirds white, nicely marked, good individual. Dam: 16 lbs. butter in seven days at 24 months. His grandam, Beecher Wythe 2nd. This cow has produced over 100 tons of milk and is now nearly 16 years old, is still milking at a great clip. Price $500.

No. 2. Born March 11, 1919. Five-sixths white, good individual. His dam, 13 lbs. butter at 2 years. Price $250.

M. J. SEBERGER
Schererville, - Indiana

"SPOT"



Eli Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois

BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

Combining Type, Size, Constitution and Production.

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

A Good Consistent Pedigree

Isn't it worth more than a high record or two in a weak pedigree, which shows no certainty of transmitting Production?

We offer *3 SERVICEABLE BULLS* with good solid pedigrees.

No. 1—Double grandson of 40-lb. sire, from a 22.6 Jr. 2-yr.-old, 7 nearest dams average 23.7, all above 21 lbs. No. 2—Son of No. 1, A. R. O. dam, 15 nearest dams average 21 lbs. butter, 520 lbs. milk. All tested. No. 3—Yearling sired by No. 1, 7 nearest tested dams average 23.46. Priced for quick sale.

BROOKENS BROS., PARKER, S. DAK.

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

Larro-feed

THE READY RATION FOR DAIRY COWS

Larro Brings Prosperity to the Dairy Farm

The dairymen who feed Larro are unusually successful because they are operating on a *certainty*.

There is no chance involved in feeding Larro because the Larro guarantee reproduced below means just what it says—you get more milk or you get your money back.

This is the same guarantee of more milk which has stood back of Larro for seven years. To the man who is not yet a Larro user it is an absolute promise of better results from his cows—to the veteran Larro user it is double assurance that Larro today is the same as it was in the beginning—that its quality will never be changed.

If Your Local Dealer Does ***Not Carry***
Larro Get in Touch With Us at Once

The Larrowe Milling Company, 2012 Larrowe Bldg., Detroit, U.S.A.

DEALERS: Larro is sold on a basis which means constantly increasing sales for you. Write for proposition.



At last—a truly-balanced dairy feed!

Pillsbury's Dairy Ration

A Pillsbury product with a Pillsbury guarantee

We Were Interested In Scientific Feeding

For years we have followed with interest the scientific feeding of the dairy cow. Her milk yield—and therefore her value—depends to a great extent upon the feed given. Three factors must be considered: the greatest milk production, economy of production, and the health of the cow.

Feed Should Maintain Health Of Cow

We have long felt that the third factor, the health of the cow, has, in the past, received too little consideration. Feeds have been mixed with the sole idea of obtaining high milk records. Not enough thought has been given to the necessity of replacing the wasted tissues worn down under the strain of the 7-day or yearly test.

So We Added Mineral Salts

In mixing Pillsbury's Dairy Ration we have made allowance for this tremendous drain on the animal by adding certain mineral salts. These salts have been combined with the other ingredients in just the right proportions to aid digestion, maintain the constitution and vitality of the cow, and insure healthy calves.

Proved By Tests—A Perfect Ration

When our laboratory tests assured us that we had the correct proportions of protein, fats, carbohydrates and mineral salts, when we knew that our mixing machines were mixing the various ingredients so thoroughly that analyses of different samples tallied exactly; then—and not until then—we took the feed to several of the largest dairy farms in Minnesota for *actual cow tests.*

The tests proved that here at last was a real feed. The cows liked it, production increased almost immediately, feeding costs came down and every feeder was enthusiastic. All realized that we had produced a remarkable feed. Read our guarantee.

Maintains Every Cow At Greatest Milk-Producing Capacity!

Pillsbury's Dairy Ration will bring every cow into a full flow of milk and ***keep her there*** during the entire lactation period. *This we guarantee.*

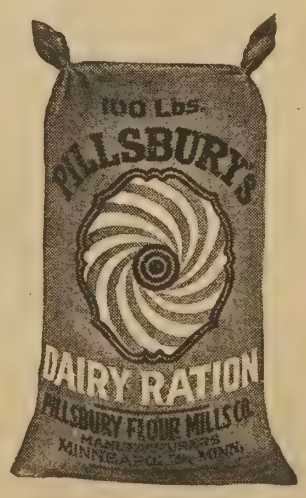
As one Minnesota dairyman put it, "I believe that if Pillsbury's Dairy Ration will not increase a cow's milk yield to the point where she returns a profit to her owner, she should be disposed of."

The Reputation Of Pillsbury Is At Stake

You would naturally expect an exceptional feed from Pillsbury. Pillsbury's Dairy Ration maintains the Pillsbury reputation for quality.

It is a clean, honest dependable feed. In competition with other feeds, both commercial and the uncertain "hand mixed" variety, it has proved its worth, time after time, both in volume and economy of production.

Pillsbury's Dairy Ration contains no "filler" of any sort. It is all feed.

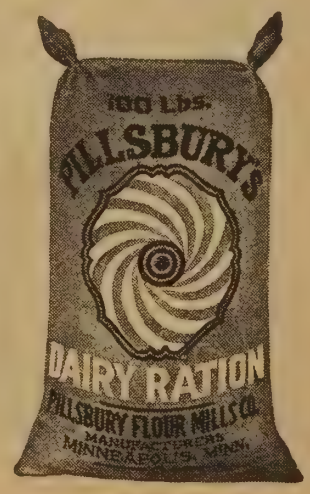


Pillsbury's Dairy Ration Contains:

Ground Oats, Wheat Bran, Hominy Feed, Linseed Meal, Standard Middlings, Corn Gluten, Cotton Seed Meal, Mineral Salts, ***and nothing else.***

Guaranteed Analysis:

Crude Protein	19%
Crude Fat	4%
Crude Fibre	11%
Carbohydrates	50%
Mineral Matter	6%



Your Feed Dealer Can Supply You, or write—

Pillsbury Flour Mills Company

MINNEAPOLIS, MINNESOTA

COLLEGE OF AGRIC
20 JUL 20
URBANA ILL

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., AUGUST 13, 1920. | Number 4

California Dairy Council Meets

SAM H. GREENE, SECRETARY

CALIFORNIA Dairy Council held its first annual convention during June. It was a two-day affair. Elaborate preparations had been made by the local committee and a program of unusual interest was given. This program was arranged so as to touch upon the four great questions in which the dairying industry throughout the United States is interested—production and quality of product, education and health of people.

The following seven directors were elected to fill expired terms: J. H. Gwinn, Banker of Petaluma; L. W. Wilson, Ice Cream Manufacturers; H. F. Robb, Milk Dealers. Directors G. M. Brown, Ed. H. Webster, D. M. Dorman, and W. B. Hopkins were re-elected. At the conclusion of the business session the convention convened and elected the following officers for the ensuing year: President, John Denman, dairyman, Petaluma; vice-president, Geo. E. Platt, Los Angeles, dairyman and president Los Angeles Creamery Company; secretary-manager, Sam H. Greene; assistant secretary, Mrs. Cynthia Price.

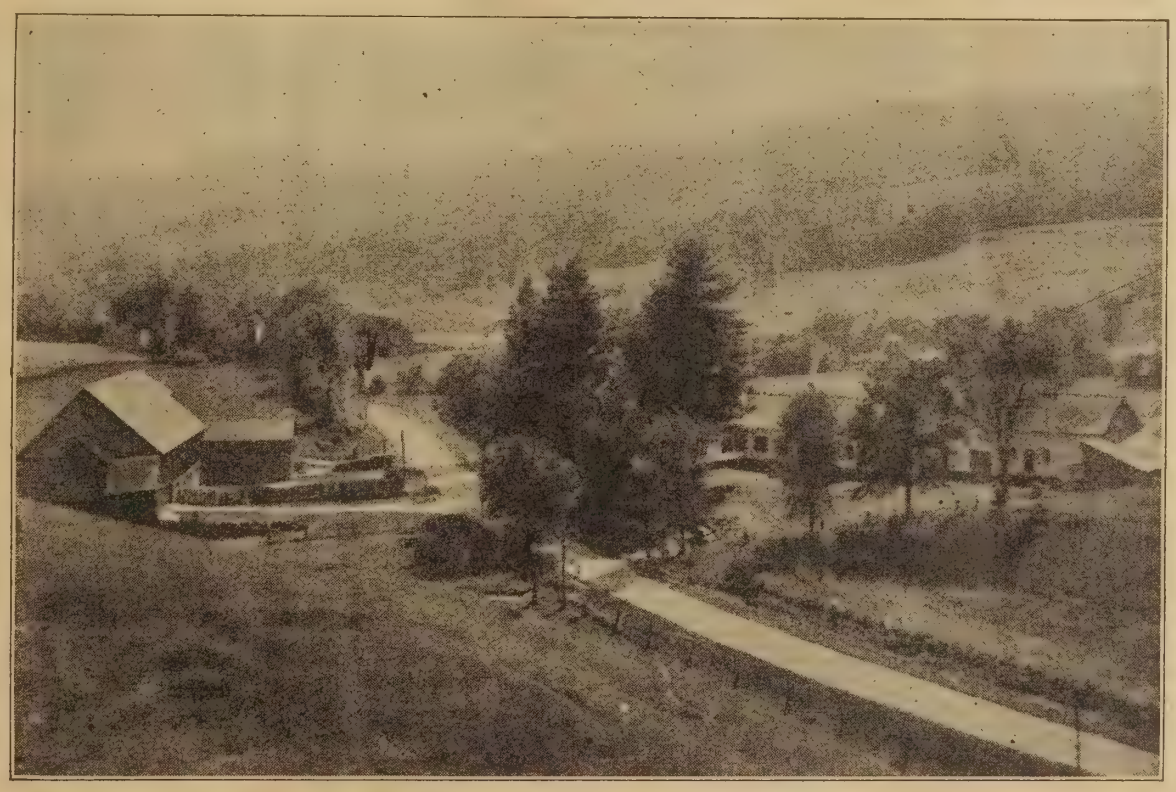
The educational program opened with an interesting and instructive talk and demonstration by Dr. C. L. Roadhouse, who displayed milk, butter, and cheese of both good and poor quality and explained in an extremely interesting and clear manner the relationship of the treatment of milk on the farm to the quality of the product. At the conclusion of his address a short recess was taken to enable the audience to sample both qualities of product. Dr. Roadhouse was followed by Professor C. V. Castle, the title of his address being: "The Relation of Production and Consumption of Dairy Products to General Agriculture". He demonstrated to the satisfaction of his hearers the dependence of general agriculture upon dairying and pointed out graphically the necessity for the development of wide consumption and of economical production. Professor Castle laid great emphasis upon the losses caused by the keeping of large numbers of low-producing cows. They are a loss to everyone on account of the extra labor required and they are a factor in keeping down consumption because of high prices. They are an expense to the dairymen in the matter of labor and of large quantities of feed which they eat but do not pay for. Professor Castle made the assertion that if one-third of the cows in California would be put out of the way, the dairymen of the state would be making much more money than they now are. He made the point clear, however, that this could not be done because of the rights of the consumers in the matter, but pleaded for a rapid extension of cow testing associations and the use of pure-bred sires as a cure for the present situation.

Mr. E. F. Moran, a representative of the San Francisco Milk Dealers' Association, read an exhaustive paper upon the problems which surround the distributors of milk in large cities. Mr. Moran's treatise was highly entertaining and instructive. He said in part: "The milk distributors of a large city are in the position of a buffer state. On the north they are bounded by the ever increasing cost of production; on the east by the constantly increasing wage of labor; on the south by the increases in the price of bottles, and of cans and tanks and caps and machinery and operating expenses; and on the west by a threatening army with banners bearing in letters of flaming red the legend: 'The price of milk must be reduced'.

"Fifteen years ago, when I became attorney for the Milk Dealers' Association of San Francisco, there were about 180 persons, firms, and corporations delivering milk in the city. Today, fully ninety per cent of all the milk delivered is handled by not more than a dozen different concerns, each of which is the result of a combination of former distributors.

"In reviewing the course of the business for the last decade it is interesting to note that with the development of sanitation as applied to milk both on the dairy ranch and in connection with distribution, and the passage and enforcement of state and municipal laws limiting, defining, and regulating the milk business, the increasing costs arising from the observance of such laws gradually forced out of business many small distributors who found that their limited means did not warrant the expenditure of the money required to improve their plants so as to place them in the condition exacted by the law and demanded by the health authorities. These either sold their business and engaged in other lines of endeavor, or combined with others similarly situated, and by thus obtaining larger capital were able to continue.

"Better co-operation between producer and distributor is essential to make the business of producing and delivering milk as successful as its great importance demands. Recent figures show that the value of dairy cattle places the dairy industry of this state among the most important of all our industries. While it is true that much of the product is not consumed as fluid milk, the fact remains that fluid milk is the most important food known to man. The duty is cast upon both producer and distributor, therefore, to work in harmony to the end that by intelligent co-operation they may not only give their business the success which is its due, but may also confer a real benefit upon the people of the state by educating them to a realization of the fact that they have awaiting them at their very doors a natural food product which science may imitate but not replace, and which, from the standpoints both of health and economy, is alone in its own field."



THE E. P. RIFORD FARM IN VERMONT

The struggle against adversity which has been fought cheerfully and successfully on this farm is the basis for the editorial, "Pessimism vs. Thinking", on page 122 of this issue.

Los Angeles Milk Survey

At the evening session Dr. Everett C. Beach, Director of Physical Education of the Los Angeles School Department, described the recent milk survey of the children in the elementary grades of the Los Angeles schools. Fifty-two thousand five hundren children were questioned as to the amount of milk they consumed daily, their ages were recorded and heights and weights obtained. It was found that 16,720 or 32% of the children received a glass of milk daily, 12,504 or 23% consumed a pint or more, and 23,276, or 45 per cent, did not receive any milk regularly. The heights and weights of these children were compared on the basis of their

(Continued on page 126)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
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A. J. GLOVER, P. C. BURCHARD,
C. L. BURLINGHAM

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Subscription Rates

Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Breeding Improved Timothy

Timothy is by far the most important American hay grass. The plant is extremely variable, as can be seen by close inspection of any field. It is evident that if the best of the varieties can be isolated there should be a considerable increase in yield obtained. Work on this problem has been conducted for some years, mainly at North Ridgeville, Ohio, in co-operation with the Ohio Experiment Station. The actual work of isolating and multiplying superior strains has proven much involved and time-consuming, as practically every good timothy plant is a heterozygote—that is, it does not breed true. However, by painstaking work a number have been secured which reproduce themselves from seed with considerable uniformity. Under plot tests their superior yielding capacity is marked. Of two of these strains seed has been grown in quantity and fields are now under test by many Ohio farmers. It is anticipated that their results will coincide with those obtained from plots and demonstrate the practical value of selected strains. Previous work has shown that improved timothy, like corn, has narrow adaptations; that is, each superior timothy retains its superiority only under conditions very similar to those under which it was selected. It is, therefore, likely that breeding will have to be done for each distinct region. The potential increases in yield will, if realized in practice, make the work of large financial importance.—C. V. PIPER, U. S. Department of Agriculture.

Want to wear your tractor out quickly? Stopped tubes that do not carry grease to the journal and loose cup covers are both excellent ways.

Keep the garden coming. A few crops may still be planted for fall use; spinach is one of them.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Smilin' Jim

Smilin' Jim, that's smilin' Jim,
The world is mighty kind to him.
Or is it that he's kind himself,
And puts dull sorrow on th' shelf?
The weather may be good or bad,
But Jim is always smilin'—glad.
"It don't help none to worry, see!"
Is what he always says to me.

Smilin' Jim, dear smilin' Jim,
And when his pocket-book grows slim,
And crops are poor and cattle slick,
He always turns that smilin' trick.
Folks like to see him come their way
Because he grins th' livelong day.
Good natured people spread content,
And worryin' don't pay th' rent.

Smilin' Jim, our smilin' Jim,
And not until th' stars grow dim
And suns shall fade and moon go out,
Will Jim be filled with woe and doubt.
There's sunshine in his very soul,
And hope has always been his goal.
"God's good," he says, "it all comes right,
Why deal in darkness when there's light?

"How have you solved the labor problem?"

"Oh, I advertised in city papers for girls to work during the summer months, and said that powder puffs would be given away free, on application, and that every room was supplied with a mirror."

An Old Sweetheart of Mine

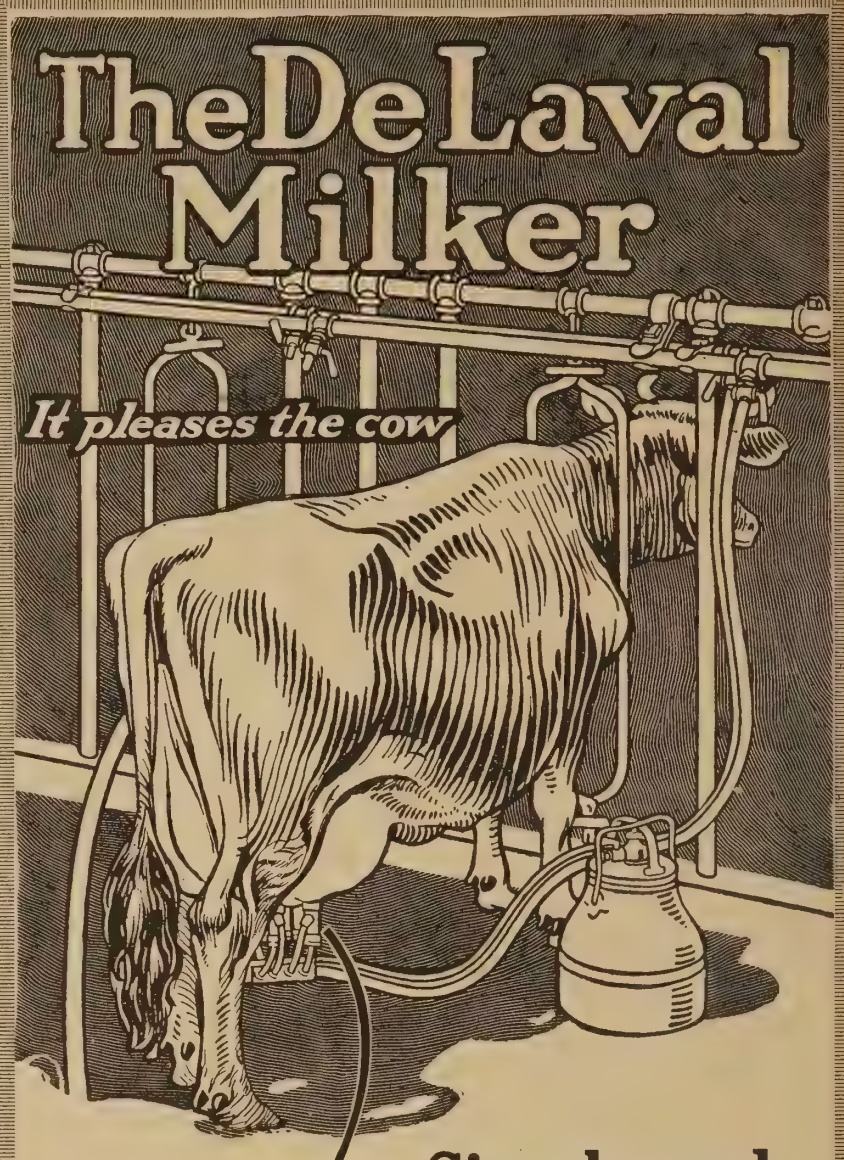
I can remember her
Just as plainly as though
It happened yesterday.
She lived on the farm adjoining ours,
And she was as fair as a flower,
With milky cheeks.
And light, fluffy hair,
And her lips were red—
The red of ripe cherries.
She wore sunbonnets
As if they were crowns of glory
And the summer time dresses
That her mother made for her
Were better than the tailored kind
Of the big city
And sweeter, by far.
And she sat next to me
At Sunday School,
And she blushed every time
I glanced in that direction
And I blushed, too.
And I thought, when I grew up
And had a herd of my own
And a silo,
And a nice new cream separator,
That we'd be married.
For she was the only girl
In the world.
But one day,
She stuck her wad of chewing gum
In the wrong place on the seat
And I sat on it,
And couldn't move,
And we quarreled,
And that was the end
Of a perfectly good rural romance.

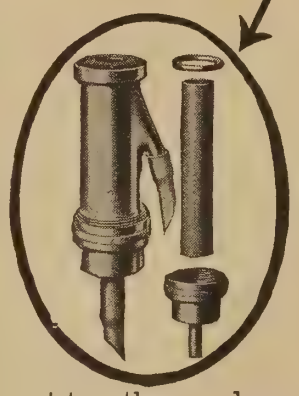
Dairy Joe's Philosophy

When a man on a farm tells me he's too busy to read, I wonder if he's too busy to pray. Knowledge is as necessary as religion, because one engenders the other.

Chased a crowd of small boys out of my apple orchard yesterday. They think it's because I'm a stingy old duffer. But I did it because I knew how that stomachache would hurt if I left 'em there—I've been a boy myself.

Cows have mighty purty eyes. Ever looked at 'em much? Animals with eyes like that are sure to be almost human. And they ought to be treated that way.





Simple and Sanitary Teat-cups

The simplicity of construction of the De Laval teat-cups is plainly shown in the illustration. They are easily taken apart and put together, and very easy to clean and keep clean.

The rubber lining is simply a straight piece of rubber tubing. It is small enough to fit the smallest teat and is held in the metal casing, which is large enough to fit the largest teat. Hence the De Laval teat-cups are self-adjusting. They are made in only one size, which fits all teats.

The liner is made of pure rubber, scientifically correct in construction and design, producing a massaging action on the teat between suction periods.

A flexible rubber mouthpiece is formed by the top of the liner in such a way that no metal touches the teat.

The De Laval Milker is faster, more economical and more reliable than any other method of milking. The sanitary features are of special importance. It is quickly and easily cleaned, and is used by many dairies in A. R. O. work and where certified milk is produced.

An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalog mentioning number of cows milked

THE DE LAVAL SEPARATOR CO.

165 Broadway NEW YORK | 29 East Madison Street CHICAGO | 61 Beale Street SAN FRANCISCO

WEED SEEDS IN MANURE

A. L. STONE, WISCONSIN EXPERIMENT STATION

FOR several years the agricultural chemists have emphasized the desirability of hauling the manure directly from the barn to the field. Two important reasons are given for adopting this procedure. One is the economy of handling the manure but once instead of twice as is necessary when the manure is piled in the barnyard and must again be loaded into the wagon or manure spreader before it can be taken to the field. There is no doubt, whatever, that loading the manure directly into the wagon or spreader from the trenches and at once spreading it on the field is the most economical method of handling it.

The second reason which the chemist gives for his recommendation is that there is no leaching away of the fertility from the exposure to rains and washing such as occurs where the manure is left piled in the barnyard for two or more months. If the manure is spread over the fields in the winter as rapidly as it is made there will undoubtedly be some washing and leaching of fertility out of the manure during the winter and spring. In a majority of cases, however, this fertility will be washed directly into the soil on some portion of the field. If the field is fairly level the fertility will undoubtedly remain on the portion of the field where it was applied. On the other hand, if the field is on a hillside it is probable much of the fertility may be washed entirely off the field to which the manure is applied.

There is one fact in connection with this method of handling farm manures which many of the chemists do not seem to realize, or at least take into consideration. This is the very large number of weed seeds often contained in the manure. If all the feed fed to live stock were absolutely free from weed seeds, no harm could result from hauling the manure directly to the field. This condition is so rare, however, that it may be dismissed without further comment. Either in the concentrates or in the roughage, weed seeds are almost certain to be present, often in very large numbers. These weed seeds are not ground by the teeth of the animals because they are too small and are not easily destroyed by passage through the stomachs and intestines of animals. As a matter of fact, it has been shown that some weed seeds are in even better condition to germinate after passing through the alimentary tract. If then the manure containing such weed seeds is hauled to the field during the spring, summer, or fall they will be placed under the very best conditions for growth into splendid specimens of their kind. On the other hand, seeds of many weeds are not at all affected by the passage through the animal. If taken to the field, in manure, during winter the seeds would remain unharmed and be ready to take advantage of the fertile soil when spring arrived.

It may not have occurred to many that manures may be of any importance as a factor in the spread of noxious or troublesome weeds. In some barnyards it happens that weeds are allowed to flourish and produce seed on the manure heaps where the manure is allowed to remain in the yard during the summer and hauled to the field in the fall after harvest. It would be expected that under such conditions many weeds would grow from the seeds which fall upon the manure piles to be carted to and spread upon the field.

There would seem to be no other way in which weed seeds could get into the manure. A little thought will convince anyone that it is impossible to feed forage or concentrates containing weed seeds without some of them reaching the manure through the bedding and any uneaten feeds thrown into the manure trenches or out in the barnyard. This is sure to be true if in the hay there are ripe weeds of Canada thistles, rose bushes, Russian thistles, or other weeds which are so spiny or thorny that live stock leave them untouched.



OX-EYE DAISIES IN A MEADOW

If the hay is cut and fed to live stock the seeds are almost certain to get into the manure and be carried to other fields.



A SAMPLE OF OATS INFESTED WITH (1) QUACK GRASS, (2) CORN COCKLE, (3) WILD OATS, (4) WILD BUCKWHEAT, (5) CHESS OR CHEAT

Feeding such oats can only result in infesting fields with these weeds, the seeds of which are certain to get into the manure and thus be carried to the fields.



WILD OATS ADJOINING A HAY FIELD

The wild oats ripen at the top of the head early and at the base of the head late. Some of the oats would ripen in the hay and if fed to live stock would certainly get into the manure.

It will greatly surprise many farmers to learn that the concentrates which they buy in the form of oil meal, bran, and mixed dairy feeds, contain large quantities of weed seeds.

In the milling of wheat and other grains immense quantities of weed seeds are cleaned out of the grain before it can be made up into manufactured products. Much of this material which goes under the name of "screenings" contains a fairly high percentage of seeds which have a great deal of feeding value. Unless the screenings contain seeds which are bitter, acrid, or otherwise disagreeable in flavor or odor they may be ground up with varying quantities of grain making a feed easily meeting the standards for protein, carbohydrates, and ash required to make the feed salable. Sometimes these weed seeds are found in feeds where the farmer least expects to find them. A farmer who had purchased some oil meal noticed some dark specks in it and sent a sample to the experiment station for examination. Much to the amazement of all concerned the feed was found to contain approximately 128,484,000 unground weed seeds to the ton. Included were the seeds of such noxious weeds as Canada thistle, Russian thistle, wild mustard, Indian mustard, and wild oats. The unground weed seeds constituted 10 per cent, by weight, of the feed. A lot of bran for which a big price had been paid was found to contain 108,256,900 weed seeds to the ton. Altogether there were 32 different kinds of weed seeds in the bran, among them being wild oats, wild mustard, Russian thistle, Canada thistle, and yellow dock, all noxious weeds. Another farmer sent in a sample of unground screenings which a neighbor was feeding to sheep. He feared the weeds would begin growing on the neighbor's farm and the seeds be washed or blown over to his own. There were approximately 870,188,000 weed seeds in a ton of the screenings and they constituted 55.52 per cent, by weight, of the entire bulk of feed. Grains of various kinds made up 1.9 per cent and the remaining 42.58 per cent was broken seeds, dirt, sand, chaff, etc. While it is a well known fact that sheep masticate their food thoroughly many of the seeds are so small they will be swallowed without being crushed and will later be found in the manure. Not only this but many of the seeds are certain to get into the bedding, or if fed out of doors will fall to the ground and produce plants, the seeds of which may be easily carried to adjoining farms.

Another type of feed which often contains large numbers of weed seeds is the chick feed of various kinds offered on the market. Two lots of chick feed were recently examined, one of which contained approximately 20,660,800 and the other approximately 313,346,380 weed seeds to the ton. Any seeds eaten by the poultry would undoubtedly be destroyed but again there is danger of the seeds reaching the manure and later the fields.

It seems then that it is hardly safe to haul manure directly to the field unless great care is taken to see that there are no weed seeds in the feeds supplied to the farm animals.

Suppose it is necessary to use such feed, can anything be done to prevent danger of infesting the fields with weeds? The answer is, yes. The method lies in piling the manure in piles eight or more feet in depth and leaving it there for sixty days. The fermentation of the manure generates enough heat to destroy the vitality of the moistened and softened seeds. Whenever possible the manure should be stored in concrete pits, or at least be protected by a covering of some kind from rains and washing or leaching away of its fertilizing value. It is possible also that at the time the manure is to be hauled to the field, the surface foot of manure should be taken off and repiled for a time. While this may not be necessary it will avoid any possible chance of carrying weed seeds to the field in the manure.

The weed problem has become so serious that no precaution should be neglected but every source of new introduction guarded against with extreme care. Only as this is done can our farms be made to produce maximum crops.

(Comment on the statements in this article appears on the editorial page of this issue.—Editors.)

DAIRY PROGRESS IN IDAHO

J. F. BRUINS, IDAHO

THE bedfellowship of the lion and lamb had nothing on a spectacle which Boise Valley dairying recently presented. Jersey and Holstein men, united in fraternal amity, went out to Oregon together to buy four carloads of pure-bred stock.

The project was engineered by the farm bureaus of Ada, Canyon, and Gem Counties. It began as a calf club plan but several dairymen took occasion to buy pure-bred stock and increased the size of the shipment. Forty-eight head of Jerseys were bought and 28 of Holsteins.

The plan of selling the stock at an auction open only to those ordering the stock was adopted as it was felt that this would avoid the dissatisfaction often felt at having to take what was ordered without personal inspection. It had the additional advantage of placing an initial value on the stock and of exercising the wits of the bidders. Those who applied for stock signed notes which guaranteed any deficit and any excess was prorated. As a matter of fact, at the sale of Jerseys the surplus amounted to about 30% over the cost price and in the case of the Holsteins, 20%.

As evidence of the local standing of dairying these deals are examples. The banks advanced some $8,000 for the shipment of Jerseys, taking notes of dairymen or in the case of the boys taking the parents' notes. There does not seem to have been any hesitation in accepting the note of any person for this purpose.

The stock sold amazingly well. Thirteen Jersey cows which cost an average of $280 sold for an average of $440, the top price being $800. The calves sold at $120 to $400 for yearlings. These prices were of course subject to discount to actual cost of the stock, but there is little question but what at public auction the stock would have brought as much or more.

The average for the Holstein sale was $310, or about the same as for the Jerseys. The top price was $650 for two cows, this amount being bid for each. The Holsteins were of good breeding but handicapped by being in less favorable condition than the Jerseys. Buyers for both breeds reported stock was very difficult to obtain and breeders were willing to part with it only on account of the great difficulty in securing and holding help and the very high prices for feed prevailing.

A Calf Club Sire

The Boise Valley Jersey breeders have undertaken a "stunt" which is without precedent so far as known. When the members for the calf club were being secured the question of service for these calves was brought up. Few local breeders will allow the use of their sires to the public so the club took the matter in hand. It was decided that the club would buy the bull for this purpose and at the same time use him for the general improvement of local stock.

La Creole's Oxford Dolly Boy was purchased of Mr. W. O. Morrow. He is a proven sire whose daughters have already sold for sums running well into four figures. One grandsire was Oxford You'll Do, and the other Golden Glow's Chief, both gold medal bulls. His dam has a record of over 700 lbs. fat. The service to this bull will be free to Jersey calf club members and he will be used also by owners of pure-breds for a fee which it is hoped will eventually retire his purchase price. In order to keep him he was placed at the farm of the Boise high school. Several local Jersey breeders have promised to donate a pure-bred heifer apiece to start a herd at this farm.

Other Idaho Sale Importations

The sales mentioned are not the only instances of recent importations of pure-breds into Idaho. Most of the females of the famous Stump herd were brought into the Payette Valley by a dairy purchasing association and there publicly auctioned off. The top price was $1,000 for the heifer, Bonnie Rochette, and others fell not far short of it. Stockwell's Dahlia brought $600. She has a record of 743 lbs. as a 10-year-old and but for her age would have brought much more. The 43 animals in this sale sold for an average of $336. The surplus over purchase price in this case will be used to finance the purchase of additional stock for the Payette Valley.

The Twin Falls County has also purchased a shipment of well bred Jerseys. In this case the calf club became a cow club and the boys bought cows at $250 to $450 each. The idea is that they will largely pay for themselves before the notes come due.

Dairy extension specialists would be glad to know the source of the report that western breeders were about to import a shipload of Guernseys. There is room for them and they would be welcome but the story seems to have no foundation in fact.

Idaho dairying has had its hard sledding. The last summer was a period of prolonged drought and shortage of irrigation water so the feed crop was cut very short. On top of that, winter came a month early and was unusually severe and the spring was late and cold with backward pasture. It has, however, strikingly shown the essential soundness of dairying. The range beef and sheep business is simply demoralized. Even hogs are getting scarce. In the face of unheard of prices for feed good dairy cows are selling higher than ever and are rarely found on the market. Dairying has been steadily gaining in this section for years and a crisis in the live stock industry merely emphasizes its fitness to survive.

Manufacturing and Marketing Problems

Marketing problems have not generally given us great concern during the period of rising prices but the recent slump has brought this question again to the fore. The local market is divided between a condensery, a co-operative cheese company, and various commercial creamery establishments. The co-operative operates six cheese factories besides a creamery and retail business in Boise. The slump in cheese prices the past winter caused them grave difficulty and for a time they skimmed their milk and made butter and casein. The company seems to feel keenly the competition of the condensery.

The present plan is to build a powdered milk plant. It is said to require $50,000 to $60,000 and as the company has close to 600 stockholders this will require $100 apiece. The plans are not yet fully matured. A chief difficulty is the heavy royalty, 5% of the gross sales, demanded by the Merrill—Soule Company. The local concern does a business of about half a million dollars a year and at this rate would have to pay $25,000 a year to this concern in royalties alone for this one valley.

Prices for butterfat in this region have gone down as elsewhere but as there is little product marketed as city milk the difference is not so striking and there is no surplus milk problem. Creameries have been paying 55 to 60 cents for fat in some creameries and the condensery 65 to 70 cents for fat. The cheese factories have paid as low as 55 cents for whole milk but have consequently lost patronage heavily to the condensery.

Feed prices have ruled high, $3 to $3.75 per cwt. for whole grains and $6 for linseed with mill feed scarce at $2.40. Alfalfa hay has sold most of the winter at around $20 but is now practically unobtainable. The high feed prices have greatly stimulated interest in silage and owners of even small herds are planting a few acres of corn this year.

One unusual feature of the feed situation this year was the importation through the Ada County Farm Bureau of a carload of cane molasses. It cost $2.45 per cwt. barreled, laid down here. Dairymen have been much pleased with the results of feeding it and are talking of bringing it in in a tank car and storing it in tanks formerly used for fruit spray.

Interest in testing has been making considerable progress. There are now four associations in the state doing testing with three more in prospect. Interest in official testing has increased greatly also. Jerseys lead at present with 10 herds and about 70 cows on test followed by Holsteins and Guernseys. Many new records for the state are promised this year.

Land Booms and Reactions

Idaho has experienced a land boom as well as other sections. Land has changed hands so rapidly that any one who has been on his present place more than three years is apt to consider himself an early settler and entitled to tell how deep the snow was back in the winter of 1917. Some farms have changed hands at as high as $500 per acre, but the general land price in this valley seems to have advanced from about $150 to $250 an acre in the past two years. The results seem to have been to unsettle crop production, break up rural communities, raise taxes, and enrich the real estate dealers. Any section having these objects in view should encourage a boom.

It is much to be regretted that the dairy industry has been used as a large part of the excuse for the recent land boom. It is no trick at all for a realty dealer to raise 20 tons silage, 5 to 8 tons alfalfa, or pasture 3 to 5 cows for the summer on an acre of land. Fortunately their stern sense of public duty keeps these gentlemen from engaging in this lucrative occupation. Dairying in Idaho is nevertheless making remarkable and real progress with ordinary sanity, and by depending on cows instead of conversation it should continue.

Texas News

The Dairymen's Co-operative Association has been incorporated at Paris, Texas, with a capital stock of $10,000. The incorporators are R. F. Scott, Jr., W. M. House, and M. C. Gullege, all of Paris.

The Yoakum Dairy Club has been organized at Yoakum, Texas. Louis Poth is president; M. S. Hagan, vice-president; and J. J. Kutack, secretary.

The Addicks Dairy Farmers' Co-operative Society has been incorporated at Addicks, Texas. It has no capital stock. The incorporators are L. Koch, C. Kobs, and G. Groschna, all of Addicks.

The Pearland Dairy Farmers' Co-operative Society has been incorporated at Pearland, Texas; no capital stock. Incorporators: J. A. Geyer, R. W. Higgins, and Joe Bennes, all of Pearland. W. D. HORNADAY.



DAIRYING IN IDAHO—AS IT WAS



DAIRYING IN IDAHO—AS IT IS—IN SPOTS

Wisconsin Jersey Record Broken

R. S. HULCE, Wisconsin College of Agriculture

A NEW record recently completed at the University of Wisconsin puts University Kenna Climax No. 306657, as a producer of butterfat, at the head of the mature class of Jersey cows in Wisconsin. Her yearly record of 15,849.8 pounds of milk and 746.76 pounds of butterfat displaces that of Croatia of St. Lambert with a record of 705.29 pounds of fat. The university cow carried a calf seven months of her test, which puts her well in Class "AA", since 155 days in calf before completing the test would have qualified her for that honor.

Her production by months is shown in the accompanying table.

University Kenna Climax was bred at the University of Wisconsin. Her sire was King Sappho King, formerly at the head of the well known herd of J. Q. Emery & Son of Wisconsin. Her dam, King's Miss Kenna, was one of the best cows ever owned at the university. She made as a junior three-year-old a semi-official record of 11,490 pounds of milk, containing 543 pounds of fat, and later made a stable record which surpassed it.

1918	Lbs. milk	% fat	Lbs. fat
December 29—31	108.4	4.98	5.40
1919			
January	1,597.1	4.95	79.06
February	1,630.0	4.24	69.11
March	1,769.2	4.02	71.12
April	1,640.2	4.27	70.04
May	1,478.8	4.65	68.76
June	1,204.8	4.71	56.75
July	1,180.6	4.96	58.56
August	1,182.1	4.51	53.31
September	1,128.2	4.94	55.73
October	1,091.3	5.67	61.88
November	986.1	5.30	52.26
December 1—28	853.0	5.25	44.78
Total	15,849.8		746.76

The accompanying illustration of the university cow was taken after her last freshening and shows her in a thin condition, due to the very short time she went dry. She is an excellent example of a hard working machine for her ability to consume feed is equalled by few cows of her size and her tendency to convert feed into milk and butterfat is well illustrated in the photograph.

Her last calf is a fine heifer sired by Pogis 99th of Hood Farm 21st.



UNIVERSITY KENNA CLIMAX, JERSEY RECORD COW OF WISCONSIN
Year's record, class AA; Milk, 15,849.8 lbs.; fat, 746.76 lbs.
OWNED BY UNIVERSITY OF WISCONSIN

A CO-OPERATIVE MILK DELIVERY PLANT

ELLSWORTH BROWN, PENNSYLVANIA

PREVIOUS to the spring of 1918 there were ten farmers in the dairy business who made a specialty of delivering milk and cream to private customers in our little city of Greenville, Pennsylvania. As each wagon was driven on nearly every street in town and but a few quarts sold on each street, there was much duplication and the waste of time and effort became more and more apparent each season. Those dairymen who had to hire drivers to do the delivering, experienced additional difficulty in retaining competent men for this work, as each man must make the trips every day—Sundays, holidays, rainy days, and cold days. The result was frequent strikes, and the drivers, without the customary 20 days or even 20 minutes' notice, would slip quietly away and the double work of milking, delivering the milk, and washing the milk utensils fell upon the dairyman, and any amount of cussing was useless.

As the war clouds grew thicker and hired help became an unknown quantity, the prospects for a milk famine in town began to assume shape. The Board of Health finally took up the matter with the milk men. A meeting of this body was held with the milk men to discuss the situation. A co-operative association was suggested and plans for carrying out this movement began to be made. A committee was appointed to visit a plant where co-operative dairying was successful. This committee reported favorably and a corporation with a capitalization of $9,000 was formed. Here is where we made our first mistake. It soon became apparent that a $20,000 capitalized corporation would be needed. A petition was presented to the state government for the increase. The increase was granted, but it cost us $60 in fees. As soon as our charter was granted we proceeded to organize. Our county agent was elected one of the three auditors.



TWENTY-THOUSAND DOLLAR FARMER-OWNED MILK PLANT

Our next difficulty was to secure a suitable building in which to operate our business. We finally applied to the Board of Trade and they helped us to secure a two-story, brick building 30x 120 feet and we began to plan for installing machinery. The next difficulty was in getting the railroad to transport the machinery to us from the factory. After long waiting it finally arrived and all the dairymen turned out and helped to move it from the station to the plant.

Considerable changing in the building had to be done before the machinery could be installed and this was done largely by the dairymen.

Finally the start in the new system of delivering was made. Instead of ten wagons to do the delivering, four wagons and four drivers were employed. These four drivers did the same work that the ten persons formerly performed. Each driver makes two trips each forenoon and covers one-fourth of the town in the two trips. There is no duplication in routes.

The milk is pasteurized and the citizens who had been buying raw milk were treated to the pasteurized product. Many who had never tasted the new process milk—and there were many of the citizens who had never heard of pasteurized milk—began to complain that there was something wrong with the milk.

Any radical change from the regular routine of a system which has been followed for years is sure to meet with a storm of protest. So the dairy association's new methods of handling the milk and selling "cooked stuff" met with condemnation from nearly every patron. Some said the milk was not clean, others proclaimed it tainted, still others were positive it had been watered, and a few wise ones were sure that dope had been added. The many telephone messages that were sent in to the manager and officers of the association from irate customers kept up the interest intensively.

But now after two years' use of pasteurized milk and cream, nearly all of the patrons are well satisfied and do not want to return to the use of milk in its raw state.

The advantages to the dairymen in the formation of their association is apparent. The farmer can select his own time to deliver this milk to the milk plant up to ten o'clock each morning. After unloading his milk or cream at the factory he can hurry home. The tiresome job of washing one or two hundred bottles each day is eliminated. Duplication of routes is "cut out". His pay is sure to come each month.

The method of distributing the payment for the milk is simple. The expense for hired help, overhead charges, etc., are deducted from the receipts. The balance goes to the producers, pro rata, on a butterfat basis or 3.5% milk, with five cents added or deducted for each one-tenth point above or below the 3.5% basis.

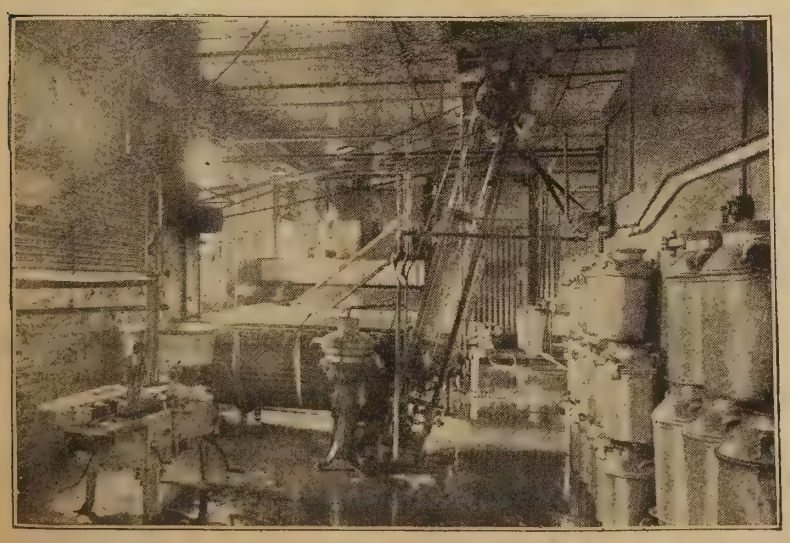
Each driver before he starts on his trip is charged up with the amount of his load and credit given him for surplus which he brings back. It was the original intention to deduct all losses in the collection of bills for products sold from the monthly salaries of the drivers, but this provision could not be carried out.

Besides milk and cream the association manufactures ice cream and buttermilk and other dairy products. Large quantities of cottage cheese are manufactured and packed in neat cartons holding nearly a pound each. These are sold to the grocery men throughout the town. A good deal is also shipped to other towns in tubs.

The success of our corporation was made possible through the help of the citizens of our town who bought stock in the enterprise and assisted us in many ways.

The work of pasteurizing, bottling, and delivering the milk and other products of the creamery, also keeping the books, etc., requires about a dozen

(Continued on page 119)



THE INTERIOR OF THE MILK PLANT AT GREENVILLE, PENNSYLVANIA

Showing Dairy Cattle

R. S. HULCE, Wisconsin College of Agriculture

THE stockman who is planning to exhibit live stock during the rapidly approaching show season should already have made his selections. To exhibit animals with rough coats and in a very thin condition is not fair to either the stock or the exhibitor when one considers the reason for showing.

There are several reasons why owners of good live stock should exhibit. A first class representation of any breed is an important element in the promotion of breed interests. Many a man considering the choice of a breed has been influenced in his choice by the character of the breed exhibits he has seen. Beginners who have already started the breeding of live stock are encouraged, and obtain much information at live stock shows. Breed and agricultural associations have long realized these facts and consequently prize money is offered to stimulate the realization of the ends in view.

There are advantages that come to the individual exhibitor in the way of advertising his own animals. The writer was at one time located in a community where the sale of pure-bred dairy cattle was rather slow. It was therefore decided to try out the advertising effects of exhibiting at fairs. The results briefly were that enough prize money was won to practically pay expenses and the inquiries for stock and sales later made more than justified the adventure from every standpoint.

The element of competition does and should enter in very strongly. We like to know whether or not an animal we own is better individually than the one exhibited by some one else. If we win, the satisfaction would in many cases be sufficient without prize money. The placings, if not made according to our ideas, may or may not change our prejudices, but we must learn to be good losers as well as good winners. A prominent breeder and exhibitor of swine makes the statement that he learned more about swine the week that he exhibited at a neighboring state fair, where he lost heavily, than he had ever learned about swine previously.

Dairy animals to be selected for fitting should be good sized for their age, possess straight top lines, good middles, prominent back bones and clean-cut features in general. In females udder development, including size, shape, quality, and well placed teats are important. Animals about to freshen show to an advantage.

A good fitting ration might consist of equal parts by weight of wheat bran, ground oats, ground corn, and oil meal. If the animal is very thin, add more corn or barley. Bran and oats tend to lighten the ration and give variety, while oil meal helps to put on a sleek coat. Good clover or alfalfa hay and corn silage are important. The silage, however, should be discontinued some time before the animals leave home, so that they will be receiving the same feeds that are to be fed while at the fair.

Clip each animal all over and blanket it several weeks before the date for showing. If clippers are not available, work out the old hair by brushing the body with sand paper tacked to a block for convenience in handling.

The purposes of blanketing are:

1. Keep the animal clean.
2. Sweat the hide and better its handling qualities.
3. Help shed old hair and make the rest straight.

To aid in putting the skin and hair in condition, wash several times a week with soap and water. When the hair has dried, apply cottonseed or olive oil and rub with a woolen rag. This not only improves the quality of the skin, but adds a gloss to the hair and gives the body a very clean appearance. For grooming, a soft brush is advisable. Avoid the use of a curry comb except for the purpose of removing dirt that clings tightly.

The horns must receive attention. Scrape down the rough portions by the use of a file or the edge of a broken piece of glass. Be careful not to make the skin sore at the base of the horns. When the horns have been worked down nicely, rub them with emery cloth to put on a smooth surface. For polishing, fix up a paste, using sweet oil, powdered pumice stone, and add a little shellac. Apply this paste mixture to the horn and rub with a woolen cloth. If the horns have been put in good condition before leaving home, polishing will be all that is necessary at the fair. The hoofs may be trimmed by use of pinchers followed by a rasp.

It is necessary to do some clipping just previous to showing. This will include the tail above the switch and usually the ears and portions of the head or face. In case of cows, the udder should be clipped just previous to showing.

A point often overlooked is that of breaking the animal to lead and to stand properly. If the efforts of the attendant are taken up in dragging and pushing an entry about, many of the good points which the animal might otherwise show are concealed. An exhibitor should have just one thought in mind while showing in the ring, and that is to give his entry every possible chance to show at an advantage. By this is meant that his animal stands squarely on its feet, back straight and head alert. Any movement either on the part of the attendant or animal should be as graceful as possible. A good animal poorly shown does not always get its just dues.

Two or more breeders who feel that each individually does not have a sufficient number of animals that they wish to enter may well go together and put on a combination exhibit. This plan, carried out on a more comprehensive scale, may be made an excellent advertisement for a community or county association.



LADY AAGGIE ECHO HENGERVELD

I AM pleased to be able to report that the Holstein-Friesian cow, Lady Aaggie Echo Hengerveld 323463, has broken the record for fat production in the senior three-year class of the semi-official yearly division, by producing in 365 consecutive days, 28,008 lbs. milk containing 960.56 lbs. fat. She freshened at the age of 3 years, 7 months, 13 days. Her best seven days' official production, made in the early part of the lactation period, is 684 lbs. milk containing 25.49 lbs. fat, while in thirty days she produced 2,894.2 lbs. milk containing 97.268 lbs. fat. During an official test, beginning 255 days from freshening, she produced in the division covering tests begun not less than 240 days from freshening, 494.4 lbs. milk containing 19.753 lbs. fat. Her sire is Paul Aaggie Oakhurst 55387; her dam is Lady Echo Hengerveld De Kol 2d 159461. She was bred by Mr. Albert E. Smith, Washington; and she is now owned by the Toyon Farm Association, cent basis, the equivalent butter claimed for Lady Aaggie Echo Hen- California. In the senior three-year class of the yearly division she displaces Jewel Pontiac Segis 229261, whose record for 365 days is 27,068.5 lbs. milk containing 936.92 lbs. fat. Computed on the 80 per gerveld amounts to 1,200.7 lbs.—MALCOLM H. GARDNER, Supt. A. R.

Maxims posted on the walls of his bank by the elder Rothschild:

Dare to go forward.
Never be discouraged.
Never tell business lies.
Be polite to everybody.
Employ your time well.
Be prompt in everything.
Pay your debts promptly.
Bear all trouble patiently.
Do not reckon upon chance.
Maintain your integrity as a sacred thing.

If you can't spray, then whisk! An old brush-broom will spread the spray materials on the insect and disease infected plants of your backyard garden.

STATE FAIR
MILWAUKEE
Aug. 30, 31; Sept. 1, 2, 3, 4
Six Days; Six Nights
50 CENTS DAY OR NIGHT
Automobiles Free
SPECIAL RATES ALL RAILWAYS
BEST IN THE LAND
of Cattle, Horses, Sheep, Swine, Poultry; Dairy, Agricultural, Horticultural, Apiary Products; Women's Work, School Work, and THE YEAR'S ROUND-UP of Badger State Boys' and Girls' Club Activities.
EVERY DAY!
ETHEL DARE
GIRL WITH A SPARTAN HEART, Changes Planes 4,000 Feet From Earth!
—ALSO—
MARVEL OF ALL AGES, THE DAREDEVIL SUPREME
LOCKLEAR
in Plane Changes.
(Watch for Dates)
SIX NIGHTS!
WORLD'S GREATEST SHOW
Presenting the
$20,000 Fireworks Spectacle
"SIEGE OF THE DARDANELLES"
500-Foot Stage, 1,000 People, and 25 STAR CIRCUS AND VAUDEVILLE ACTS on two mammoth stages.
MUSIC EVERYWHERE!
Famous Million Dollar Band, with Six Soloists; Eight Other Bands and Orchestras Day and Night.
AUTOMOBILE SHOW and "TRUCK TOWN"
150,000 square feet of exhibits and demonstrations, including all 1921 models.
HARNESS RACING!
MONDAY, WEDNESDAY, THURSDAY, FRIDAY—First Race at 1 P. M.
AUTO RACING!
TUESDAY AND SATURDAY at 2 P. M.—America's and Europe's greatest dirt track drivers and cars.
HORSE SHOW!
STOCK PAVILION
MONDAY, TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY NIGHTS, at 8 o'clock.
50 ACRES OF TRACTORS AND OTHER FARM MACHINERY.
SPECIAL EXHIBITS
U. S. Government, State Marketing, Wisconsin Department of Agriculture, Household, New Era and a score of other added exhibits.
SPECIAL SHOWS
THE C. T. KENNEDY 10-ACRE EXPOSITION.
THE MUDLESS AND DUSTLESS FAIR.
MONDAY, AUG. 30—All Wisconsin School Children Free.
THE WISCONSIN STATE FAIR "Educates, Inspires, Entertains on Biggest Possible Scale."

Reliable Fly Knocker
will protect your cows and other stock from flies and only costs about one-fifth as much as other sprays. Supplied in concentrated form. One gallon makes 16 gallons spray solution by simply pouring it into water and stirring. Price 1 Gallon Can $5.00, makes 16 Gallons; 1 Quart Can $1.50, makes 4 Gallons. If your dealer doesn't have it, we will supply you by express on receipt of price. Write us.
RELIABLE PRODUCTS CO.
4230 VAN BUREN ST., CHICAGO, ILL.

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Kans.	Dickinson	A. Bowser	May	144		80	J. A. Engle
"	Montgomery	R. E. Bausman	"	88	25	67	T. W. Ewing
"	Harper	Walter Wentze	"	111	18	71	Z. C. Thompson
"	Shawnee	Louise Krigbaum	"	166	18	66	Ira Roming & Son
"	Washington	W. O. Skinner	"	128	60	74	B. D. Sperry
"	Meade	C. W. Foote	"	167		45	J. A. Grimm
Pa.	Buffalo Valley	N. Heiss	June	318	24	70	J. S. Erdley
Ill.	Palmyra	G. E. Dickson	"	491	50	66	Harry Gilbert
Wis.	Rock Prairie	W. J. McKee	July	476	15	69	J. W. Wehenger & Son
Wash.	Whatcom Co.	John Vickers	June	566	202	92	A. E. Smith & Co.
Ill.	Lake Co. No. 2	E. R. Jackson	July	389	26	59	J. Howe
Mo.	St. Louis Co.	J. L. Malone	June	376		51	Bellefountaine Fin
Ohio	Tuscarawas	C. F. Lewis	"	190	22	58	J. Young
Minn.	Pioneer	H. C. McMurray	July	961	52	76	T. Jensen & Sons
Ind.	Orleans	M. R. McCutchan	"	442	49	79	F. H. Turner & Sons
Pa.	Meadville	H. C. Drissel	June	355	48	72	L. Brawley
Wis.	Richland Co.—Sabin	H. Engsberg	July	530	50	69	T. Bee
Ill.	Lake Co. No. 2	R. Williams	"	465	93	80	B. Rouse
N. H.	Monadnock	M. W. Smalley	June	111	25	76	W. S. Hadley
Ill.	Vermilion—Champaign	T. R. Lovett	"	460	31	66	R. W. Rouse
N. H.	Coos	W. J. Abbott	July	690	31	59	H. A. & W. E. Bullard

Association Notes

Edgar—Marathon, Wisconsin:—One cow sold for beef. Association has ordered a carload of oil meal for August delivery. June milk testing 3.5 per cent sold for $1.96 per 100 lbs. The creamery paid $.59 for fat and the cheese factory $.52 to $.60.

Monadnock, New Hampshire:—Twenty-six cows were tested for semi-official records. Ten separators were tested for cleanliness in skimming. Three profitable and two unprofitable cows were sold and one pure-bred Guernsey sire was purchased. For the last two years every herd in this association has had a pure-bred sire at its head. Bran sold for $68 per ton; gluten, $82; cottonseed meal, $83; oil meal, $77; ground oats, $95; corn meal, $85; bran middlings, $72; hay, $50; Schumacher feed, $76; Larro, $84.

Lake County No. 2, Illinois:—Owing to the extreme hot and dry weather during July, most of the herds in this association dropped considerably in production and had to be fed winter rations. Two members have purchased milking machines. One member purchased two pure-bred Holsteins, very choice individual daughters of King Lyons and Prince Hengerveld Pietje. Market milk sold for $3.20 per hundred. Unicorn cost $82 per ton; bran, $56; Big Q, $80; oil meal, $78; cottonseed meal, $80; silage, $8; pasture, $2.00 per cow per month; oats, $1.00 per bushel.

Richland County—Sabin, Wisconsin:—One pure-bred bull was bought. One set of drinking cups was installed and 7 unprofitable cows sold for beef. Several members have started their cows on grain rations which have not been fed for the past two months. One barn was remodeled and one new barn was built. Market milk sold for $2.60 per hundred pounds. The condensery paid 80c per pound for fat; the creamery, 62c and the cheese factory, 59c. Milk retailed for 12c per quart; butter, 56c per pound and cheese for 24c per pound. Oil meal cost $90 per ton; bran, $53; oats, $67; corn, $58; gluten, $82; Schumacher feed, $62.50; alfalfa hay, $80; barley, $69; cottonseed meal, $89.

Meadville, Pennsylvania:—Market milk sold for $2.90 per hundred pounds. Milk retailed at 14c per quart and butter 65c per pound. Oil meal cost $78 per ton; corn meal, $85; cottonseed meal, $78; gluten, $80; Unicorn, $84.

Orleans, Indiana:—A few cows are being sold as unprofitable. Sometimes they are kept at a profit after being tested and correctly fed. Market milk sold for $3.60 per hundred pounds.

Lake County No. 5, Illinois:—Market milk sold for $3.20 per hundred pounds. Bran cost $4.85 per cwt.; corn, $3.60; oats, $3.90; barley, $3.60; hominy, $3.40; oil meal, $4.25; cottonseed meal, $4.25; alfalfa hay, $40 per ton; clover hay, $35.

Pioneer, Minnesota:—Market milk sold for $4.50 per cwt. The creamery paid 70 cents per pound for fat. Milk retailed for 13c per quart and butter 64 cents per pound.

Coos, New Hampshire:—Market milk sold for $2.85 per cwt. Bran cost $68 per ton; corn meal, $84; hominy, $80; gluten, $80; cottonseed meal, $80; linseed, $80.

Vermilion—Champaign, Illinois:—Twelve unprofitable cows were sold. A carload of feed was ordered. Market milk sold for $3.60 per cwt. Milk retailed for 17c a quart.

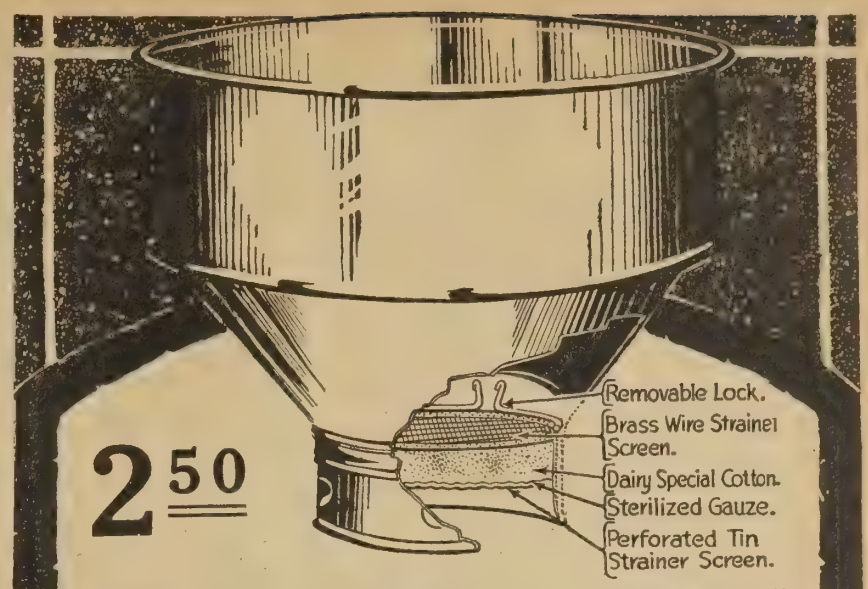
To Manufacture Feed

HOARD'S DAIRYMAN:—Stockholders of a proposed flour and grist mill company at Porterfield, Marinette County, Wisconsin, met July 31, for the purpose of completing the organization of a $20,000 company. At a preliminary meeting at Harmony Corners in the same county, July 24, reports showed that $19,000 of the capital had been subscribed and confidence was expressed that $1,000 more would be taken before the coming meeting.

The purpose of this mill is largely to manufacture dairy cattle feed, flour being a secondary consideration. These farmers, who are specializing on dairying, as are most of the farmers of Marinette County, found last winter that commercial feeds constituted a serious burden and they have decided they can with advantage manufacture their own feeds of this class.

At the same meeting of July 24, the Marinette County Cow Testing Association was organized with Ed. Race, D. C. Taylor, Alton Francour, Carl Hart, Ed. Seiles, John Thompson, and B. F. Miller as directors. The association, which began testing August 1, has 59 members owning 725 cows.

Wisconsin. LEO P. COOK.



2.50

FILTER YOUR MILK

CP CHAPMAN STRAINER AND FILTER

A combined strainer and filter for the price of strainer only. To use the Chapman as filter, insert a layer of cotton and sheet of gauze between the two screens.

The filter will remove bacteria, dandruff, hair, blood corpuscles, straw and other substances that a strainer only can't catch. Thus will greatly improve the quality and flavor of the milk and prevent it from souring quickly.

Can be quickly taken apart for cleaning.

Consists of heavily tinned charcoal steel bowl, ring lock, fine mesh brass screen and perforated tin screen. Cotton and gauze furnished at extra prices below.

Strainer and Filter Complete $2.50

Postage extra, 30c

Wgt. 2 lbs. Size 12" in diameter.

Dairy Special Absorbent Cotton

Single lb. lots, 60c a lb., in 25-lb. lots, 55c a lb., in 50-lb. lots, 50c a lb., in 100-lb. lots, 47½c a lb.

Dairy Special Sterilized Gauze

Less 100 yards ..... 12½c per yard
100 to 150 yards ..... 10c per yard
500 yards and over ..... 8½c per yard

Above prices guaranteed until September 10th only. Send for Big Dairy Mail Sales Catalogue.

The Creamery Package Mfg. Company

68 W. Kinzie St., Chicago, Ill.

Save Time and Labor Get Better Results



Success in breeding cattle, in the production of milk, or in raising chickens or other farm animals depends so much on healthful living quarters that no farmer can afford to neglect sanitation even when labor is hard to get. But there is no need to spend as much time and labor as the mixing and application, first of whitewash and then of disinfectants, call for. Not only the most troublesome part of the work of mixing and applying whitewash, but all the extra work of applying a disinfectant over whitewash can be saved by using

CARBOLA
The Disinfecting White Paint

which kills lice, mites, fly eggs, etc., and prevents the germs of contagious disease from getting a start in flock or herd. Carbola is a white paint in powder form. And right in the paint is a germicide many times stronger than pure carbolic acid, but neither caustic nor poisonous—harmless to the smallest chick or to stock that licks a painted surface.

Makes It Easier To Do Work That Must Be Done

Carbola is turned into smooth-spreading, liquid paint simply by mixing with water. No waiting, straining or bother—takes less than five minutes' time. May be mixed today and applied whenever convenient—does not spoil by standing. Put it on with a brush or spray pump to wood, brick, stone or cement, or over whitewash. It dries snow-white, and one gallon—one pound of powder—will cover 200 square feet. It will not clog the sprayer, nor flake or fall off as whitewash does, and the germicide, strong from the first, grows stronger as the paint dries, and is there day and night guarding your herd and flock against disease.

Use Carbola Instead of Whitewash and Disinfectants

in stables, kennels, poultry houses, rabbit hutches, cellars, hog pens, creameries, outbuildings, garages, factories, warehouses and on tree trunks.

Carbola will save you time, labor and trouble, and give you better results than you possibly can get from whitewash and disinfectants. The dry powder is excellent as a lice powder. Carbola is used by leading poultry, dairy and stock farms, and by U. S. Experiment Stations and Agricultural Colleges.



Your hardware, paint, drug or seed dealer has Carbola or can get it. If not, order direct. Prompt shipment by parcel post or express.

10 lbs. (10 gals.) $1.25 and postage **20 lbs. (20 gals.) $2.50 delivered**
50 lbs. (50 gals.) $5.00 delivered

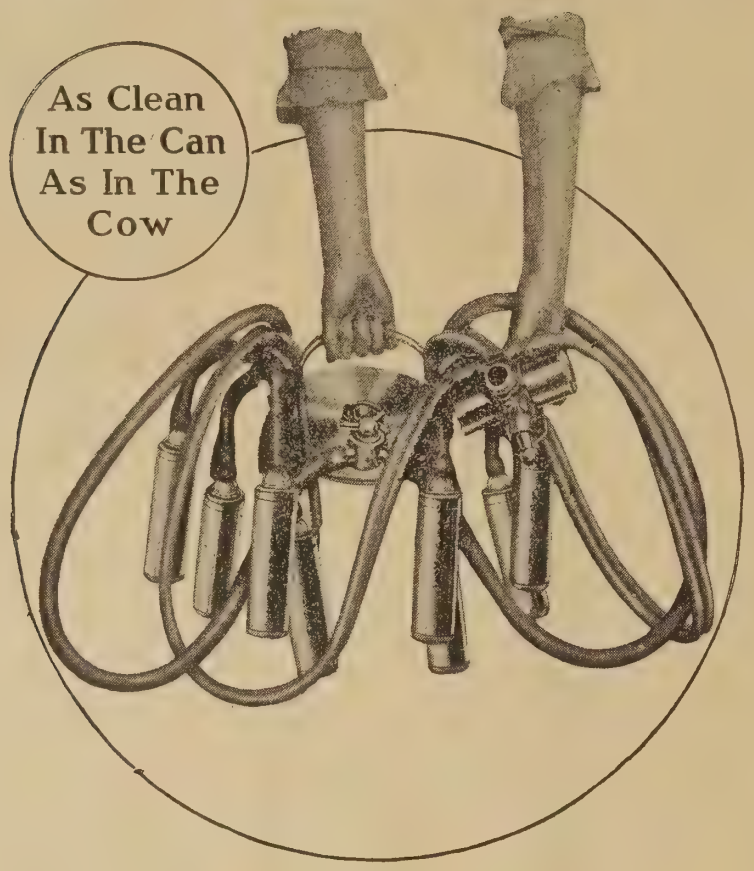
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Trial package and interesting booklet, 30c postpaid

CARBOLA CHEMICAL COMPANY, INC.

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NU-WAY

Sanitary Milker



No Other Milker Has This Sanitary Feature

THE exclusive sanitary advantage of the Nu-Way is the easily detachable pulsator, which can be entirely removed from the lid.

All parts coming in contact with the milk can be placed in the sterilizing solution without detaching a single tube. This explains the increasing demand for the Nu-Way Milker, because it keeps milk in the can as clean as it is in the cow.

The Nu-Way is also the only alternate action machine with milk flow visible in every cup. The Nu-Way Teat Cup has an indestructible sanitary glass bottom keeping the milk from each quarter in plain sight.

The Nu-Way will cut your milking time two-thirds, increase your profits and increase your reputation for clean milk, which means that you will always secure the highest market price for your milk.

Write for a booklet today containing full description of this wonderful milker.

Nu-Way Milker Company, Inc. 103 Decker St., Syracuse, New York

Cost of Making Cheese and the Future of the Dairy Industry

The cost of making cheese is a problem of grave importance to the future of the cheese industry and is attracting the attention of those who really have the best interests of the work at heart. A condition exists that has today grown to such proportions as to directly menace the welfare of those engaged in the business of manufacturing and marketing cheese.

For years there was a steady increase in the cost of the necessary buildings, equipment, and supplies for the manufacture of cheese. However, we were not greatly concerned in the matter until coming of war conditions when prices of all kinds of supplies began to mount rapidly. The price paid for making was increased, but in too many instances it has not been in proportion to the cost of manufacture.

Many of our best makers, attracted by better money making possibilities, have gone out of the business, leaving the way open to younger and less experienced men. In their enthusiasm and inexperience many of these younger men eagerly bought out the establishments of the older men and in many instances found that in face of the overhead expense and ever increasing cost of supplies the profits were often conspicuous by their absence. Many of the "old reliables" who have remained in the business have been confronted by this same problem and the profits of the business have not been such as to always provide for the necessary up-keep of buildings and replacement of worn-out equipment.

As could naturally be expected conditions of this kind have resulted in discouraged and dissatisfied makers and a general lack of interest in their work. The tendency has been to follow the line of least resistance, a policy that is today working greatly to the injury of Wisconsin cheese.

To get results the dairy farmer must realize that he should allow a price for making consistent with the cost of manufacture. This price must be sufficient to allow the manufacturer a decent living and a fair profit, a profit that will be some incentive for a good man to stay in the business and to give the best service possible. In return for a fair allowance to the manufacturer the farmer has the right to demand a class of work that will insure the best possible results. In too many instances the patrons of factories are so insistent upon better returns for their milk that the maker is compelled to increase his yield by methods that mean injury to quality, and injury to quality, consistently and generally followed, must eventually ruin the reputation of Wisconsin cheese and bring an incalculable loss in which everyone engaged in the cheese industry must share. This question of sufficient remuneration to keep good cheesemakers in the business is one of vital importance to the patrons of cheese factories and one that they should give their most careful consideration.

In many instances makers are receiving satisfactory prices but many others are unable to convince the farmer that they must have an increase in the price of making. Only by organization and co-operation on the part of the makers in making reasonable demands can any relief be attained in many localities and for the good of all concerned it is to be hoped that permanent relief for such problems will be attained.

Both the dairy farmer and the cheesemakers must realize that the future of the cheese industry depends entirely upon the quality of the goods. Put upon the market only cheese of high grade and there need be no fear of over production—GEO. J. WEIGLE, Wisconsin Dairy & Food Commissioner.

California Items

HOARD'S DAIRYMAN:—Dairymen and other alfalfa consumers are at present greatly concerned over the short hay crop. With the exception of a few spots, there is a general shortage of alfalfa throughout the state, and reports indicate that the shortage is general throughout Nevada and Arizona. Alfalfa growers in these three states are unable to meet the demand for hay. To conserve the supply for local needs, the alfalfa growers of California, Inc., are not shipping alfalfa meal out of the state.

In Modoc County, where feed is usually plentiful, nearly 100 head of Holstein dairy cattle were offered for sale by Roberts & Summers the other day at public auction, giving as the reason for the sale, the shortage of pasture and feed. In the Sierra Valley, where harvesting is now in progress, reports state that there is a heavy crop where there was plenty of water for irrigation but that the crop is short elsewhere. In the San Joaquin Valley, farmers under the Modesto Irrigation District Control will receive water up to August 1st according to a report of the chief engineer, this being an effort to relieve the shortage of alfalfa by making it possible for farmers to harvest an additional crop.

Throughout the hay sections, the movement of the crops is being retarded because of a shortage of cars. In some sections this shortage is acute. California depends on the East for its cars, and none are coming in because of congestion and shortage in the East.

Alfalfa prices, in consequence of all this, are high. In addition to the short crop, everything that goes into the production of alfalfa and alfalfa meal tends to increase the price this year, wages, baling costs, freights, storage, etc., all being higher.

The result of these high prices places California dairymen in a hard position. They are up against the proposition of quitting business or raising prices for their products, a thing that is not easily done in the face of public opposition. The State Market Director is said to have admitted that dairymen will either have to raise prices or close down their business. It is reported from various sections of the state, notably in Imperial where cotton growing is coming into favor, that many dairymen are selling off their herds and going into other business.

On the other hand, dairy farms are changing hands and being restocked in certain localities. Near Modesto, Joe Vosti has sold his 160-acre ranch to F. Patocchie and Son of Oakdale for $75,000. The new owners will restock the ranch with 200 head of dairy cattle. Similar changes have taken place the past month in the various dairy sections.

Oakland, Cal. L. L. D.

Jersey Cattle Notes

For week ending July 23rd:

Number of animals registered: Bulls, 300; cows, 688; total, 988. Number of transfers recorded: Bulls, 219; cows, 1,109; total, 1,328.

Milk Bar at Picnic

HOARD'S DAIRYMAN:—In spite of the fact that farm labor is about impossible to get and farmers are overworked, farmers' picnics are more frequent and better attended than in former years. One of these affairs came off recently at the county seat of Delaware County, N. Y., and the attendance was estimated at 1,000. The State School of Agriculture at Delhi, the County Farm Bureau, the Dairymen's League, and the Grange were the organizations particularly responsible for putting on the picnic, but the college of agriculture contributed in the way of a milk show and bar.

Of course, games were a feature and there was music; these cannot be omitted from such a gathering. The fields and buildings at the school were visited. The grange and the bureau were soliciting members. There were addresses by Grange and League men. Such, at a glance, was the picnic. Of course, there were eats and drinks. Some privileges were sold. What do you think of this? Coffee and soft drinks were forbidden at all booths. All drinks sold must be milk drinks.

Some folks do not like milk drinks, but, never mind, you wouldn't suspect you were drinking milk the way some of those drinks were put out. Mine was chocolate. I do not care particularly for milk to drink, but that tablespoonful of chocolate, sugar, etc., in the glass of milk, well shaken together, made the taste equal to the best put out at the soda fountain.

Any fruit juices, such as strawberry, raspberry, etc., can be used in the same way and you are really getting something when you buy milk flavored after this fashion. This with milk, buttermilk, etc., were sold at the milk bar at very reasonable prices, milk at three cents a glass and buttermilk at two cents.

Mr. Eastman of the League News gave a description of the development of organization in the last four years, at which time he came into the county as bureau agent. Then there was almost nothing, only something of a grange and a farm bureau just developing. The grange now has in the state practically 125,000 members, the farm bureaus 70,000, and the League 60,000. The bureau and the League has, of course, only men commonly counted as members, while the grange counts women and children. In the county the bureau has 1,200 members and the League 2,700. All these organizations are working unitedly. In addition we have the Exchange which is rapidly getting together a million dollars capital, and the League co-operative that is developing as rapidly as seems safe and sane. Then to go further, there are milk producers' organizations at every city in the country and these are working in the utmost harmony. We are able to say things to the legislatures and have them noticed, and even got about all asked for at the Chicago convention except packer control, and a similar delegation was at San Francisco, not partizan but agricultural.

New York. H. H. LYON.



SKIMMILK HOLSTEINS

"These two calves never had a drop of whole milk after they were four days old." So writes their owner, W. E. Bishop of Wisconsin. One was four days under and the other eleven days over six months when the picture was taken. Do they look likely? Calf meal was used with skimmilk in substituting whole milk. Apparently the calves found that feed satisfactory. Feeding large amounts of whole milk to calves is an expensive proposition. With proper management, it is unnecessary.

Has Another View

HOARD'S DAIRYMAN:—On page 1517 of the July 16th, 1920, issue of your valuable paper appears a statement to the effect that my "headquarters are in Washington and backed by the packers and margarine interests," and that my recent address before the Interstate Cottonseed Crushers' Association "was an appeal for vigorous and concerted action against the butter industry." This interpretation of my address is an incorrect one.

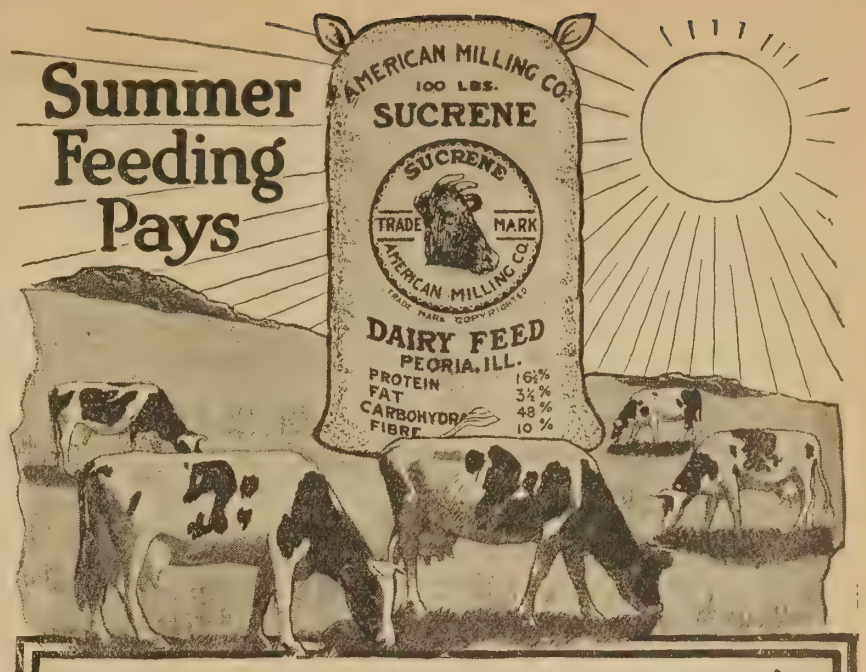
The "packer", as the term is generally understood, is not contributing one cent to the expenses of this institute. Only a small part of the margarine industry is backing it. The rest of the industry may or may not be in sympathy with it. For your information I am enclosing a list of the names and addresses of our present membership.

My address was not an appeal for any action against the butter industry. No man can point to a single thing I ever said against milk or milk products. My appeal was for concerted action against laws that make a market for one product by making it impossible to market a competitive product. The man who raises peanuts, cotton, beef, hogs, and cocoanuts under the American flag has as much right in the food markets of America as a man who keeps a dairy cow. Any law that favors the one at the expense of the other is a vicious law and cannot be defended on any theory of government.

My chief function as secretary of this institute, briefly expressed, is to tell the American people the whole truth about margarine and as far as possible to keep other people from telling untruths and half truths about it. The performance of this function ought not to be looked upon as an action against the butter industry.

J. S. ABBOTT.

See editorial comment on page 122.



COWS on grass alone go down rapidly in milk flow and bodily vigor when the drought comes or when the grazing season is over. Spring-freshened cows, fed Sucrene Dairy Feed while on pasture, keep up their heavy milk flow through fall and winter. Fall-fresh cows are in better condition for calving.

"Sucrene Dairy Feed has made me more money than any feed I ever bought. It produces larger quantities of milk at low cost and keeps stock in the best of health, with practically no calving troubles."—Thos. Y. Hackett, Daretown, N. J.

Sucrene Dairy Feed backs up the stimulating effects of grass—is many times stronger than the finest pasture in milk making and body-maintaining nutrients. Butter made from cows fed Sucrene while grazing is firm and crispy—not smeary like butter from cows on grass alone.

Composed of wheat bran, linseed meal, prime cottonseed meal, cocoanut meal, corn gluten feed, corn feed meal, ground and bolted grain screenings, clipped oat by-product, molasses, salt, calcium carbonate.

Guaranteed analysis: 16½% protein, 3½% fat, 48% carbohydrates, 10% fibre.

Try this feed. Order a ton from your dealer. If he cannot supply you write us. The coupon brings you full information on Sucrene Feeds.

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Amco Fat Maker for Steers

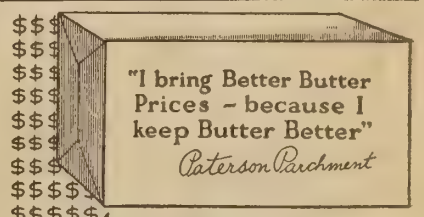
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Silos At Half Price

I must clear my present warehouse before winter. About 200 silos left, which I will sell at half price as long as they last. Silos are well known make, new, built of genuine Clear Oregon Fir, and absolutely first class in every way. You have as good a chance at these as anyone else if you get your order in before they are gone. No partiality shown big buyers. Everybody treated fairly. Orders filled in order of their receipt.

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For an amount too small to consider you can wrap your butter in

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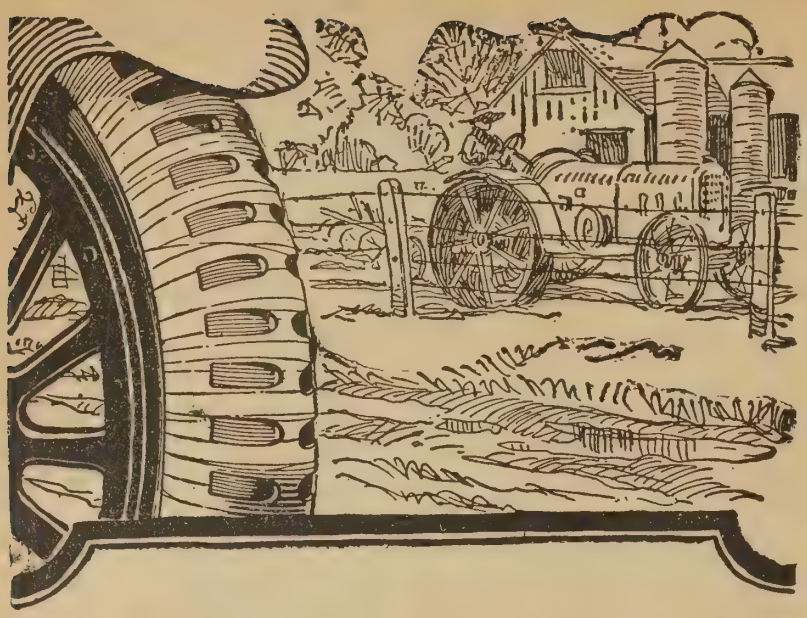
stamped with your own brand, which to your customer becomes an identifying mark of fresh butter, free from dirt, impurities and bad odors—wholesome, fine flavored butter which people gladly pay more for. Try it.

Write for free samples and book, "Better Butter". Worth money to every dairyman.

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The Perfect Silo

Easy to erect—no nails or screws—beautiful stock—unblemished and thoroughly seasoned—deeply tongued, grooved and splined to insure permanent air-tightness. Makes perfect ensilage and outlasts your grandchildren. A Kalamazoo offers you the only continuous opening door frame that's galvanized after being assembled—to hermetically seal against all destructive action. Our catalog explains other valuable features.

Buy a Kalamazoo on Easy Terms
She'll Pay for Herself in a Hurry

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The Shedd Jersey Calf Club

F. L. BALLARD, OREGON

THE Willamette Valley in Oregon is known as a famous Jersey center. Enthusiasm over excellent Jerseys extends into the ranks of the boys and girls, and there are several calf clubs in the state which have selected Jerseys as the live stock with which the members prefer to work.

One of the most noteworthy of the clubs is at Shedd, which was visited recently by the breeders who participated in the Oregon Jersey Jubilee. The Shedd Club, composed of 30 boys and girls, all owning Jerseys, was one of the first in the United States to be awarded a $75 prize by the American Jersey Cattle Club. The influence of this number of young people in a rural community grouped together for the purpose of studying and practicing the fundamentals of live stock care and improvement, is felt well beyond the membership of the club. The entire community is proud of the work of the young people, and large gatherings assemble whenever the club holds a special meeting, judging demonstration, or exhibit. An annual community fair is held by the young people in conjunction with the local Shorthorn club. This event is largely attended. The club is training what promises to be a strong stock judging team to participate in county, state, and inter-state contests this fall.

Recently on the occasion of the Jersey Jubilee, three hundred persons devoted an hour to viewing the calves which were exhibited by 27 of the 30 members. The club members participated in a general program, a feature of which was an address by President Munn. Officers of this organization of future dairymen and farm women are Harold Troutman, president, and Elene Davis, secretary.

Mrs. C. W. Shedd, who acts as local leader, is largely responsible for the enthusiasm which pervades the Shedd Calf Club. S. V. Smith, county agent, and L. J. Allen, state live stock club leader, have also devoted considerable time to assisting the club members with their problems.



SHEDD, OREGON, JERSEY CALF CLUB

Another Jersey Breaks World's Record

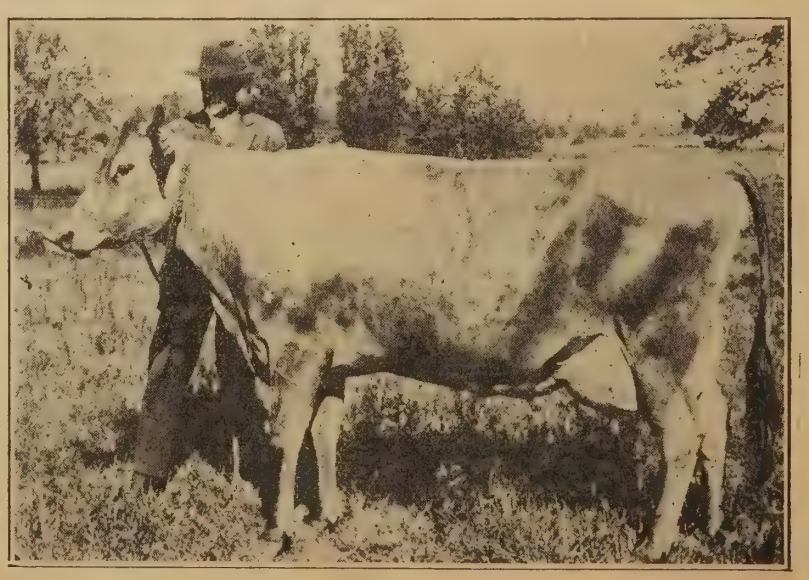
POPPY'S Dortha, owned by Frank E. Lynn, Oregon, has established a new world's record for junior three-year-old Jersey cows by making 17,904 pounds of milk, 994 pounds of butterfat, in a year's test.

Mr. Lynn gives an interesting account of the record in these words:

"I was not doing testing when this cow freshened and had no intention of starting her, so she had no grain of any kind for two months before freshening and was not prepared for a test in any way. It was only after she started milking so heavily that I decided to again start testing. Even then I had no idea that she could make a world's record.

"It was only after six months that I realized she really had a chance to make a remarkable record, and she was then fed and milked at regular intervals, although she was not coddled in any way. She has never had a blanket on or had her drinking water warmed in the coldest weather.

"Her feed for the last six months of her test was 12 pounds mill-run,



FRANK E. LYNN OF OREGON AND HIS WORLD'S CHAMPION JERSEY COW, POPPY'S DORTHA

9 pounds chopped oats, 6 pounds beet pulp, and 3 pounds oil meal. She also had 50 pounds of silage and 30 pounds of kale per day until the first of May, when she was turned on pasture. One of the cow's peculiarities is that she knows when she has had enough to eat, and will not take any more feed than is good for her."

This statement, coming from the man who owned a cow that did not appear to be championship material, emphasizes again the fact that appearances are ofttimes deceiving, and that the best way to tell what a cow can do is to put her on official test.

Poppy's Dortha comes by her productiveness through inheritance, as her pedigree shows her to be a granddaughter of Rosaire's Olga Lad, a gold and silver medal bull, and her grandam on her dam's side is St. Mawes Poppy, a cow with three official records of over 700 pounds of fat, the highest of which was 952 pounds fat. In her next generation she reveals the blood of St. Mawes, a gold medal sire. This adds further evidence that great producers reproduce, and offers valuable material to students of dairy cattle breeding.

Besides being the new three-year-old champion, Poppy's Dortha has won the distinction of having made the fifth highest fat record, the sixth highest milk record of the Jersey breed, and the highest milk record ever made by a Jersey under seven years of age.—AMERICAN JERSEY CATTLE CLUB.

Sawdust Chemically Treated is Tried as a Stock Food

Sawdust as a possible feed for stock has been considered favorably for many years, but it remained for the Forest Products Laboratory and the Wisconsin College of Agriculture to conduct the first trial.

The feeding experiments in which chemically treated softwood sawdust was fed were under the direction of F. B. Morrison of the College of Agriculture. The sawdust was prepared by means of a new process perfected by E. C. Sherrard of the Forest Products Laboratory. The amount of treated sawdust which could be prepared under laboratory conditions was limited so that only a short feeding test was made. More extensive trials will be necessary before definite conclusions can be made as to the feeding value of the hydrolized sawdust.

"Three cows were fed for three periods of four weeks each. In the first and third feeding periods," says Mr. Morrison, "the cows were given an excellent ration consisting of alfalfa hay, corn silage, and a concentrate mixture consisting of 55 parts of ground barley, 30 parts of wheat bran, and 15 parts of linseed meal. In the second feeding period the hydrolized or treated sawdust was substituted for a part of the barley in the mixture. Two pounds of sawdust were used in place of one of barley. The grain mixture then consisted of 30 parts of sawdust, 40 parts of ground barley, 30 parts of wheat bran, and 15 parts of linseed meal. The cows kept up their production through this period and maintained their weight even better than on the ration fed during the first and third periods.

"While it is unsafe to draw definite conclusions from such a short test, it would seem that cattle may be fed a limited amount of hydrolized sawdust. As a feed it contains only a negligible amount of protein and for that reason cannot be compared with barley. In both of the rations used in the trial the protein was furnished by the other feeds. Before attempting the manufacture of this new feed on a commercial scale it will be necessary to carry on much longer feeding tests to find out whether the sawdust has any injurious effects when its use is long continued," says Mr. Morrison.

"Sensational reports circulating to the effect that the saving in feed will be enormous and that the use of sawdust will revolutionize the dairy industry are false and misleading," states Mr. Morrison. "No one can yet state whether or not it will prove of practical application."

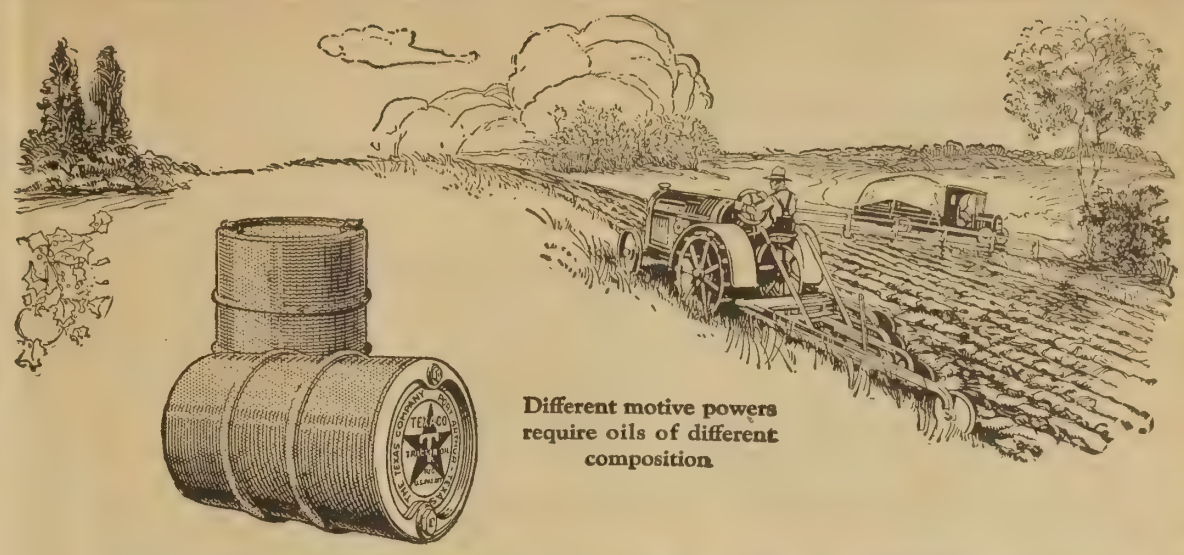
Making Hydrolized Sawdust

"Hydrolized sawdust is not ordinary sawdust, but that which has undergone many changes through chemical treatment. It requires clean sawdust from certain woods; some sawdust cannot be treated. The first step in changing the sawdust is to treat with dilute sulphuric acid for from 15 to 20 minutes under a steam pressure of 115 pounds to the square inch. During the cooking about 25 per cent of the dry weight of the wood is changed into sugar and the fibrous part of the wood is greatly changed, becoming brittle and friable, an intermediate product between cellulose and sugar," explains Dr. Sherrard.

"The sugars are then extracted from the digested dust with hot water and the sulphuric acid removed by neutralizing with lime. After settling or in some cases after filtering, the sugar solutions were evaporated to a thick molasses under reduced pressure and mixed with the digested residue which had been partially dried. The mixed material was then placed in an oven and dried at a temperature of 70 to 80 degrees C. until it contained not more than 12 per cent of moisture. In this handling some sugars were lost so that in the final product the sugars averaged from 14 to 18 per cent of the dry food. It has been found that the sawdust free from chips and pieces of bark is best suited for this purpose since a more even penetration and digestion is obtained with the smaller particles."

From experience and data gathered from investigations upon the preparation of ethyl alcohol from wood, Dr. Sherrard believes that similar feeds can be obtained from any of the non-resinous coniferous woods and perhaps some of the more resinous woods. Larch should be partially adapted to this use since it contains approximately 12 per cent of galactin, a compound which gives rise to galactose upon treatment with dilute acids.—Wisconsin College of Agriculture.

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DECLINING FEED PRICES

SANDERS SOSLAND, MISSOURI

THE feedstuffs industry of the United States has entered, or at least is about to enter, a new era in prices. Not in many months, if at all in the past few years, have such broad and general downturns in values occurred on markets as have been recorded within the past month. The commodities used on a large scale in the rations for dairy cattle have shared generously in the price depression. For instance, bran is more than $15 a ton lower than the high point of values reached in the early summer period, when the trade was marveling at the ability of the offal to maintain the record height. Alfalfa hay has declined about $12 a ton, and alfalfa meal and alfalfa mixed feeds have suffered similar depression. Since the inauguration of trading in cottonseed cake and meal for new crop shipment, the market has receded about $10 a ton. Corn and oats, in fact practically every important feed, have declined sharply in price.

One is not obliged to scan market gossip closely to discover the basic influences contributing to the strong bearish pressure on prices for feedstuffs. Enormous feed crop production is the bear club. The excellent outturns of feed crops thus far, including oats, barley, other grains, alfalfa, clover, and prairie hay, and the ideal condition of crops which are yet to be harvested, particularly corn, the sorghum grains, cotton, and flaxseed, and plants of lesser importance, have brought about a sharp reduction in the demand on markets. Pastures in every section of the country are in excellent condition and are being utilized more generally than during any summer or fall of recent years.

Serious drouth or prolonged dry spells have in the past few years stimulated sharply the demand for feeds during the summer months, this having served to offset the effect of the enlarged supply resulting from harvests. The buying came from the Southwest, possibly Texas, Kansas, and surrounding states, or the far West, such as California, Nevada, and Utah, or from the Middle West, the Northwest, Northeast, or the East. Buying of feed to tide over stock through a drouth period usually is on a larger scale than actual needs require, the fear of a bulge in prices because of the weather conditions and possible crop failure stimulating the demand. Nor is the buying confined merely to the feeders within the drouthy areas; demand develops from other sections, due to the excitement which is created in the general trade. However, this is not the condition today. Not only is the excellent growth of pastures checking the demand for feed, but it is increasing on a large scale the surplus available for commercial marketing channels.

So far as the dairy industry is concerned, most attention centers around the price movements in the market for bran, the offal of the flour mill. Millers, jobbers, the country merchant, and the dairyman have come to look upon bran in recent months as a luxurious feed, and have thought of the offal in terms of $50 and even $60 a ton. The speculative element, or that portion of it which considered bran high around $40 to $45 a ton in the Middle West during March and April, pocketed heavy losses on short accounts. Naturally, when the trade entered July with a market around $50 a ton, few were willing to sell short for deferred shipment, despite the large alfalfa and other crop outturns and the excellent condition of pastures. Instead, there was a considerable "long" interest in the bran market. The bulls of the earlier months were so confident of their position, basing their views largely on the prospects of a very light production by mills of the country during July, that they bought large quantities for deferred shipment. No doubt they would have realized a profit if the drouth of former years had developed, which would have sustained the interior local demand. But the buying strength of the country fell off to an insignificant volume, with the result that production of the offal by mills, while comparatively scant, was large and burdensome in contrast with the demand.

So bran has declined, and promises to decline further. On the Minneapolis market, the leading spring wheat terminal, bran is available around $43 to $44 a ton for spot shipment, sacked; in Kansas City around $44, and in St. Louis and Chicago around $46 to $47 a ton. At the present writing, jobbers are offering bran for thirty-day shipment at a discount of five to ten cents under the spot market, and for sixty- and ninety-day delivery, important milling points have recently quoted down to $40. But the trade is of an insignificant volume in the deferred deliveries and does not fully reflect the sentiment of market operators as to the probable price movements up to October. The important fact concerning the trade position is the freer selling than the volume buyers are willing to absorb. The



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selling pressure is coming from both mills and the speculative trade, the latter being forced to unload their holdings upon the market when received, owing to inability to find an outlet such as was previously anticipated.

The outlook for bran is naturally bearish. Since the high point of values in May, prices have receded approximately $12 a ton. If it has been possible to witness such a sharp depression during a period of very light production and small stocks in the hands of the consuming trade, what may be expected when mills begin operating at full capacity? It is only reasonable to anticipate further downturns the remainder of the summer, which might possibly extend into the fall season. The stocks of flour in consuming channels of the country have dwindled sharply, and with a more settled tone in the market for wheat, bakers, jobbers, and other buyers will begin to accumulate their stocks. Millers in both the spring and winter wheat sections are confident of a broad domestic demand by the middle of August, and full time operations by the opening of September are quite probable. This, of course, means production on a full capacity scale of bran and shorts.

Whether demand for the offal will increase in proportion to the enlarged production by mills is a question, however. Much depends upon the character of the weather. A late summer drouth, which is a possibility, would doubtless stimulate sharply the demand for bran, and with the present low stocks in hands of the consuming trade, a wave of buying overbalancing the increased production could easily result. However, there are no signs of drouth for the immediate future, and a continuation of present favorable weather with outturns of late feed crops such as now promised would have a depressing influence on the later trade. Unless the unusual occurs, the dairy trade can arrange its buying of bran on the theory that prices will continue on a downward scale. And that means buying on a hand-to-mouth basis or only for current needs will prove the most profitable.

Hog producers have not thus far enjoyed the lower scale of prices in their purchases of shorts, the heavier offal of the flour mill. Light production was the basic factor in the maintenance of values at near record levels, but it required a semblance of demand to sustain prices. Demand for the heavier offal has not been broad and generally active, but there was sufficient buying of a scattered character to absorb the scant supply available on the market. Some of the buying of shorts in recent weeks, it is interesting to note, came from mills themselves, their production having dwindled to a point below the actual consumptive needs of the local trade. Gray shorts or flour middlings at the present writing are bringing around $62 a ton on the Minneapolis market, $61 in Chicago, $60 to $61 in St. Louis, and around $57 to $58 in Kansas City. Brown shorts or standard middlings have not met with any important demand, selling around $54 in Kansas City, $54 to $55 in Minneapolis, $55 in Chicago, and about $56 in St. Louis. There is at present a premium of approximately $15 a ton on shorts over bran, a very abnormal difference, but this disparity will not long prevail. Shorts should work downward more rapidly than bran.

Alfalfa and other varieties of forage have felt probably more than any other feedstuffs the effect of excellent pasturage. Hay is in a very weak position, only the acute shortage of cars and the partial breakdown of the nation's transportation system checking declines in prices. The lack of baling wire and ties and the scarcity of labor on farms are contributing influences to the restricted movement of hay to market, but are playing only a minor part as a bullish influence in the general trade. It is important to remember that in the past crop year the shortage of cars and motive power for moving hay from the country to terminals was the basic factor in causing the upward swing of prices. Of course, there were other influences tending to force the market up which do not prevail on the current trade, including short production in the East, the northwestern and southwestern dry spells and scarcity of other feeds. Many in the hay trade, while manifesting doubt whether values will soar to the high levels reached in the past crop year, believe the car situation sufficiently bullish on the market to at least maintain prices around current levels.

Demand for alfalfa is of a scattered character. Some hay is moving to the east, southwest, and the north, but no section is buying on a generous scale. The fact that clover production in the East is considerably greater than a year ago is reducing demand for alfalfa from the dairy districts of that territory, and this will tell later in the crop season. Much forage and roughage is available in the South and Southeast, and while that territory will buy considerable hay, the extent of purchases will be dependent to a great extent on the prosperity of the cotton belt, which is largely based on the price of cotton. Alfalfa production is somewhat greater than a year ago in the West, and the quality is far

(Continued on page 137)



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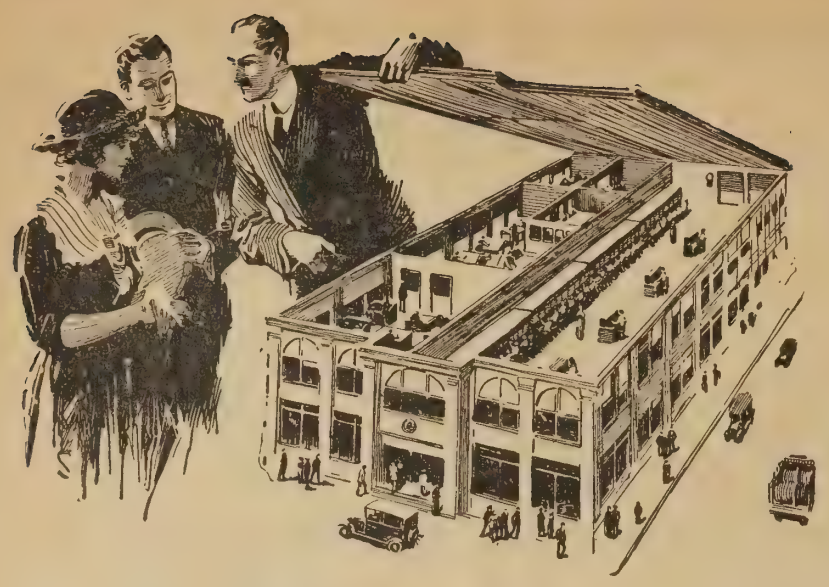
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Calves Make Smaller Gains on Skimmilk Fed Cold

HOARD'S DAIRYMAN:—An experiment that will interest dairymen who feed skimmilk to calves was recently completed at the United States Dairy Division experimental farm, Beltsville, Md. The results of this work indicate that calves fed on cold skimmilk make smaller total gains and smaller gains per pound of milk, than when the skimmilk is fed warm, or when fed warm and cold alternately.

It is commonly believed that cold skimmilk, or sour milk, when fed to calves will cause scours. Earlier work has shown that the sourness of milk itself will not have this effect. It was therefore desired to test the effect of cold skimmilk and to find out the relative gains that will be made on warm and cold skimmilk.

Twelve calves, balanced as nearly as possible with reference to breed and body weight, were used in the test, and were divided into three groups of four each. The skimmilk feeding began when the calves were 10 days old, with the exception of one calf, which was 20 days old. The experiment ran for 60 days. One group received skimmilk at a temperature between 90 degrees and 100 degrees F. Another group was fed warm and cold skimmilk in alternate periods of two days, the cold skimmilk having a temperature ranging usually between 50 degrees and 60 degrees F., although it sometimes went lower. The third group was fed cold skimmilk at a temperature averaging a little above 50 degrees F. Each calf was fed 12 lbs. of milk daily until it attained a weight of 100 lbs., when the quantity was increased to 14 lbs.

Result of Feeding Skimmilk Warm, Cold, and at Alternating Temperatures

Group	Initial weight lbs.	Final weight lbs.	Total gain lbs.	Daily gain lbs.	Total skimmilk lbs.	Milk per lb. of gain lbs.	Temperature of milk F°
Warm skimmilk	88.2	139.2	51	.85	803.5	16.35	93.02
Alternate warm and cold skimmilk	90	144	54	.90	801.5	15.12	71.97
Cold skimmilk	85.5	122	36.5	.61	775	24.47	52.2

Cold Skimmilk Chilled Calves

This experiment was conducted during the winter months, at which time it is probable that the cold skimmilk will show to poorer advantage than during warmer weather. It was noted that the cold milk was taken by the calves less readily than the warm milk, and that it chilled them. One calf which started on cold skimmilk had to be dropped from the experiment and a substitute provided on account of its refusing to drink the cold milk. Another calf fed cold skimmilk scoured some but not enough to make it necessary to change the ration, nor to remove the calf from the experiment.

Except for some very slight digestive disturbances, the calves on warm skimmilk, and those on warm and cold skimmilk alternately, went through the experiment in good condition.

It will be observed from this table that the calves which were fed alternately warm and cold skimmilk apparently did a little better than those fed warm skimmilk. Those fed cold milk alone made much smaller gains. It is not to be concluded from this that alternate feeding as described is advisable, as it is realized that four calves are an insufficient number from which to draw definite conclusions. While no change in the commonly accepted method of feeding is recommended as a result of this experiment, we can conclude that cold skimmilk is not necessarily productive of scours, and that alternate warm and cold feeding gives better results than cold feeding alone.—United States Dairy Division.

Bulletins of the Week

Buttermilk Cheese and Cottage Cheese—Their Manufacture and Sale, by J. L. Sammis. Bulletin 315, Wisconsin Experiment Station, Madison, Wis.

Capons vs. Cockerels, by Roy H. Waite. Bulletin 235, Maryland Experiment Station, College Park, Md.

The Effect of Age of Eggs on Their Hatching Quality, by R. H. Waite. Bulletin 233, Maryland Experiment Station, College Park, Md.

The Development of the Peruvian Alfalfa Industry in the U. S., by H. L. Westover. Circular 93, U. S. Dept. of Agr., Washington, D. C.



HOLSTEIN BREEDERS OF JEFFERSON COUNTY PICNIC

Three thousand people attended the second annual picnic of the Jefferson County Holstein-Friesian Breeders' Association held at Jefferson, Wisconsin, July 8. Even this attendance would have been greatly increased with favorable weather.

Speakers for the day's program were R. C. Pollock of the Holstein-Friesian Association of America; L. L. Oldham, secretary of the Wisconsin Holstein-Friesian Breeders' Association; and A. J. Glover, editor of Hoard's Dairyman. Mr. Pollock outlined the work of the National Association in the organization of state associations and pointed out the advantages gained through co-operative promotion of Holstein interests. Mr. Oldham called on the breeders for increased support of their state association and reviewed the work already being accomplished. Mr. Glover spoke of the Farm Bureau movement and the effort of the Wisconsin Dairy Council. He told of the necessity and wisdom of dairymen supporting their industry through the increased consumption of dairy products on the farm.

In a free lottery to all attendants of the picnic a Holstein bull calf was given to the holder of the winning number. The fortunate one was John E. Fromader, a farm boy.

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Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

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195 Marion Street Oshkosh, Wisconsin

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

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POUGHKEEPSIE, N. Y.

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Think what that means to you in good hard dollars with the great demand for wheat at high prices. Many farmers in Western Canada have paid for their land from a single crop. The same success may still be yours, for you can buy on easy terms,

Farm Land at $15 to $30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows **20 to 45 bushels of wheat to the acre.** Good grazing lands at low prices convenient to your grain farm enable you to reap the **profits from stock raising and dairying.**

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—low taxation (none on improvements), healthful climate, good schools, churches, pleasant social relationships, a prosperous and industrious people.

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at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog.
Jones Nat'l School of Auctioneering, 38 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

A Co-operative Milk Delivery Plant

(Continued from page 109)

persons. The drivers of the delivery wagons are paid a monthly salary and in addition a bonus is granted them for sales above a specified amount. They have been earning a bonus each month for some time.

We have passed through some dark financial periods but now the future looks bright for our association. A large factor in our success has been the assurance from citizens of our town that they stood ready to help us in times of need. They bought stock in the enterprise and assisted in other ways. But possibly the most important consideration is the proper operation of the plant and its business management. In this respect we have been fortunate in securing the services of J. C. Joslin, formerly manager of the Federal Creamery at Grove City, Pennsylvania.

Get Ready for the Tester

HOARD'S DARYMAN:—When doing official testing among Ohio herds I often wanted to tell many dairymen about the advantage to themselves and to the tester if they would fix up a little for the tester's work. I could not do this but now that I have about finished my testing work I can say what I have wanted to say when working.

In summer testing the matter of working equipment is all that matters. Water and a bench to work on are the main ones. But in winter time, when the samples are brought in out of the barn where the temperature is only kept above zero by the heat of the cows, it is a different matter.

The kind of a bottle that the sample is to be taken in is of some importance. A wide mouth is much easier to fill than a tall, narrow bottle. The half pint milk or cream bottles are the best sample bottles I have ever found. They are of a standard that is easy to buy. Any paper cap fits them so if a bottle should be accidently tipped over the sample is safe. I have used everything from a two-quart Mason fruit jar to an olive bottle for getting the samples. Maybe some testers don't care about such equipment but I appreciate things to work with. Such a bottle as the half pint is easy to warm up and easy to mix the sample in just before starting the actual testing operation.

In winter it surely does not pay any owner of cows to send the tester out to a shanty or a milk room where his feet and hands are cold all the time he is making the tests. One can not do accurate work under this influence. Testing is accurate work when it comes to reading fat columns and measuring acid and milk. When fingers are cold this can not be done the best. There is another bigger reason, though, for a warm room. Milk samples do not mix well unless warm. Nor will every bit of the fat come out when reading the fat columns if the water is cooler than it should be. A warm room will tend to make the best working conditions and the test will come the very best.

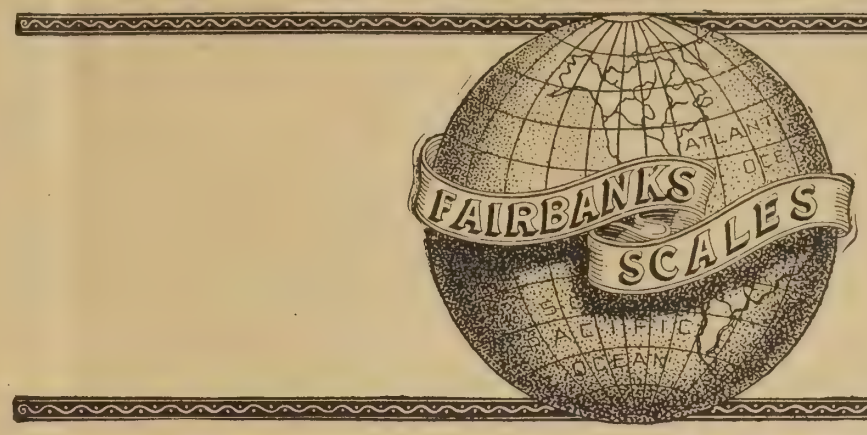
Running water and a sink of some sort facilitate working. I have worked on farms where I tested a larger number of cows than would have been possible without every convenience to work with, including a 24-bottle steam testing centrifuge. Part of a herd may be milked three times a day and part of it two times. This makes about six hours a day to be spent in the barn watching the cows during milking time. The time left needs to be well put in to get the tests out before the next milking time arrives. With a drygoods box and a pail to dump water in and wash up with I couldn't do this test without dividing it into two sections. This would have cost the owner $6 extra for my time each testing period besides board. That amount will fix up most any farm with a comfortable, convenient place for the tester to work.

Very few testers will be any more careful with a good working condition than without it. Yet a few might. Carelessness most always gets a lower test rather than an exact one or a higher one. In a case of this sort the owner loses. However, when a tester wants to do his very best, no matter what the conditions, he can't do it when working conditions won't allow it. A warm room is necessary. Just a warm stove will not do the business. A fire might easily be warm but the room ought to be comfortable. Clean milk test bottles can not be had without hot water. Some sort of a cleanser for taking the fat from the milk bottles ought to be used, too. Testers can seldom carry a case of any cleanser along with them. They have considerable of a load as it is. The sample bottles ought to be cleaned after each test. One can not do a satisfactory job with warm water alone. The water must be hot or some cleaner must be used. Without conveniences to work with the outfit used is apt to be left dirty for the next run and neither the tester nor the owner will be any ahead in this case.

Not only is a convenient place for washing bottles and milking equipment worth while for the testing times but it is a convenience for every day. Many dairymen do not take the milk buckets or parts of the cream separator to the house for the women folks at all. They can take care of this work in the milk room or dairy and have a good job done at that. Usually the farm dairy furnishes plenty of work for the women folks so such an arrangement would meet with approval from that quarter.

Ohio. EARL ROGERS.

FAIRBANKS SCALES



Accurate Weights now even more important



TO GET first hand facts about your farm crop weights you must have a dependable scale. Such a scale tells you whether or not you are feeding your stock for profit.

It tells you exactly what that stock should market. It assures you greatest returns from your produce.

It checks the weights of what you buy—whether it be fertilizer, feed, live stock or seed.

You should have a Fairbanks Scale for Wagon and Stock use. In your neighborhood it will become the local standard by which all other weights are judged.

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Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15. Postage extra. Weight 2 lbs. Send for it today, when you need it you won't have time.
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Only $2 DOWN ONE YEAR TO PAY
$44 Buys the New Butterfly Jr. No. 2½
Light running, easy cleaning, close skimming, durable. Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on
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CONTENTS

California Dairy Council Meets - - 105
Breeding Improved Timothy - - 106
The Dairy Optimist - - - - 106
Weed Seeds in Manure - - - - 107
Dairy Progress in Idaho - - 108
Texas News - - - - - - 108
Wisconsin Jersey Record Broken - - 109
A Co-operative Milk Delivery Plant - 109
Showing Dairy Cattle - - - - 110
Cow Testing Associations - - - 111
To Manufacture Feed - - - - 111
Cost of Making Cheese and the Future of the Dairy Industry - - - - 112
California Items - - - - - 112
Milk Bar at Picnic - - - - 113
Has Another View - - - - 113
The Shedd Jersey Calf Club - - - 114
Another Jersey Breaks World Record - 114
Sawdust Chemically Treated is Tried as a Stock Food - - - - 115
Declining Feed Prices - - - 116
Calves Make Smaller Gains on Skimmilk Fed Cold - - - - - - 118
Bulletins of the Week - - - 118
Get Ready for the Tester - - - 119
Washington, D. C., Weekly News - 120
Storage Butter Contest at 1920 National Dairy Show - - - - - - 120
New York Dairy News - - - - 121
Silage Investigations - - - - 121
A Correction - - - - - 121
Weed Seeds in Farm Manure - - 122
Has Another View - - - 122
Pessimism vs. Thinking - - 122
Peas for Hay - - - - - 123
Succulence Stimulates Secretion - 123
Winter Rye and Vetch - - - - 123
Feed Values Compared - - - - 123
Threshing Time Fires - - - - 123
Horses in Hot Weather - - - 123
Handling Help on a Big Dairy Farm 123
Demonstration Days in Central Wisconsin 124
New York Butter Market - - - 128
Ayrshires for Export - - - - 128
Cowpox - - - - - - 128
Importance to Junior Poultrymen - 130
Junior Letters - - - - - 131
Substitutes for Teat Plugs - - - 134
Inventions and Appliances of Interest to Agriculture - - - - - - - 134
Wisconsin June Butter Scoring - - 138
Tester Finds Poor Strainers in Use - 138
Veterinary—Blood in Milk—Periods of Heat—Abortion—Blindness - - - 139
Increasing Testing in Indiana - - 139
Fall-sown Oats - - - - 142
Meeting of Middle West State Farm Officers - - - - - - - 136
Indiana Jersey Calf Club Tour - - 136
Boils - - - - - - 137
Prices of Wheat Bran and Middlings - 140
Better Lighting for the Farm Home 140
Dairying Thirty Years Ago - - 141
Wisconsin Short Course - - - - 141

Coming Events

Illinois State Fair, Springfield, Ill., August 20—28. B. M. Davison, Secretary.

Wisconsin State Fair, Milwaukee, Wis., August 30—September 4. O. F. Remey, Sec.

Iowa State Fair and Exposition, Des Moines, Ia., August 25—September 3. A. R. Cory, Secretary.

Ohio State Fair, Columbus, Ohio, August 30—September 4. E. V. Walborn, Secretary.

Minnesota State Fair Minneapolis, Minn., September 4—11. T. H. Canfield, Secretary.

Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.

Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.

Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.

New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.

Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, D. C., August 2—Dr. W. C. Fowler suddenly changed his mind last week, after the National Grange had asked him to either produce his records to show what farmers in the milk producing area supplying Washington were "pouring milk on the ground" or else stand convicted of trying to blacken the reputation and standing of all the farmers and milk producers in this area. Dr. Fowler is health officer of the District of Columbia, holding his office at the will of a District Commission, subject to the congress of the United States, and is an open and avowed opponent of higher prices for milk.

As told in Hoard's Dairyman last week in a first letter to the Grange Dr. Fowler said he "had the evidence" but declined to make known the names because "it would not serve any good purpose." In a second letter, the Grange put the other angle of the problem up to him, and he very promptly issued a statement to the newspapers on the day following the receipt of this letter, backing down completely, and announcing that "further investigation had shown that no farmers had thrown away any milk". He saved his face, however, by alleging that a receiving station had been compelled to throw away some milk, after saving the cream, and making a "small quantity of cheese". This may be true.

⚜

Today's Washington papers report a "complaint" filed with the federal officials here, asking for a grand jury investigation of a Maryland—Virginia Milk Trust. The newspaper story sets forth that a gigantic conspiracy is being entered into whereby the milk producers are being involved in a conspiracy in restraint of trade, to hold up the whole consuming public here and force great increases in the price of milk. As a piece of demagoguery the newspaper article is a work of art. The facts are that a new contract is being negotiated between the milk producers and the Maryland—Virginia Milk Producers' Association whereby the association becomes the agent, in fact, of the milk producers. This contract is the same as is being carried out in Baltimore and has been in use there for some time with entire satisfaction. The association contract is no secret to anyone, perfectly open and above board. If the appeal of the newspapers has any result, it will be only that the milk producers will be made to suffer the trouble and inconvenience of proving their own case as they have in every other persecution. In this connection one sentence in the Dr. Fowler letter which the Grange has made public is of interest. In answer to a request for information as to the cost of production of milk in this territory he frankly states that his office has no information on this subject.

⚜

Figures are now available showing the foreign trade in dairy products for the past fiscal year. Net imports decreased during this period, the equivalent of three-quarters of a billion pounds of milk, according to the chart which has been prepared showing all the details, by C. W. Larson, dairy specialist and acting chief of the Dairy Division of the Department of Agriculture. Butter and cheese are now on a net import basis.

⚜

The I. C. C. decision on increased freight and other rates has been widely published and needs no comment here. It will be noted that the valuation which the railroad executives asked to have made the basis of their claims was slashed seriously by the commission. The Farm Bureau Federation attorney, who summed the case up for agricultural interests, asked that this be fixed at a figure not over seventeen billion dollars. The I. C. C. used eighteen billion as their basis. The original claim of the railroads was at least 33 per cent over this figure. Milk rates were given a twenty per cent boost in the I. C. C. decision. This was to be expected, but it means that every milk producers' association has its own fight on hand to keep this rate down, as the I. C. C. decision only established a maximum. It does not of itself warrant a blanket increase to this maximum in every case.



PEARL'S ALPHA, A JERSEY CHAMPION BUTTERFAT PRODUCER OF ARKANSAS

Record: 10,239 lbs. milk, 553.8 lbs. fat at age of 3 years, 8 months.
Left to right: Bradford Knapp, Dean and Director Arkansas College of Agriculture; John C. Futrall, President Arkansas University; H. E. Dvoracheck, Professor of Animal Husbandry and Dairying.

OWNED BY ARKANSAS COLLEGE OF AGRICULTURE

⚜

Somebody is lying about the wheat crop. The result of it is the slump last week. But it is an ill wind which blows no good, and this is proven by the corresponding slump in wheat feeds. Wheat feeds went down by good sized margins during the past few days. To come back to the wheat situation, the same day the Kansas State Board of Agriculture issues a statement estimating the Kansas crop at 147 million bushels, a former grain administration man says it will be a 175 million bushels and all the newspapers quote the big figure. The day the market took its biggest drop, reports reached Washington of a serious outbreak of rust in southern Minnesota and South Dakota. The reports are well verified, but the market sag continues. Once more it is a question of who is lying?

Storage Butter Contest at 1920 National Dairy Show

When Mr. White, in charge of Dairy Manufacturing Investigations, in the Dairy Division at Washington, suggested to the management of the National Dairy Show that a very important butter class could be added to the contests of the show, i. e., a Storage Butter Contest, and gave his reasons, the management very quickly agreed with Mr. White that it would be a very good class to add. As late as April 26th, the classes to cover this storage butter were agreed upon as whole milk and hand separator cream. By the time the announcements were given to the press, and the form prepared to make entry, there was a very limited time before June 12th for the creamery men to make up their minds to enter these contests, but the proof that a great many creamery men agreed with Mr. White that these storage classes would develop a great interest, is demonstrated by the fact that sixteen whole milk entries were made and forty-five hand separator—in all, sixty-one entries of storage butter now in storage awaiting judgment next October, and we believe this will be one of the exciting events for the creamery men at the Show.—National Dairy Show.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Sale Announcements

Aug. 14—Chester White Swine. V. C. Tiedt, Mauston, Wis.
Aug. 17—Holsteins. Fairview Dairy, Pittsburg, Kansas.
Aug. 19—Holsteins. Hooker & Appleton, Manassas, Virginia.
August 25—Brown Swiss. Speedwell Farms, Lyndonville, Vt. William S. Dunn, Sale Mgr., Middleburgh, N. Y.
Sept. 6—Holsteins. Dispersal of F. C. Linton, Jr., Herd of Registered Holsteins at West Chester, Pa.
Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Janesville, Wis., B. T. Green, Manager.
Sept. 10—Holsteins. Westham Dispersal Sale, Richmond, Virginia.
Sept. 13—Holsteins. Dispersal Dr. R. Ivey and Dr. S. P. Scherer herds, Fishers, Indiana.
Sept. 29-30—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Sept. 30—Holsteins. Marathon Co. Second Semi-annual Sale at Wausau. Sale Mgr., R. A. Rietzow, Edgar, Wis.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Holsteins. Dispersal of C. E. Burgess & Sons Herd at Huntington, Ind.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
Nov. 16-17—Holsteins. Second Iowa Breeders' Guaranty Sale at Waterloo, Ia. C. H. Jenness, Sec.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.

New York Dairy News

Holstein Exhibition Herd:—The Holstein herd which is to represent Onondaga County at the state fair in competition for the premiums for county herds, amounting to $850, was selected July 24 by the committee appointed by the executive board of the Onondaga County Holstein Club.

The committee was successful in finding outstanding individuals for its first choice of 20 animals. The animals will be carefully fitted and inspected, and the exhibition herd made up of the best 12.

⚜

Netherland Company Sold?—Arrangements have been made whereby the Netherland Dairy Company will open a milk station at Phoenix, N. Y., according to a recent announcement by officials of the company. It will have a capacity of 200 cans of milk a day. Officials of the company believe the opening of this station will mean a great deal to the milk producers of this section, as the business will amount to $15,000 a month, or $180,000 a year. The opening of this raw milk station will mean a permanent market for raw milk at Dairymen's League prices, with a premium for quality.

It is rumored that the Netherland Dairy Company will soon merge with the Sheffield Farms Company. The Sheffield Company operates a large milk station near Tully.

⚜

New York Leads in Holsteins:—New York State leads the country in the number of pure-bred Holstein cattle it possesses, according to a report just made public by the Holstein-Friesian Association of America. The statistics are based on returns made in the census which the national organization has been carrying on during the past year.

New York State has a total of 83,546 pure-bred Holsteins, more than all the New England States put together. These states have a total of 27,702.

Wisconsin, which was popularly believed to be the biggest Holstein state in the country, has 58,092 head. The report shows that New York leads Minnesota, Illinois, Michigan, and Ohio combined by 219 head. The total of the four states is 83,327.

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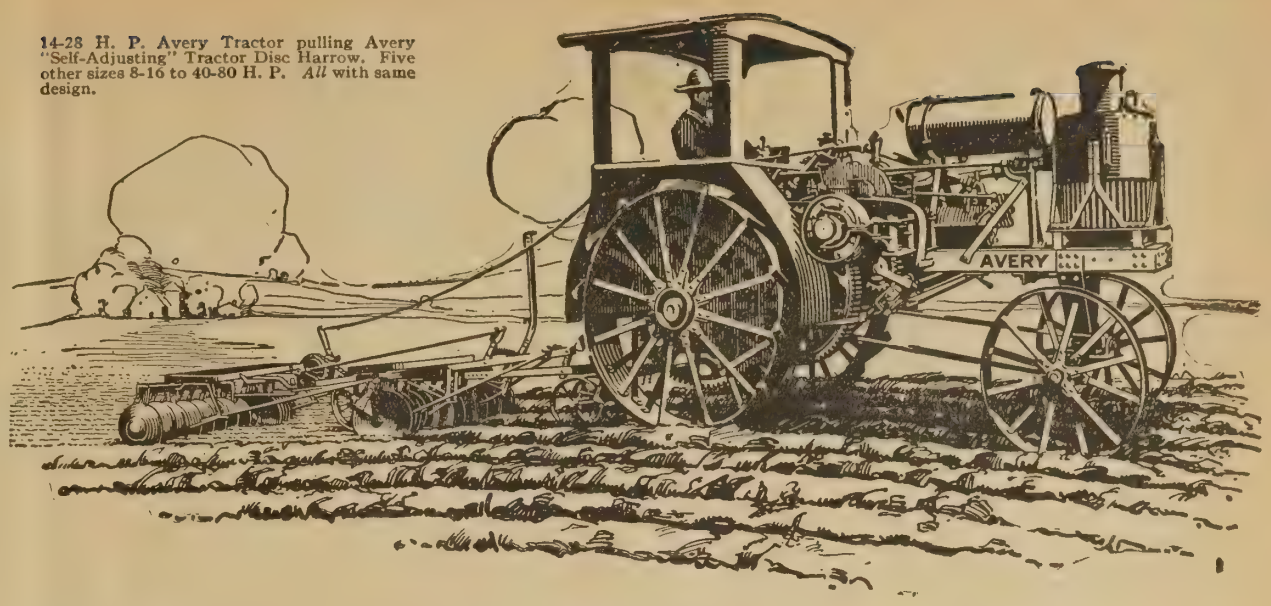
Creameries for Sale:—Much comment is being made on the large number of cheese factories and creameries combined that are being advertised for sale throughout New York State. Some of them have done a large business for over fifty years.

⚜

Imitation Cream:—The state and city authorities' attention has been called to the fact that a fraudulent thing is occurring each day in New York City and Brooklyn, that will prove injurious to the public health as well as the milk industry if allowed to go on. A mixture of skimmilk, butterfat, and vegetable oil is being sold as a substitute for cream. The cans are labeled "Neucream", "Neu-Kream', "Newco", or some similar name. Then the product is sold to so-called "splitters", chiefly, who mix it with skimmilk and a little cream and sell to retailers. After it leaves the "splitters" hands, this sour cream combination is sold as "Pasteurized cream—grade B". Most of it is being sold on the East side and some in Brooklyn. Large quantities are said to be marketed in Connecticut.

To protect themselves, a number of the larger sour cream dealers have organized an association called the Merchants' Pure Cream and Can Protective Association, designed to eradicate the sale of adulterated cream and to insure the return of empty containers. This new association is conducting an educational campaign by placing warning ads in the Jewish papers of the city and are taking energetic steps to stamp out the fraud.

New York. E. M. L. BLANCHER.



14-28 H. P. Avery Tractor pulling Avery "Self-Adjusting" Tractor Disc Harrow. Five other sizes 8-16 to 40-80 H. P. *All* with same design.

Get Your Avery Now When You Need It Most

Fall time is indeed *tractor* time—the time when the advantages of power farming are many—the time when an Avery will mean most to you in getting your work done in the right way. With an Avery *now*, you can get your fall plowing, discing, harrowing, seeding all finished double quick—also have your own power for threshing, silo filling, shelling corn, grinding feed, road work and other power jobs.

You may have said, "Some day I will have an Avery." Why wait till "someday" when having an Avery *right now* would mean so much to you in speeding up your work, getting it done in the right way, and insuring a big next year's crop.

A Size for Any Farm

You can get an Avery in just the right size to fit your needs best. Also "Power-Lift" Moldboard or Disc Plows to fit any size Avery Tractor and "Self-Adjusting" Tractor Disc Harrows and "Power-Lift" Tractor Grain Drills. All these tools are operated from the tractor platform—real *one-man* outfits.

When you get an Avery you put speed and certainty into your farm work. Five sizes of Avery Tractors from the 8-16 to 40-80 H. P. have the low speed, heavy-duty **"Draft-Horse" Motor**—the motor that gives years of service with minimum upkeep cost. Has Renewable Inner Cylinder Walls, Adjustable Crankshaft Boxes, Valves in Head, Centrifugal Gasifiers that burn *all* the kerosene, and many other exclusive features.

The power is delivered through the **"Direct-Drive" Transmission** with only three shafts and straight spur gears between the motor and the drawbar. Belt pulley is mounted *direct* on the crankshaft—you get all the power of the motor in the belt. That's why the Avery is the real puller in the belt and at the drawbar.

Write for Catalog

Get your Avery now when you need its service most in getting a good crop started for next year. See your local Avery dealer or write us for catalog showing complete Avery line of Tractors, Tractor Drawn or Tractor Driven Machinery.


Avery Six-Cylinder Model "C". A small tractor making a big hit. The Avery 5-10 H. P. is similar to this model but smaller.


Avery Motor Cultivator Harvesting—one of the most useful power machines ever built for farm work. One and two row sizes


Avery Separators are the Champion Grain Savers. Hyatt Roller Bearing equipped.

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Branch Houses, Distributors and Service Stations Covering Every State in the Union

AVERY

Motor Farming, Threshing and Road Building Machinery


Avery 40-80 H. P. Special Road Tractor. Built in five sizes—make better roads at less expense.

Silage Investigations

The work of many scattered investigators has shown that almost any plant, preserved as silage, makes palatable good feed. Among the plants which have been thus preserved and have yielded satisfactory ensilage are:—besides corn and sorghum—sunflowers, sweet clover, various grasses, cockle-burs, Canada thistle, bull thistle, Russian thistle, and others. It is practically certain that any plant not too woody will make desirable feed as ensilage. Apart from their fiber content, these plants all show very similar content when analyzed, and some of them which are not palatable as green plants become palatable after fermentation in the silo.

From these facts it becomes evident that the outstanding consideration in a silage plant is the one which will give maximum yield, provided it does not present too great difficulties in preparing for the silo.

Recent investigations by the Office of Forage Crop Investigations have shown that ordinary oil barrels make extremely efficient experimental silos in which silage tests can be made from a relatively small area of land. These experiments have likewise demonstrated that the factor of enormous importance in securing good silage is the exclusion of air as completely as possible. Under such conditions alfalfa made extremely good silage whereas ordinarily—that is, when the air is not fully excluded—it tends to forego putrefactive fermentation and becomes ill-smelling.

During the present season the office is growing a very large variety of plants which produce large tonnage and is putting up silage from each of them.

In the United States, broadly speaking, corn is the principal silage crop throughout the region in which it is grown. In the drier regions it is mainly replaced by sorghum. In the extreme South, along the Gulf coast, Japanese sugar cane and Napier grass are being used extensively. And in the extreme northern states, too cool to obtain large yields of corn, the sunflower is meeting with high favor. For special parts of the country it is very certain that among the plants being experimented with are some which will yield larger tonnage per acre than any of those mentioned.—C. V. PIPER, United States Department of Agriculture.

A Correction

In the illustration appearing on the front page of our issue for July 30, bearing the legend, "Carved Out of the Forest", we inadvertently made the statement that this farm was owned by Murphy Brothers. As a matter of fact, the farm is known as Murphy Farm, and is owned by Frank E. Murphy and his nephew, E. N. Murphy.

EDITORIAL COMMENT



It is estimated that at least 30 per cent of pure-bred bull calves born are sold for veal. This is unfortunate. A certain number of bull calves should be sold for veal but in view of the fact that a large majority of the dairy herds in this country are headed by scrub bulls, it shows that only a few people appreciate improved dairy blood and that the breeder has large opportunities in educating these men to see that there is more profit in keeping a pure-bred bull than a scrub at the head of the herd.

It is very doubtful whether any pure-bred bull calf should be vealed until all of the scrub bulls have been eliminated. In dairy sections, we believe the farm bureau could engage in establishing agencies through which the pure-bred calves could be distributed to dairy farmers owning scrubs. Only a few states in the past year or two have provided ways and means of saving the pure-bred bull calf and eliminating the scrub.

The indifference to the spread of bovine tuberculosis is appalling. It seems that some feel, even with all the demonstrations which have been made, that tuberculosis is not a disease to be dreaded. These men are blind to facts and to their own financial returns. They do not appreciate that the person who keeps tubercular animals is paying the penalty. The United States Department of Agriculture, in its Weekly News Letter, gives an example of how tuberculosis, if uncontrolled, runs its course through a herd of cattle.

A report of a field inspector gives an incident where every animal in a herd of grade Holsteins and Jerseys reacted to the tuberculin test. The herd consisted of 14 cows, 2 calves, and 2 bulls. Upon post-mortem examination, six of the animals showed such extensive lesions that the entire carcass was condemned and destroyed. All other reactors likewise showed lesions. The hogs of this farm were likewise infected.

Last winter the farmer shipped 50 of his cows to market and after 21 had been slaughtered, the remaining number was refused. The loss this man sustained in his cattle and hogs has surely convinced him that the person who permits tuberculosis to run its course, pays a severe penalty. It should not be necessary for every farmer to have this expense before he takes steps to eradicate this disease from his farm.

WEED SEEDS IN FARM MANURE

Elsewhere in this issue we publish an article by Professor A. L. Stone, of the Wisconsin Experiment Station, entitled "Weed Seeds in Farm Manure". There is no question but that many of the weed seeds which cause much work and considerable expense find their way to the fields through manure. The way to destroy these seeds is through placing the manure in large, deep piles and permitting it to stand for eight weeks. In making such piles provision should be made to prevent the loss of fertility.

It is very noticeable that on a majority of our farms little or no attention is paid to saving the fertility in the barnyard or to where the manure is piled. It is not uncommon to find manure close to the barn where the drippings from the eaves fall upon it, and that, together with the rains, will carry away in a short time at least one-half of the plant food in the manure. Not only does the fertility escape through leaching, but by not mixing the horse manure with cow manure. Horse manure piled separately heats to a very high temperature and nitrogen escapes. The ammonia gas which arises is often very biting, both to the eyes and to the nose. When this condition obtains, the farmer may well know that nitrogen is being lost. If horse manure is piled separately, it should be kept moist in order to prevent undue fermentation, or "fire-fanging" as it is termed. Using too much water will create heavy losses, as has been stated. But, as Professor Stone points out, if manure has noxious weed seeds in it, the best way is to place it in piles so that it can ferment and heat, and in this way destroy the germination of the seed.

For years we have advocated hauling the manure direct from the barn to the fields whenever it is possible. It is less work to handle the manure in this way and it conserves a larger amount of the fertility. But if the manure has weed seeds, storing in piles for two months is an effective way of destroying them. The losses, however, which are apt to come by this practice are heavy unless provision is made to prevent leaching and undue fermentation. In many ways it is the choice between two evils, and except where the feed is known to contain noxious weed seeds we would prefer the practice of daily hauling of manure. If the other procedure is adopted, compliance with Professor Stone's suggestion as to proper storage should be followed in order to avoid fertility losses that may be quite as large and as costly as the control of weeds resulting from the unfermented manure.

HAS ANOTHER VIEW

Elsewhere in this issue we publish a communication from Mr. J. S. Abbott, Secretary of the Institute of Independent Margarine Manufacturers, and under the caption, "Has Another View". He takes exception to a statement made in our Washington letter published in the issue of July 16th, page 1517. The statement was: "Mr. Abbott's address before the Interstate Cottonseed Crushers' Association was an appeal for vigorous and concerted action against the butter industry."

Mr. Abbott apparently forgets that in his address he said: "They differ, however, in one fundamental particular from the purpose of that giant organization (Referring to the National Dairy Union,—Eds.), whose product is in competition with margarine. It appears that the chief purpose of that organization is to kill outright the margarine industry, and to kill it, not by clean competition but by methods pursued in the spirit of an attempt to kill it by vicious prohibitory laws, and other tricks of commercial knavery, such as the boycott, false doctrines of economics, and misrepresentation of the facts of nutrition."

He also states that the present law is a prohibitory law and then follows by this statement: "Only a few years ago there was only one pound of margarine to ten pounds of butter consumed in the United States. Today there is consumed one pound of margarine to every two and one-half pounds of butter." An increased consumption of from one pound of margaine to ten pounds of butter to two and one-half pounds of butter to one of margarine, does not make it appear that the present law, which taxes oleomargarine 10c when colored in semblance of yellow butter, as being in any way prohibitory.

Oleomargarine sold in its natural color, which is white, is taxed only one-fourth cent per pound. The ten-cent tax on oleomargarine was placed on colored margarine in order to drive out deception and fraud. The oleomargarine manufacturer desires the privilege of coloring oleomargarine in order that he may sell his products as butter. The tax of 10 cents per pound was levied on colored oleomargarine to prevent counterfeiting. Further, yellow is the trade-mark of butter and we do not believe a so-called substitute is entitled to use this trade-mark.

Mr. C. H. Thom, the first dairy and food commissioner of Wisconsin, epitomized the reason for asking a tax of 10c per pound to be placed upon colored oleomargarine as follows: "No corner of the state is too remote for the presence of fraud. No table so humble; no dining room so grand; no lumber camp so rough that oleomargarine with its mellow name would not walk upon it and into it with a deceitful and brazen smile with the claim that its name is butter."

The motive of the present law was to tax the fraud out of oleomargarine and to force it to sell upon its own merits and in competition with butter. Mr. Abbott speaks of oleomargarine as a competitive product of butter. It is not a competitive product when it sells as butter and this was a common practice in the days before the law was passed, levying a tax of 10 cents a pound on colored oleomargarine and one-fourth cent on uncolored. Where substitution is possible, competition is impossible.

PESSIMISM VS. THINKING

There is an unfortunate amount of complaining about conditions on dairy farms. Too many have fallen in the habit of discontent and chronic carping. By their lamentations they magnify the real and the imagined difficulties confronting dairying. No one can doubt that the situation in many sections could be improved, but fault finding is a poor improver. Disgruntled, purposeless pessimism never raised milk prices or cut down the expenses of production. It's another kind of thinking that gets us over the rough places. If things aren't right with a man he does well to get active in righting them. Leaning back on a milk stool and wailing about prices and conditions doesn't help anyone. Folks love optimism. They thrive on good cheer. It puts them in a mood to do things. Pessimism doesn't.

Every time we hear one of these fellows who says there's no money in cows—that every pound of milk produced nets a loss and the dairy industry is doomed, we want to tell about E. P. Riford.

E. P. Riford lives in Vermont on a typical farm, pretty much on the slant and composed mostly of road-building material. At the best, making a living on it isn't easy sledding. Seven years ago he had a herd of cows, very limited capital, and a fair chance to "get on". Then a calamity befell him. An accident took the fingers off his right hand. He had a family of small children to provide for, a farm adapted to little else than the keeping of cows, and the cows ready for milking, but he couldn't milk them.

He made the best of available help and tackled the job of running the farm. For awhile he milked as many as eleven cows—with his left hand. But he was soon squarely against a choice between two things—buying a milking machine or quitting. He wouldn't quit; he had too much courage and too much faith in dairying for that, so the milking machine was installed.

That was nearly seven years ago. During this time the machine has made it possible for Mr. Riford to milk his herd of 20 to 22 cows alone. He says it is now in as good condition as when he purchased it, that it has never spoiled an udder, and that it has saved the expense of a hired man. He says that to be successful with a mechanical milker requires knowing more about the cows than for hand milking, that the milker must know how to fit the teat cups, be careful to strip clean, and keep the machine in the best of running order. He has found it satisfactory to wash the machine with water containing washing powder and keep the tubes in clean water.

Just when Mr. Riford was making good progress in spite of his first misfortune, another struck him. He had his herd tested for tuberculosis and found twenty-eight head diseased. He tested again in six months and lost seven more. Out of seven calves too young to inoculate at the first test, the six oldest went with the second. Out of his herd which he had spent many years in building, he was left with two cows and a bull calf.

But he didn't give up or even complain of hard luck. He set out at once to get together a new herd. He made the barn less apt to promote the spread of disease by remodeling to provide plenty of light, cement floors, and clean stalls. Now he has a milking herd of 21 cows including two-year-olds producing more than the former herd did as mature cows. His testing association record shows one has made 161 lbs. of fat in four months and in a recent month four were in the forty-pound list.

We talked with Mr. Riford a few weeks ago as he showed us through his barn. He thinks the relation of costs to returns ought to favor the producer a little more, but he doesn't spend much time complaining. He puts his efforts into increasing the efficiency of his own work. As we contemplate the advantages most dairy farmers enjoy as com-

pared to this optimistic Vermonter, we wonder if the story of his difficulties may not make those of others seem small. Every time we hear a man lamenting present day conditions, we want to tell him about E. P. Riford.

Peas for Hay

Will you please advise me as to the proper time to cut my peas as I wish to use them for hay? Also, can they be fed alone or shall I mix them with clover and timothy?

Pembine, Wis. H. G.

Field peas when grown alone for hay are cut when most of the pods are well formed. When seeding in mixtures with grain, the time of cutting is governed to a considerable extent by the maturity of the grain. If the peas are allowed to stand until the pods are fully formed, the grain may be so ripe as to produce a very strawy hay. In the combined crop, it is ordinarily cut when the oats are in the early milk stage and the peas are commencing to pod.

The pea hay may be fed alone just as clover or any other legume hay is fed.

Succulence Stimulates Secretion

HOARD'S DAIRYMAN:—In selecting a ration for dairy cows one of the important considerations is the provision of succulence. Succulent feeds have a very beneficial effect on milking cows and they are essential to profitable milk production. The benefits to be derived from succulent feeds are due to a considerable extent to the fact that they render the ration palatable, have a laxative and cooling effect on the cow's digestive system, and provide a part of the large amount of water required by high producing cows. Good pasture grass is the best succulence for dairy cattle and in the early part of summer it will provide all the succulent feed they require as a rule. In the latter part of summer when the pastures begin to dry up, soiling crops or silage should be used to provide additional succulence. In winter corn silage forms the most economical succulence though it can sometimes be advantageously supplemented with beet pulp or roots.

Many are feeding cows without giving attention to this problem. Some are successful, others not, but none are attaining the success they would achieve if succulent feeds were provided. Crops of a succulent character are easily and cheaply produced and the dairyman must so conduct his operations that a supply of palatable succulent feed is available for his cows throughout the year.

Iowa. A. C. MCCANDLISH.

Winter Rye and Vetch

How many cubic feet to the ton of alsike and red top hay in a small mow, 12 ft. by 22 ft. and 6 ft. deep?

In sowing winter rye and vetch how much of each would you put to the acre?

Roulette, Pa. C. S. W.

It is doubtful whether the hay mentioned will go less than 500 cubic feet to the ton and it is more likely that it will be 550 to 600 cubic feet per ton. Estimates of this character are very difficult to make and it has been our experience that estimates of hay by measure are ordinarily somewhat excessive.

The general recommendations are to sow from 20 to 25 lbs. of hairy vetch to one-half bushel of winter rye. In the state of Oregon, it is recommended to sow 20 lbs. of hairy vetch with not over 10 to 20 lbs. of rye. The basis of this recommendation is that more rye tends to smother out the vetch. This would hold particularly true if it is desired to grow a seed crop from the vetch, but if it is to be used for pasture or for hay, it is quite likely that the previous recommendation will prove quite as satisfactory.

In New York State, they have adopted a system of adding 10 lbs. of hairy vetch to the usual spring seeding of oats, timothy, and clover. The purpose of this is to supply additional value to the oats when cut as hay and also provide a somewhat quicker growing legume crop than the clover itself.

Feed Values Compared

I have to buy feed for my pigs. Shelled corn here is worth $2 per bushel. On that basis what are the following feeds worth per cwt.: Barley, oats, tankage, skimmilk, buttermilk, whey, and middlings.

Camden, Mich. J. A. P.

It is very difficult to place comparable valuations upon a number of feeds. This is true because different feeds fill various needs in the cow's rations. Also the value to a feeder depends upon what he needs, that is, if he is short of protein a high protein feed may be very much more valuable than another feed which is high in carbohydrate value but low in protein.

We have taken the several feeds listed and figured their values on the basis of their total digestible nutrients, that is, the sum of protein and carbohydrates plus the fat multiplied by 2.25. On this basis we figure that when corn is worth $2 per bushel, barley has a value of about $3.25 per hundred pounds, oats $3, tankage $3.40, middlings $3.20, skimmilk $1, buttermilk $1, and whey $.50.

Perhaps tankage is a good illustration of the fact that feeds cannot always be purchased on their total digestible nutrients. If tankage is needed in the feeding of pigs, it is protein which is sought. The high protein content of this feed may give it a valuation out of proportion to that on the basis of its total digestible nutrients.

When we value buttermilk at $1 per hundred pounds, that is, equal to skimmilk, we have in mind the undiluted product from a creamery where care is taken to see that the buttermilk is clean and of uniform quality from day to day.

Threshing Time Fires

The golden grain in stacks represents the year's product of the soil and the season's effort and labor of the farmer, his family, and hired help.

The crops throughout the state are bountiful. Shall they be safeguarded against fire, and saved for their intended use of food and feed for man and beast?

Over $50,000 worth of grain in stacks was destroyed by fires caused by threshing engines last year in Wisconsin. There was a further considerable loss on buildings and straw stacks from this cause.

A few simple, inexpensive precautions will insure the safety of your grain stacks.

Clean up and remove all dry grass, weeds, and other combustible materials from the yard in which grain is to be stacked.

On the principle of not putting "all your eggs in one basket" do not stack all your grain in one place, but have two or more sets of stacks.

Do not stack your grain too near buildings. A fire in the grain stacks may destroy your buildings also, or a chimney spark may set the stacks on fire.

Do not place the stacks within 200 feet from a railway track.

A plowed fire guard, of not less than six furrows, around each set of stacks will protect the stacks against running fires.

Smoking on or around grain or straw stacks should not be permitted.

See that the threshing engine smoke stack is equipped with a good, effective spark arrester.

Every threshing crew should carry along two or more approved chemical fire extinguishers to combat incipient fires.

Farmers should place near each set of stacks some barrels filled with water and a few pails.

The engineer should be required to keep all oily waste in metal receptacles.

Do not hazard the product on which you have spent months of care and labor.—Wisconsin Industrial Commission.

Horses in Hot Weather

The following rules for the care of work horses in hot weather were prepared by the Boston Work-Horse Relief Association:

1. A sponge on top of the head, or even a cloth is good if kept wet. If dry it is worse than nothing.

2. Water your horse as often as possible. So long as a horse is working, water in small quantities will not hurt him. But let him drink only a few swallows if he is going to stand still.

3. When he comes in after work, sponge off the harness marks and sweat, his eyes, his nose and mouth, and the dock. Wash his feet but not his legs.

4. If the thermometer is 75 degrees or higher, wipe him all over with a damp sponge, using vinegar water if possible. Do not wash the horse at night.

5. Saturday night, give a bran mash, lukewarm; add a tablespoon of saltpetre.

6. Watch your horse. If he stops sweating suddenly, or if he breathes short and quick, or if his ears droop, or if he stands with his legs braced sideways, he is in danger of a heat or sun stroke and needs attention at once.

7. If the horse is overcome by heat, get him into the shade, remove harness and bridle, wash out his mouth, sponge him all over, shower his legs, and give him two ounces of aromatic spirits of ammonia, or two ounces of sweet spirits of nitre, in a pint of water; or give him a pint of coffee, warm. Cool his head at once, using cold water, or, if necessary, chopped ice, wrapped in a cloth.

8. If the horse is off his feed, try him with two quarts of oats mixed with bran, and a little water; and add a little salt or sugar. Or give him oat meal gruel or barley water to drink.

9. Clean your horse at night, so that he can rest well, and clean him thoroughly. The salt dandruff drying on his skin makes him uncomfortable, and often produces sores under the harness.

10. Do not fail to water him at night after he has eaten his hay. If you don't he will be thirsty all night.

11. If it is so hot that the horse sweats in the stable at night, tie him outside, with bedding under him. Unless he cools off during the night, he cannot well stand the next day's heat.

Handling Help on a Big Dairy Farm

An Interview by Mr. Crooker with the Manager

"The thing about our method of handling help which makes it different from that followed on many big dairy farms is that when our men are through work they are done. This statement, probably, needs amplification in order to bring out the point which it seeks to emphasize. On the average farm the work is never done. After a day in the field there are usually enough 'chores' and 'odds and ends' to look after to keep everyone going until sheer weariness compels them to tumble into bed. No wonder farm help has drifted to the cities where a regular time schedule prevails in the trades. When such conditions prevail on a farm similar to ours it is due, I think, almost entirely to a lack of systematic plan." Thus spoke the manager of a large dairy farm in northern Illinois.

"We divide our help, as is usually done on big farms of this kind, into two classes," he went on. "There are field men and barn men. Our inflexible rule, however, is that the barn men shall never work in the field and the field men shall never work in the barn. Occasionally, of course, we are obliged to shift a man from one class to the other, but it is understood that if a barn man should go on field work he is to keep a field man's hours and busy himself solely with field men's tasks. The rule works both ways. The barn men get up at four o'clock; the field men sleep until five. The former begin work a bit earlier, you see, but they are apt to have a longer breathing spell at noon. Between the morning and evening periods of barn work they expect to do light work of various kinds about the place such as mowing lawns in summer, repair jobs, and so on. They are never sent to the field, however, 'to help out' between their regular duties. Some seasons it is difficult to find enough to keep them more than partially busy through the middle of the day. But they get up earlier, you see. It all averages up.

"Another thing we insist on is that work shall be finished promptly by half past five o'clock. The field men usually get in a little before this time. When they have put away their teams it is 'quitting time' and their day's work is done. The barn men start milking sufficiently early so that 5:30 o'clock sees everything out of the way. They, too, are then done for the day. Every man's time after he is done is his own until next morning. Not long ago there were five of my men who had 'flivers' or other cars in the farm garage. Their evenings were enjoyed as freely as though they had been mechanics who laid down their tools at the sound of the whistle.

"In regard to time off, it is our custom to give men one full day a month—more at seasons when we can spare them. Sometimes a man gets a full week if farm work is slack. This last year I have been promising men who stay through the season a bonus of $5 for each month they remain with us. This bonus is forfeited, of course, if men leave before the season's work is finished. Now and then, in the case of especially faithful or capable workers, I have surprised them by doubling this amount when I came to pay them. I find it pays to be generous and square with the men, provided one holds a firm hand. And I find it true, also, that they will enter into the spirit of the work with more zest if they know they have regular duties and regular hours."



Demonstration Days in Central Wisconsin

An attendance of over two thousand people coming from half a dozen counties in Central Wisconsin represents the high-water mark for Farmers' Week at the Marshfield Experiment Station. The session started July 27 and closed July 29. The first day was given over to Taylor and Clark Counties, the second to Wood, and the third to Marathon. Mr. R. A. Kolb and H. Knipfel had in charge the delegations from Clark and Taylor; R. A. Peterson, Wood; and Frank Swoboda, Marathon County. A dozen or more speakers, experts in their line, took part in the program. The meetings were opened by Mr. F. L. Musbach, in charge of the station, who welcomed the visitors and extended to them every facility to get information and assistance. He referred to the increasing interest on the part of the farmers in the work the station is doing. Eight years ago a one-day session with about 75 in attendance to a three-day course with 2,000 people, some of them coming from distances of 75 to 80 miles, gives some idea of the interest manifested and the co-operation existing between the farmers and the local station. It is only through such effort and interest that the station can be of greatest service to the farming community of Central Wisconsin.

The station now embraces a tract of 180 acres, three-fourths of which is under cultivation. The greater part of this is yet in demonstration tracts. As funds permit, more land will be devoted to experimental work in taking up new problems in soil management and grain testing work that are now pressing for attention.

Mrs. Nellie Kedzie Jones assisted by Miss Brady and Miss Maloche had charge of the women's program. Mrs. Jones in her talks urged the better care and feeding of the children in the farm home. She stated that a quarter of a million of boys and girls under two years of age died the past years because the mothers were not informed as to the best food and care for the little ones. The home demonstration agent, she emphasized, is one of the means of bringing information into the homes that will assist the mothers in the better selection of foods and care of children.

Miss Maloche and Miss Brady demonstrated in a practical way the use of modern appliances, the making over of garments, and household accounts.

Editor Glover of Hoard's Dairyman who is president of the State Dairy Council, emphasized the value of milk as human food. The growing child he said should have at least a quart of milk and the adult a pint a day for health's sake. A properly nourished body is much more disease-resistant than one under-nourished. Only one child out of six going to the country schools receives milk to drink.

He urged the support of the Wisconsin Dairy Council, an organization whose prime purpose is to tell the people of this state and others the value of our milk product, stating that in comparison with the prices of other foodstuffs milk is considered a very economical food.

Edward Nordman, farmer for 37 years and now director of the Division of Markets, spoke briefly of the relation of the farmer to the experiment station and also of the newly created Division of Markets. He urged the farmers to bring their problems to the experiment station for assistance in their solution. One of the important problems confronting the farmer in Central Wisconsin is how to get clover back into the soil.

"The Division of Markets," stated Mr. Nordman, "is interested in shortening the route from the producer to the consumer. This doesn't mean cutting out the middleman entirely, but making it as easy as possible to deliver the products of the farmer to the city consumer." The marketing division also aims to help the farmers in forming co-operative organizations in order to help to get better prices for the farmers' products.

Mr. F. B. Morrison discussed at length the cheaper production of pork. Four trial lots are maintained at the station in which various pastures including oats, peas, rape, and clover are being tried out. The results of this line of work will soon be published in pamphlet form.

The important part of the program in the afternoon for the farmers was given over to the inspection of crops. Mr. E. J. Delwiche, agronomist for the station, gave the results of his work in the tests he has been pursuing in the growing of grains. In oats the 5 best yielders include the Wisconsin Pedigree Nos. 1, 4, 5, 7, and the variety known as Lincoln oats. These average between 50 to 55 bushels per acre for the past five years. Winter wheat has been found a more dependable crop than spring wheat on the Colby silt loam. Pedigree No. 2 and Bascsa No. 408 average for the past three years from 26 to 30 bushels per acre. Winter rye is also a crop recommended for Central Wisconsin. Failures are practically unknown. Pedigree No. 1 and No. 1219 are two of the best varieties tested out.

Much of the Colby silt loam requires not only surface drainage but also under-drainage in order to get the maximum yields. The results of tiling were explained by Mr. L. F. Musbach and the improvement of the yield in crops due to under-drainage shown. The studies thus far show that this type of soil may be drained but that the lines of tile must be nearer than four rods apart in order to get the best results. Another set of plots is devoted to plowing at various depths and the use of a subsoiler and deep tiller. During the past seven years little if any benefits have been derived from deep tillage methods. All things considered, plowing to a depth of 6 to 6½ inches is the practice recommended.

The detrimental effect of acid soils is becoming more noticeable the longer the land is under crop. The effect of liming has been found not only beneficial in getting better stands of clover but also in improving the yields of other crops in the rotation.

Phosphate fertilizers are showing good results in not only increasing the yields but also in hastening the maturity of the corn crop.

The young folks program was in charge of E. Cooper, E. Stokdyk, and J. Taylor. The program included the visiting of the experimental plots viewing the different varieties of grains grown and the effects of different soil treatments. Games and sports concluded the program for the young folks.

It is very encouraging to the men and women who are devoting their time to this type of instruction to see the great interest displayed by the visitors in the very strenuous program arranged for them. No longer can the meetings be called "Farmers' Picnics" for there is only time for a hurried lunch and greeting of friends. They are now truly demonstration days.

Wisconsin. SUBSCRIBER.

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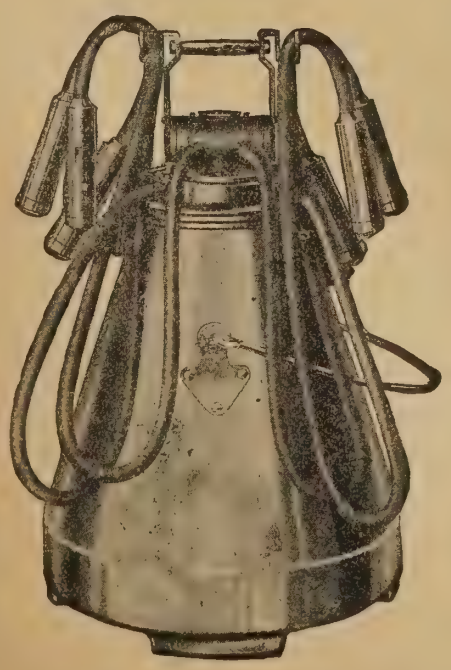
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Kill All Flies! THEY SPREAD DISEASE

Placed anywhere, DAISY FLY KILLER attracts and kills all flies. Neat, clean, ornamental, convenient and cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed.

DAISY FLY KILLER at your dealer or 5 by EXPRESS, prepaid, $1.25.
HAROLD SOMERS, 150 De Kalb Ave., Brooklyn, N. Y.



Treat All Seeds

Take no chances. Smut is a common disease which usually decreases the yield of grain as much as 20%. *Formaldehyde* is endorsed by the U. S. Department of Agriculture as the standard treatment of seed grain, to prevent smuts, fungus growth, potato scab and black-leg.

FORMALDEHYDE
The Farmer's Friend

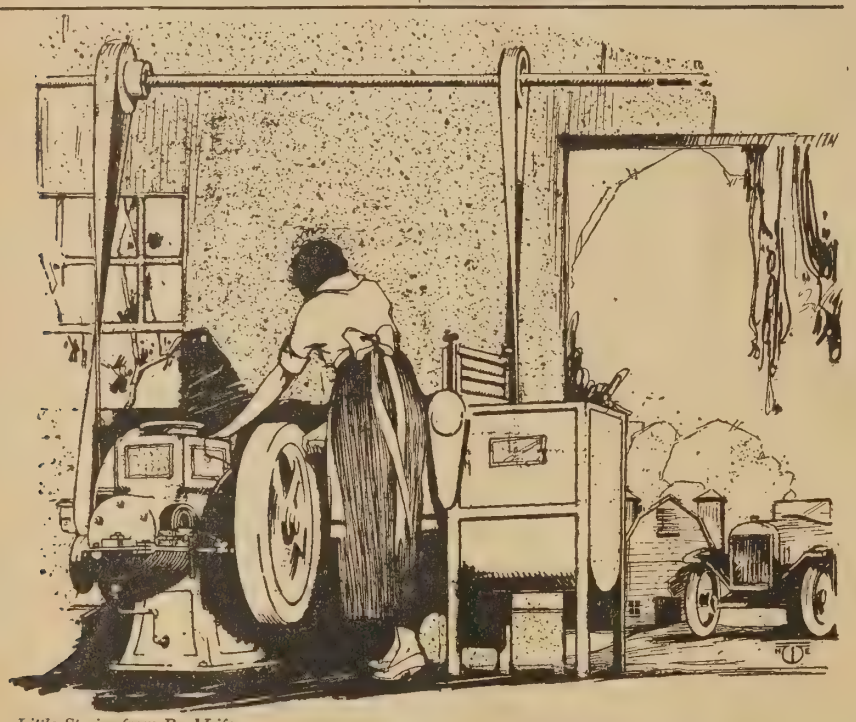
Insures a full yield because it destroys all forms of smuts and checks all plant diseases known to affect grain crops. Can be used also on the soil. One pint bottle of *Formaldehyde*—from the Laboratories of the Perth Amboy Chemical Works—treats 40 bushels of seed. New hand-book just issued free.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK

Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.



Little Stories from Real Life

Ladies Like Webster-Equipped Engines

Elton S. Jones, Riverton, Conn., testifies:

"We have given the WEBSTER Magneto a thorough trial and find that the engine develops more power than it ever did before. Since installing it, the lady who owns the engine

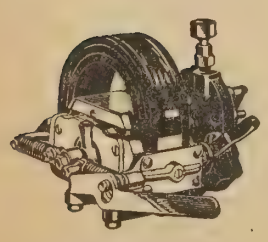
Starts It Herself

which she could not do before." Strong testimony!

Years of testing under all conditions have proved that the

WEBSTER MAGNETO

is more effective, simpler, easier to start and operate, has less carbon trouble, is less likely to get out of order than any other.



45 WEBSTER Service Stations

More than 600,000

WEBSTER Magnetos are now in use. 85% of the manufacturers using make-and-break ignition equip their engines with WEBSTER Magnetos.

There is no Substitute for WEBSTER Ignition
Insist on WEBSTER Equipment when you buy your next engine.

WEBSTER ELECTRIC COMPANY
RACINE WISCONSIN U.S.A

California Dairy Council Meets

(Continued from first page.)

consumption of milk, and the figures revealed the startling fact that in every age, without exception, the milk-using children were taller and weighed more than the non-milk-using children. It was also found that the milk-using children made more rapid progress in their studies. In every grade the milk-using children were slightly younger than the non-milk-using children. The milk-using children gained on the average 2.28 years on the non-milk-using children, from the kindergarten to the eighth grade. Dr. Beach stated further that practically all of the winners of the school athletic contests received milk regularly in their diet. He stated it was his experience that the boys and girls who showed lack of inclination to engage in the more strenuous games, such as base ball, basket ball, tennis, etc., admitted under questioning that they did not receive milk.

Dr. Beach accompanied his talk with illustrative picture slides. His address was very impressive, and he pleaded for a more active interest on the part of the dairying industry in the work of educating people throughout the entire country on the importance of a more liberal use of milk, butter, cheese, and ice cream, for their own health and the welfare of their children.

Dr. Ethel M. Watters, Director Bureau of Child Hygiene, State Board of Health, told the audience the place of milk in the diet of childhood. She explained the work of the Bureau in a graphic and entertaining manner. Her hearers were surprised to learn that representatives of the Bureau who go into rural districts spreading the gospel of hygiene and nutrition find a large proportion of undernourished young children and a pitiful lack of knowledge of the food value of dairy products on the part of producers.

In the discussion of her topic Dr. Watters revealed most clearly the necessity for the existence of some organization or group of people that will persistently carry on a campaign of educational publicity concerning the nutrition value of milk and other dairy products. The uniform ignorance on the part of mothers, disclosed by Dr. Watters, is almost unbelievable. She praised the work of the California Dairy Council and urged that it be given wider and more liberal support in order that its usefulness may be rapidly extended.

The Dairyman's Big Opportunity

The second day's program was given at the county fair grounds. It opened with a practical and convincing paper on feeding dairy cows for profit by Professor Edwin C. Voorhies, assistant to Dean Hunt of the College of Agriculture. Professor Voorhies began by saying that he would not make a technical or scientific address, but would endeavor to give a practical talk on feeding. The applause at the close gave evidence that the large audience heartily appreciated his effort. Professor Voorhies took up the practice of feeding straight alfalfa and showed in a practical way how the production of cows could be increased by reducing the amount of alfalfa, and feeding silage, concentrates, and roots, according to relative costs and local conditions.

One of the most educational and interesting features of the entire program was the address of Professor H. E. Van Norman, Dean and Vice-president of University Farm School, Davis. Dean Van Norman began his talk with a forceful presentation of the opportunity with which the dairymen of the country are confronted in the discoveries of science of the vital part which dairy products play in the health and welfare of the nation. He asserted that no industry has right at its elbow such marvelous material as the dairying industry, and predicted that there would be such a demand for dairy products within the next few years as would strain the resources of the industry provided those who are engaged in it will seize the opportunity at hand and educate the consuming public to realize the truths that science has discovered.

After driving home this point he turned to the magnificent dairy cows which had been brought in and gave the finest demonstration of cow judging that was ever offered in Kings County. His audience followed his every word and description. It is to be hoped that more talks of this kind will be given to the dairymen throughout the state.

Dr. J. P. Iverson delivered a helpful and instructive paper on the best methods for the eradication of tuberculosis in dairy cows. His address was followed very closely and brought immediate fruit in the decision of the Dairymen's Department of Kings County Farm Bureau to at once commence a campaign for the eradication of this disease from the herds of the county.

For the benefit of the large number of Portuguese people, the entire program was summed in an address by Mr. J. P. Mendonza in the Portuguese language. Mr. Mendonza aroused great enthusiasm and obtained a vociferous endorsement of the work of California Dairy Council and a pledge that the Portuguese dairymen would support it in all its efforts.

The barbecue proved to be a big attraction and a great success. Fifteen hundred people were served in an hour and a half without a hitch. Milk, buttermilk, and ice cream were provided in generous quantities by the creameries and dairies of Hanford and vicinity. Costa's Boys' Band discoursed lively music during the barbecue and between numbers on the program.

Calves Auctioned

One of the most interesting features of the day was the auction sale of three pure-bred dairy calves that had been presented to the Council. C. M. Blowers Company presented a four-week-old great grandson of Tilly Alcartra. The bidding was spirited and the calf was finally purchased by two of the directors of the council for a high school boys' calf club in Sonoma County. A. B. Comfort donated a seven-month-old bull of the famous King Riverside Mead strain, and Sperry Flour Company bid him in at $250. The purchaser retained possession of the calf just long enough to name him "Suremilk" and turned him back to the auctioneer for re-sale. He was knocked down for the second time to Shore Acres Dairy, San Leandro, at $350. During the second sale H. E. Vogel of Fresno offered the successful bidder a three-week-old calf free. Sperry Flour Company added a ton of Suremilk and A. J. Quist, Caruthers, a ton of alfalfa hay, baled. Mr. Wesley G. Clark gave a three-week-old calf of equally good breeding. This animal brought $160, and also went to the Sonoma County Boys' Calf Club.

"A single glowing cigarette stub," says Secretary Meredith, "may cost the government thousands of dollars for fire fighting, to say nothing of the value of the timber destroyed, the desolation of scenic beauty, and the harm done to water flows."

Rotate the sheep pasture in the summer; don't allow lambs to run on old pasture; put them on green forage if you have it and new pasture is not available.



From actual photograph, taken in The Edison Shop, Fifth Avenue, New York City. Standing next to the New Edison, Mr. Albert Spalding, America's greatest violinist. Behind the screen, Mr. Cecil Burleigh, the eminent American composer; Mr. Berton Braley, the poet and song-writer, and Mr. Henry Hadley, who wrote the opera, "Cleopatra's Night."

Do You Know Any Violins?

YOU quickly recognize a friend by his voice. Just as quickly a musician recognizes the voice of a violin he knows.

Every good violin has a tone-quality that makes it different from every other violin. The fundamental violin tone is given an individuality by minute differences in the over-tones.

This tone individuality is inherent in the instrument itself; it is independent of the player; it gives each fine violin something that in human beings we call "personality."

RE-CREATION of Tone Characteristics

The New Edison's success in RE-CREATING these over-tones prompted the interesting test, pictured above.

We wanted to know if, to the super-critical ears of experts, the New Edison RE-CREATED, not only the fundamental violin tone and the artist's execution, but also the individual tone characteristics of a violin, so fully and absolutely, that those who knew the instrument would immediately recognize its voice by its RE-CREATION.

Test Against a Guarnerius

The test was made in the Recital Hall of The Edison Shop, Fifth Avenue, New York, just before Mr. Spalding sailed for his tour of Europe and South America. Spalding played his Guarnerius in direct comparison with one of his New Edison RE-CREATIONS.

This Guarnerius is a rare, old, highly treasured violin, noted for its brilliant, joyous, singing tone. Experts have valued it in five figures.

How the Test Was Made

Behind a screen were Henry Hadley, whose opera, "Cleopatra's Night", was performed last season at the Metropolitan; Cecil Burleigh, one of the best of American composers, and Berton Braley, who has written many song lyrics. They could not see either Spalding or the New Edison. Their judgment was formed from the only positive musical evidence—sound.

Mr. Spalding stood beside the New Edison and played a selection. Suddenly he lifted his bow. The New Edison took up his performance and continued it alone. Thus they alternated, Mr. Spalding and the New Edison.

The test ended. The experts of the jury were asked two questions: First, if they could detect any difference between Spalding's technique and its RE-CREATION. Second, if they could note any difference between the tone-quality of his Guarnerius and its RE-CREATION.

Decision of the Jury

Unanimously, they declared that they could not. The New Edison, they agreed, RE-CREATED absolutely, not only the individuality of Spalding's art, but also every tone-quality of his wonderful Guarnerius. The New Edison gives *everything* that Spalding gives with his great Guarnerius.

Mr. Edison has spent more than three million dollars in perfecting the New Edison to a point where it will RE-CREATE even the subtle tone-qualities that distinguish one violin from another. After a thorough investigation, we believe that the New Edison is the only instrument capable of sustaining this test.

The "Two-Violin" Test

Your local dealer will gladly give you the interesting "Two-Violin" Test described on this page. It will enable you to determine the New Edison's Realism for yourself. Ask for it. Thomas A. Edison, Inc., Orange, N. J.

A Test You Can Make

The "Two-Violin" Test

Albert Spalding, with his brilliant, joyous, singing Guarnerius, has made a RE-CREATION of an "Ave Maria" for the New Edison. Carl Flesch, Europe's greatest violinist, has also made a RE-CREATION of an "Ave Maria" for the New Edison. His violin is a Stradivarius, rich, profound and mellow in tone.

Go to your Edison dealer and let him play these two "Ave Maria" RE-CREATIONS for you. Ask for the "Two-Violin" Test. Contrast the tone of the RE-CREATED Guarnerius against the tone of the RE-CREATED Stradivarius. See whether the New Edison brings out the subtle distinctions between them. Get acquainted with these two famous violins.



The NEW EDISON

"The Phonograph with a Soul"

POSITIONS WANTED

Married man, no children, wants position as herdsman. State wages. FRED ROSE, 1808 Adams St., Toledo, Ohio.

Position wanted by married man on stock or dairy farm, north preferred, college training, practical farmer and dairyman. Open for position Jan. 1st. Address BOX 305, care Hoard's Dairyman.

Manager, 36 years old, graduate agricultural college, thoroughly experienced in general farming, stock raising, A. R. O. work, soil development, drainage, building construction, handling of men, wants position. No proposition too large. Write BOX 302, care Hoard's Dairyman. 4-3

Here is farm help. Have you a winter string of cows to let on percentage basis or would you hire? Look me up. Address BOX 303, care Hoard's Dairyman.

Position wanted on farm. Dry hand milker. Prefer place where could become part owner in near future, but will hire by month. Married, no children. State wages first letter. H. F. HARRIS, R. 2, Long Lane, Mo.

Expert herdsman, married, desires position October 1. Cornell training, 12 years' experience. Address BOX 313, care Hoard's Dairyman.

Position wanted—By practical dairyman and farmer with family. No small children. Can handle farm and dairy without other help. Am in position to change at once. Best of reference. Address BOX 103, Granger, Iowa.

Would like to hear from S. B. C., Ohio, regarding a position that is open on this farm. MERRYGLADE FARM, Somerset, Pa.

County agent with years of farm experience desires farm management position in Eastern United States by the first of the year. Address BOX 310, care Hoard's Dairyman.

Wanted by graduate veterinarian. Position on good stock farm to look after health and general welfare of animals. Also look after advertising and sales end. Address BOX 309, care Hoard's Dairyman.

Wanted—Position on modern dairy farm. Am experienced in feeding, the production of certified milk, Babcock testing, pasteurizing, mechanical milkers and mechanical refrigeration. Single, age 32. Prefer Eastern states. E. KNOLLIN, Kennett Square, Chester County, Pa.

Wanted Position—As working manager or herdsman. A-1 farmer, dairyman, feeding for short or long time tests. Expert calfman. Run all farm machinery, keep same in repair, 30 years, married. Address BOX 315, care Hoard's Dairyman.

(Continued on page 133)

New York Butter Market

NEW YORK CITY, August 3—The foreign butter which was received during the winter and early spring months invariably reached this market at an opportune time. Had it not been for the arrival of four million pounds of Danish butter at the time of the railroad strike in April, there would have been a marked shortage in the butter supply at that time, and prices would undoubtedly have gone even higher than they did. However, the same can not be said of the last large imports of butter which arrived here about two weeks ago. The result of the arrival of that butter is an almost panicky market. Receivers are extremely nervous and there is very good reason for them being in a pessimistic frame of mind. To begin, the Danish and Holland butter is not being absorbed readily, as it is estimated that fully 50 per cent of it remains as yet unsold. Holders of it are attempting to force sales, as it is tying up large sums of money. To do so they are willing to shade prices to a considerable degree. To add to the unsettled condition, domestic production shows very little seasonal decrease. Receipts of butter in this market ran about 9000 packages higher during the past week than for the same week last year. Because of the uniformly cool weather throughout the butter producing sections, the fly nuisance is not so bad as usual at this time of the year and pastures are holding up remarkably well. There is a feeling that there will be an unprecedented butter production in this country during the coming months.

The tightness of money is also a factor that is injuring the butter market. Always at times of over supply, especially at this time of the year, receivers place large quantities of their accumulated butter in storage warehouses and depend on their banks to help them finance their holdings. While many receivers have been forced to put some of their butter in storages, they are finding it difficult to do so because of their inability to get money to finance them. Practically all banks are asking 8 per cent on money loaned on storage holdings. That condition makes receivers very careful, in view of the fact that with a large fall production certain, there is a possibility that butter prices may be lower during the fall months than at the present time. For that reason, dealers are urgent sellers and continue to shade prices. On the other hand, buyers have things their own way and are purchasing very sparingly. The present outlook is far from satisfactory and receivers are operating very carefully. It is very probable that butter prices will be at a lower level during the coming year than they have been for some time.

With conditions as they are at present the price trend could not be otherwise than downward. There is absolutely nothing to bouy the market up. If it were apparent that production would decrease there would be a possibility that the market might recover somewhat. However, as it is, while price declines are small from day to day, the price of butter is gradually going down. The total decline since Monday of the past week has been 1¾@2c. On Monday of last week, the quotation on extras was 56c. On Tuesday, there was a decline of ½@¾c. That was followed by a further decline of ¼@½c on Wednesday. On Thursday, the market recovered to a slight degree as some unexpected speculative buying materialized. That continued on Friday and the price advanced ½c although it was generally felt that the increase in price was unjustified. On Saturday, the quotation was ½c lower, but there was no change on Monday, although the market was very weak. Today, however, there was a decline of ¾@1c, and the market is very weak. Established quotations at the close today were: Extras (92 score), 54@54¼c; higher scoring than extras (93 score or higher), 54½@55½c; firsts (90—91 score), 52½@53½c; firsts (88—89 score), 51@52c; and seconds (83—87 score), 48@50c.

W. B. LIVERANCE.

Ayrshires for Export

The continuous and persistent demand of foreign countries is resulting in considerable trade. Two new exports are announced. W. H. Druckemiller, Pennsylvania, has shipped to Ponce, Porto Rico, two Ayrshire cows and two Ayrshire bull calves, the purchaser being the well known planter and exporter, Vincente Usera. Capt. A. Henry Higginson, Massachusetts, announces the sale of nine females and one male for shipment to Jorge Baretto of Brazil. The latter exportation includes daughters of such well known sires as Low Milton Iron Duke, Cavalier's Lord Roseberry, Netherhall Keystone, Hobsland Record Piece, and Baron's Best.

J. G. WATSON, Sec.

Cowpox

My cows all have sore teats. There are little warts like sores all over the teat and after a scab forms they break open and a watery-like liquid runs out. It also seems to be catching. After one has it they all get it. It seems to last about 3 weeks, then goes away and after a week or so comes again. Can you advise a remedy for this?

Giese, Minn. F. W.

Isolate affected cows and milk them last, or have them milked by one who does not handle the other cows. The infection is readily carried from cow to cow by the milker's hands. Twice daily immerse affected teats for 5 minutes in hot water containing all the boric acid it will dissolve; then dry gently and apply a little benzoated oxide of zinc ointment. If any sore is obstinate in healing apply strong iodin ointment twice daily. Cleanse, disinfect, and whitewash the stable.

CHICAGO, Aug. 5—Butter—Creamery, extras, 32c; standards 52c; dairy firsts, 46½@50½c; seconds, 43@45½c.

Eggs—Ordinary, 41@42c; firsts, 41½@55½c.

Cheese—Twins, 22½c; Young Americas, 23½c.

MILWAUKEE, Aug. 5—Eggs—Fresh, current receipts, 45@46c; recandled for city trade, 48@50c; checks, 29@30c; dirties, 33@35c.

Butter—Creamery—Tubs, 54@55c; prints, 55c; extra firsts, 52@53c; No. 1 packing stock, 38c; No. 2, 20@30c.

Cheese—Twins, 23@23½c; Daisies, 24@24½c; Longhorns, 25@25½c; Young Americas, 24½@25c; fancy Brick, 27@28c; Limburger, new 1 lb., 31c; Limburger, 2 lbs., 30c.

NEW YORK Aug. 5—Cheese— Firm; state milk, common to specials, 20@28c; skims, common to specials 5@17½c.

Butter—Unsettled; receipts, 7,394 pkgs.; creamery, extras, 53¾@54c; state dairy tubs, 45@53½c; imitation creamery, prints, nominal.

Eggs—Steady; receipts, 14,761 cases; nearby white fancy, 68@70c; nearby mixed fancy, 48@62c; fresh firsts, 47@55c; Pacific coast, 50@70c.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

WANTED
Holstein Females

Young animals with size, type, health, production. Send pedigrees, pictures, prices, weight and some idea of what they can produce at maturity.

Loidolt Bros., Sauk Rapids, Minn.

Bulls—Ready for Service

Sired by a son of former world record cow and out of A. R. O. daughters of Homestead Jr. De Kol 2d.

Their sire is a grandson of King Segis De Kol Korndyke out of Finderne Pontiac Netherland, a world record jr. 2-year-old, 28.26 lbs. butter in 7 days, 10.72 lbs. in 30 days, (31 lbs. at full age on three quarters). These youngsters are priced to sell,—$200 to $500. Write

Wm. Millar, Jr., R. 2, Menominee, Wis.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Shuttlewick Farms

Offer

A two-yr.-old Guernsey Bull

Daphne's Crusader of Shuttlewick

No. 53595

A grandson of Don Diavolo of Linda Vista, No. 23565, who sold for $10,000, the then top price for a Guernsey bull. His fourteen nearest sires are in the Advanced Registry and his ten nearest tested dams averaged 725.12 pounds of butterfat. He traces once to Imp. Golden Secret, four times to Imp. King of the May, three times to Imp. Hayes Rosie and three times to Dolly Bloom. Address **Myron A. Wick, 232 East 131st St., Cleveland, Ohio.**

Exceptional!

Registered Holstein Bull Calves
From 3 to 6 months old
at Farmers Prices'

Apply H. Schuster,
R. R. No. 2, Nashotah, Wis.

BIG CROPS ASSURED IN WESTERN CANADA

Need of Farm Labor Urgently Required for Harvest

Rains of the past week, which have been general throughout all portions of Western Canada, covering **Manitoba, Saskatchewan** and **Alberta,** have placed beyond all manner of doubt the certainty of vast grain crops throughout the entire district.

Reports from all points indicate marvelous and rapid growth. The conditions of a week or so back, which were decidedly less promising and led many to think there might be a partial failure, have disappeared altogether and now there is a wave of optimism circulating throughout the entire country.

In 1915 there were enormous yields reported from all parts, and it would appear now as if in many places the yields of 1915 would be equaled if not beaten.

What might appear to be a drawback is the apparent shortage of farm help. The Province of Manitoba, through its Employment Bureau in Winnipeg, is asking for 10,000 harvest hands and over, offering from $5 to $6 per day. The Province of Saskatchewan is asking for 15,000 extra hands, to take care of the immense harvest that is certain to be reaped in that Province. In Alberta the crop area is somewhat less, the labor conditions somewhat better, and a request is being made for 5,000 extra farm hands.

Interviewing the officials of the different Governments, they are inclined to the opinion that as the crops in Kansas, Nebraska, South Dakota, Illinois and other Central States are harvested, there will be a movement northward that will materially help to take care of the labor situation. With the low railroad rates that may be secured on application to the Employment Office at Winnipeg and at boundary points, or which may be secured through the Canadian Government Offices at Chicago, Ill.; Detroit, Mich.; Milwaukee, Wis.; Kansas City, Mo.; Omaha, Neb.; Des Moines, Iowa; Watertown, S. D.; St. Paul, Minn., and Grand Forks, N. D., will give to those seeking employment the opportunity to reach the harvest fields at a low cost.

HIGH SCHOOL GRADUATES

If you wish to make yourself independent—study Veterinary Science. Write for particulars.

INDIANA VETERINARY COLLEGE
816 E. Market Street Indianapolis, Indiana



Water Should not be Stored in a Tank



Draw water direct from the well or other source of supply at a turn of the faucet. Open the faucet and the pump delivers a steady stream of water *under ample pressure.* Close the faucet and the pump stops. All done by the

WESTCO
Tankless Water System

—the lowest priced, automatic, power water system. Has no storage tank—no tank to leak, freeze, rot, rust, overflow or collapse. No stale, stagnant water. The WESTCO Pump has only one moving part—no belts, no valves, no gears, no oiling.

The WESTCO System can be run off the regular electric light circuit or farm lighting plant. Thousands are in daily, successful operation.

Send today for our bulletin C-4, which tells the story.

WESTERN PUMP COMPANY
DAVENPORT, IA. MOLINE, ILL.
Branch offices and distributors in principal cities

There's a Westco pump for every purpose



THE more miles you ride on Goodrich Tires, the greater your wonder grows that so many more miles of service are still left.

Goodrich Tires

"Best in the Long Run"

FOUNDED 1870

TRADE MARK

The Goodrich Adjustment Basis: Silvertown Cords, 8000 Miles; Fabric Tires, 6000 Miles

...er, Wis.

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Importance to Junior Poultrymen

In the year 1882 a scientific investigator by the name of Koch discovered the deadly germ of tuberculosis, a disease which has taken thousands of lives and has cost the people of the world millions of dollars.

Human tuberculosis is one of the most dreaded diseases. It does its work so slowly and silently, that it gets a good foothold upon the patient before he is aware of it. The best way to combat this disease is by keeping ourselves fit. Plenty of fresh air, outdoor exercise, good wholesome food, and regular bedtime hours will keep you in good condition. We cannot be too careful about all of these things if we want to keep in the best health.

As important as it is for us to know about tuberculosis in people, we should also be informed about this disease as it affects other animals. Since the discovery made by Koch in 1882, tuberculosis has been a problem of constant study, and we now know that the farm stock, cattle, hogs, and poultry may easily contract this disease. Knowledge of this disease is now so extensive and means of detecting it in affected animals are so successful that there seems to be little excuse for the disease in any dairy herd.

The cause of the disease, according to the discovery in 1882, and from the work of others since that time, is a very tiny germ known as the tubercle bacillus. Outside of an animal body these germs cannot develop, but once they gain an entrance they multiply rapidly and cause little knots, nodules, or tubercles to form on various organs. For this reason the disease has always been known as tuberculosis.

Tuberculosis in Poultry

It has long been known that birds of many kinds are subject to tubercular infection. However, it is only within recent times that attention has turned to a study of tuberculosis in poultry in a practical way. It is safe to say that the poultry business has suffered severe losses in the past due to a lack of knowledge of this disease. The bacillus or germ which causes the disease in poultry is smaller than the one to which human beings are subject.

How the Disease Works

Those who have made a study of tuberculosis in poultry will tell you that the disease affects the digestive organs rather than the lungs, which is more frequently the case in man. There are usually no signs of the disease in an infected bird, until it is well along and has secured a firm grip upon the individual. Loss of flesh is probably the first indication, and in badly infected cases two-thirds of the weight may be lost. This perhaps is considered the best external evidence that the disease is present. It should at least arouse our suspicion and cause us to be on the lookout before it becomes too late.

The comb and wattles become very pale in color and sometimes lameness is present. These, of course, are all to be regarded as symptoms of the disease, and it is only after some of the individuals so affected are slaughtered and examined that the disease can be positively diagnosed. The disease usually appears in birds that are at least one year old and over.

Infection and Spread of the Disease

Tuberculosis may be introduced into a flock of healthy fowls by purchasing stock from diseased flocks. Even the eggs from infected hens may carry the germs of the disease. Sometimes the entrails of an infected bird which has been slaughtered for home consumption are thrown into the chicken yard for the others to eat. This might cause the spread of the disease. It has been proven by those who have investigated poultry diseases that the diseased fowls are the real cause for the spread of this disease.

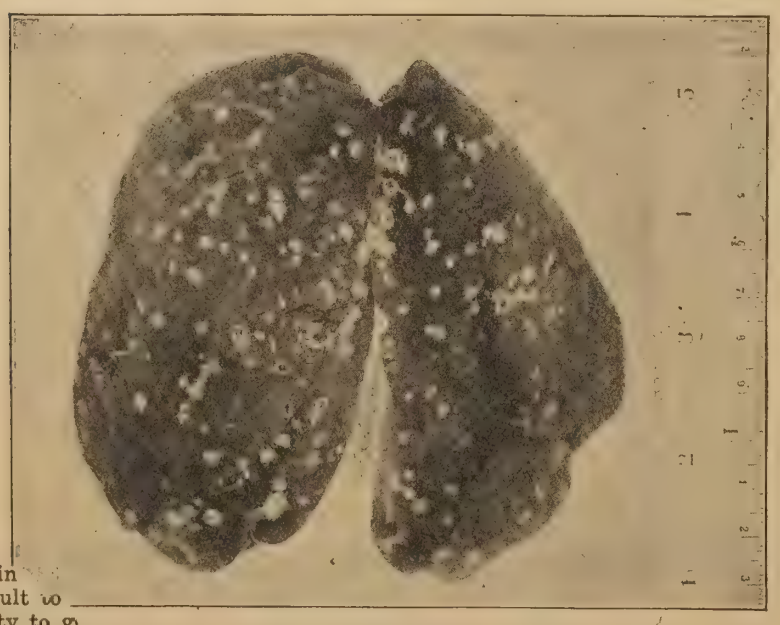
The infected birds throw off the germs with their excreta, thus affording the greatest possible opportunity for contaminating everything about the poultry grounds. Thus the disease may spread rapidly from bird to bird until a large part of the flock has



THE APPEARANCE OF TWO HENS WHICH WERE FOUND TO BE IN ADVANCED STAGES OF TUBERCULOSIS



THIS LARGE INTESTINE IS COVERED WITH TUBERCLES



NOTE THE NUMEROUS TUBERCLES ON THIS LIVER



SWELLING OF THE LEFT WATTLE SHOWS THAT THIS HEN HAD TUBERCULOSIS. THE TUBERCULIN WAS INJECTED INTO THE WATTLE

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

contracted the disease. Evidently, then, the germs enter the body with the food that is eaten.

How to Make Sure That the Disease Exists

Although one may be quite certain that tuberculosis exists in his flock, he can only be positive of it after a post mortem examination has been made over the body of one of the sick birds.

When the liver, spleen, or the intestine, the organs usually affected in fowls, show tubercles then the case appears to be more positive. At first the tubercles are very small, no larger than a pin head, but as the disease advances they get so that they can be plainly seen. This makes the case almost a clean cut one.

But the bacteriologist would not be content with an examination that extended only this far. You ask what else can he do. He would proceed something like this. After removing some of the tubercular tissues, he would make a microscopic examination of their contents. For this work he has to have a very high power microscope, one that magnifies many, many times. If he finds countless numbers of these little tissue destroyers as he will in tubercular birds, then no doubt remains as to the cause of the trouble.

What Can Be Done

When once detected in a flock, the easiest way to get rid of it is to destroy the entire flock. There is no medical treatment known that will cure the disease. Healthy looking birds might be used for food, but only after the internal organs have been carefully examined. The carcasses of the diseased birds should be burned or buried. They should not be thrown out for the hogs to devour, for there are cases where hogs have become infected with the disease peculiar to birds.

It always stands one in hand to keep the poultry premises clean if he wants to avoid diseases. Plenty of sunlight in the poultry house will do a great deal in the way of destroying the germ of tuberculosis. Too many farm poultry houses are constructed upon the basis that sunlight is not necessary to maintain good health in the flock. But quite the contrary is true. You can hardly get too much sunlight in a poultry house.

Before stocking up again after a diseased flock has been disposed of, the inside of the house and all the utensils should be thoroughly washed or saturated with a good strong coal tar disinfectant, followed by a second treatment in the course of a couple of weeks. Every precaution should be taken and nothing left undone which might again be the means of infecting healthy birds.

Junior Letters

Hoard's Dairyman Juniors:—I have not written for a long time and I thought I would write this evening and let you know that I am still a junior.

We are still raising the Brown Swiss cattle. My brother and I sold our grade Swiss heifers and bought two twin Brown Swiss calves. They will be one year old in July. We also own a pig. We own about eight pure-bred Brown Swiss cattle. We are milking about eight cows.

We are going to buy an alfalfa ranch this fall to go with our homestead.

My brother and I did some trapping last winter and caught three mink, a coon, and one skunk. We got $25 for them. I do not think we got enough for them as prices were marked high. We saw a coyote while we were riding to school.

Oregon. Victor O. Freund.

Hoard's Dairyman Juniors:—I bought sixteen eggs and set them and got sixteen little chicks. They are all alive yet. My cow died.

We are going to move this fall.

My father has six cows. We have two horses. We work over a hundred-acre farm.

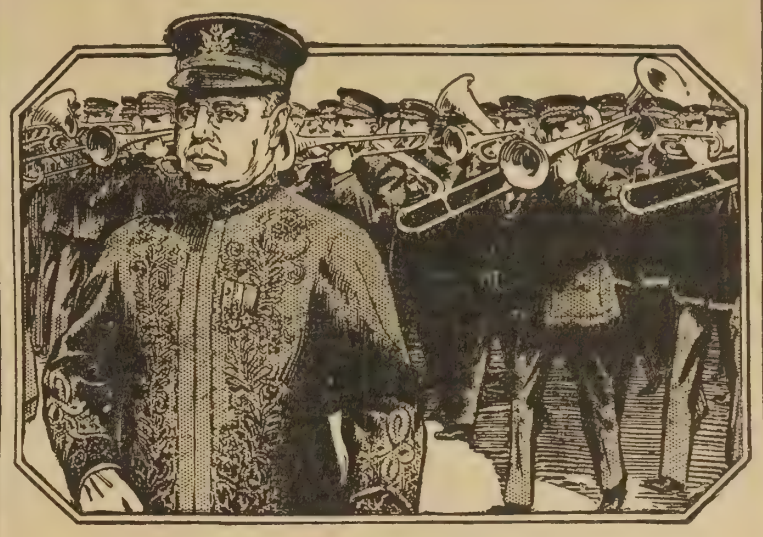
My mother raised 180 chicks.

The 29th of August I will be 11 years old. I am in the 4th grade.

My address is R. R. 3, Waupun, Wis.

Albert E. Johnson.

You can hear Sousa's Band any day when you have a Victrola



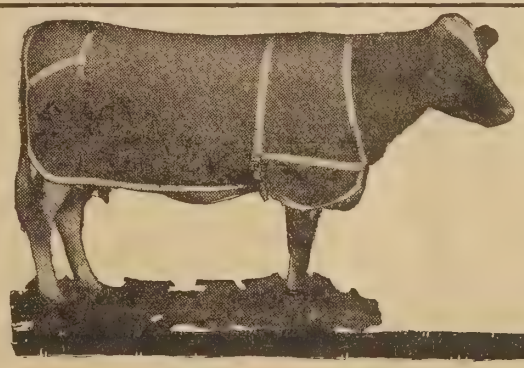
Your home, wherever it may be, is right on the line of march of Sousa's Band—of Pryor's Band, Conway's, Vessella's, U. S. Marine, Garde Republicaine of France, Black Diamonds of London, of the greatest bands of all the world. And every band *plays* as it goes marching by—on the Victrola. Plays the very music you want to hear and gives you the same thrill!

Victrolas $25 to $1500. Write to us for catalogs and name of nearest Victor dealer.

VICTROLA
REG. U. S. PAT. OFF.

Victor Talking Machine Co.
Camden, New Jersey



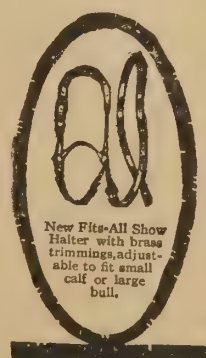


A few of the hundreds of live stock breeders who use Kant-Kom-Off Blankets

Pine Grove Farms, Elma Center, N.Y.
Hollyhock Farm, Dousman, Wis.
Pabst Stock Farm, Oconomowoc, Wis.
F. D. Underwood, Wauwatosa, Wis.
Long View Farm, Lee's Summit, Mo.
Falfurrias Farm, Falfurrias, Texas.
Edgemoor Farm, Santee, Cal.
Santa Fe Dairy Farm, Topeka, Kans.

Prepare Your Herd for Show Time

Fall Fairs and Stock Shows are not far off. Your chances for the prize ribbons will be much greater if you keep your cows' hides clean and silky—free from dirt and moisture with Kant-Kom-Off Cow Blankets. Endorsed and used by large and successful breeders everywhere. They protect the cows against flies and insects and insure a greater yield of milk.



New Fits-All Show Halter with brass trimmings, adjustable to fit small calf or large bull.

"Kant-Kom-Off" COW BLANKET

Mighty good investment; useful all the year 'round. Fastened only in 3 places, yet it cannot become loose or be kicked off. Made of good quality duck, khaki, gray and white colors, plain or fancy web-trimmed border. Adds greatly to appearance of cow, very durable. 90% of America's cattle wear Kant-Kom-Off Cow Blankets. Get yours now—it means more prize ribbons. It will pay you to dress your herd with fancy wool felt Kant-Kom-Off Blankets.

Samples of fancy wool felt for blankets free. Write today for our circular and prices—it will pay you.

R. LAACKE MFG. CO. Dept. 96 Milwaukee, Wis.



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Mo. 19*

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

Holstein and Guernsey pure-bred and grades. Write me. If it is 1, 100, or 1,000 head I can please you. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Holstein and Guernsey springers and fresh cows; also high grade calves either breed, two months old, $35 each. We pay express. CLOVER VALLEY HOLSTEIN FARM, Whitewater, Wis. 21-10

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

20 high grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old. $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

For Sale—60 large Holstein heifers to be fresh September and October, 22 young cows also to freshen September and October, 15 pure-bred Holstein cows and heifers. J. A. KNORR, Blanchardville, Wis. 2-3

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

For Sale—Twelve high grade Holstein cows, some fresh, others to freshen soon. Write WALTER W. MAAS, Route 5, Merrill, Wisconsin. 3-3

High grade Holstein cows and heifers bred to registered sires, due to freshen this fall, in any number desired. J. D. BRINGGOLD & SON, West Concord. Minn. 3-2

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

Cows for Sale—100 head of Holstein springers, to freshen from one week to three months. Will sell singly or in car lots. A. E. LEWIS, Lancaster, Wisconsin. Long distance phone 114R. 3-3

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

Notice—We can furnish a car of nice, straight registered Holsteins. Tuberculin tested and guaranteed against a 60-day retest. A. W. STRONG & SON, Vernon, N. Y. 3-2

For Sale—Ten pure-bred Holstein heifer calves all well marked from one to four months old. Eight sired by a good son of Woodcrest Sir Clyde, other two from good bulls, some from tested dams. For immediate sale of bunch $80.00 apiece. ROBERT I. BACKUS, Heuvelton, New York. 3-2

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

32 registered milking Shorthorn cows; 24 registered Holstein cows and large heifers; 25 high grade Holstein cows, none over 6 years; 28-lb. bulls. Priced to sell on sight. CORNUCOPIA CATTLE CO., Fort Morgan, Colo. 3-2

High grade Holsteins—40 high grade Holstein cows and heifers at prices that are right. PAUL C. SPIEGELBERG, Stratford, Wisconsin. 3-4

STOCK FOR SALE

Three hundred high grade and pure-bred Holsteins of all ages. Write for prices. FRICK & HOESLY, New Glarus, Wis. 2-spl

Holstein bull, ready for service. Dam, 15-lb. two-year-old, 28-lb. sire, $150. Two September bulls $100 each. W. E. RAY, Kewanee, Ill.

5 registered Holstein and 4 registered Guernsey heifers for sale. BURR OAK STOCK FARM, Whitewater, Wis. 4-4

Pure-bred and grade Holsteins, pure-bred Ayrshire cattle for sale, 75 head grade Holstein cows, 3 pure-bred Holstein bulls, 2 pure-bred Ayrshire heifers. Association records on all stock. CEDAR GROVE COW TESTING ASSOCIATION, Cedar Grove, Wis. 4-2

We have for sale 75 head of cows (grade Holsteins) with cow testing association records; also 2 Ayrshire heifers 1½ years old (pure-bred). CEDAR GROVE COW TESTING ASSOCIATION, Cedar Grove, Wis. 4-2

For Sale—Not having any feed for winter must sell my dairy herd of seven registered Holstein cows, also fine herd bull. Prices reasonable. FRANK W. STONE, 1020 Kent St., Kewanee, Ill.

For Sale—10 head choice high grade Holstein heifers to freshen from September first to fifteenth. All my own breeding and raising. These heifers from one of the best herd of cows in Lee County. A. H. BOSWORTH, Dixon, Ill. 4-2

Holsteins—Some choice pure-breds and grades at moderate figures. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wisconsin. 4-2

High grade Holstein heifers due to freshen soon. Dams highest grade with association production records, 30 to 60 lbs. B. F. per month. Bred to pure-bred sire whose dam has a record of 26 lbs. as four-year-old. Prices on request. C. E. PEEBLES, Peebles, Wisconsin.

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

For Sale—Several registered Guernsey bulls 7 to 12 months, grandsons of Imp. Clara's Sequel and Langwater Frenchman. Dams 500 to 752 lbs. fat. See display ad page 143. Sale list. HOMER F. RUNDELL, Livingston, Wisconsin. 2*

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write for photos and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

Guernsey Bulls—New sales list now ready. Exceedingly good values in bulls ready for service of May Rose and Glenwood breeding and priced to sell. Federal Accredited herd. THE GROVE FARM, Deerfield, Ill. 4-2

For Sale—Registered Guernsey bulls from six weeks to 2½ years whose dams are doing well in A. R. Also have grade females, some bred to a son of Pencoyd's Golden May Secret. Satisfaction guaranteed. EWING GUERNSEY FARM, H. R. Burg, Mgr., Wausau, Wis. 4-3

For Sale—A few registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wis. 4-3

For Sale—Registered Guernsey bull coming four. Must sell to avoid inbreeding. Will consider exchange. CHAS. J. ROBINSON, Manteno, Kankakee Co., Illinois.

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Guernsey bull calves for sale. Out Dairymaid's Hero of Fox Valley and A. R. dams, with butterfat up to 622 lbs. ANTON O. BERGE, Valders, Wis. 4-3

I have seven high grade Guernsey cows for sale bred to a grandson of Galaxy Sequel and to freshen in September, October and November. First check for $1,200 takes them. H. M. WALTERS, Dexter, Minn. 4-2

For Sale—Registered large five-month-old show bull calf. Dam, 2-year-old, on test, month May averaged 1½ lbs. fat day. C. A. BALCOM, Ohio, Illinois.

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

STOCK FOR SALE

For Sale—15 head of good dairy cows consisting of 8 head of high grade Guernseys, 7 Jerseys. DR. E. G. L. HARBOUR, Lawrence, Kansas. 3-3

For Sale—Four-year-old herd bull Beauty Eagle Duke of Riverdale 40151. His three nearest dams averaged 582.42 lbs. B. F. A sure breeder. Price $300 F. O. B. H. C. WINSLOW, Hillandale Guernsey Farm, Paeonian Springs, Va. 3-2

High quality grade Guernsey heifers, 4 to 10 months old. B. McADAM, Mosinee, Wis. 3-4

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Ayrshire bulls and heifer calves. Sired by Bloome's Mischief Maker. OAK GROVE FARM, Brookfield, Wis. 4-2

Jerseys—Carload of high grade Jersey cows and heifers. All tuberculin tested. GEO. AUSMAN, Elk Mound, Wis. 4-4

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

STOCK WANTED

Wanted—A load of young dairy cows. B. H. McEACHEN, R. 1, Wayne, Neb.

PONIES

Ponies for Sale—Pony colts ready to be broken at a bargain. ED. NEHLS, Route 2, Juneau, Wis.

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

RABBITS

Rabbits, Pet Stock—Read The Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

FOXES

Wanted—Red Foxes; state age, sex and price. W. C. WILSON, Stephen Girard Bldg., Philadelphia, Pa. 2-6

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

MACHINERY

For Sale—One new De Laval centrifugal milk clarifier No. 111. One new Victor No. 2 combined churn and butter worker. 60-gallon capacity. One Alaska large type copper cooler 2½ feet by 10 feet. Address BIRTCHERD DAIRY, Norfolk, Va. 1-4

For Sale—One Disbrow churn size D 4, working capacity 45 to 200 lbs. In good repair and only run about six months. Reason for selling putting in larger one. First check for $60 takes it. THE WINDSOR CREAMERY, Windsor, Ill. 3-3

Three-unit Hinman Milker complete. Good as new. D. OFFRINGA, Ames, Iowa. 3-3

For Sale—A two-unit Hinman milking machine complete. Used four months. Have two machines, reason for selling. Price $100. O. L. JANNEY, Fairview Stock Farms, Alexandria, Ind. 3-2

Empire Milker—One double unit, super simple pulsator, complete with pump, tank, stall cocks and piping. Nearly new. Price $210. Hinman Milker; 3 units, complete with rods, shafting hangers, bevel gears, etc., for 36 cows. Good condition. Price $110. Perfection Milker; Brand new one double unit outfit complete with No. 1 pump, tank, gauge, and stall cocks for 18 cows. In original crates. Price $230. M. E. JULIUS CO., Stockton, Ill.

For Sale—Liberty milking machine, double unit alternating action, practically new. Price $125. C. L. HULL, R. 1, Whitewater, Wisconsin. 4-2

For Sale—Ronning ensilage harvester outfit complete, brand new in original crate, just received. Farm sold. Will sacrifice 10% to early buyer. Address BOX 306, care Hoard's Dairyman. 4-2

For Sale—One new 2½ H. P. Empire gasoline engine. Price $90 cash. Also one new Fairbanks Morse and Co. type G. No. 1. Feed Mill 8" burr with 5-foot steel sacking elevator. Price $47.50 F. O. B. B. W. WILCOX, Sugar Grove, Pa.

For Sale—18-inch Appleton silo filler used very little and in good running order. Equipped complete with pie and distributor pipe for 40 ft. silo, also two sets of knives. Price $200. A. H. MORSE, Osage, Ia. 4-2

United Milker—2 single units, extra pail. Complete for 16 cows. Brand new and never unpacked. Price $170. M. JULIUS CO., Stockton, Ill.

For Sale—One De Laval milking machine outfit complete. Two units, large size pump. Used 5 months. Going out of business. ERNEST DOEGNES, Connersville, Ind.

LIGHTNING RODS

Lightning rods, exclusive agency and quick sales to live agents selling "Diddie's Universal Rods". Our copper tests 99.96% pure. Write for agency. Prices are right. L. A. DIDDIE CO., Marshfield, Wis. 13-24

FARMS FOR SALE

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red, White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Hardwood cut-over land, silt loam, clay subsoil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4. NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Cortland County good farms for sale. Write GEORGE V. CLARK, 13 North Church St., Cortland, N. Y. 17-13

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

160-acre farm, highly improved, good buildings, complete, $20,000. 70-acre farm adjoining city limits, complete, $16,000. Write for other bargains. WM. ALBRECHT, JR., Wausau, Wis. 25-6

I know of some exceptional farm bargains in New York State, small and large. Fine buildings, spring water, alfalfa land, good roads. Eighty to hundred twenty per acre. Easy terms. These are unusual bargains. Write me. BOX 256, care Hoard's Dairyman. 26*

Fine opportunity for dairyman—640 acres in Leavenworth County, Kansas, 34 miles from Kansas City, Mo., and 5 miles from condensery, lime stone land, fine blue grass and alfalfa; 200 acres under cultivation for silage and feed. Modern dairy barn for 80 cows, 3 silos, 170 acres now in wheat, will make 25 bushels per acre, will be put back into alfalfa. Owner will furnish land and cows for half proceeds, or will sell on payments covering a long period of years. WHITSED LAMING, Tonganoxie, Kansas. 1-4

Maryland Farm for Sale—140 acres, 20 acres timber, 30 acres meadow, balance rich level land, on macadam road, 52 acres wheat, and other crops. 10-room house, 2 sleeping porches, good outbuildings, plenty of fruit, watered by springs, and branches; fine community; 43 thousand feet of lumber and all crops. $10,500 takes all. We have many others; send for our catalogue. CAUGHY, HEARN & CO., 220 E. Lexington St., Baltimore, Md. 1-4

For Sale—Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

Choice dairy farm of 170 acres near Syracuse, New York. $24,000 equipped. M. VOORHEES, Memphis, New York. 2-5

Eighty acres rich clay loam soil, Fond du Lac County. Great corn and alfalfa land. Fully equipped. With or without personal. See with growing crops. No agent's commission. HENRY MICHELS, Fond du Lac, Wisconsin. 2-3

Real Farm Bargains in Wisconsin. Send for new free list. Liberal terms. LOEBHAMMEL REALTY CO., (not Inc.), Medford, Wisconsin. 3-4

Two limestone, alfalfa, dairy farms. One hundred acres, new up-to-date buildings, 70 acres now in alfalfa, on macadam road and trolly. Three hundred fifty acres, four sets improvements, two large dairy barns, nearly two hundred acres alfalfa now growing, might divide into smaller farms. Both near Syracuse. Holstein and alfalfa center of the East. Farmers' half million dollar milk plant just completed. Will sell on reasonable terms and interest rate. Come see most productive soil, highest markets, finest community anywhere. W. A. WITHROW, Route Four, Syracuse, N. Y. 3-2

For Sale—My farm of 120 acres, soil black loam with heavy clay subsoil; good nine-room house with furnace, hip roof barn with fixtures, cement silo and milk house, all other buildings in good condition; good fences, good orchard, house faces south with nice door yard and shade trees. F. F. ROCKWELL, Clinton Junction, Rock County, Wisconsin. 3-2

Choice Farm for Sale—Part of original Gale farm one mile west of Galesville. Fertile black loam, level. New improvements, orchard, and berries. On state highway and truck line. Near school and market. All city deliveries. Ideal for general or truck farming. A beautiful place in the heart of a beautiful country. Will sell crops and personal property. The best buy on the market. CHAS. S. PARKER, Owner, Galesville, Wis. 3-2

Greatest stock and dairy district on earth. You cannot go wrong if you buy your future farm home in Aitkin County, Minnesota. Rapidly becoming America's greatest farming center. Our free information will tell you how to secure one of these farms on a small down payment and easy terms. Write L. B. ARNOLD, Land Agent, 154 Wolvin Bldg., Duluth, Minnesota. 3-4

Join Our South American Colony. Choice land $5.00 per acre. For literature, address BOX 277, Gridley, Calif. 3-4

New York Farm Agency, Westfield, New York, specializes dairy stock farms. Westerners buying fast. Best bargains on earth. 8-spl

Free map and list, land bargains near Twin Cities. BAKER S-76, St. Croix Falls, Wisconsin. 6-spl

$17.00 per acre buys 1,400 acres in northern Michigan on railroad; large clearing; big barn; two houses; some bargain, write today. R. R. FORWARD, Duluth, Minn. 2-spl

Buy Farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and service. Offices throughout the state. Write the CENTRAL OFFICE at Oneida, N. Y., for a brief list and state your requirements. 8-spl

FARMS FOR SALE

240 acres, mostly alfalfa, plenty of water, buildings in good repair, a bargain if taken at once. Possession to suit the buyer. Want to sell direct and save middle man's profit. Do not write, but come, I mean business. R. D. LEE, Cazenovia, N. Y. 3-3

130 acres level, black clay loam, 2½ miles from county seat, gravel road, large 9-room house, 30x60 gambrel and 54x62 gambrel roof barns, granary, tool shed, and all the necessary outbuildings, all buildings painted and in good condition. Good orchard, good fences, well drained, 100 acres under cultivation, 30 acres pasture and timber. This farm is in a high state cultivation and is in every way a No. 1 farm. Price $135 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 16-spl

Best dairy farm in northern Illinois. 200 acres fine level black soil. New barn 36 by 80 holds 36 cows, 8 horses, 100 tons of hay. All modern equipment and milking machine. 40-ft. brick silo, new modern 8-room house and full set of outbuildings. Buildings and equipment are new. One mile to elevator, cement road. 5 miles to Beloit, 12 miles to Rockford. Running water, some fine timber. This farm is worth $225 per acre, $12,000 down, balance long time 5½%. You can pay for this place in 6 years. Entire farm fenced with hog tight woven wire. We are instructed to sell this farm for $185 per acre for quick sale. Owned by nonresident. Don't wait. We guarantee every word of this ad. Write, phone or call. G. W. GILBERT & CO., Main 2256, 216 Mead Bldg., Rockford, Ill.

Dairy farm—150 acres, good buildings. Level land, $150 per acre. Two miles from Casey. Selling 60 gallons milk daily and not supplying the demand. T. N. WRIGHT, Casey, Ill.

Over 100 acres fine land, 17 miles macadam roads to City Hall, Philadelphia. 1½ to large manufacturing town of Amber. Modern cow barn, 48 standing, 4 box stalls. Milk room, feed room, cement floors. Large implement and tool house. Large hollow tile slate roofed house (not finished inside.) Macadam roads each side and through farm. Very moderate rent, desirable tenant. Immediate possession. Rent free for one year. FARM, 2024 N. Tenth St., Philadelphia, Pa. 4-3

For Sale—Alfalfa farm, 112 acres, $6,500. For particulars address owner GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 4-4

Grade-A dairy farm. 141 acres, elegant valley land, good buildings, piped spring water, concrete highway. Close to Cortland City in Central New York's best dairy and produce section. CRANDALL'S AGENCY, Homer, New York. Member New York State Farm Brokers' Association.

New York State Dairy Farms—Fine Delaware county dairy farms, all sizes, all prices, fully stocked with choice dairy cows, fully equipped with farm machinery and other personal property; sold on easy terms; by government reports, the greatest dairy county in the greatest dairy state in the Union. Write for catalogue. THE JOHN O. HILLIS FARM AGENCY, Hobart, Delaware County, New York. 4-4

100 acres—6 miles from town, good roads, good 10-room house, good 50x60 barn, two smaller barns, outbuildings, black clay loam tiled, 76 acres under cultivation, 20 acres saw timber, balance pasture. Without help, must sell. $125 per acre. MICHIGAN FARM AGENCY, Box 928, East Lansing, Mich. 24-spl

Several fine dairy farms in the beautiful Chenango Valley. Can show splendid crops of corn, potatoes, cabbage, wheat and oats. Write JERRY HOLEY, Earlville, N. Y.

For Sale—160 acres 2½ miles from Ashville. House, stables, granaries, etc. $6,500. Write for full particulars. FRED C. STONE, Ashville, Manitoba.

Only $25 per acre 535-acre southern Wisconsin stock farm, good improvements, one mile from town, half cash. M. SULLIVAN, 417 Walnut St., Rockford, Ill.

131 acres, $6,600, with 20 cows, horses, crops, tools. Great dairy center near town, 2 railroad stations, creamery, milk station productive fields, spring-watered pasture, valuable wood, fruit orchard; 10-room house, beautiful maple shade, big basement barn, silo, spring water; owner called away includes horses, cows, machinery, tools, wagons, harness, part of growing crops, all for $6,600 easy terms. Details of this and another equipped farm with growing crops for $3,500, page 31, Strout's Big Illustrated Catalog Farm Bargains, 33 States. Copy free. STROUT FARM AGENCY, 150DL Nassau St., New York City.

Bargain, 71 acres, improved. Choice location. Immediate possession. 40 acres can be put in fall wheat; 240 acres rich bottom land; well improved. 3 miles Ottawa. Write for full descriptions and descriptive booklet. MANSFIELD LAND COMPANY, Ottawa Kansas. 4-2

Just Out—Our new summer and fall land list of a large number of choice Central Wisconsin farm bargains, showing photographs of these farms. Also free map. Write today for this list. GRAHAM'S LAND OFFICE, Marshfield, Wisconsin.

Western Canada, the finest grain farming country in the world. Brandon, Manitoba, the center of its most prosperous district. Improved farms can be bought for $20 to $75 an acre. Will return as much as $300 American land. $100 American money buys $110 to $115 Canadian money. Buy now; everything in your favor. For particulars write to C. C. JACKSON, 437 Tenth St., Brandon, Manitoba.

Retired business man has well improved Montgomery County, Ohio, farm, sixty acres under cultivation (adjoining land if desired probably reasonably obtainable by purchase or lease), on good road near town with railway and traction lines, new and attractive buildings of best materials throughout, with tobacco shed, silo and complete equipment of new machinery, tools, etc. Electric lights and running spring water for all buildings. Good stock, all young, including small herd of registered Holstein cattle. Will trade for or sell a half interest to an industrious, ambitious and capable man with experience in farming, dairying and stock raising, using proceeds if wished in establishing a dairying and breeding proposition in his charge. Address BOX 312, care Hoard's Dairyman.

New York State, greatest guaranteed farm bargains. Before buying send for my list at once. FRANK J. BASLOE, Herkimer, New York. 4-2

FARMS FOR SALE

196½ acres Westview stock farm; on Jefferson Highway 27 miles south of St. Paul. Best black loam; clean and extremely fertile. Gently rolling; 12 acres valuable woodland around buildings. Large barn, modern, for 70 head stock. Power, well, feed, dairy and tool room under one roof. Electric light plant and tank heater. Large concrete silo. Large house. Poultry house, machine shed and large metal garage. Orchard recently trimmed. Location is of the best, 3½ miles from each of two good towns. Access to good high schools, creameries and live stock markets. Has telephone and mail delivery. This farm is a money-maker and one for a man to be proud of. In a prosperous locality. $45,000; terms. Write P. C. RECORDS, Castle Rock, Dakota Co., Minn.

Bargain for Sale—530 acres, two fine improvements, 100 head stock. Write for terms and state the amount you have for first payment. BOX 641, Delhi, N. Y. 4-2

For Sale—120 acres good loamy soil. Seventy acres under cultivation, fifteen timber, balance pasture. Near town 8,000, rock road, schools, churches. 17 head cattle, 3 horses, good buildings, all machinery, good crops, possession at once. Must be seen to be appreciated. Write for particulars, agents don't answer. Price $19,500. BOX 261, Grand Rapids, Wisconsin.

FARMS FOR RENT

Ideal dairy farm for rent on shares. Renter must have some cash to buy in. Possession at once. Fine chance. CHAS. W. O'NEILL, Bridgeport, Wis. 3-2

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

Farm for Rent—120-acre farm, all plow land with all equipment. 30 cows, registered or high grades, as preferred. 20 rods from school, 80 rods from cheese factory, 1 mile from church, 4 miles from town. New house and new barn and two silos. Man must be able to make part payment on his half. Will rent on 50-50 basis. ANDREW FRANK, Fox Lake, Wis. 4-4

Here is a real opportunity for a modern dairyman and farmer to make money. I have a 216-acre farm located 45 miles west of Chicago, 1 mile from the railroad station; 60 Holstein cattle, including 5 pure-breds, a good basic herd on which I have production record; also good 8-room house. Prefer married man with sons and if possible one who has some Holsteins. Write fully to ARCH E. RICHARDS, Geneva, Ill. 4-2

Will give long share lease on stock dairy farm near Louisville, Kentucky. Address BOX 314, care Hoard's Dairyman.

WANTED TO RENT

Wanted to Rent—Good grain and dairy farm, on share or cash rent, by experienced farmer. Can furnish best of reference as to my ability as farmer and dairyman. FRANK KIRK, Wauconda, Ill.

Two partners would like to rent a good dairy farm fully equipped or would take the management of stock and grain farm. Both parties will come well recommended. Particulars apply BOX 308, care Hoard's Dairyman.

FARMS WANTED

Have several parties with cash and paying city property who want farms with stock. WALTER MILLER, 320 Brumder Bldg., Milwaukee.

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

PARTNER WANTED

Dairy Partner Wanted—Have a 100-acre farm, 20 acres fruit trees, 10-room house with electricity and bathroom, furnace, etc. One mile from city. Modern barn with running hot and cold water, litter carrier, milking machine, etc. About twenty head pure-bred Holsteins, 4 work horses, pigs and poultry. Want farm family with several children, all interested in dairying. Must buy one-half interest in feed and tools, but not in stock. Requires about $1,500 cash. Will give one-half. Possession on November 1st, 1920. No letters answered unless you give full information, age, how many in family, experience, references, etc. Previous tenant on place 6 years and made money. Address PINE LODGE FARM, Sheboygan Falls, Wis. 3-2

SILOS

For Sale—Indiana stave silos, 10x20, 12x24. LUCIE KEVIL, Princeton, Ky. 24*

12x28 Saginaw fir stave silo, 10x20 stave silo with hip roof, both new. Whirlwind silo filler. Immediate delivery. Don't wait. EDW. BENNETT, Brookfield, Wis.

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

Still in the Lead—The Perfection or Wasson stanchion improved with or without frame. STANLEY C. SWIFT MFG. COMPANY, Cuba, New York. 22-spl

SEEDS

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 3*

For Sale—Pedigreed Michigan Red Rock wheat and Rosen rye. Choice selected seed. Early orders solicited. FRED A. LUTHER, Broadview, Hart, Michigan. 3-2

TOBACCO

Kentucky Tobacco, natural leaf; 10 lbs. $3.00; 20 lbs. $5.00. R. F. VEAL, Sedalia, Kentucky. 3-2

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

PRINTING

Hoard's Dairyman Art Dept. designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cts. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wis. 8-tf

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Wanted—Three men—dairyman, hogman and general farmer—on profit sharing plan worked out with state university whereby each man should make more than prevailing wages. Good herds, good equipment, fair school, church and good living conditions. Needed groceries at wholesale prices. Monthly guarantee. Give experience and references. OLUSTEE MANOR FARM, Olustee, Fla. 3-3

Good position open with large ice cream manufacturing concern for young man, agricultural college graduate; must be familiar with handling butterfats. State experience and salary desired. BOX 288, care Hoard's Dairyman. 3-2

Wanted at Once, assistant herdsman. Guernseys. State wages and experience first letter. LLOYD RUNDELL, Roberts, Wis. 3-2

Herdsman—Dairyman wanted for good herd of 30 Holstein cows. Must be clean and neat, both in appearance and work. Give salary expected, age, references, whether married or single and when at liberty. Address J. R. SMITH, MGR., Box 326, Colver, Cambria Co., Pa. 3-3

Wanted—Experienced herdsman, married, for herd of forty Holsteins. Must know calf rearing and be able to get results. Modern James equipment, running water, electric power, Sharples Milker. Cream sold. Residence seven rooms on small, beautiful lake. One mile to city. Salary $100.00 per month with free house, electric lights, running water and furnace heat. Must board two or three men greater part of year, proper allowance made for same. A good place to make good. Our present herdsman receives promotion. Answer fully as to age, experience, etc. FLORENCE FARM, Florence, Wisconsin. 3-2

Testers Wanted—Experienced men for cow testing association work. Can pay as high as $125 per month and expenses. Write C. S. RHODE, University of Illinois, Urbana, Illinois. 3*

Help Wanted—Reliable married man without children to work on small farm. One who can milk. Wife to do general housework. Good wages and entire maintenance. MORGAN HEIGHTS SANITARIUM, Marquette, Michigan. 3-3

Experienced herdsman and feeder at once for one of the best Guernsey herds in Wisconsin. Must be experienced in feeding for high records and able to treat common ailments of dairy cattle. Familiarity with Guernseys desired, but not necessary. Single man, twenty-seven or older preferred. State age, nationality, religion, wages expected, and full account of experience in first letter. H. L. STOUT, McCormick Bldg., Chicago. 3-2

Wanted—A first class man for general farm work about Sept. 1st. Excellent wages to right man. Nice six-room house, garden, etc. GEORGE CURTISS, Stockton, Ill. 3-2

Wanted—Good dry hand milker, barn work only. Herd pure-bred Guernseys, doing testing. Address F. W. DUBOC, Herdsman, Fairydale Farm, Pawling, N. Y. 3-2

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Wanted—Man to milk test cows. Must be good dry hand milker, one who has had experience or young man interested in good Jerseys, a young experienced man preferred. If we can get the right man we can use him as assistant herdsman and will pay accordingly. Address ALLEN DALE FARMS, Shelbyville, Kentucky. 1-4

Herdsman Wanted—Single herdsman at once to take charge of Guernseys. Must have experience and a good calf raiser. ADAMS & SWAIN, Algona, Iowa. 2*

I want to hire by the year a young Dane or Swede and his wife to assist in the conduct of my 13-acre raspberry farm. Must be able to handle a plow well, be a hard worker, and not afraid of a twelve-hour day when necessary. Will furnish a house, garden, milk, fruit, and a good salary to the right man. Permanent job. E. R. THOMAS, Sumner, Wash. 2-3

Wanted—A farm manager, first class, thoroughly experienced man. None other need apply. State experience, references and salary expected. Address BOX 289, care Hoard's Dairyman. 3*

HELP WANTED

Wanted—By young couple on dairy farm, man of clean habits, about 55 years, one who would appreciate good home and steady position rather than exorbitant wages. State nationality, past experience and wages desired in first letter. ROUTE 1, BOX 88, Cushing, Wis.

Wanted—At once on 150-acre dairy farm, married man with one or two boys, to milk 25 cows and do general farm work. Milker and tractor used. State wages and recommendations in first letter. DAVID T. CROCKETT, Woodbine, Md.

Wanted—Good farm hand to work on dairy farm. Apply at once and state wages. W. H. TAGGART & SONS, Manawa, Wis.

Wanted—Working herdsman for Holstein herd. Must have experience in A. R. O. work. State reference and salary expected. M. L. ENRIGHT, East Grand Forks, Minn. 4-2

Wanted—Competent herdsman who understands official milk testing. Holsteins, five cows now on test. Good position, married man preferred. Begin at once. A. F. CARDON, Logan, Utah.

Wanted—Two teamsters for general farm work, one willing to milk. Also one man for all round work. Single men preferred and only those of good steady habits need apply. Wages $70 per month with board with one week's vacation on full pay for every six months of employment. MERRYGLADE FARM, Somerset, Pa. 4-2

Wanted—Herdsman to take charge of herd of 20 cows and 15 young cattle, Jerseys and Holsteins. State wages expected, experience and references. RAY McCAULEY, Hicksville, Ohio. 4-2

Wanted—Experienced man, with capital for working interest, to build and manage ice plant, cold storage and creamery. Junction of Milwaukee; end of electrification; shops, two benchland irrigation projects, oil, 1,200-barrel flour mill; population 3,000. Big opportunity for right man. FRANK F. GOSS, Harlowton, Mont. 4-2

Wanted—Experienced herdsman for responsible position. Man more important than salary. H. W. McCRAY, 252 Worthington St., Springfield, Mass.

Wanted at Once—Two single dairymen to assist herdsman with registered herd Jersey cattle. Salary $90 per month with board. Must be experienced in all branches of the business. SAM F. CRABBE, Fargo, N. D.

Herdsman wanted near Columbus, Ohio. Must have had some experience and plenty of ambition. Registered Holstein cattle. Modern buildings. Reference furnished. Address BOX 311, care Hoard's Dairyman. 4-2

Wanted—A single man experienced for general farm and dairy work, pure-bred Holsteins. A permanent position, good home for a steady and responsible man at good wages. $60 to $75 to start. BELVOIR FARM, Lake Geneva, Wisconsin. 4-2

Wanted—Young man for general farm work. Must milk. Sept. 1st to Dec. 1st, then if both suited, for year. Write giving experience, age, nationality, wages wanted. No booze or cigarettes. H. E. PRESTON, Elgin, Minnesota. 4-2

Wanted a Tester. Due to the appointment of the tester now working in our association as supervisor of testers in the state we would like to have one of the best men available to take the association, September 1, 1920. This association offers the best opportunities of any in the state. Study and short courses in the state university, compensation for operating a machine, and a good salary are included. Write to the tester of the VERMILION CHAMPAIGN COUNTY COW TESTING ASSOCIATION, care Farm Bureau, Danville, Illinois.

Wanted—Young man for Central Oklahoma cow testing association. Must know how to test milk and balance rations. Salary $100 per month. C. W. RADWAY, Stillwater, Oklahoma. 4-2

Wanted at once, single man, good buttermaker, and understanding care of high grade milk, machinery, etc., in retail milk plant handling about 1,500 quarts daily near Pocomoke, Md. In first letter state wages and when can come. Address BOX 316, care Hoard's Dairyman. 4-2

Wanted—Married man to care for milking herd of pure-bred Holsteins and to raise calves. Milking machine used. New house. Opportunities for right parties. State wages and experience. BAIRD BROTHERS, Waukesha, Wisconsin. 4-2

Wanted—A reliable experienced married man with a boy of about 15. Good accommodations, a promising job, steady work at good wages on a good dairy farm. Write at once. Position open from now until September 1. BELVOIR FARMS, Lake Geneva, Wis. 4-2

POSITIONS WANTED

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work. Salary $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spl

Wanted—Manager's place on good farm. Sixteen years' experience as manager on dairy and stock farm; also understand hog raising and stock feeding. W. R. JONES, R. 3, Bell Buckle, Tenn. 4-2

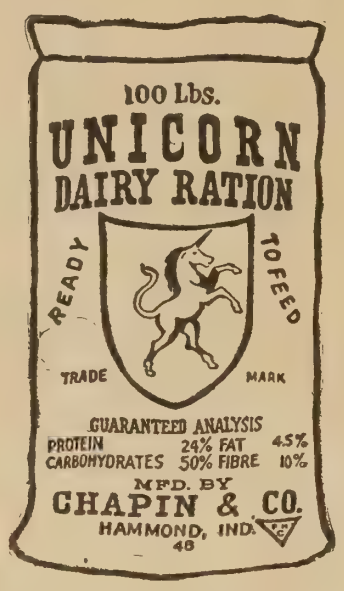
Wanted—Position as superintendent or manager by man of successful experience with pure-bred cattle and hogs. Also agricultural graduate. Address BOX 307, care Hoard's Dairyman.

Experienced general farm and dairy hand wants work. I have first class references. My phone number is Main 5074. Write STANLEY LEWIS, 559 W. Madison St., Chicago, Ill.

Dairy Farm Superintendent open for position this fall; age 30, married, 2 children; am capable of handling a large proposition. Have had considerable experience in all lines of dairy farming. Pure-breds preferred. Am at present dairy farming but intend selling out early this fall. Am willing to act as a working superintendent. Separate dwelling house desired, no help boarded. Only place where one can use practical and theoretical knowledge will be considered. All propositions will be investigated personally. Address BOX 304, care Hoard's Dairyman.

Other Classified Advertisements will be found on Page 128.

You Can't Compete With Machinery



"Better Sires—Better Stock"

We will award a money prize of $1,000 to the county that first eliminates its inferior sires.

This prize will be awarded under rules provided by the Bureau of Animal Industry, United States Department of Agriculture.

Detailed information on request.

Mixing feed on the farm is old fashioned, like threshing with a flail.

The modern time and money saving way is to have it done by machinery on a large scale.

In our mills we mix a ton of Unicorn Dairy Ration in one minute at a power cost of a few cents.

Labor is scarce and high priced. You can use yours more profitably on other work.

Unicorn requires no labor. Ready to feed, you get it as you need it. No worry or work of keeping on hand a supply of many different kinds of feed.

Made of the best feeds. Put together in the right way by men who have learned by experience.

Be wise. You can't compete with machinery. Lower your milk production cost by feeding Unicorn.

CHAPIN & COMPANY, Chicago

"It sure will Tickle You"

says the Good Judge



To find how long the full rich taste of the Real Tobacco Chew lasts.

That's why it really saves you money to use this class of tobacco instead of the ordinary kinds.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

RIGHT CUT is a short-cut tobacco
W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

When Writing to Advertisers, Mention Hoard's Dairyman

Substitute for Teat Plugs

HOARD'S DAIRYMAN:—In place of using metal teat plugs, I would suggest the use of common cat gut or violin strings, cut to length of teat. It is well to slightly heat and burn the end so as to form a head which will prevent this plug from being drawn into the udder and makes it easier to take hold of the end to pull it out of the teat.

I am not the originator of this method of handling but it was given to me by the best cow doctor it has ever been my fortune to meet. I am glad to pass it along, although I have never tried it myself. It can be inserted each time after milking and does not irritate and is far better than either metal or wood plugs, in my opinion. Preferably, it should not be used but once but this is not so serious, perhaps, if it is used on the same cow each time and some care is taken to keep it clean and possibly disinfect it.

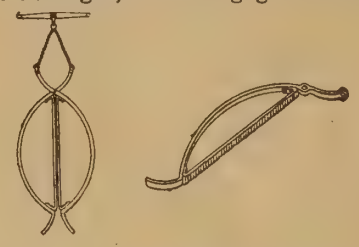
Winthrop, Me. P. A. T.

"No," said a shrewd old farmer, "I don't know as noise or talking at milking time reduces the flow of milk—but it may make the job last longer."

Inventions and Appliances of Interest to Agriculture

Brush Puller

This device is used in clearing land. It has two identical jaws, illustrated at the right, which engage the brush

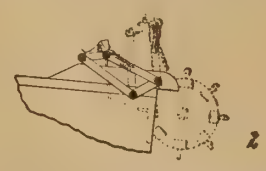


and hold it tighter the harder the horse pulls.

(W. D. Vaughan, Clarendon, Vermont. U. S. Patent 1,300,897).

Fertilizer Distributor

The new feature of this distributor is that the comb moves forward automatically to act as an end board when the box is empty, and moves

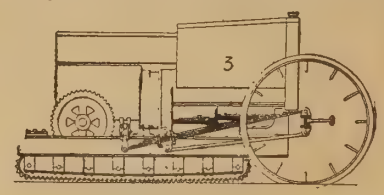


back to its operative position when the load moves to the rear.

(Deere and Co., Moline, Ill. U. S. Patent 1,325,287).

Spring Construction

This tractor has two cantilever springs so placed between the frame and axles that the load rests largely on the caterpillar tread, and only sufficiently on the front wheels to give

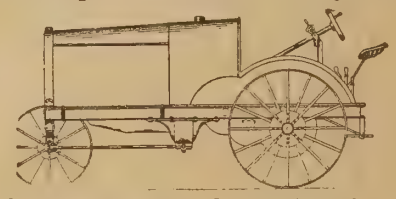


proper steering pressure.

(General machinery and Investment Co., St. Paul, Minn. U. S. Patent 1,324,974).

Tractor

The improvement here is in the radius rods. These are bolted to the front axle at one end and hinged to a cross piece at the other. They brace

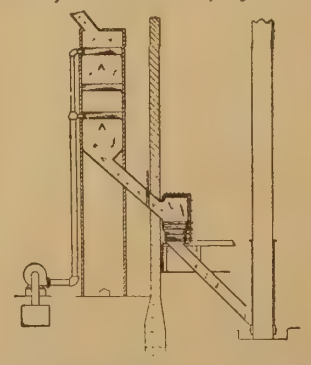


the front axle but do not draw it out of vertical alignment.

(Liberty Tractor Co., Minneapolis, Minn. U. S. Patent 1,322,049).

Bleaching Grain

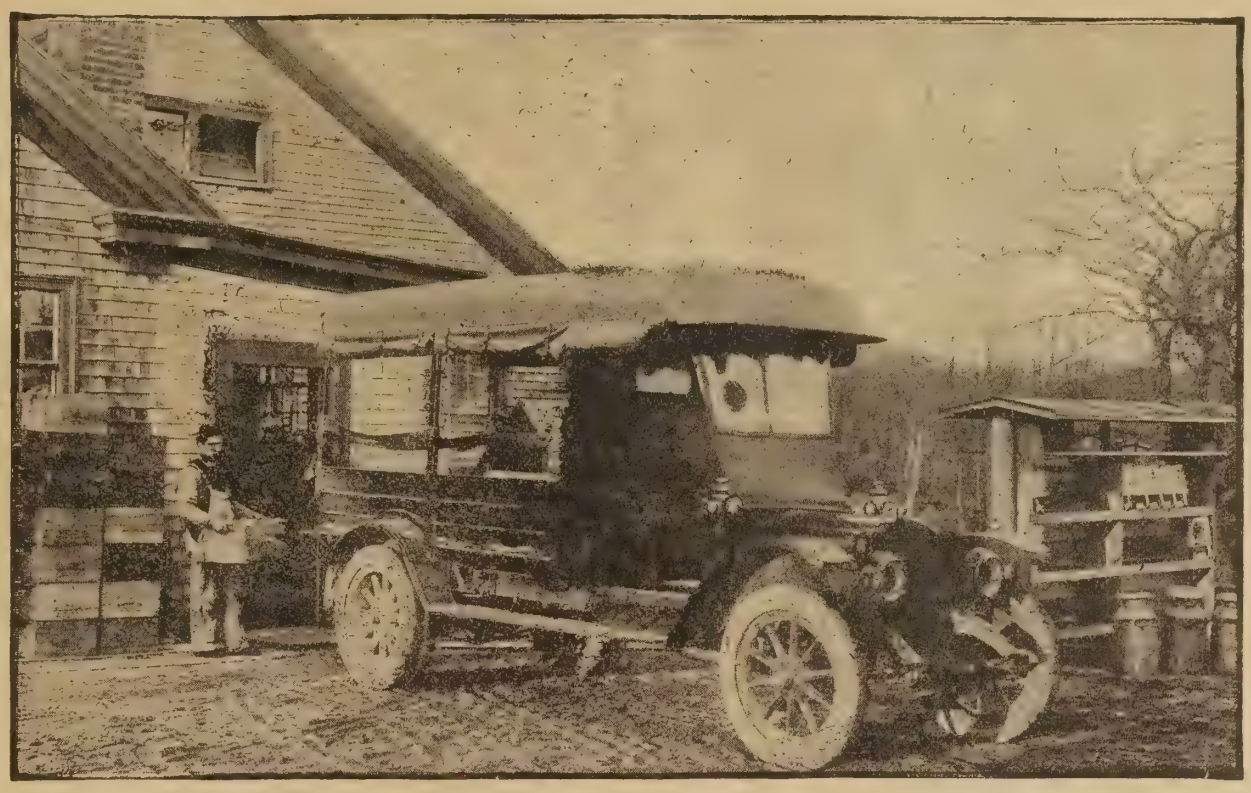
Grain has formerly been bleached and freed from mold, smut, and bacteria by means of sulphur fumes and steam acting at the same time. This apparatus gives better and quicker results, it is claimed, by treating the



grain first with the fumes and afterward with steam.

(Donahue-Stratton Co., Milwaukee, Wis. U. S. Patent 1,324,048).

Canada. C. J. LYNDE.



Loading for the city. In his White equipment, the Dairy Farmer is assured of fast, dependable and low cost transportation

The Most Work *for the* Least Money

YEARS of service in the hands of thousands of owners throughout the country furnish convincing evidence that White Trucks do the most work for the least money. Cost records show they have the highest operating efficiency with the lowest outlay for maintenance and repairs.

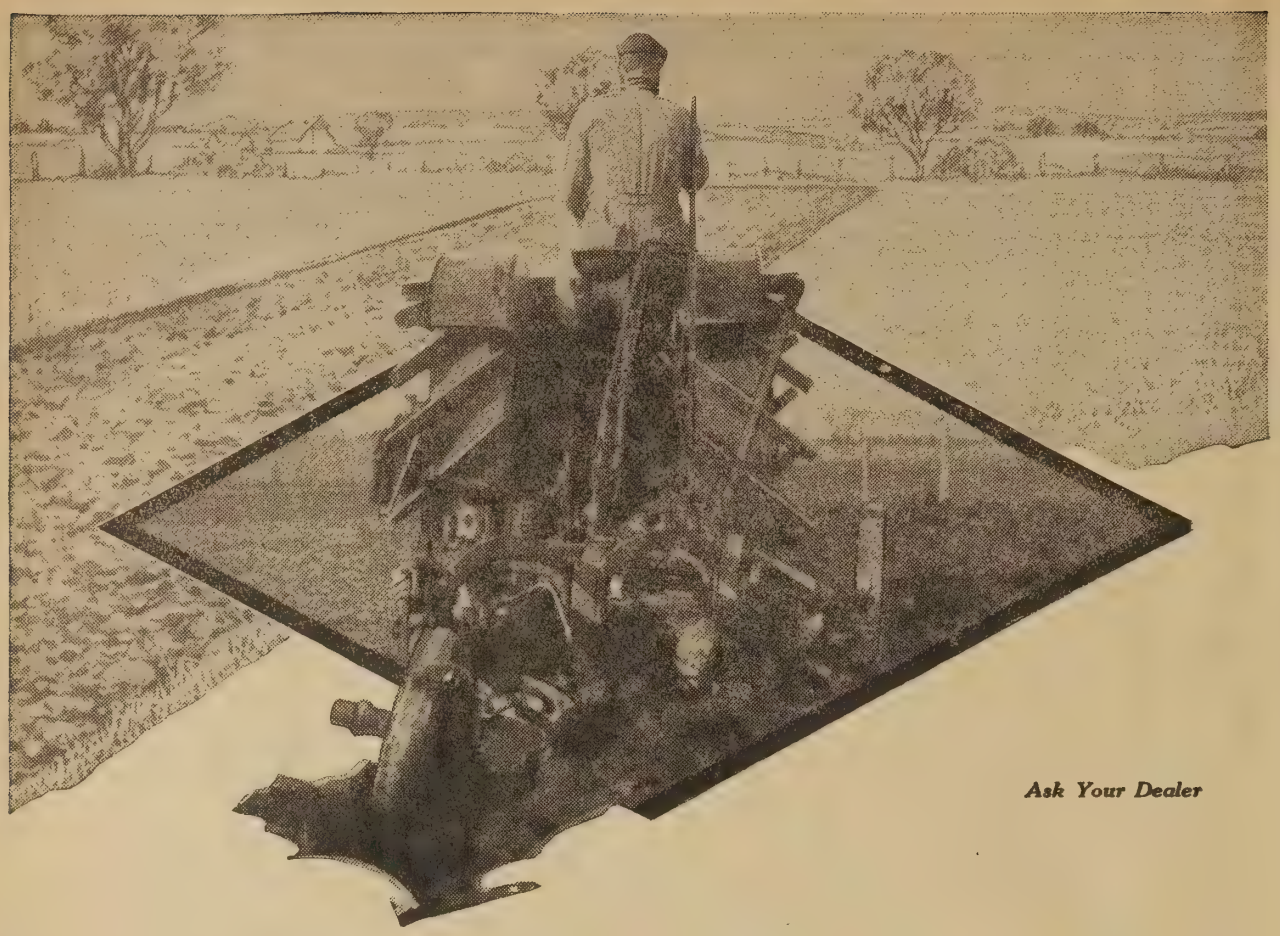
On your dairy farm—for general hauling on the premises, for transporting milk and other products to market or shipping points, for bringing in feed and supplies—you can afford to use White Trucks better than you can afford the less dependable service and higher operating costs of inferior equipment.

Figured by years of service, White Trucks are the most economical trucks made.

Write for booklet, "100,000 Miles and More," which tells the experience of hundreds of White owners whose trucks are still giving dependable service after traveling 100,000, 200,000, 300,000 miles and more.

THE WHITE COMPANY, *Cleveland*

White Trucks



You Can't Overwork An E-B Plowing Outfit

NEVER mind how hard the ground, or how hot the day—an E-B plowing outfit goes right on turning land, as many hours of the day as you want to drive it.

What makes a plowing outfit as dependable as this? No one feature, nor, for that matter, a dozen. Only the longest experience, under the widest variety of farming conditions—and then a manufacturing organization big enough and far-sighted enough to utilize all the lessons of that experience.

There are, of course, a number of features of both tractor and plows—features of evident superiority.

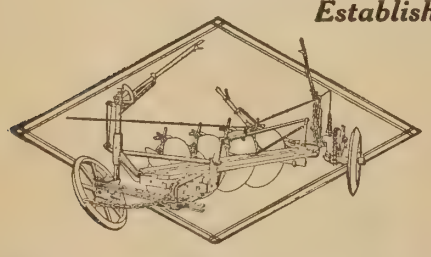
But while such features are valuable, and set the E-B plowing outfit apart, never forget that your guarantee of trouble-free service is the whole job, the uniform excellence of *every* unit of construction.

Sixty-eight years of implement making have taught us what is necessary for dependable service. A manufacturing organization of vast extent builds this knowledge into E-B plowing outfits.

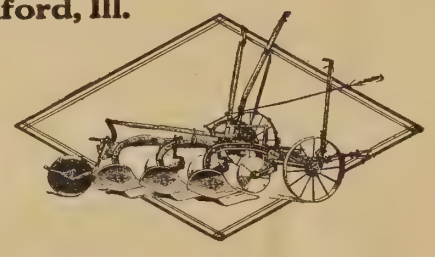
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A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company

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You have **Absolute Control** of the Saw at all times.

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We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.

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Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Meeting of Middle West State Farm Bureau Officers

The first co-operative marketing project of one commodity by all United States farmers will most likely be with the 1920 wool clip this fall. At the third meeting of Middle West State Farm Bureau presidents and secretaries, held at Lansing, Michigan, the American Farm Bureau Federation was asked to take definite steps to that end.

The middle west states represented have had in their wool pools 25 million pounds of wool. In all state wool pools there is an estimate of 100 million pounds. D. O. Thompson, secretary of the Illinois Agricultural Association, said the Illinois pool will soon have a million pounds in the Chicago storage house. J. R. Howard stated the American Farm Bureau wool committee will have a meeting in Chicago soon.

Plans have been in the making several months for the co-operative marketing of grain by middle west farmers. The so-called commodity system of marketing, as presented by Aaron Sapiro, attorney for fourteen co-operative marketing associations of California, seems best adapted to grain and wool marketing. The commodity plan calls for contracts with growers for half or more of all the commodity raised, for a period of several years; the pooling of that commodity and selling it through one agency direct to the manufacturer. This plan eliminates speculation.

At this meeting recommendation was made to each State Farm Bureau to send a delegate to California to study the commodity marketing plan in operation. The Federal Bureau of Markets was requested to send research men to foreign countries to study co-operative marketing methods.

Live stock marketing was recognized as a more complicated problem than any other commodity. The State Farm Bureau officers considered protesting against the proposed 33 per cent increase for selling live stock by commission men in the Chicago stock yards. This increase is in addition to an increase from 70 to 75 cents a head for cattle, and an increase from $18 to $25 as a maximum per car of cattle, made in January. H. D. Lute, secretary of the Nebraska Farm Bureau, advocated letting the increase go into effect, and start a farmers' co-operative Commission Company to handle their own stock. He stated that the Farmers' Union Commission Company at Omaha returned 65 per cent of its income back to its patrons last year. State officers agreed to discuss the establishing of a commission company at Chicago with their executive committees and get authority to act at the next meeting.

The American Farm Bureau announces that a meeting of produce association representatives will be called this fall to get together the needs of produce marketing.

Sentiment favored the opening of the Great Lakes to the Atlantic Ocean, because of its vital relation to the transportation of middle west farm products. Chas. Lawrence of the Great Lakes Tidewater Association said 70 per cent of the food consumed in the United States is raised in the middle west and almost 100 per cent of the export food products. He declared that the money farmers lose by inadequate transportation of their products will pay for it in one year. He said wheat is the easiest commodity moved, and one-half of the transportation costs from Chicago to Liverpool is for the loading charge at Buffalo and at New York or other Eastern ports. Opening of the waterway would cut out this cost.

Lewis Taylor, secretary of the Indiana Federation, stated farmers have lost more money because of strikes by labor and inadequate transportation than any other one thing. The officers refused to pass resolutions for the reason that resolutions mean nothing. The Kansas Farm Bureau officers were asked to secure Governor Allen to explain the Kansas Industrial Court at the next meeting, which will be held at Manhattan, Kansas, September 21 and 22.—Illinois Agricultural Association.

Indiana Jersey Cattle Club Tour

The precedent established by the Oregon Jersey Cattle Club of making an annual tour of the state by automobile is being followed by the Indiana Jersey Cattle Club.

The tour of the Indiana Club has been set for August sixteenth and will be one of the biggest advertising stunts ever attempted by the representatives of any breed in the Hoosier state. Brookville has been selected as the starting point and from there a caravan of automobiles filled with Jersey enthusiasts will set forth early in the morning of the sixteenth.

The entire tour will last for three days during which time some of southern Indiana's leading Jersey herds will be visited. Attractive programs have been arranged for the entertainment of the "Jersey tourists" at all stopping points.—American Jersey Cattle Club.



GAMBOGE'S ROYAL SYBIL
Virginia senior three-year-old Jersey champion. Record: 11,028 lbs. milk, 621 lbs. fat.
OWNED BY MANNSFIELD HALL FARM

Declining Feed Prices

(Continued from page 117)

better on the whole, due to ideal weather for harvesting.

The best grades of alfalfa are selling around a top of $30 a ton in Kansas City, the largest distributing market for the hay in the United States. The No. 1 grade is bringing around $27 to $28.50, while the cheapest grades are selling down to $16 a ton. The readjustment from an old to a new crop basis carried alfalfa down about $10 a ton. Clover hay is selling at a range of $14 to $19 a ton in Kansas City. Chicago quotes clover mixed around $30 a ton, and up to $28 a ton in St. Louis.

While stocks of old crop cottonseed cake and meal have been sharply reduced, with little activity in the market for spot shipment, the new crop deliveries attract much interest. As in the case of feedstuffs generally, new crop cake and meal have been depressed sharply since crushers began offering their output for fall shipment. The early sales were made around $64 a ton for 43 per cent protein grade, basis Texas crushing plants, but the market has since fallen to around $54 to $55 a ton. Compared with the old crop spot market, the new cake and meal for September and October shipment shows a discount of about $5 a ton. Even on the lower range, buyers are not taking hold, believing the cotton crop outlook and feed situation as a whole warrants a still lower level. This is probably not a high price compared with the record figures paid within the past two years, but it is still far above the normal basis.

Little demand prevails for spot offerings of cottonseed cake, the excellent condition of pastures and the rather discouraging outlook for cattle tending to withhold purchases by rangemen. Still, the stocks in hands of crushers and other operators are comparatively light, and this will retard any declining tendency in cake and meal for prompt shipment. Exporters have displayed a marked lack of interest in the high protein feeds, and are buying very sparingly.

Linseed cake and meal also are easy. The market for prompt shipment is holding around $63 a ton, Minneapolis, September around $64 and for October delivery about $65. Flaxseed crop conditions are very encouraging, promising a crop of more than 14,000,000 bushels. Demand is coming largely from small interior dealers, who are buying from a hand-to-mouth basis, while the larger operators are unwilling to take hold at current prices in view of the sharp depression in other feeds.

Corn is playing an important part in the bearish pressure on feed prices. The fluctuations in values for the feed grain are a vital swaying force to the high protein feeds, to bran and shorts, and to other commodities used in fattening operations. Corn is now available on markets of the Middle West below $1.50 a bushel, which represents a decline of 50 to 60 cents a bushel from the high point recorded early in the summer period. Views on the corn market are widely divergent, but it is easily apparent to note that observers of the grain trade are not hopeful of a return to the $2-level in coming months because of the prospects for an enormous harvest of the cereal. A corn crop of more than three billion bushels would not be surprising, and, unless there is a marked change in the condition of the growing crop, no sharp upturn in values is likely, at least not for the next few months. The corn visible in the United States has increased to fairly liberal proportions and will offset to a large extent a light market movement resulting from car shortage. Oats have been depressed practically as much as corn, sales in the Middle West now around 80c. a bushel or less comparing with a level above $1.20 a bushel before grain of the new crop began flowing into markets.

Much is being heard in trade circles over a possible sharp increase in demand for all feeds immediately following the announcement of higher freight rates. The broader demand is expected to result from eagerness of consumers to accumulate stocks before the advance becomes effective, which will probably be thirty days from the date of the announcement by the Interstate Commerce Commission. Such a turn in the market is probable, but it will have only a temporary effect on prices.

Tight money markets are effectively though quietly pressing prices for feedstuffs. It is a hidden force, exerting pressure from both a buying and selling standpoint. The buyer as a rule has not the credit to permit of large buying, while the seller is inclined to push his stocks upon the market to enlarge his money reserve. This already is telling in the trade, and will continue a powerful influence.



Boils

Please advise what is the trouble with the udder of a cow I own. About one week ago there appeared along the bottom of udder small knots about the size of a large pe. and they seem to be getting sore. There are possibly a dozen of such knots.

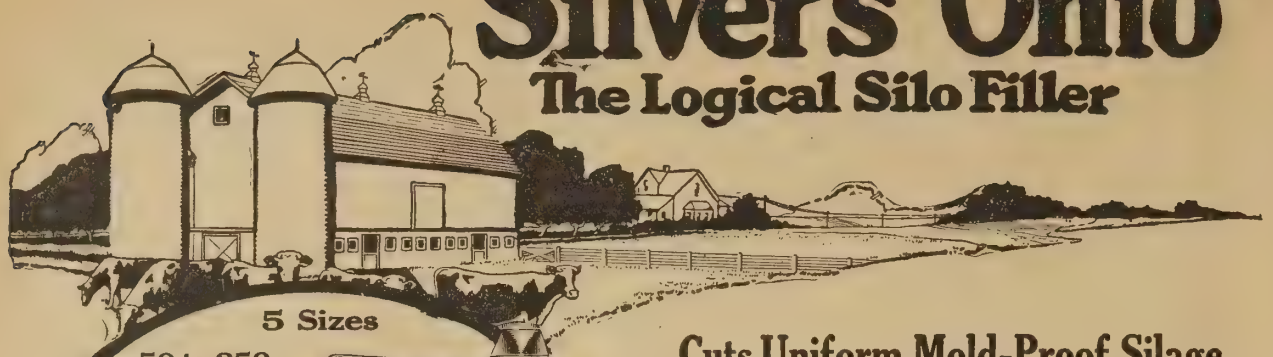
Hampstead, Md. A. R. S.

Crops of boils form in succession in such cases as the infection spreads in the connective tissue. Swab forming boils once daily with tincture of iodin until they soften; then liberate pus and apply iodin daily until well. They usually subside quickly after opening. If the condition persists rub a little ten per cent oleate of mercury into the affected areas every other day. Wash the udder and teats each time before milking. Keep the hands clean and the nails trimmed. Have the floors and gutters cleansed, disinfected, and whitewashed and keep cows out of filth and from standing in stagnant water.

Remember that the tractor has a lot of fall plowing and belt work to do yet this year. Maybe a little looking over would be a good thing.

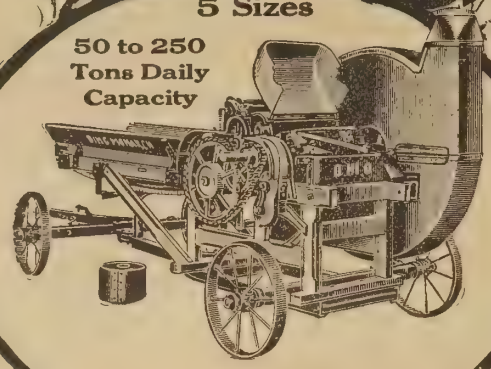
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The Logical Silo Filler



5 Sizes

50 to 250 Tons Daily Capacity



Cuts Uniform Mold-Proof Silage

The "Ohio" knife cylinder with 14-inch bearings *cannot* spring from shear plate. The construction principle is *right*. Every leaf and joint is reduced, releasing the sugar juices necessary for proper fermentation. The result is a fine, even-cut silage reduced to a semi-pulp, free from air pockets and mold, making a highly nutritious food for your stock.

More Tons per h. p. and a Cleaner Cut.

The "Ohio" is the lightest running cutter per ton capacity. Its DIRECT DRIVE—see below—cuts power one-third, saves time and trouble, insures safety, slow speed, clean cut, long life, terrific blast—the big-fan "Ohio" never clogs.

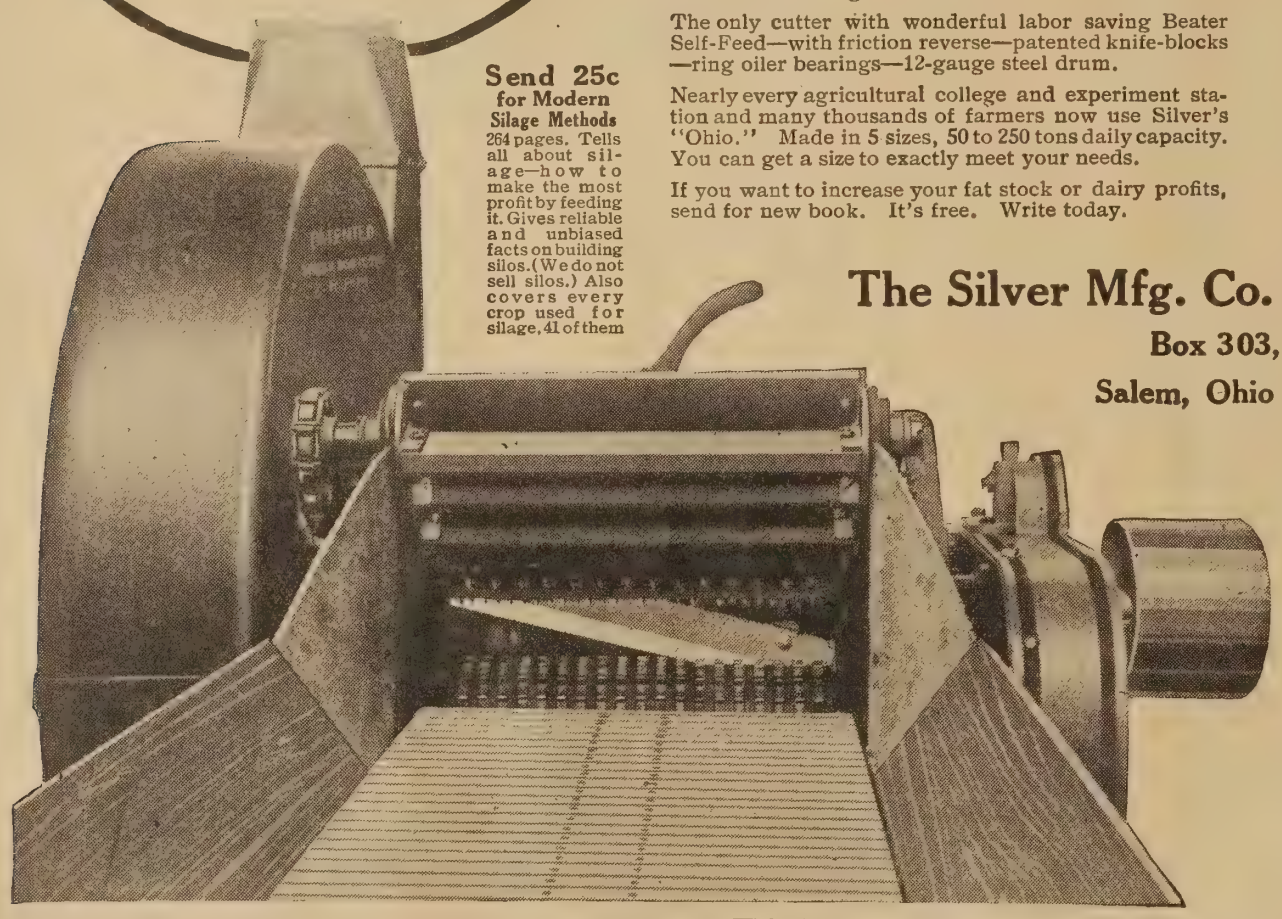
The only cutter with wonderful labor saving Beater Self-Feed—with friction reverse—patented knife-blocks—ring oiler bearings—12-gauge steel drum.

Nearly every agricultural college and experiment station and many thousands of farmers now use Silver's "Ohio." Made in 5 sizes, 50 to 250 tons daily capacity. You can get a size to exactly meet your needs.

If you want to increase your fat stock or dairy profits, send for new book. It's free. Write today.

Send 25c for Modern Silage Methods

264 pages. Tells all about silage—how to make the most profit by feeding it. Gives reliable and unbiased facts on building silos. (We do not sell silos.) Also covers every crop used for silage, 41 of them



The Silver Mfg. Co.

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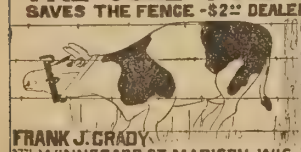
Salem, Ohio

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Farm lands in the South have not been boosted by speculation. Why buy a farm in a high-priced section and cripple your future with debt when you can buy a better farm in the South for one-third the price? Don't you want a farm where climatic and soil conditions are unexcelled? It is our business to help you find just what you want. We know Southern lands and land values and it is to our interest to locate you where you will succeed and make business for the railroad. There is no charge for our service. For full information call on, or write to J. C. Williams, Manager, Southern Railway Development Service, 1302 Pennsylvania Ave., Washington, D. C.

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GUERNSEY BREEDER'S JOURNAL

Indespensable toall interested in Guernseys or improving their herds of dairy stock. Well gotten up. Full of pertinent facts. Giving latest records of production. With Hoard's Dairyman 1 year, $2.75.

Send for sample copy.

GUERNSEY BREEDER'S JOURNAL
Peterboro, New Hampshire.

Wisconsin June Butter Scoring

If all the butter made in Wisconsin during the month of June were as good as the entries sent to the Dairy School for the scoring on the 22nd, I am sure the creameries of the state would be encouraged.

A number of the tubs showed characteristic June features such as excessive moisture or leaky condition. This defect might easily be overcome by more working and this would also have helped the uneven distribution of the salt which was noticed in a few of the tubs of butter received this month.

One question asked on the method blanks sent with each tub of butter is the buttermaker's score of his butter. In one case he agreed with the judges that the score should be 95. This was an exceptionally good piece of butter made from gathered cream, but it was delivered daily, pasteurized while sweet, and the cream cooled to just the right condition for making good butter.

One or two of the tubs of butter were made from cream four days old, and the quality of this butter was considerably less than 95. One buttermaker who sent butter with a score of 94 recorded the use of an entirely new kind of starter. I have written asking more particulars in regard to his starter, as the flavor was very noticeable in the butter.

The use of electric motors in our creameries seems to be more and more common and one of the buttermakers writes this month for suggestions in regard to putting in electric motors at his creamery. I am sure anyone who is so situated that it is possible to use electric motors will appreciate the great advantage these have over any other kind of power in a creamery. I recently visited a number of factories between Madison and the Mississippi River and found that not only the creameries but the Swiss cheese factories in that section of the state are using electric power entirely.

The active demand and high price of butter at the present time evidently cut down the number of entries we received this month, but there were 26 with scores of over 90. The three highest scores went to Norman Anderson, A. T. Larson, and Geo. Nelson.

Mr. Axel Madsen of the Dairy and Food Commission comments as follows: "Having his butter scored should give a buttermaker a splendid foundation to work among his patrons for better raw material. We perhaps have some buttermakers whose only aim is to receive a high score and, if failing to do so, lose interest in exhibits. However, a true score will give the real benefit, so when we compete with other states, we shall not lose on account of thinking we have something we really haven't.

"The butter as a whole was very uniform compared with previous months. The general criticism on the butter was the indications of old, stale cream, and a few exhibits had a strong feed or weedy flavor. The buttermakers seemed to have adjusted the temperature, taking the hot weather into consideration, as the texture was very good. A few exhibits showed good quality of raw material and good workmanship, which goes to indicate that the patrons and the creamery operator are working together." E. H. FARRINGTON.

Wisconsin Dairy School.

Tester Finds Poor Strainers in Use

HOARD'S DAIRYMAN:—I have just recently completed a year's cow testing work. As a side line I spent time and money toward creating a greater desire on the part of the farmers in my association to respect sanitary methods of straining their milk. I had an up-to-date strainer and sediment tester. As a rule, farmers who are particular about their milk straining methods are scarce and far apart to my notion.

During one year's testing the tester encountered several types of strainers used which were average in efficiency. In their order comes the large strainer with three grades of mesh and an upper cloth to hold the larger objects such as hair and straw, the single strainer with a ring below for a cloth and a wire mesh above, single strainer of tin with no cloth above or below, and lastly the airy cheese-cloth full of holes—usually unseen.

Quite generally the good farmers appreciated a good strainer but occasional sediment tests showed some disgusting results. Many instances could be cited in which the owner took pride in a strainer doing poor work of which he didn't know. Monthly tests proved to him that a better strainer was an asset and an object of pride. Sometimes a lowland pasture was the seat of the trouble, the cows bringing silt and clay on their udders and flanks. It was suggested that a few minutes to wash these parts would eliminate the major part of the trouble and, at the same time, make the cow more cool and comfortable. After this the sediment tester results were gratifying in all cases.

The best results were secured on the county farm where a special type of strainer was used at all times. Briefly described it was a bowl accommodating a hollow sphere which had three grades of mesh brass strainers. This was screwed to the inside of the outer bowl at the neck. A cloth held securely over the top of the bowl prevented straw and other objects from clogging the wire strainers. With a few exceptions the work of this strainer was almost perfect.

It is disgusting to describe the inefficient work of the cheese-cloth strainer. The test disks showed invariably at all seasons yellow and stringy matter with straw and silt galore. Milking machines eliminated some of this but a cheese-cloth strainer is an indication of the owner's character and habits.

Wisconsin. VICTOR M. ANDERSON.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Blood in Milk

Several days ago my cow came up in the evening with the right front quarter of udder badly swollen. Upon trying to milk her we found this quarter filled with blood (instead of milk) and badly clotted, making it difficult to strip out. There were no marks of any injury on the udder; nor was it painful to the touch as I bathed it with hot water and massaged it thoroughly and greased it with melted lard. The swelling has subsided but the other conditions remain. Cow has been fresh about six weeks and calf was allowed to suck as I wanted fine veal. As soon as the trouble came on I vealed the calf.

Coupeville, Wash. F. B. W.

Injury apparently caused rupture of blood vessels in the quarter mentioned and bunting by the calf would be a possible cause. Treatment now should consist in bathing the affected quarter three times daily with cold water and vinegar and giving the cow a level teaspoonful of dried sulphate of iron and three teaspoonfuls of table salt in her feed each evening. Increase the two such doses daily if the trouble persists and the cow is not well along in calf. Unless infection or mammitis (garget) results from the present condition the cow should perfectly recover.

Periods of Heat

1. How many days after a cow drops her calf is she in heat the first time, and how often after the first time?
2. Also when would a heifer calf soon a year old come in?
3. The cow has two heifer calves, born last and this year and how can I breed her now so I can get another next year?
4. What is the cause of pigs being born dead?

Donaldson, Minn. N. R.

1. A cow sometimes comes in heat about seven days after calving, but usually the first period occurs in four weeks. It is not considered advisable to breed a cow at the first period mentioned.

2. A heifer may come in heat regularly when five or six months old and usually is bred to calve when two years old, or thereabout. Periods of heat recur at intervals of twenty-one days.

3. If a cow fails to come in heat have a trained veterinarian treat her womb and ovaries. See recent answers under title of failure to come in heat.

4. Pigs often come dead when the sow is prevented from farrowing quickly by reason of constipation, flabbiness, weakness, or sickness. Drugs also may cause dead pigs, or their death may be due to germ infection. If you care to tell us how you fed and cared for the sow we may be able to give you helpful advice.

Abortion

A year ago I bought a farm here which I still own. There is a mixed head of 14 cows and 5 heifers. In some way last winter contagious abortion got into the herd. I have taken as good care of the cows as possible. The veterinarian here told me my barn was kept in first class condition. He advises me to sell off my cows and buy new ones. This means a big loss to me.

New Lisbon, Wis. P. P.

Do not sell the cows. The disease will be likely to die out in time or the cows become immune after aborting several times, if you treat them as follows:

Cleanse, disinfect, and whitewash the stable. Use a mixture of one part of compound cresol solution and 30 parts of water for disinfecting purposes. Use fresh-made whitewash. Isolate cows that have aborted and if possible have each of them treated by a veterinarian who has had special training in such work and who owns modern instruments for its effective application. Meanwhile flush out the vagina of each cow every other day with lukewarm boiled water containing 30 grains of permanganate of potash to the gallon. When a cow is bred continue the vaginal injections until she goes past one period without coming in heat. Before breeding any cow or heifer flush out the vagina daily for two or three weeks with the permanganate solution. Use a like solution to disinfect the sheath of the bull before and after each service. The bull need not have been sold. Apply to the state agricultural experiment station for a bulletin on abortion.

Blindness

We have two pure-bred Guernsey calves, one two weeks, the other 6 months old, that have gone blind without any apparent reason. In every other way they appear to be perfectly healthy. Our veterinarian does not seem to be able to remove the trouble or define its cause. Can you enlighten us?

Biglerville, Pa. G. W. K.

Blindness from amaurosis or palsy of the sight (paralysis of the retina and optic nerves) sometimes follows a shock, injury, or loss of blood from an operation such as castration. It may also result from lightning shock. In a few instances we have seen it occur as a reflex from severe derangement of the digestive organs. In the latter cases a physic possibly may do some good, but in most instances the condition is incurable.

Increased Testing in Indiana

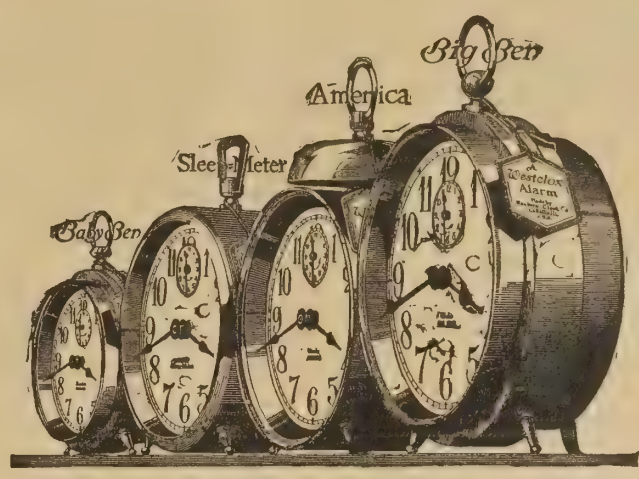
The year ending July 1, 1920, showed the greatest increase in official testing in Indiana that has been seen in any year. This great increase shows clearly the growing interest in dairying and especially with regard to pure-bred cattle. The owners of pure-bred cattle are beginning to realize that buyers of young stock are looking for those animals whose dams and sires' dams have production records and that the cost of testing cows is very small as compared to the increased value of the offspring from cows with good records of production. The high cost of feed is undoubtedly another reason why breeders are testing their cows, for with feed at present prices a breeder feeding a herd of low producing cows will soon have to get into some other business.

During the last year a larger number of seven-day tests have been made than during any previous year. One hundred twenty-one seven-day tests were completed, which is an increase of 73 per cent over the seven-day testing done last year. Eighteen fourteen-day tests were made, an increase of 157 per cent over the fourteen-day test made last year. The number of breeders doing short-time testing showed an increase of 89 per cent. In the year the number of breeders doing yearly testing showed an increase of 25 per cent over the number during the previous year. There were 539 cows on yearly test during this year, an increase of 46 per cent.

The number of Guernsey herds on test increased 200 per cent. A large part of this increase was due to the calf clubs which have been started and as these heifers freshen their owners, though most of them are boys and girls, have started them on official test. The Jersey herds on test have shown an increase for the year of 12 per cent.

While the number of cattle on official test in Indiana is not large, as compared to that in some of the more strictly dairy states, the increase shown in one year is probably much greater in proportion than that which would be found in those states. Such an increase in official testing is an indication of the rapid improvement in the quality of the pure-bred dairy cattle in Indiana. A few such years will put Indiana among the leading states in the amount of official testing done.

Indiana. L. H. FAIRCHILD.



Four well-known Westclox

YOU like an honest clock for the same reason you like an honest man. You can depend on what it says.

Westclox alarms make and hold so many friends because they run and ring *on time*.

The secret of their dependability is inside the case—Westclox construction.

The wheels turn on needle-fine pivots of polished steel. Friction is greatly reduced; the clock runs more smoothly and gives you longer service.

Big Ben, America, Sleep-Meter and Baby Ben are the four top-notchers of the Westclox line. But all Westclox alarms have this same construction. The men who make Big Ben take pride in making every Westclox right.

It will pay you to look for the Westclox mark of good timekeeping on the dial and tag of the clock you buy. Then you will have a timekeeper that you can depend on for honest, faithful service.

WESTERN CLOCK CO., LA SALLE, ILLINOIS, U.S.A.

Makers of *Westclox:* Big Ben, Baby Ben, Pocket Ben, Glo-Ben, America, Sleep-Meter, Jack o'Lantern

Factory: Peru, Illinois. *In Canada:* Western Clock Co., Ltd., Peterborough, Ont.

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT REGULAR BREEDERS BY

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STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

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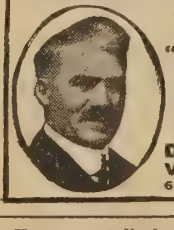
Treat Your Herd the Roberts Way

Easy to Apply — Sure Results

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YOU CAN

Stamp Abortion Out OF YOUR HERD AND **Keep It Out**



ASK FOR "The Cattle Specialist"

Sent free on request. Anwers every question pertaining to **Abortion in Cows.** Tells how to treat your own herd at small expense. Write

DR. DAVID ROBERTS VETERINARY CO., Inc.

638 Grand Ave., Waukesha, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Prices of Wheat Bran and Middlings

For farmers who buy considerable amounts of mill feed, a knowledge of the seasonal trend of prices should be helpful in determining when to buy most economically.

The following figures show the average Minneapolis carlot monthly prices of wheat bran for the ten years 1905-1914 inclusive:

Month	Price per ton	Per cent of Jan. price
January	$19.25	100
February	19.38	101
March	19.53	101
April	18.93	98
May	18.82	98
June	17.39	90
July	17.00	88
August	17.91	93
September	18.31	95
October	17.95	93
November	18.11	94
December	19.38	98

During this ten-year period the lowest prices of the year occurred three times in July, three times in October, and one each in June, August, November, and April.

From the foregoing it would appear that on the average one would save sufficient on his feed bill to make it a practice to buy a year's supply during July or October. Farmers who do not have to buy feed every year probably would find October a more suitable month for purchasing supplies as the crop has then been harvested and the farmer can quite accurately forecast his feed requirements.

Prices of Standard Wheat Middlings

The following figures show the ten-year average monthly carlot price of wheat middlings at Minneapolis for the ten years 1905-1914 inclusive as compiled from the Northwestern Miller:

Month	Price per ton	Per cent of Jan. price
January	$19.53	100
February	19.81	101
March	19.76	101
April	19.53	100
May	19.79	101
June	19.29	99
July	19.60	100
August	20.41	104
September	20.51	105
October	19.61	100
November	19.29	99
December	19.60	100

From the foregoing, it is apparent that there is much less seasonable fluctuation in the price of middlings than is the case with wheat bran. This is doubtless due to the fact that wheat bran is very largely used for cows and therefore not so much in demand during the season of good pasture. Upon the other hand, wheat middlings are extensively used for feeding pigs and the prices tend to be at their highest during August and September, which is a season when many pig growers are short of feed due to the fact that the pigs are large enough to require considerable feed, but when new corn is not available in large quantities.

Particular attention is called to the fact that for any one year the trend of prices may be very different from the average.—Wm. L. Cavert, Minnesota College of Agriculture.



BELLE LYON'S KORNDYKE HENGERVELD

Holstein heifer whose junior two-year-old 7-day record is 413.5 lbs. milk containing 13.18 lbs. fat. Purchased at recent Ohio State Holstein Sale by D. Postlewaite of Ohio from N. W. Lee & Son.

Better Lighting for the Farm Home

HOARD'S DAIRYMAN:—In discussing better lighting methods for country homes and village communities recently Wm. Kumerth, associate professor in physics, Iowa State College, said: "There is a growing realization among the farm people of the fact that good illumination is as much a necessity as are pure water, fresh air, and proper sanitation and that the effect of poor lighting, whether natural or artificial, reacts strongly on the health.

"In the past decade a multiplicity of modern improvements has added greatly to the comfort and convenience of farm homes and rural communities. In the last few years the matter of lighting systems has been receiving considerable attention, perhaps because of the more extensive study which has been devoted to all phases of city lighting and to continued improvements in the illuminants themselves.

"Illumination is a symbol of intellectual development, for one of the most important factors in the growing forces of civilization has been the steadily increasing opportunity for study after dusk. The New York State Health Department has found that while 21% of country school children have defective vision, only 5% of city school children are so afflicted. One might naturally expect the reverse to be true. For all that, investigation has revealed the fact that city school children in general have stronger eyes than do those in the country, probably because of the superior lighting which city school children enjoy in their homes. But poor lighting conditions need not obtain for the rural family. Very good lighting can be secured from practically every kind of illuminant if proper attention is given to the subject. The result will be fewer headaches and stronger eyes.

"The country home should be well lighted, not only because light safeguards the eyes, but because a well lighted home is attractive and fosters a cheerful disposition. Proper attention paid to the lighting of the home may help solve the problem of keeping the young men and women on the farm. Just as a moth is attracted by the light of a candle, so young people are drawn by good lighting. Abundant light in their own homes where they may read in comfort, or play games, will contribute largely to their staying at home evenings. The depressing atmosphere of many a dimly lighted country home has no doubt been a substantial factor in driving its young people to seek residence in the brightly lighted towns and cities.

"With his greatest interest concentrated on his stock, machinery, and crops, the farm husband has frequently neglected in the past to give the proper attention to his home. But the day is now rapidly approaching—in fact it is already here—when farm women are coming into their own and the improvement of the farm home is receiving proper attention.

"Of all the different illuminants available for country homes those of the lowest initial cost are more likely to be introduced first. In the past the only available illuminants have been low priced. As farmers grow more prosperous they are inclined to consider some higher priced system. In a few instances the cost of installation may appear high, but it should be remembered that some of these systems serve a double purpose. Thus where illuminating gas, natural gas, or Blau gas can be obtained, the system when once installed will lend itself to both heating and lighting at moderate cost. In the electric system the apparatus also lends itself to other uses, such as power, when it can be conveyed through circuits taking small current. When the 110 volt system is available, either through private installment or the tapping of a transmission line, many uses can then be found for electricity on the farm, while the lights will be practically as effective as in the city.

"In the following table may be found the total approximate cost of lighting an eight-room farm house for one year: Candle, $114; kerosene, $40; kerosene pressure lamp, $31; gasoline reading lamp, $31; gasoline system, $37; acetylene plant, $70; public service electric, $74; high voltage private, $131; low voltage private, $97."

Iowa. H. J. METCALF.

The protest of farm women against rural living conditions is said to be a chief factor in the migration from country to city.

BROWN SWISS



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

RED POLLED

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls, also heifers and young bulls by them. Don't forget the date. Send for catalog.

Jean Du Luth Farms, Duluth, Minnesota.

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.

15,540.9 lbs. Milk
613.60 lbs. Fat

Is the average official production of his two nearest dams. This Brown Swiss bull is 16 months old and ready for service.
Two other fine yearlings and several younger bulls. Entire herd FEDERALLY ACCREDITED. Write for pedigree and prices.

WALHALLA FARMS, Middleburgh, N. Y.

SPEEDWELL FARMS
LYNDONVILLE, VERMONT
ESTATE OF THE LATE THEO. N. VAIL
(W. M. HUBBARD, Mgr.)

ANNOUNCE THE CLOSING OUT

AUCTION SALE

OF THEIR

Registered Brown Swiss Cattle

WEDNESDAY
AUGUST 25th, 1920
At ONE P. M.

The herd consists of forty head. KUNDRY, the three-year-old world's record cow of the breed, two of her daughters and a son are a few of the attractive offerings in this sale. Nine daughters by the great bull, Tom Phyllis. Several fifty-pound cows in the herd.

For Catalogue Address

GEO. BAIN
Auctioneer

WILLIAM S. DUNN, Sale Manager
MIDDLEBURGH, N. Y.

Dairying Thirty Years Ago

Notes From the Issue of Hoard's Dairyman for August 15th, 1890

Dr. S. M. Babcock had just finished the perfection of the Babcock tester and furnished Hoard's Dairyman a long article giving drawings of the tester and directions concerning its use. There has been a surprisingly small number of changes in the manipulation of this test since this article was written nearly a third of a century ago.

"Millions of dollars lost this year by turning the cows out into the burning sunshine, when they ought to have been in a cool, airy stable with screened windows."

"It is said that many a race has been lost to the cross horse that displayed his ill temper by biting at the horse that was neck and neck with him; and that if he had put such wasted energy into his legs, he would have "got there" ahead of his competitor. Same with many a cross and worrying man."

"Now, that we know that the old barns were made with too few and too small windows, it makes us ache to see a new barn going up with but little if any improvement on the old ones, in that respect. Windows are most as cheap as either stone or brick wall, and should be put in large, and plenty of them."

"A heated controversy was being carried on regarding the use of preservaline. Dr. S. M. Babcock had attacked its use and Hoard's Dairyman offered the manufacturers "the chance they need in vindication of their business" and allowed them the use of its columns in defending their product. The Official Analyst of Montreal was quoted as certifying that the analysis he had made of this product showed it to be an "innocent preservative salt, an antacid and favorable for the preservation of milk and dairy products."

The markets for dairy products were indicated in these reports:

Elgin, Ill., Aug. 11—Butter—Call board sales easy 20¼c.

Floor sales at 20-2¼ @20½c. Aug. 4, 1890, butter sold at 19½-20@ 20½c; Aug. 8, 1889, butter sold at 15½c; Aug. 13, 1888, butter sold at 19c; Aug. 15, '87, butter sold at 27c.

Sheboygan Falls, Wis., Aug. 12.—The market was slower than usual today, yet prices held up exceedingly well considering the reports from Chicago and eastern markets. The sales reported were 35 Twins at 6½c; 100 Twins at 7⅝c; 1,550 at 7¾c; 755 at 8c; 90 cases Americas at 8¼c; 600 at 8½c; 1,177 at 8¾c.

Wisconsin Short Course

The "Short Course in Agriculture" was established at the Wisconsin College of Agriculture in 1885 and the achievements of the 5,540 students who have attended that course are living demonstrations of the wisdom and foresight of former Dean Henry who first conceived of this type of instruction. The plan of the short course is outlined briefly in the following paragraphs from a recent announcement:

"The Short Course consists of three terms of five weeks each. Students may enter at the beginning of any term. The course is so planned that a definite unit of work is completed during each five-week period. The course will start the middle of November and the studies for the first term (five weeks) will be completed at the time of the Christmas holidays. The second term will start after the vacation and the work of this term will close at the end of the first week in February. The third term will begin the second week in February and close the middle of March. The course will be completed in good time to permit the student to return to the farm to begin the spring work.

"Under this plan Short Course students will concentrate upon a few subjects for each term and complete them before taking up other subjects. Instruction is given by means of lectures, recitations, laboratory practice, demonstrations, and conferences. Opportunity is given for students to secure answers to individual questions, which makes the work practical and helpful to them.

"The course of study is so arranged as to give the students an idea of the fundamental sciences which underlie successful agriculture. The principles and approved practices of profitable farming based upon these fundamental sciences are explained."

Further detailed information and application for admission may be secured by writing to Director of Short Course, College of Agriculture, Madison, Wis.



Green Valley Cherry King 2nd, No. 260435n.

SPECIAL PRICE

on Duroc pigs of May and June farrow. Sired by State Fair winners. Gilts bred for fall litters. Write for Catalog and price list.

We deliver it. Have before you pay.
GREEN VALLEY STOCK FARM
BOX 6 LOUISVILLE, ILLINOIS

ISLAND FARM DUROCS

We are offering a few choice spring pigs, either sex, at $30 each at weaning time. Write us your wants.
ISLAND FARM, - Floodwood, Minn.

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

JERSEYS

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Fairview Farm Jerseys
"Production" our Watchword.
BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.
Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.
Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.
Price, $150 f. o. b. cars our station.
Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

Wanted To Buy Jerseys

A few bred heifers or young cows. Tuberculin tested and subject to sixty-day retest. State particulars and prices in first letter.
White Acres Farm, Marshall, Minn.

MERIDALE JERSEYS



Interested
Prince 2d 95708

Sire of 27 Register of Merit cows, including Interested Jap's Santa, 15,569 lbs. milk, 1,007 lbs. 85% butter.

His pedigree blends the blood of those conspicuously prepotent cows, Interest and Sayda.

He has 50% the same blood as five Gold Medal cows in the Meridale Herd. A few of his sons are for sale, out of excellent Register of Merit cows.

AYER & McKINNEY
300 Chestnut Street, Philadelphia, Pa.

Cedar Crest Farms
JERSEYS

We have a few young cows and heifers for sale. Write for particulars.
J. K. Dering, Lake Villa, Ill.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Hillcrest Jersey

Bull calf, 6 mos. Sire—Figgis Wingold. Dam—on R. of M. cow sired by grandson of Golden Fern's Lad. For particulars and price write
ROLLIE VANDERVORT, TOMAH, WIS.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. buttert Granddaughter Jacoba Irene, young stock; St. Lamberf breeding for sale. R. C. Green & Son, Albion, Wis.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON, - Edgerton, Wisconsin

SWINE

Alfamarl Springs
OFFERS FOR SALE

Rex of Alfamarl Springs by Union Star, a richly bred Yeksa bull whose dam, Reunion, made 576 lbs. fat at three years; out of Goldie Belle, a good daughter of Tricksey's Sam. He is ready for service.
F. M. TESS, Mgr., - Troy Center, Wis.



MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.
Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.
The National Duroc-Jersey Record Association. Dept. 300 Peoria, Ill.

Tierra Bella Stock Farm
Public Sale of Registered Chester White Hogs

We have reserved 40 choice Chester Whites, including 16 tried sows and fall gilts bred to Jumbo for fall litters, 10 big type fall boars sired by Pay Streaks Monarch, a good son of the Grand Champion Pay Streak, also 14 spring sows and boars sired by these big type boars. Everything will be registered. Write now for catalogue and plan to be our guest at Mauston, Wisconsin. Sale day August 14th.
V. C. TIEDT - - - - - - - - - - MAUSTON, WIS.



MISS NARCISSE 4th
R. M. 9,495.5 lbs. milk, 621 lbs. butter as a sr.3-yr.-old.

JERSEY CREST FARMS

Offers Her Son—Ready For Heavy Service

Narcisse's Varsity Diamond is a splendid individual, solid color, 2 years old. We have withheld him from sale until now in order to test his dam, a double granddaughter of Keepsake's Golden Lad. His sire is Favorite's Golden Lad from Lad's Golden Favorite, 822 lbs. butter R. M., one of the best daughters of Keepsake's Golden Lad. Herd under federal supervision. Write for complete information.
Jersey Crest Farms, - Oconto Falls, Wis.



"Bulls of Serviceable Age For Sale"

If in need of a bull, here is a bargain, will sell at the cost of raising them. They are good individuals, and from R. of M. dams and are sired by sires of popular blood lines. Write for price list and particulars.
W. M. KNIGHT, OAK GROVE JERSEY FARM, Eagle, Waukesha Co., Wisconsin.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right - put on
AYRSHIRE BULL
at the head of your herd





Four World's Record Cows at Ravinia

You Want Bigger Cream Checks

You may like a cow for her looks but she pays for her feed bill in milk.

Ravinia Ayrshires

are beautiful to look at too; but the big thing about them is that they "milk like a pump."

They have proved this by the world's records they have made; and will prove it to you in the bigger cream checks you get from them and from the herd you can breed out of them.

We can tell you some things about increasing your cream checks that you ought to know, and we'll be glad to do it. Get some paper and write us a letter right now about your breeding problems.

GOSSARD BREEDING ESTATES
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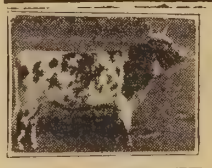
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Sons for Sale from the Best Type Cows We Could Purchase.

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Duncraggan
Sons of
Ringmaster's Brae Burn Diplomat
For Sale
GEORGE F. WHITE, WESTFORD, MASS.

Ringmaster's Brae Burn Adonis
Young bull calves by this sire are now offered.
W. Grant Fancher, Essex Co. Training School, Lawrence, Mass.

Brae Burn Farm

Cavalier's Model Champion
1st at National 1919
Heads Our Herd



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ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS



"Ayrshires of Quality"

Kit Auchenbrain

Jr. 4-yr.-old record 14,452 lbs. milk, 656 lbs. fat.

Champion of Breed for 30 days with 2019 lbs. milk.

Her bull calf, Kit's Surrel, by Surrel for sale.

WEYMOUTH FARMS,
North Weymouth, Mass.



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

Highland Farm Ayrshires

If you want—
Big Stylish Cows
Big Teats and
Big Production

Get a "Baron" to head your herd. A few choice bull calves by Imp. Baron's Best of Bargenoch, No. 12858, out of A. R. Finlayston dams, for sale.

Lt. Col. John R. Valentine, Prop Philip C. Palmer, V. S., Manager
Bryn Mawr, Pennsylvania

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Some Nice Young Bulls For Sale.

The best of breeding. E. N. Manley & Sons, Lyons, Neb.

Fall-sown Oats

Fall seeding of oats has numerous advantages over spring seeding, where the fall-sown varieties can be successfully grown, as in the states of South Carolina, Georgia, Alabama, Florida, Mississippi, and Louisiana; in Virginia and North Carolina, except in the Piedmont and mountain sections; and in southern and eastern Texas, announces the United States Department of Agriculture, in Farmers' Bulletin 1119, entitled "Fall-sown Oats."

Under the climatic conditions in those states, the fall-sown crop usually yields better and matures earlier. The land can usually be prepared in better shape in the fall than in the spring. Fall seeding interferes less with other work. Poorer land and less fertilizer can be used. The fall-sown crop furnishes a cover for the soil during the winter and prevents washing.

The bulletin gives the varieties best adapted, cultural methods, and rotations. This bulletin will be supplied on request by the U. S. Department of Agriculture, Washington, D. C.



Economy in Production ← GUERNSEYS → Quality of Products



The Guernsey readily adapts herself to wide extremes in climate. Notable records of production have been made in Maine, Florida, Louisiana, Washington, and Northern Minnesota. Send for our free literature.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 75, PETERBORO, N. H.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.
Federal Tuberculosis Free Accredite' Herd.
Mountain Bros., Carrier 485, Des Moines, Ia.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow
Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.
C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale.
(Herd Federal tested for tuberculosis)
Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Registered Guernsey Bull Calf

Born 12-14-19. Dark fawn, white points, solid head. Fine type. Sire, King Masher 5th 18361 A. R. Dam, Glenwood Girl of Springfield 2d 42759 A. R. with 12,978.4 milk, 662.25 fat at 3½ years. Price $250. Write for pedigree.
Broad Acres, Springfield Center, N. Y.



Sequel's Glenwood of Linwood 41767

Sire, Imp. Clara's Sequel 29414, sire of 30 A. R. daughters averaging 500 lbs. fat. Dam, Ideal of Alfalfa Farms 40750. She has three A. R. records: 452 lbs. class G, 740 lbs. class A, 690 lbs. class AA.
I am offering the following bulls by the above sire. Their dams have large records and are sired by Langwater Frenchman, Langwater Frederick, and Governor of the Chene:
Eugene of Linwood 7 months, dam 752 lbs. class AA class leader
Edgar of Linwood 11 months, dam 540 lbs. class B
Edward of Linwood 11 months, dam 421 lbs. class G
Emery of Linwood 11 months, dam 514 lbs. class A
Edwin of Linwood 10 months, dam approximately 590 lbs. fat class FF
Elmer of Linwood 8 months, dam 485 lbs. class G
Ernest of Linwood 8 months, dam 566 lbs. class B
Sale List Homer F. Rundell, Livingston, Wis.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.
TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.
Charles L. Hill & Son, - Rosendale, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.
RALPH TRATT, WHITEWATER, WIS.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.
August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.
Folly Farm, - Libertyville, Ill.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

Belle Alto Farms

Accredited Herd of 80 Guernseys

For Sale:—Grandsons of King of the May 9001 and out of A. R. dams. One bull calf, price $150 and three ready for service, $250 and $300. An opportunity for the best kind of a foundation.
BELLE ALTO FARMS.
M. H. McCallum, Mgr., Wernersville, Penn.

In the July 2d Issue

of the Hoard's Dairyman, page 1446 is an account of the Anna Dean Sale. If you read this you will notice that twenty-five daughters of Imp. Goldseeker of Anna Dean Farm sold at an average of $500. I am offering for sale three bulls by same sire as these heifers. One of them out of a daughter of Masher's Sequel with a record of 635 lbs. of fat. On the inside cover of the Guernsey Breeders' Journal, the last issue, you will find a picture of this cow's sister. I am also offering for sale a daughter of Imp. Clipper that sold for $1,950.00 in this sale.
W. W. CLARK, - Vesper, Wisconsin

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).
BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.
A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.
Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

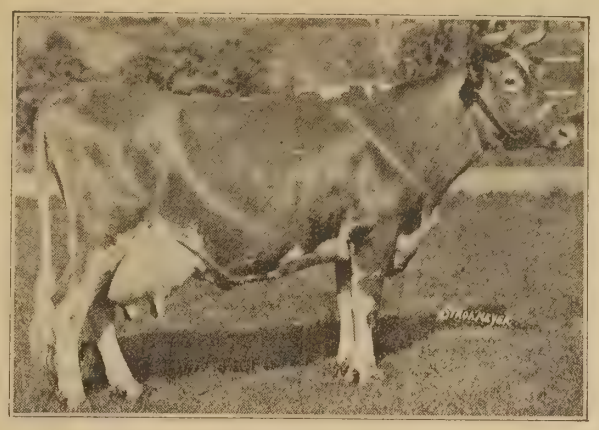
I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.
Wern Farm, Waukesha, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.
Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6.559 lbs. milk, 322.08 lbs. fat 145 days in "A"
We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.
Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.
C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

ALBAMONT GUERNSEYS

Superior young bulls two to twelve months old, rich in May Rose blood. Several are

Sons of Don Diavolo.

Send for sales list. **J. C. HAARTZ, 10 High St., BOSTON, MASS.**

The Mixter Farm

325 GUERNSEYS 325
Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.
HARDWICK, MASSACHUSETTS.

Hillswold Farm

Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr**

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.
Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

We are now offering a few well bred

May Rose Bull Calves

Sired by Langwater Renown 39636 and out of Daughters of Pencoyd's Golden Secret 16550. The dams are on test and doing very well. Also *an extra fine Yearling*. Now fit for light service. He is fawn and white, with clear nose. Anyone wishing to get the blood of this great family will do well to consider the above breeding. For price, pedigree, and all particulars address
GREEN MEADOW FARM,
Walter Jauncey, Mgr., Williamstown, Mass.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.
B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

Do You Want A Bull Calf Sired by Anton's King Confidence?

His dam, Ma Chere Confidence 55851, A. R. 5727, has a record in Class C, of 764.65 lbs. of butterfat in one year.



Anton's King Confidence 43517

At the present time, we are offering several very desirable young animals that will be ready for service this fall. They are all out of A. R. dams or two-year-olds, that are now on test.

The strong May Rose breeding on the sire's side (A. K. C. traces five times to May Rose 2nd) combined with Starlight's Excelsior and Yeksa traces on the dam's side make these young bulls representative of the best blood in Guernsey circles.

Their conformation is of the very best—straight tops, long, deep barrels, and good width, all linked firmly with refinement and dairy temperament. Write for complete information.

HOARD'S DAIRYMAN FARM, FORT ATKINSON, WIS.

GUERNSEYS

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137
Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

Your Opportunity

to obtain the blood that breeds on, sons of

Langwater Raritan

the only GUERNSEY BULL that has a full sister (Langwater Nancy) with 1000-lb. fat record.

Send for sale list.

Herdlea Stock Farms, - New Hope, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $600. Write for particulars.

Meadowland Farms, Litchfield, Conn.

HOLSTEINS

2 Choice Bulls for Sale

No. 1. Born Dec. 19, 1919, good individual, good length, and a straight top line, three-fifths white. Dam, A. R. O. 18.10 lbs. butter as a senior yearling, milk 400 lbs., and daughter of 35.68-lb. bull, King Colantha Lyons. Sire, King Korndyke Gem, whose dam's A. R. O. record is 32.74 as a 3-year-old. Price $225. No. 2. Born January 9, 1920. A good, growthy fellow, heavy body, about three-fifths white. Dam, A. R. O. 22.50, milk 520 lbs. Sire, King Colantha Lyons, a 35.68-lb. bull. Price $225. Pedigree and photo on request. An accredited herd.

MICHAEL SEBERGER SCHERERVILLE, IND.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke! Also two fine young registered cows, one a granddaughter of Pontiac Korndyke.

Wm. N. Osborn, Wanatah, Ind.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

OKLAHOMA BULL CALVES

from 4 to 16 months of age, well marked, straight and guaranteed right in every way. Several sired by a 32-lb. son of "Champion Echo Sylvia Pontiac" from Ormsby dams. Prices reasonable. Photo and pedigrees on application.

BOSTWICK & SON, Ardmore, Oklahoma.

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Warwood Farm

Has for sale

Holstein Bulls

from two to twelve months old, of excellent breeding.

FRED C. LANDORF, Foreman, Lisle, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Grandson of King Segis Pontiac

Ready For Heavy Service

We have for sale a 2-year-old grandson of King Segis Pontiac from one of our best "all the year" A. R. O. cows. He is a splendid individual, well marked and very well grown. Priced to sell. Also have a few bull calves. Write today.

PINEHURST FARMS, ROCKFORD, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

Facts in BLACK & WHITE



What Holstein Cows' Milk Means to Mothers

The almost invariable verdict of doctors who have made a serious study of the question of cows' milk has been in favor of Holstein cows' milk. Dr. Hubert Work, Superintendent Woodcroft School for Feeble-minded Children, Pueblo, Colo., says: "In practice I abandoned Jersey milk for infant feeding because I could not successfully modify it for babies. This was suggested to me by the statement that a Jersey cow's milk is not always tolerated by her own calf. **Holstein cow's milk needs no modification for the healthy child.** Although the mentally feeble are always of low physical vitality also, we have never admitted a feeble-minded child who did not take Holstein cows' milk and thrive on it."

Send for "Specialists' Evidence."

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.



BEECHER WYTHE 2ND

Butter 7 days 19.65, milk 534.6 at 15 years of age, 75 days after freshening; 19.1 lbs. butter, 548 lbs. milk, 109 days after freshening.

At 14 years of age, Grand Champion Cow of Indiana 1918; 22,554 lbs. of milk, 800 lbs. of butter, as a ten-year-old. Dam of 12 consecutive heifer calves and one bull calf. Nine A. R. O. daughters.

2 Serviceable Bulls For Sale

Sired by King Colantha Lyons, a 35.68-lb. son of King Lyons, out of a 29-lb. daughter of King Segis.

No. 1. Born April 18, 1919. Two-thirds white, nicely marked, good individual. Dam: 16 lbs. butter in seven days at 24 months. His grandam, Beecher Wythe 2nd. This cow has produced over 100 tons of milk and is now nearly 16 years old, is still milking at a great clip. Price $500.

No. 2. Born March 11, 1919. Five-sixths white, good individual. His dam, 13 lbs. butter at 2 years. Price $250.

M. J. SEBERGER
Schererville, - Indiana

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois

BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

Combining Type, Size, Constitution and Production.

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.



W. J. Gillett & Sons, Rosendale, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. S. A. BAIRD & SON, WAUKESHA, WIS.

Who Pays The Price?

All stockmen have losses. Usually they come unexpectedly. That's why live stock insurance is desirable. It protects your invested capital. It reimburses you for loss.

We protect your investment at a cost less than the interest rate on the money you would use to replace a loss. When you lose an animal we pay you the money to replace it. WE PAY THE PRICE.

Insure In A Home Company, Owned by Wisconsin Stockmen

WISCONSIN LIVE STOCK INSURANCE COMPANY

Bank of Wisconsin Building, Madison **"Not a Mutual Company"**



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $200.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont**, the **First Tuesday and Wednesday of every other month,** Feb.4-5; Apr.1-2; June3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

FRED S. BALL

SPECIAL HOLSTEIN AUCTIONEER

I sell a big per cent of all the Imported sales in the south-west. Wire early for dates as I sell every day in sale season. **EL RENO, OKLAHOMA.**

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed to have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association.
A. F. Gafke, Secretary, Jefferson, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

2500 Healthy Holsteins 2500

Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.

Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis.

Check Or Bond Buys Dandy Bull Calf

Born June 20, 1920. His dam and sire's dam average over 30 lbs. butter and 657 lbs. milk. Dam and grandam have good yearly records. Rich in Pontiac Korndyke and King Segis blood. Dark in color. Cut price. **Chic Dairy Farm, - - Juneau, Wis.**

This space reserved for
EMIL REX, IRON RIDGE, WIS.
Nothing for sale at present

PABST KORNDYKE SEGIS

a son of Korndyke Segis Johanna heads my herd. His dam, Pabst Citronella, made 669.4 lbs. butter, 16,867.8 lbs. milk in 1 year as a 2-yr.-old, 26.285 lbs. butter in 7 days as a 4-year-old.

HERMAN LUEBKE, R. 8, WATERTOWN, WIS.

JOHANNA BOY TWISK

heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. Nothing for sale at present.

T. W. LUCK, R. 1, HORICON, WIS.

LEVEL-LAY FARM HERD

headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.

E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.

S. T. JONES, - R. 8, Watertown, Wis.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. CHRIS. INDERMUEHLE, R. 1, Juneau, Wis.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY

Tuberculin tested herds—State and Federal.

WISCONSIN

Individuality Short and long time production records.

DO YOU KNOW?

That there are 40 bulls with 30-lb., 40-lb. or 1,000-lb. yearly record dams in service in WAUKESHA COUNTY?

That there is more long and short time production work done in WAUKESHA than in any other county in Wisconsin, the greatest dairy state in the Union?

That WAUKESHA contains more tuberculin tested cattle than any other county in the world?

That WAUKESHA breeders have more dollars invested in Holstein-Friesian cattle than any other county in the world?

That WAUKESHA COUNTY produced the highest priced dairy cow in the world?

That bred for production stock pays?

WAUKESHA BREEDERS can supply your Holstein wants.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin. - - Office 254 Broadway

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

HOLSTEIN BULLS

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke age over 37 lbs. butter in 7 days. Come

WISCONSIN STAR STOCK FARM,

AND HEIFERS ! !

dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams aver- and see them or write to

ED. M. SHULTZ, HARTFORD, WIS

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

Oconomowoc, Waukesha Co., Wis.

Minnesota Holstein Breeders' Association

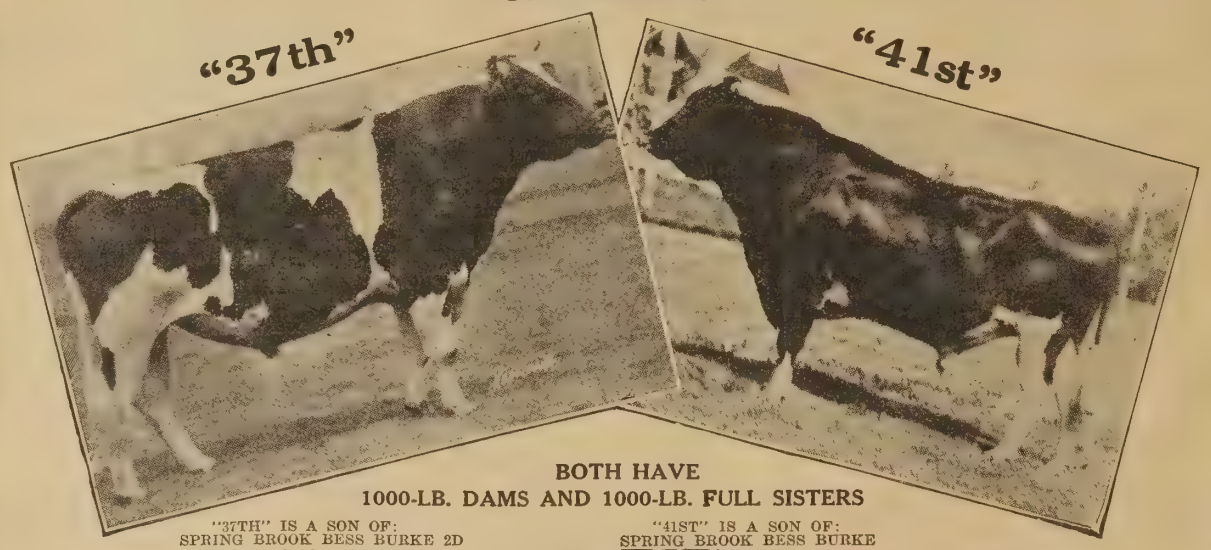
Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

SIR PIETERTJE ORMSBY MERCEDES

"THE WORLD'S GREATEST YEARLY RECORD SIRE"

OUR HERD SIRES



BOTH HAVE
1000-LB. DAMS AND 1000-LB. FULL SISTERS

"37TH" IS A SON OF:
SPRING BROOK BESS BURKE 2D
Butter, 365 days 1,290.91
Butter, 3 years 3,380.14
"The World's Largest Dairy Cow"

"41ST" IS A SON OF:
SPRING BROOK BESS BURKE
Butter, 365 days at 9 yrs. 1,094.16
Butter, 3 years 2,903.93
"The Greatest Mother of the Breed"

E. C. SCHROEDER FARMS, - MOORHEAD, MINNESOTA

(A FEDERAL ACCREDITED HERD)

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm
William Schmidt, Prop. St. Peter, Minn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

YOU WANT

a bull calf from a healthy herd. YOU WANT him to be from a young dam that has not reached her maximum production. You want him sired by a high record bull with yearly record backing. If you get a splendid individual, to boot, you have no kick coming. We have just what you want. Come and get it or send for our bull list right now.

FLECKS FARMS, - Faribault, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

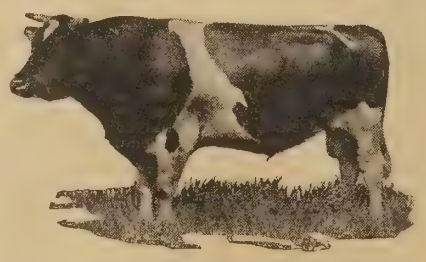
Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - E. GRAND FORKS, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

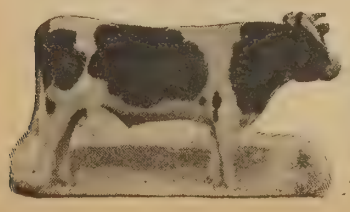
Address correspondence to Axel Hansen, formerly with John B. Irwin.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

HOLSTEIN BULLS

Ormsby Bred **Ready For Service**

from A. R. O. Dams Running on the 10-month test.

We are now able to offer bulls that are well grown, straight, deep bodied individuals, that combine in the closest possible degree, the blood that has made Minnesota famous. They are priced from $200 and up and we will make a lot price to breeders' clubs or county agents desiring bulls of the best breeding to place on the farms of their counties. We are also able to offer a few cows, to freshen in the fall, to the service of our herd sire, he by the only living son of PIETERTJE MAID ORMSBY and out of the highest record daughter of KING SEGIS PONTIAC COUNT.

Write or come and see us, farm just outside of city limits of St. Paul.

RAMSEY COUNTY HOME, - North St. Paul, Minn.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d, a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

Here's Your Chance to Get a Choice Bull

From a sire whose 4 nearest dams averaged 29 lbs.

❖ Born November 1916 Black and white ❖ Born February 1917 Black and White ❖ Born May 1917 Black and White ❖

3 Choice Bargains

L. H. HUNTER, RANDOLPH, MINN.

Grandsons of Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

TOYON FARM ASSOCIATION

Mills Building San Francisco

AMERICA'S ONLY HERD OWNING EXCLUSIVELY TWO SONS OF SIR PIETERTJE ORMSBY MERCEDES

SIR PIETERTJE ORMSBY MERCEDES 43d
Dam's record 1250.35 lbs.

SIR PIETERTJE ORMSBY CANARY
Dam's record, 3½ yrs. - 862.88 lbs.
Dam's dam's record - 1009.87 lbs.

SIR AAGGIE MEAD
His 5 nearest dams average 1177 lbs.

350 HEALTHY HOLSTEINS—UNDER FEDERAL SUPERVISION

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH

WHEATFIELD FARMS

A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.

Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS

J. C. Dold, Owner. R. F. D. No. 14, LA SALLE, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - SYRACUSE, NEW YORK.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

FOR SALE

2 Choice Holstein Bulls

One age 11 months with 23-lb. dam, sire 31-lb. son of King of the Pontiacs. No. 2. Age 6 months, dam 27-lb. 4-year-old, sire 31-lb. son of King Walker Segis.

CLARK & SICKMON, HONESDALE, PA.

Will Sell at Auction

August 17, 1920

My Entire Herd of 36 Head of Holsteins

Fairview Dairy, Pittsburg, Kansas

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **C. I. Reamer, North Liberty, Ind.**

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

King Segis Bred Bulls

We have a limited number of calves and yearlings of KING SEGIS breeding.

Each individual has been picked from heavy producing dams and sires, many with large A. R. O. records and containing the best foundation blood of the breed.

Prices are reasonable. Write for pedigrees.

G. G. BURLINGAME, - CAZENOVIA, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Ernella Farm

OFFERS

17 - Females - 17

Six mature cows, 2 to 6 years old, fresh and bred to a 37.14-lb. son of King Segis Champion and a 27-lb. son of King Pontiac Hengerveld Fayne, the $100,000 bull recently purchased by Cold Stream Farms. Eleven yearling heifers, well bred, well grown and nicely marked.

Herd under State and Federal supervision. Bargain prices.

E. S. RACE, - BELVIDERE, N. J.



What Kind of Tires does the Thinking Farmer want

FARMERS are too busy getting results these days to pay much attention to selling talk

The tire that has nothing to show by way of performance, other than the mere desire of some dealer to dispose of it, has a harder time getting by with them than it ever had.

Revere Tires have a record of *service* and *economy* that extends back to the day when the first Revere Tire was built.

A record based on the *ceaseless and unending care* which the Revere Rubber Company has taken to see that *all of its tires* live up to what thinking farmers expect of them.

Wherever you find a Revere Dealer, you find a man who is thinking more of what the farmer needs and expects than of how many tires he can dispose of.

Trusting in the *established* record of Revere Tires to bring him that repeating custom which is the basis of all good business.

If what you are looking for is a *reliable* tire—a tire that *delivers economy* not sometimes only, but *always*—not in one size alone, but *in all sizes*—you will do well to get in touch at once with the Revere Tire Dealer in your neighborhood.

REVERE
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COMPANY
1788 Broadway
New York



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HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Fort Atkinson, Wisconsin Vol. LX, No. 5 August 20, 1920

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
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We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Early Experience With Sunflower Silage

HOARD'S DAIRYMAN:—Nearly twenty years ago several Delaware County (New York) dairymen became interested in the combination silage of corn and sunflowers. While this silage gave very universal satisfaction, it soon was discontinued for the pure corn silage for the following reasons: 1st, sunflower seed became scarce and hard to get and rather expensive for large fields of the silage; 2nd, the harvesting of the combined crop was very hard. Sunflowers in full head for cutting as silage are very top-heavy, and corn for silage is very heavy at the bottom of the stalk. The result is that the combined crop is very difficult to handle, as one tips one way and the other the other way when being picked up in the field for loading. It is thus a rather slow and hard crop to harvest, and the big heads are also difficult to run through a cutter with corn. Some of the dairymen overcame some of this difficulty in harvesting by planting the crops separate in the fields, and when filling silos they cut alternate loads of the two crops. The handling was better and results from silage the same. In the last fifteen years little has been grown here.

Youngs, N. Y. O. F. S.

Under normal conditions the best time to cut corn for silage is when the kernels are well dented, and about one-fourth of the husks and the lower leaves are drying up. Mature corn has a greater nutritive value and will make better silage than too green corn, providing it contains enough moisture to insure good fermentation. The best guide as t time of cutting under unfavorable conditions is when the corn ceases to grow.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Two things make me as mad as a roost full of wet hens—one is to watch an infernal big black crow just waiting until I go back in the house, and the other is the sight of a fat rat in the corn crib.

Vacation Time

"Going to leave the farm and go on a vacation after the crops are all in?"

"Yep."

"How long you going to be away?"

"Two weeks longer than usual, I know I'll be that much happier and better satisfied when I return."

"Healthy out here in the country, isn't it?"

"Well, I'm not so sure. Grandpa Egbert passed away last Friday, and he was still a young man."

"What was his age?"

"Oh, he was only ninety-seven. But I guess he got sort of careless on wet days when he went for th' cows."

Home Once More

Home once more—and heart beats high,
Pulse is like a leaping mare.
There's a new joy in the sky,
Peace is round me, everywhere.
At the sharp turn of the road,
On the hill I stand and look,
Down to little clumps of trees,
Softly stirring in the breeze,
And a vagrant, fretful brook.

Home once more—I see the smoke,
Rising upward, and the field,
See dim forms o' farmin' folk,
In God's golden sun revealed.
Red roads winding off and on,
Lanes where herds are won't to go,
Silo, gleaming in the light,
And the face of earth is bright,
Ah! I knew it would be so!

Home once more—a thousand years
Must have passed since yesterday!
In between, the doubts and tears,
Cities—heartaches—grim dismay!
Now, there in the valley's lap,
Home smiles up at me, and I
Feel the quick, glad leap of bliss,
Feel a farmer-mother's kiss,
Underneath the unspoiled sky!

It makes me smile every time I see a city feller turn up his nose at sight of farms and farmers. I know how soon he'd turn up his toes to the daisies if both of them should suddenly stop.

The Farm Hand that Succeeds

He is kind to animals because he loves them.

He wants to see the farm make good.

He works by the sun, not a clock.

He is as kind to cows as he would be to women.

He is patient with young farm lads.

He never stops until a job is done.

He sees the almost holy side of soil.

He cultivates his mind while he cultivates the ground.

He finally marries a country girl
And
He lives happily forever after.

All life is like a county fair; everybody can't expect to win a cup or a blue ribbon, but we can at least have lots of folks pass and admire us for the good qualities we possess.

A great many tributes have been paid to milk, but we'd like to see one written by a six-month-old baby. Then you'd have a document worth keeping.





A New

De Laval

Cream Separator

Quickly pays for itself in these times of high butterfat prices and scarcity of labor. It does so doubly quick if your present separator is too small, half-worn-out, or you have none at all.

The De Laval Separator skims cleaner, is easier to turn and wash, and lasts longer—that is why there are more De Lavals in use than all other makes combined.

The De Laval is the World's Standard Separator.

A De Laval purchased now will pay for itself before Spring.

See the nearest De Laval local agent at once, or write the nearest De Laval office below for any information desired.

The De Laval Separator Co.

165 Broadway, NEW YORK — 29 East Madison Street, CHICAGO — 61 Beale Street, SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

Uncle Sam's Hired Men Who Serve You

Dr. L. O. Howard, Chief of the Bureau of Entomology, Veteran Campaigner Against Bugs, Probably Saves American Farmers a Billion Dollars a Year

DIXON MERRITT

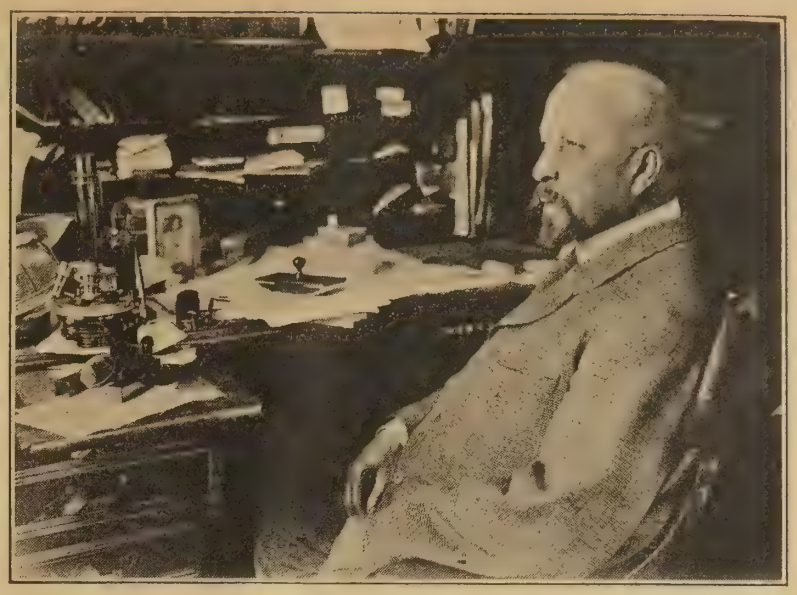
This is the second of a series of articles prepared by the United States Department of Agriculture, and which we are publishing at the request of Secretary Meredith, to acquaint our readers with the type of men who are making possible the wonderful service the Department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—Editor.

HALF a billion dollars a year is a pretty big estimate to put on the value of a man's services, but Dr. L. O. Howard, chief of the Bureau of Entomology of the United States Department of Agriculture, is worth that to the farmers of the United States. That is my estimate. Estimates from different sources vary. Dr. Howard himself, a conservative man and modest, is inclined to put it at about a hundred million. Here is the basis of my own estimate: Insects annually destroy about 10 per cent of the possible production of crops in the United States. If it were not for the general use of remedies found by the Bureau of Entomology, the loss would be 20 per cent. The difference between 10 per cent and 20 per cent of the crops of the United States is a billion dollars, easily. Then, just to be conservative, I cut that in half, and call it the annual value of Dr. Howard's services.

You see I am using "Dr. Howard" and "the Bureau of Entomology" as interchangeable terms. That is not scientifically accurate and Dr. Howard would object to it, but all the other people in the Bureau would be inclined to let it pass. He has been there so long—42 years—and has been so closely associated with all the work of protecting farmers against insects that one is justified in thinking of the bureau in terms of Howard.

The people who work with him say that Dr. Howard is the most exacting man in the world—with himself. With everybody else he is almost the opposite, they say. His men must get results, but Howard does not waste any time quibbling over methods. And yet, perhaps, there is a good deal of method in that trait of his. It has the effect of encouraging personality, of developing men who do things more effectively by impressing their individuality on the work. Somebody said of Dr. Howard a good many years ago that his work had less of academic assumption than any other scientific bureau in the government. Dogma finds no place in his thought. He does not believe that it is any of any man's business how any other man thinks.

When Dr. Howard came to the Department of Agriculture 42 years ago, economic entomology was not sure of its social position among the sciences. Other sciences looked upon it askance. Men were inclined to feel that entomologists partook of the diminutive nature of the creatures they study. That is not true now and has not been true for a good many years. Dr. Howard says, modestly, that he has "probably helped the appreciation of economic entomology as a scientifically based thing among other scientific men." Other scientific men say that Dr. Howard, by his work in the Department of Agriculture, has been the dominating force in making economic entomology a great science and recognized as such.



DR. L. O. HOWARD, CHIEF, BUREAU OF ENTOMOLOGY, U. S. DEPARTMENT OF AGRICULTURE

I suspect, however, that the value of the science is not yet thoroughly understood by people generally. Let me point out a few things that have been accomplished by one of Dr. Howard's specialties—the study of the parasites of insect pests.

The fluted or white scale of California was inflicting tremendous injury upon the citrus-fruit industry. The Department of Agriculture introduced from the Orient a lady-bird beetle, a natural enemy of the scale. The result was the speedy reduction of scale to negligible numbers and the saving of the citrus industry of the Pacific Coast.

Nearly 50 years ago, an instructor at Harvard had a fad for moths. Entomology was not his work, but he was playing at it. He had imported a number of moths and caterpillars from Europe. A storm destroyed his netting enclosure and liberated some of the caterpillars. Twenty years later, the gypsy moth progeny of some of those escaped caterpillars having increased unnoticed till that time, appeared as a pest and threatened the destruction of orchard, shade, ornamental and forest trees. The plague spread to Maine, New Hampshire, Rhode Island, and Connecticut. The states and the federal government began a campaign of control. Dr. Howard made several trips to Eu-

(Continued on page 168)

FEED FLIGHTS AND PROTEIN

A. C. McCANDLISH, IOWA

TWO years ago the limits of $20 and $40 per ton included the prices of practically all the common feeds used on the farm. But now if the upper limit be doubled it will not reach the height which some feed prices have attained within the last few months. This means that the dairy farmer has to exercise greater care than ever before in the selection of the concentrates he purchases to supplement his home-grown feeds.

The farmer of the Middle West is independent of the rest of the world except for one thing: he grows all the feeds he needs but his high-protein concentrates. Consequently, he should aim to produce as much protein as possible on the farm with a view to limiting the amount he will have to purchase and in buying feeds he should see that he uses the most economical source of protein available.

The dairy cow for maximum production needs a liberal ration containing large amounts of protein and one of the easiest and cheapest ways of providing some of this protein is by means of a home grown legume hay—alfalfa or clover. Such a roughage will not necessarily reduce appreciably the amount of grain that a cow will require for production but it will aid in minimizing the amount of protein needed in the grain ration.

In purchasing protein concentrates it should be kept in mind that digestible protein is the material desired and the prices paid should to a large extent be in accordance with the amount of protein supplied by the feed.

All protein feeds contain carbohydrates and fats but the necessity of purchasing these is not great as they can be produced cheaply on the dairy farm. Allowance for their presence in a concentrate must be made however. A convenient method is to allow one dollar per hundred pounds for the digestible carbohydrates and two dollars and a quarter per hundred pounds for the digestible fats in a feed and charge the rest of the cost to the digestible protein. This is not allowing as much as might be considered an equitable value for the carbohydrates and fats but it is useful for comparative purposes. In this way the cost of each hundred pounds of digestible protein in any of the common concentrates can be obtained and the accompanying table has been prepared in this way.

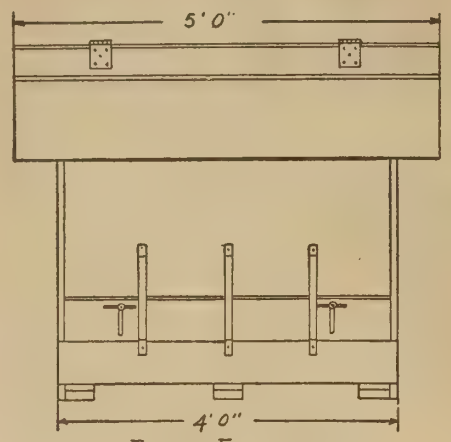
COST PER 100 LBS. OF DIGESTIBLE CRUDE PROTEIN IN CONCENTRATES AT VARIOUS PRICES

Cost per ton	$32	$38	$42	$44	$50	$54	$56	$60	$62	$66	$68
	COST PER 100 LBS. OF DIGESTIBLE CRUDE PROTEIN										
Feeds											
Corn, whole	$10.91	$14.91	$17.57	$18.91	$22.91	$25.57	$26.91	$29.57	$30.91	$33.57	$34.91
Corn meal	12.04	16.39	19.29	20.74	25.09	27.99	29.43	32.33	33.78	36.68	38.13
Corn and cob meal	14.43	19.34	22.29	24.26	29.18	32.46	34.10	37.38	39.02	42.20	43.84
Hominy feed	11.77	16.06	18.91	20.34	24.63	27.49	28.91	31.77	33.20	36.06	37.49
Gluten feed	4.67	6.06	6.99	7.45	8.84	9.72	10.23	11.15	11.61	12.54	13.00
Gluten meal	3.52	4.51	5.17	5.50	6.50	7.16	7.49	8.15	8.48	9.15	9.48
Germ oil meal	5.70	7.52	8.73	9.33	11.15	12.36	12.97	14.18	14.79	16.00	16.61
Red Dog flour	6.46	8.49	9.84	10.51	12.54	13.89	14.57	15.92	16.59	17.95	18.62
Wheat shorts	7.77	10.01	11.50	12.25	14.49	15.98	16.72	18.22	18.96	20.46	21.20
Wheat bran	8.93	11.33	12.93	13.73	16.13	17.73	18.53	20.13	20.93	22.53	23.33
Oats, whole	10.24	13.33	15.39	16.42	19.52	21.58	22.61	24.67	25.70	27.76	28.79
Oats, ground	10.57	13.77	15.89	16.96	20.15	22.28	23.34	25.47	26.53	28.66	29.72
Barley	9.96	13.29	15.51	16.62	19.96	22.18	23.29	25.51	26.62	28.84	29.96
Malt sprouts	5.40	6.88	7.87	8.36	9.84	10.82	11.32	12.30	12.79	13.78	14.27
Brewers dried grains	5.39	6.78	7.71	8.18	9.58	10.50	10.97	11.90	12.36	13.29	13.76
Cottonseed meal	3.21	4.02	4.56	4.83	5.64	6.18	6.45	6.99	7.26	7.80	8.07
Cold-pressed cottonseed (cake)	5.22	6.64	7.59	8.07	9.49	10.44	10.91	11.86	12.33	13.28	13.75
Linseed oil meal (O. P.)	3.72	4.71	5.37	5.71	6.70	7.36	7.69	8.35	8.69	9.35	9.68
Cowpea	5.31	6.86	7.89	8.40	9.95	10.98	11.49	12.53	13.04	14.07	14.59
Field pea	5.41	6.99	8.04	8.57	10.15	11.20	11.73	12.78	13.31	14.36	14.88
Soy bean	3.41	4.39	5.04	5.37	6.35	7.00	7.32	7.97	8.30	8.95	9.28
Distillers dried grains (corn)	4.17	5.51	6.41	6.85	8.19	9.08	9.53	10.42	10.87	11.76	12.21
Distillers dried grains (rye)	7.88	10.09	11.56	12.29	14.50	15.96	16.71	18.18	18.91	20.38	21.12

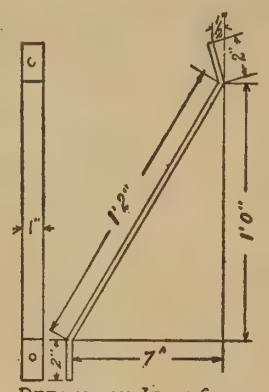
As an illustration of the use of the table it may be noted that when wheat bran is costing $36, oil meal (O. P.) $64, and cottonseed meal $70 per ton, the respective costs of 100 lbs. of digestible crude protein in the three feeds are $10.53, $9.02, and $8.34. The prices used have been chosen arbitrarily to demonstrate that the feed purchased at the lowest cost per ton is not necessarily the cheapest source of protein. In this case the reverse is true.

When the price of a feed is known the table can be used to determine the cost of protein in the feed but it should be remembered that this proceeding has certain limitations. Some concentrates such as hominy feed are not purchased for the protein they contain, but for the energy supplying carbohydrates and fats they provide and so they can not be properly evaluated in this way. Again, in some cases, cottonseed meal would be the wrong feed to use even if it provided protein at a lower cost than did oil meal. Oil meal is a safe feed under all conditions but cottonseed meal can not be satisfactorily used where there is no succulence such as silage or roots in the ration. On the whole, however, it may be said that the main nutrient the corn belt dairy farmer has to purchase is protein and he should get his protein as economically as possible.

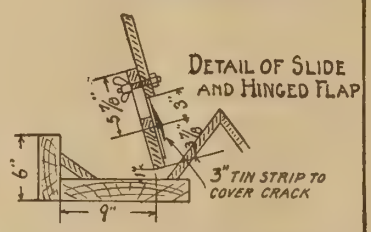
BUILDING SELF-FEEDERS FOR HOGS

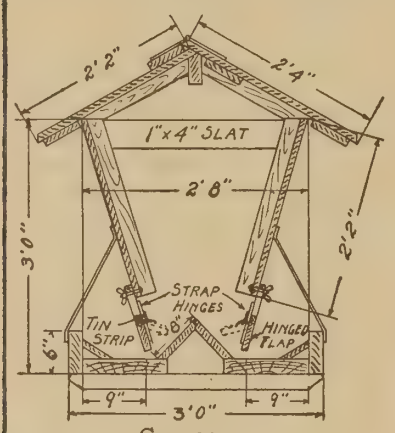


FRONT ELEVATION



DETAIL OF IRON STRAP





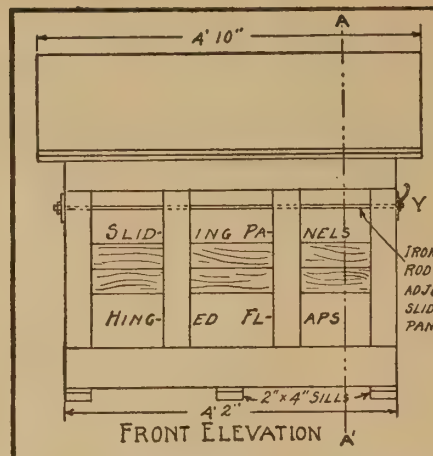
SECTION

BILL OF LUMBER			
NAME	NO.	DIMENSION	BD. FT.
TROUGH	1	2"×12"×8'	16
"	1	2"×6"×8'	8
"	1	1"×4"×14'	4⅔
RIDGE & SKIDS	1	2"×4"×14'	9⅓
CORNERS	1	2"×2"×16'	5⅓
COVER CLEATS	2	1"×6"×10'	10
SLIDE	1	1"×6"×8'	4
"	1	1"×4"×8'	2⅔
DEFLECTOR	1	1"×8"×8'	5⅓
COVER & SIDES	13	1"×6"×12'	78 D.M.
TOTAL 2" STUFF			38⅔
" 1" "			104⅔

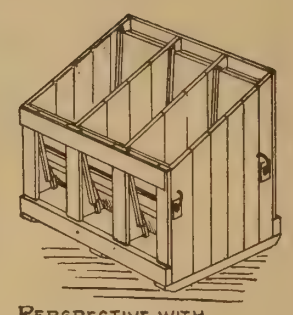
HARDWARE
4 - ½" BOLTS WITH THUMB NUT
2 - 5" T HINGES
8 - 3" STRAP HINGES
6 - ¼"×1" IRON STRAPS
16 & 8 PENNY NAILS

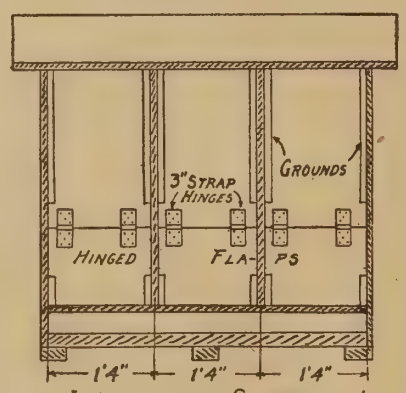

PERSPECTIVE WITH ROOF REMOVED

LARGE, TWO-WAY, SINGLE COMPARTMENT SELF-FEEDER

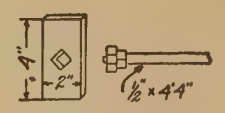


FRONT ELEVATION

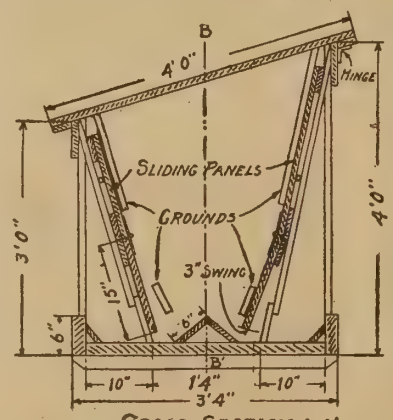

PERSPECTIVE WITH ROOF REMOVED



LONGITUDINAL SECTION B.B'.



IRON BOLT



CROSS SECTION A.A'.

BILL OF LUMBER			
NAME	NO.	DIMENSION	BD. FT.
TROUGH	1	2"×12"×12'	24
"	1	2"×6"×10'	10
"	1	1"×6"×8'	4
THROUGH & CLEATS	5	1"×4"×8	13⅓
FRONT	2	1"×4"×12'	8
"	1	1"×6"×10'	5
SILLS	1	2"×4"×10'	6⅔
SLIDES	5	1"×6"×14'	35 D.M.
"	2	1"×6"×12'	12 " "
TOP	2	1"×8"×16'	21⅓ "
PARTITIONS	8	1"×8"×12'	64 " "
TOTAL 2" STUFF			40⅔
" 1" "			162⅔
STRIPS (GROUNDS) 66 LINEAR FEET			

HARDWARE
2-½"-4'4" BOLTS WITH WINGED NUTS
4- PLATES ¼"×2"×4"
2 - 5" T HINGES
12 - 3" STRAP HINGES
16 PENNY NAILS
8 PENNY NAILS

THREE COMPARTMENT, TWO-WAY SELF-FEEDER

SELF-FEEDING growing and fattening pigs saves time, labor, feed, and therefore money. A self-feeder is simply a box or hopper so constructed that when filled with grain or other dry concentrates it will feed down into a trough and keep a certain amount of the grain before the hogs at all times.

Less labor required. Instead of making a young farm lad carry heavy swill pails in slopping the hogs two or three times a day, try filling a self-feeder, which can be done handily from a wagon, once or twice a week. The pigs can be cared for this way in less than half the time that it takes for hand feeding. Then, too, the pigs can be fed out on good clover pasture, far removed from the farmstead and free from the microbes and parasites in the dust of the hog-lot. It is necessary to see daily that the self-feeder is delivering the feed to the trough. Bulky feeds and ground feeds tend to clog in the hopper and need to be poked down, which is a simple matter and requires practically no extra work, as a good pig-man inspects his herd each day anyway.

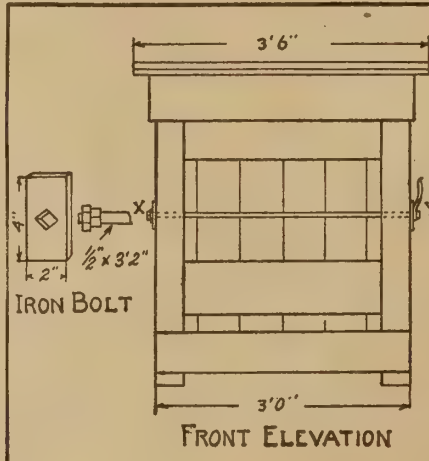
More rapid gains and earlier market. Self-fed pigs make more rapid gains than when hand fed, requiring a shorter time to reach a marketable weight, thus saving labor and also getting the pigs on an earlier market, which is generally higher.

Cheaper gains. The younger a pig is the less feed he requires to make a hundred pounds gain. Consequently, since a self-fed pig is pushed harder, he usually gains faster, matures younger, and requires less feed for each hundred pounds gain, thus making cheaper pork. This has been proven by actual experiments.

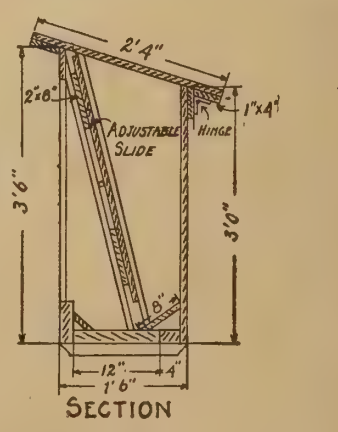
Where plenty of skimmilk or buttermilk is available there is no need to purchase tankage or oil meal. Merely self-feed corn or ground barley and in addition feed enough of the dairy by-products by hand twice a day to balance the ration.

Points of a good self-feeder. It should be cheap, durable, weather tight, roomy, easy to construct, easily regulated for different kinds of feeds, and so built as to feed into the trough with but very little clogging of the feed. The trough should be so constructed that it is impossible for feed to be thrown out by the pigs.

(The accompanying illustrations and printed matter are reprinted through the courtesy of the Wisconsin College of Agriculture.—Editors.)



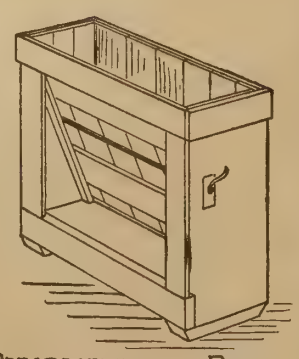
IRON BOLT
FRONT ELEVATION



SECTION

BILL OF LUMBER			
NAME	NO.	DIMENSION	BD. FT.
TROUGH	1	2"×12"×3'	6
"	1	2"×6"×3'	3
"	1	2"×4"×6'	4
BACK, SIDES, COVER	7	1"×6"×12'	42
CLEATS	2	1"×4"×10'	6⅔
"	1	1"×8"×10'	6⅔
TOTAL 2" STUFF			13
" 1" "			55⅓
STRIPS (GROUNDS) 12-LINEAR FEET			

HARDWARE
1-½"-3'2" BOLT WITH WINGED NUT
2- PLATES ¼"×2"×4"
2 - 4" T HINGES
8 & 16 PENNY NAILS


PERSPECTIVE WITH ROOF REMOVED

SMALL, ONE-WAY SELF-FEEDER

FEEDING AND CARING FOR SWINE

THE Wisconsin College of Agriculture passed out at last year's state fair a bulletin, entitled "More Pork for Wisconsin", the authors being F. L. Morrison, G. Bohstedt, and M. H. Scott. This bulletin is so well filled with the meat of the best methods of feeding and care of swine that it should have wider circulation than one state. In consideration of this we present the major portion of this bulletin to the readers of Hoard's Dairyman:

Perhaps the most important essential to real success in the hog game is the proper feed, care, and management of the brood sow. Unless she is given the proper attention, large and thrifty litters can not be expected. The feed and care from breeding time to the weaning of the pigs is of especial importance. It is during this most important stage of their development that Mrs. Hog will do all in her power to make the "little future porkers" strong and thrifty, if we but give her a chance by seeing that she gets:

1. The right kind of feed—especially plenty of protein and mineral matter.
2. The right amount of feed—not fattening.
3. Plenty of exercise.
4. Comfortable quarters—dry, ventilated, well lighted.
5. No sudden changes of feed.
6. No rough treatment.
7. Freedom from worms, lice, and constipation.

How to Produce More Pork

1. Feed and care for your brood sows right.

2. Use pasture crops for all classes of swine throughout the growing season.

3. Have self-feeders, use them, and use them right.

4. Grind your barley and feed it to hogs.

Feed Clover or Alfalfa in Winter

It is very important that during pregnancy and the suckling period we feed the sow plenty of protein-rich feeds such as skimmilk, buttermilk, or tankage, and plenty of mineral matter which is contained in the above protein feeds and especially in the pasture crops. These feeds are the muscle and bone builders and are absolutely essential if we want strong, thrifty pigs that will make economical gains after they are weaned. We cannot over-emphasize the importance of feeding alfalfa or clover hay in racks to the sows during the winter months. It takes the place of pasture in the winter when the latter is not available, in furnishing bulk and additional protein, mineral matter, and vitamines. Roots, too, are fed to good advantage during the winter, as they provide succulence and are laxative.

Brood sows should not be allowed to become fat but should be kept in good, thrifty condition. From breeding to farrowing time (114 days), we should feed enough to cause yearling and older sows to gain about 70 lbs., while gilts should gain from 80 to 100 lbs. during this period.

The following are good rations for pregnant sows in winter:

(1). 94 lbs. corn, fed on ear.
6 lbs. tankage.
Alfalfa or clover hay in rack.

(2). 96 lbs. ground barley.
4 lbs. tankage.
Alfalfa or clover hay in rack.

(3). 35 lbs. ground barley or corn.
30 lbs. ground oats.
30 lbs. middlings.
5 lbs. tankage.
Alfalfa or clover hay in rack.

(4). 70 lbs. ground barley or corn.
25 lbs. chopped alfalfa hay.
5 lbs. tankage.

The above mixtures may be fed either dry or in thick slop. There is, on the whole, no advantage in slop over dry feeding.

In trials at the College of Agriculture during the past three winters, no ration has excelled No. 1. We simply feed one-fourth to one-third pound of tankage per head daily in a trough, and enough ear corn to keep the sows in good condition. This is usually 4 to 6 lbs. a head daily. In addition they have all the alfalfa or clover hay they want in a rack. Roots can be fed along with this ration to advantage, saving corn.

If other protein-rich feeds are substituted for tankage in the above mixtures it should be in the following proportion: 1 pound of tankage is equivalent to 2 lbs. of linseed oil meal, 15 lbs. of skimmilk or buttermilk, or 30 lbs. of whey.

Make the sow take exercise for it is necessary for her own health as well as to produce a strong litter. It is often advisable to shut her out of the shed during the middle of the day for a couple of hours and to feed her some distance from her sleeping quarters. Keep the sow free from lice and worms, and avoid constipation.

At Farrowing Time

Four or five days before a sow is due to farrow (this is best told by keeping a record of breeding) separate her from the rest of the herd, put her in the farrowing pen so that she will become accustomed to it before farrowing, allow her exercise daily, and be sure that her bowels are in a laxative condition. Some bran and oil meal in a slop as a part of her ration will aid in preventing constipation and also in avoiding a feverish condition of the sow after farrowing. If it is necessary to resort to a purgative, 3 or 4 ounces of Epsom salts will loosen her bowels. The two adjacent sides of the pen in the corner where the sow makes her nest should be supplied with fenders, that is, 2 by 8's bracketed to the sides about 8 or 9 inches from the floor. This is to furnish a refuge for the newly born piglot so they will not be squeezed against the wall nor lain on by the mother.

At farrowing time be sure the bedding is fresh and clean, not too long and not too much of it—better too little than too much. It is well to spray the pen with a good coal tar disinfectant once or twice a week—this to prevent white scours in the pigs. Also avoid sudden changing of the sow's feed for this will produce sickness and scours in the pigs.

If the sow is restless at farrowing time the pigs should be put in a warm basket as they arrive and after all are born and the sow is quiet, carefully place them, one at a time, at teats. This should be done as soon as possible.

For the first 24 hours after farrowing give the sow no food, but be sure that she gets all the lukewarm water she will drink.

It is advisable to cut the wolf teeth of the pigs close to the gums by means of nippers which will tend to keep the sow quieter and prevent the pigs scratching each other up in fighting.

Feed Mixtures After Farrowing

It takes about 10 days to get the sow on full feed after farrowing. It must be done slowly and the feed increased only gradually. After 10 days or two weeks give the sow all she will clean up three times a day. The following mixtures are good for suckling sows:

(1). 40 lbs. ground barley or corn.
20 lbs. middlings.
30 lbs. ground oats.
6 lbs. tankage.
4 lbs. chopped alfalfa.

(2). 50 lbs. ground barley or corn.
35 lbs. middlings.
10 lbs. oil meal.
5 lbs. tankage.

(3). 50 lbs. ground barley, corn, or oats.
50 lbs. middlings.
Fed with sweet skimmilk or buttermilk.

Plenty of exercise is essential at this time for both sow and litter. It keeps the pigs from becoming too fat and developing thumps which kills and stunts large numbers of pigs every year. Get the sows and litters out on pasture as early as possible. Bluegrass is good for early pasture. It is well to have a creep for the little pigs where they can be fed separately, after two or three weeks old, ground barley, cracked corn, and tankage. Fresh skimmilk is much better for the little fellows than tankage and will surely make them grow.

Castration is done with best results when pigs are about 6 weeks old; that is, about two weeks before weaning. At weaning time the sow's ration should be limited so as to prevent udder trouble. It may be necessary to turn the pigs in for a few minutes every other day for awhile.

It is well to start self feeding the pigs in their creep long before they are weaned. They will scarcely miss their mother, especially if a little fresh skimmilk can be given them at this time. You can feed ground barley or corn and tankage or oil meal in separate compartments of a self-feeder, and be sure and have the pigs on good pasture.

After the sows have dried up, the ones that for any reason are not desirable mothers for next year's crop will be culled out and fed for market, preferably in self-feeders on pasture. Those that will be kept over will be run on pasture with enough concentrates to keep them thrifty. Make them rustle for forage during the summer—the exercise is good for them.



GROWING PIGS WILL MAKE GOOD USE OF PASTURE AND WILL MAKE CHEAPER GAINS ON PASTURE THAN THOSE KEPT IN A DRY LOT

Pasture Crops for Hogs

Pasture crops reduce the cost of pork production 20 per cent. Good pasture for all pigs throughout the growing season (from early spring till late fall) is of the greatest importance. Not only do pigs make cheaper gains, but the green succulent feed and the exercise they obtain aid greatly in keeping them thrifty and in good condition.

Another advantage in having hogs on pasture is the fact that the manure is evenly distributed over the field and none wasted as is the case when pigs are fed in dry lot.

To study the actual advantage in dollars and cents, of feeding hogs on pasture as compared with dry-lot feeding, and to find the comparative values of the various pasture crops for Southern Wisconsin, trials have been carried on at the College of Agriculture for the past there years. In these trials the pigs have been fed from a weight of about 50 lbs. until they reached market weights of 200 to 225 lbs.

The table on this page illustrates the advantage of pasture over dry-lot feeding. It is a comparison of a lot self-fed corn and tankage on rape pasture with the same combination of feeds fed in dry lot. The average results for three consecutive years are given.

The "no pasture pigs" made fair gains, for they were fed the excellent combination of corn and tankage. But the more fortunate ones getting rape pasture in addition gained considerably faster and required 52 lbs. less corn and 20 lbs. less expensive tankage for each 100 lbs. gain. On rape pasture the return per acre over the cost of corn and tankage was $99.21 with feeds and pork at the average prices during the three years but at 1918 prices the return per acre was $147.06. Even though fed the excellent ration of corn and tankage the "no pasture" pigs returned but $53.19 over the cost of the corn and tankage at average prices for the three years, or $75.95 at 1918 prices.

Comparing the returns from the pigs on rape pasture with those having no pasture, we find that an acre of rape was worth $46.02 at average prices for the three years and $72.01 with feeds and pork at 1918 price.

(Continued on page 180)

Pasture vs. No Pasture, Average of 3 Years

	Average daily gain	Feed for 100 lbs. gain		Return per acre over cost of corn and tankage	
		Corn	Tankage	Av. prices	1918 prices
	lbs.	lbs.	lbs.		
Rape pasture	1.30	377	26	$99.21	$147.06
No pasture	1.06	429	46	53.19*	75.05*

*Return for same number of pigs as on an acre of rape.

Bull Selection and Management

C. O. LEVINE, IOWA

THERE is no animal more important on the dairy farm than the bull. He is at least half the herd; in that half the blood in every calf produced is his. In spite of this important fact, the head of the herd is often given the least attention of any one individual on the farm. The prevalent idea of many farmers seems to be that any old animal is good enough, just so that he is able to produce live calves.

If success is to be obtained in the dairy industry, there are certain fundamental factors that one must consider in selecting the animal which shall largely determine the future producing capacity of the herd.

First of all is the question of breed. If the majority of cows in the herd contain a high per cent of blood of one of the dairy breeds the farmer should select a bull of the breed which his cows chiefly represent.

In localities where a certain dairy breed predominates, and seems to be the most popular for that particular locality, it is best to get a bull of that breed; and if the farmer does not already have good cows of that breed, several high grade cows of the same breed should be purchased. The dairy farmer will in time have surplus animals to sell, and, if he later secures pure-bred cows, he will have young bulls to sell. In the long run he will be better able to sell animals of the most popular breed than he will those less known.

It is comparatively easy to decide on the breed, but finding the right individual animal is often a difficult problem.

First of all, the bull should be healthy, growthy, and have a strong constitution which is indicated by heart girth. We don't want a sickly, runty, slab-sided individual at any price, no matter what his pedigree shows. If the animal under consideration is some distance away, and time does not permit a journey to see the bull, insist on getting a photograph of the animal. While the photograph will not take the place of the animal himself in determining his physical make-up, it does give some indication of what the animal is.

Careful consideration must be given to the breeding of the bull. The pedigree in itself means but little. It is what the pedigree tells about the near relatives of the bull that is of importance. If the sire of the bull under consideration is out of a cow with a good production record, or the sire himself has sired heifers that have developed into good producers, and the dam is a good producer, and out of good producing ancestors, the chances are that the animal will himself be a producer of heifers that will develop into good milkers.

Another problem for the farmer who is inexperienced in buying breeding stock is the age of the bull. Shall he buy a young, untried bull, or shall he buy an older bull whose breeding qualities are pretty well known? If a good mature bull, that is known to be a producer of good cows, can be secured at a reasonable price, the mature bull is generally to be preferred.

The price to pay for a bull is another problem to consider. Sometimes good, young, untried bulls with high producing ancestry can be procured at a very reasonable price. Sometimes the reverse is true, as is shown by recent sales where untried animals have sold for amounts running up into the sixth figure. As a rule, a farmer just beginning to build up his herd with good dairy sires, and who has no pure-bred females, should not pay more than $500 for a bull. Good bull calves around six months, with good producing parents, can sometimes be purchased at from two to five hundred dollars each.

Tuberculosis and contagious abortion are two diseases to guard against in buying a bull. Always demand an official certificate, showing that the bull is free from tuberculosis. The certificate should show that the bull has been tested for tuberculosis within the past year. It is best to buy with the understanding that if the bull reacts to the tuberculous retest within six months, that he is to be returned, and the money paid for the bull as well as the shipping charges refunded.

Contagious abortion is a difficult thing to deal with. About the only safeguard against it a man has in buying a bull is to note if there are many young calves in the herd to which the bull under consideration belongs. The calves will testify, at least, that the disease is not very common in the herd.

The above precautions should always be taken into consideration in buying either males or females to be added to the herd.

Lack of size and potency in bulls is often due to improper care and feeding. The bull should be handled fearlessly, but never carelessly. He should never be teased. Teasing develops a fighting spirit in the bull.

When six months old, the bull should be separated from the heifers and cows of the herd, as sexual development often begins at about this age.

When six to ten months old, a copper or cannon-metal ring, about two inches in diameter, should be placed in the bull's nose. This ring should be replaced by a ring three inches in diameter when the bull is mature. Self piercing rings are the easiest to insert, and should be used, if possible. For inserting other styles, a hole is made in the septum of the nose with a knife, trocar and canula, or a punch, and the ring passed through the hole and screwed shut. The ring should be examined from time to time for wear. When it shows some wear, it should be replaced with a new ring.

Unless it is the intention to show the animal, it is best to remove the horns. The best time to do this is when the ring is placed in his nose, or when he is about a year old. It can best be done with dehorning clippers. Care should be taken to cut the horns close to the head, removing about one-fourth inch of hide and hair with the horns, or they will grow again. The dehorning should be done in the fall or spring of the year, when the weather is cool, and there are few flies.

Inserting a ring in the bull's nose, and removing his horns, checks the developing meanness in him, does not reduce his breeding powers, and makes him a safer animal to handle, although even a well rung and dehorned bull should never be trusted.

The dairy bull is best managed when kept in a lot of from one-fifth to one acre in area. At one end of the lot should be built a bull shed. which can be closed when it is desired to catch the bull. A good arrangement is to have two rooms in the shed, separated by a heavy plank partition. One room is for the bull when he is in out of the weather, or eating, and the other room is for storing hay or grain. With this arrangement the bull can be safely fed, and when it is desired to catch him it can be done by locking him in the shed and catching him from the safe side of the partition. In catching the bull while in the shed, we have found it convenient to use a stiff wire about five feet long, bent at the end to form a hook, which is hooked through the ring in the bull's nose.

After all, the bull should have plenty of exercise if he is to be virile and potent. Exercise is best provided by setting a post about ten feet high in some convenient place in the pen or, better still, along the side of the pen, with an arm extending out three or four feet into the pen. At the end of the arm, a chunk of wood about a foot in diameter is hung about four feet above the ground. The post should be braced with a guy wire on the outside of the pen. The bull will amuse himself by butting the chunk of wood, and in so doing will get the necessary exercise.

In leading the bull, it should always be done with a bull staff attached to the nose ring. In addition it is well to have a strap attached to the ring.

Feeding the bull is an important item. The bull should not be too fat, but should be kept in good condition, with liberal feeding of the proper kind of feed. Alfalfa or clover hay makes a good roughage. Much silage should not be fed. Heavy feeding of silage tends to develop pot-bellies in bulls which decrease their potency. Fifteen to eighteen pounds a day should be the limit of this feed. Grain to the extent of four to eight pounds a day, depending on the size of the animal, should be fed. A good grain ration consists of two parts ground corn, two parts ground oats, and one part oil meal. A good grain mixture for a cow producing milk is a good grain mixture for the bull.

The bull is old enough for service when he is nine or ten months old. Up to one year, he should not be allowed to serve more than five or six



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BIG CROPS ASSURED IN WESTERN CANADA

Need of Farm Labor Urgently Required for Harvest

Rains of the past week, which have been general throughout all portions of Western Canada, covering **Manitoba, Saskatchewan** and **Alberta**, have placed beyond all manner of doubt the certainty of vast grain crops throughout the entire district.

Reports from all points indicate marvelous and rapid growth. The conditions of a week or so back, which were decidedly less promising and led many to think there might be a partial failure, have disappeared altogether and now there is a wave of optimism circulating throughout the entire country.

In 1915 there were enormous yields reported from all parts, and it would appear now as if in many places the yields of 1915 would be equaled if not beaten.

What might appear to be a drawback is the apparent shortage of farm help. The Province of Manitoba, through its Employment Bureau in Winnipeg, is asking for 10,000 harvest hands and over, offering from $5 to $6 per day. The Province of Saskatchewan is asking for 15,000 extra hands, to take care of the immense harvest that is certain to be reaped in that Province. In Alberta the crop area is somewhat less, the labor conditions somewhat better, and a request is being made for 5,000 extra farm hands.

Interviewing the officials of the different Governments, they are inclined to the opinion that as the crops in Kansas, Nebraska, South Dakota, Illinois and other Central States are harvested, there will be a movement northward that will materially help to take care of the labor situation. With the low railroad rates that may be secured on application to the Employment Office at Winnipeg and at boundary points, or which may be secured through the Canadian Government Offices at Chicago, Ill.; Detroit, Mich.; Milwaukee, Wis.; Kansas City, Mo.; Omaha, Neb.; Des Moines, Iowa; Watertown, S. D.; St. Paul, Minn., and Grand Forks, N. D., will give to those seeking employment the opportunity to reach the harvest fields at a low cost.

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Low introductory offer puts this new saw-rig within reach of all, at small part of cost of other rigs. Saws your winter's wood in few hours. Powerful 4-cycle motor. Easy to operate, light to move. 30 days' trial to prove our claims. 10-year guarantee. Send today for FREE BOOK of FACTS.

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cows, and service should be very limited up to fifteen months of age. Up to two years of age, the bull should not be required to serve more than twenty to twenty-five cows. After the bull has reached two years of age, unlimited service may be practiced to a certain extent. Fifty to sixty cows is all a mature bull should be required to serve in one year, with never more than two services a day, or six to eight in one week.

For small or restless cows, it is best to use a breeding rack. In case of a small bull and large cow, a hole may be dug for the hind feet of the cow.

The mistake in small herds of selling the bull before the production capacity of his heifers is known too frequently occurs. Early disposal of the bull is usually due to the farmer not wishing to practice inbreeding to the extent of mating the bull to the bull's own offspring. Where a farmer has a neighbor who has a good bull of the same breed, and who also does not wish to inbreed, the situation is met by exchanging bulls. In this way, young bulls, with good producing parents, can be conveniently kept until their production ability has been tested. Many bulls have been sacrificed at butcher prices, while, if they had been kept a year or two longer, or long enough for their heifers to show their milking capacity, they would have been worth five to fifteen or more times their value for meat.

Butter Prices for July

From the daily quotations of the United States Bureau of Markets, we have compiled the following table giving the monthly averages of the daily wholesale prices for July, 1919 and 1920 on 92 score butter (extras) at the four principal markets, together with the total receipts of butter at these markets:

	Ave. price July 1920	July 1919	Receipts July 1920	July 1919
	cents	cents	tubs	tubs
Chicago	55.00	51.52	355,749	328,359
New York	56.72	53.20	283,110	311,522
Boston	58.07	54.84	183,941	192,647
Philadelphia	57.49	54.06	76,000	67,017
Total			898,800	889,545

During July, butter maintained about the same average that it did for June, with practically the same total receipts. As compared with a year ago, the receipts for the month are slightly larger but the total receipts for the seven months ending July 31 are nearly a million tubs under that of the like period during 1919. The total receipts for the first 7 months of 1920 were 3,809,859 tubs as compared with 4,729,855 tubs during the first 7 months of 1919.

Ninety score butter averaged 52.58c for July on the Chicago market with centralizer butter at this market selling for 54.46c, or at a premium of 2c a pound. Jobbers' prices on extras sold to retailers during July were 56.49c in Chicago and 59.40c in New York.

California Milk Prices Rise

HOARD'S DAIRYMAN:—The Housewives' Leagues of California have been unable to stay the proposed raise of prices in milk. On August 1st, the price to the consumer went up to the following:

Pasteurized milk—Pints, 10 cents; quarts, 16 cents; 1½ quarts, 24 cents; 4 quarts or over, 15 cents per quart.

Certified milk—Pints, 16 cents; quarts, 25 cents.

Table cream—¼ pint, 12 cents; ½ pint, 23 cents; 1 pint, 45 cents.

Pastry cream—¼ pint, 15 cents; ½ pint, 28 cents; 1 pint, 55 cents.

With the inauguration of the new schedule, the distributors have also announced the discontinuance of all discounts for cash or payment in advance.

The above prices are for the East Bay cities; it is reported that prices in San Francisco will be the same except that the price per quart will be 17 cents.

The distributors state that the raise in price is necessary because of a corresponding raise made by the producers. The producers say the raise is necessary because of the high price of feed, especially alfalfa.

The State Market Director was asked to investigate the situation and he has issued a lengthy statement in which appears the list of dairies that have sold off their herds because at the present price of feed it was no longer profitable to keep them. The list comprises eleven dairies supplying San Francisco, their daily shipment aggregating close to 5,000 gallons.

Regarding the price received by the dairymen for their cattle, the statement says: "Because of feed and labor conditions so many dairymen have been selling off their herds that there has been a material reduction in the price at which milk cows can be bought; the auctioneers who handle cattle sales state that from 15 to 20 per cent of the dairy cows sold by them have gone to the butcher's block."

It was also pointed out that the cost of alfalfa, due to crop shortage, has increased from around $9 in 1914 to from $28 to $33 today. Labor has increased from a gross cost of $65 per month in 1914 to $140 at present. In addition to this, all overhead expenses have increased proportionately.

Regarding the price of alfalfa, the Alfalfa Growers of California, Inc., have issued a statement which is a strong argument against growers raising the price of alfalfa further, but in which appears the following significant paragraph:

"As far as it is possible to judge from the general condition at this time it is probable that the comparatively short alfalfa crop this year will lead to further advances in price between now and winter."

Oakland, Cal. L. L. D.

— WORK —

EVERYBODY complains of the high cost of living. Everybody knows the remedy. What is it? Work. The trouble is, everybody wants the other fellow to do the work. As certain as 2 and 2 make 4, we can't work a 6-hour day and live on the products of an 8-hour work day and keep it up.

To be sure, if we are willing to wear our old clothes until they drop off, and if we are willing to do without butter, meat, and sugar, we can get along very well on a 6-hour work day. If we are willing to live in tents, we can get along on a 3-hour work day and if we are willing to live in the trees, we needn't work at all.

But that isn't the American way of doing things. I believe the American people are going to wake up pretty soon and go to work, and when they do, our country will become rich, not in shoddy cloth and inflated currency, but in real, honest, genuine wealth.—J. C. McDOWELL.

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JUST the thing to determine the yield of each cow. Especially popular with cream handlers who weigh the cream as collected at the different farms.

On the dial of this scale is a loose indicator which can be adjusted and set by a thumb screw, at the O mark so as to balance the weight of the pail. Thus, the net weight of the milk is shown.

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with each scale. These blanks contain the record of two milkings a day for one week for 14 cows.

Three Capacities

Scales, 30 lbs. capacity, by 1-20 lb. each	$4.55
Scales, 60 lbs. capacity, by 1-10 lb. each	5.65
Scales, 120 lbs. capacity, by 1-5 lb. each	8.85
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Because of the distinctive qualities of the materials from which they are made—ground cork and refined asphalt—Circle A Cork Brick are warm to the touch, yielding to the tread, non-slippery, durable and sanitary.

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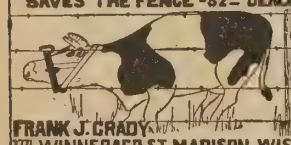
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Farm lands in the South have not been boosted by speculation. Why buy a farm in a high-priced section and cripple your future with debt when you can buy a better farm in the South for one-third the price? Don't you want a farm where climatic and soil conditions are unexcelled? It is our business to help you find just what you want. We know Southern lands and land values and it is to our interest to locate you where you will succeed and make business for the railroad. There is no charge for our service. For full information call on, or write to J. C. Williams, Manager, Southern Railway Development Service, 1302 Pennsylvania Ave., Washington, D. C.

KING SEGIS PATENT LOCK

Ear Tags, Bull Staff and Rings.

Description and prices sent on application.

300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business.



H. A. Meyer, Syracuse, N.Y.

Two Blades of Grass Where One Grew Before

A. E. LINDQUIST, ILLINOIS

A WELL known leader in agriculture recently admonished the farmer "Not to trust entirely to the Lord to make our pastures grow but to put some thought and work on them ourselves," which is something we have not done to date. Indications, however, are that we are finally awakening to the fact that instead of being a potential asset, our pastures may be made one of our most valuable pieces of farm land. In place of requiring four acres to carry one animal a year, as it now does in New England, or five acres to carry three head in Illinois where pastures are a bit more efficient, we should be able to make each pasture acre support one animal per year. In Europe one-half an acre is made to feed one animal, while at present the average for the entire United States is only one animal to every three acres.

It has been estimated that an acre of pasture will replace the following amounts of feed, based on 1918 prices: May $4.40, June $6.05, July $6.34, August $6.25, September $6.90, and October $7.63; a total of $31.36 annually. It is apparent that if these amounts are anywhere near correct, the pasture is worthy of considerable attention.

Poor grasses and weeds may be eliminated and clover and good grasses substituted, by the simple measure of providing plenty plant foods on which the latter thrive, in form available for their roots, instead of providing nothing and thus favoring the growth of weeds and wire grass.

From 1910 to 1916 a study was made of the effects of different ratios of ammonia, phosphoric acid, and potash on the pasture grasses at the Pennsylvania Experiment Station. At the beginning of the experiment, the grasses were in the following proportion: 50% wire grass or Canada blue grass, 30% Kentucky grass, and 20% timothy. After the experiment had progressed for six years, another examination of the pasture grasses showed that instead of there being 30% wire grass, there was not any but in its stead the valuable white and red clovers, while the other 50% was principally blue grass with a trace of timothy. This experiment also showed that nitrogen in fertilizers increases the growth of grasses and stimulates the growth of Kentucky blue grass, while potash and phosphoric acid tend to bring back clovers. From this we can draw the following conclusion: In the meadow, high ammonia fertilizers are best, whereas in the pastures where we usually wish to stimulate the growth of clovers, fertilizers high in phosphoric acid and potash should be used.

Mr. J. W. Weston, Michigan, tells of applying 300 lbs. of acid phosphate on a three-year-old meadow and leaving untreated strips for comparison. The treated portion of the field yielded 1½ tons per acre while the untreated portion gave only one-half a ton per acre. On another farm in the same county, acid phosphate was applied at the rate of 200 lbs. per acre on one-half of a 10-acre pasture. The treated section yielded 2 tons per acre while the untreated gave only one-half as much. The average value of clover and tmothy last year was about $24 a ton and prairie grasses brought about $18 a ton, so it is readily evident that the money invested in fertilizer returned a splendid dividend.

Back in 1913, the Virginia State Experiment Station, working in co-operation with the United States Department of Agriculture, took an old limestone pasture—one which had not been plowed for at least twenty years—and divided it up into plots of 2½ acres each. These were laid out in pairs. One of each pair received fertility treatment, the other did not. The animals were allowed to run for two weeks on one plot, then weighed and transferred to the other. Two weeks later the operation was reversed. By this simple system it was possible to make a record of the gain in live weight per acre on fertilized and unfertilized pasture.

The use of 300 lbs. of acid phosphate per acre, applied three times in five years, produced the best results.



Field to the right received no fertilizer, the clover yield for 1919 being 1.45 tons per acre. Field to the left received an application of limestone and acid phosphate, the clover yield for 1919 being 2.68 tons per acre.
Courtesy Iowa Experiment Station

The average annual gain in weight due to the use of this fertilizer was 158 lbs. If we figure acid phosphate spread on pasture as costing the farmer one and a half cents a pound—which, by the way, is in excess of its actual cost—the live weight increase produced by fertlizers cost the farmer less than two and one-fourth cents per pound. At this rate fertilizer on pasture produced live-weight gains far cheaper than can be produced in any other way.

From the experiments above and others of similar nature, pasture experts recommend the application of 200 to 400 lbs. per acre of the following fertilizers as top-dressing (it is preferable to apply this in the spring):

For grasses		For clover, alfalfa, and pasture
5—7—2	sand	0—12—4
6—8—0	loam	0—12—2
6—8—0	clay	0—16—0

The change in vegetation from weeds and poor grasses to clovers and good grasses may be somewhat slow, but the results of the application of fertilizer can often be seen within 48 hours after it is washed into the soil. The color of the grass changes. The sickly yellowish green color is replaced by a deep dark, thrifty green and growth begins at once. The root growth is stimulated and as a result the plant can use more of the plant food in the soil than before because of this greater root system.

Jersey Cattle Notes

For week ending July 30:

Number of animals registered: Bulls, 404; cows, 866; total, 1,270. Number of transfers recorded: Bulls, 248; cows, 843; total, 1091.

Tuberculosis in Hogs Increases

Some interesting observations have been made by the Veterinary Science Department in regard to the occurrence of tuberculosis in hogs. A farmer living in Oregon, Dane County, reported he had lost from November to March, 17 hogs in a drove of 45. A sick pig brought to the laboratory for examination showed generalized tuberculosis. A survey of the farm showed that the pigs after weaning had been fed skimmed milk separated on the farm, ground feed, and corn, but had been allowed to follow the dairy cattle during the winter. Fourteen animals were slaughtered. Lesions of tuberculosis were found in 12. The lesions were so extensive in four animals that they were considered by the federal inspectors as unfit for food.

The cows on the farm were tested. Eight out of 17 reacted, four of which were so extensively diseased as to be condemned as unfit for food.

Statistical evidence is constantly accumulating which shows that tuberculosis of hogs is on the increase. The data collected by the federal meat inspectors show that the ratio of tubercular to healthy hogs is three times as great as in 1911. The percentage of tubercular hogs at those abattoirs which draw their supplies from dairy districts is far greater than at those drawing their supplies from areas where hogs are not fed skimmilk or whey or allowed to follow feeding cattle, as is shown in the following figures collected by one of the large packing companies:

	%		%
Milwaukee	24.3	Denver	3.1
Chicago	14.3	St. Louis	2.0
Omaha	9.4	Ft. Worth	0.8
St. Paul	5.4		

When 9 per cent of the 40,000,000 hogs slaughtered show the presence of this disease, and 2 per cent of those slaughtered at Milwaukee are used only for grease, it would seem that it is time that this drain on our resources is grappled with heroically. This disease places an enormous tax on the meat-consuming public. When the burden is thrown back on the producer of hogs, as it should be, for he is in position to check this loss almost entirely by the use of methods known to be effective, he will bestir himself in the eradication of tuberculosis of hogs as well as the disease in cattle with which it is so closely related.

The pasteurization of whey is one phase of this work which every farmer feeding whey should forward as much as possible by seeing to it that the factory of which he is a patron pasteurizes its whey in an efficient manner.—Wisconsin Bulletin 302.

Marsh Soils Need Potash Fertilizers

"Potash and corn must go hand in hand on our marsh soils if we are to get profitable returns," says Griffith Richards of the soils department, University of Wisconsin.

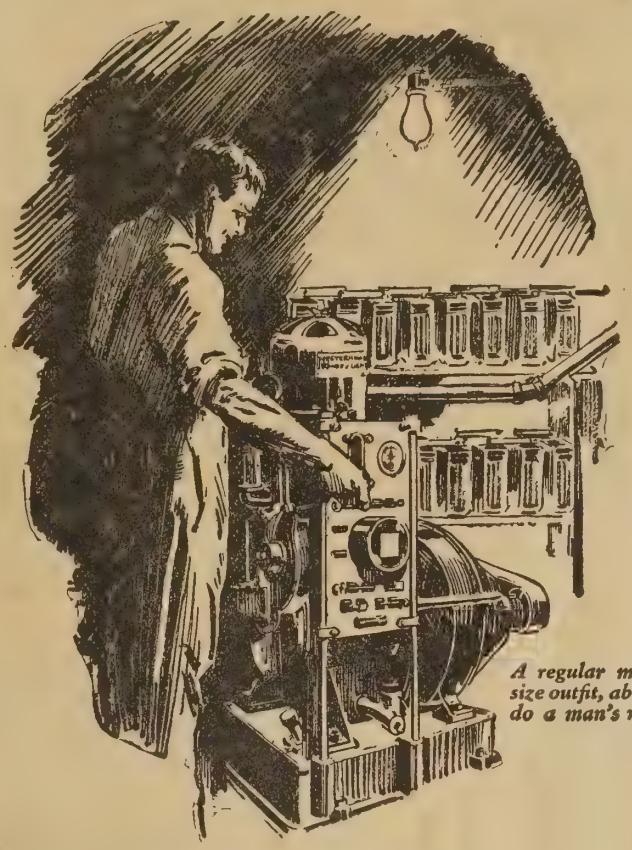
"Last year trials with different fertilizers on the university marsh showed that the addition of potash alone more than doubled the yield of corn, and was nearly equal in value to heavy applications of manure. With no fertilizers, the yield of corn was 34.5 bushels an acre; with the addition of 200 pounds of muriate of potash, 78.6 bushels; and with the addition of 12 tons of manure, 83.5 bushels. Thus the experiment showed that the application of 200 pounds of potash at a cost of about $15 an acre gave an increased yield of 44 bushels. Valuing the corn at $1.80 a bushel the increased returns were $79.20, which means a net profit of $64.20 an acre from the use of potash alone.

"Manure was seen to give good yields, but where we have both marsh and upland soils on the same farm it will be more profitable for the farmer to use the manure on the uplands and get potash for the marsh. Manures contain much nitrogen that is not needed by peat soils but which is usually very deficient in upland soils.

"Other trials on the marsh show that mixed fertilizers, containing one per cent nitrogen, eight per cent phosphorus, and two per cent potash and applied at the rate of 125 pounds to the acre, yielded only 41 bushels of corn an acre. Potash and phosphorus mixed and applied at rate of 200 pounds potash and 400 pounds phosphorus gave a yield of only 71 bushels an acre or less than was obtained by use of potash alone. Thus phosphorus is not needed on our marsh now.

"The results obtained on the university marsh," continues Mr. Griffith, "will apply to most marsh soils in southern Wisconsin, for it is typical of the marsh soils of this region. The marsh is a deep peat, not very well decomposed, and neutral in character. Thus if we are to increase our corn yields on our marsh soils in southern Wisconsin, potash fertilizers must be used."

"How a new kind of farm hand added acres to my farm"



A regular man's size outfit, able to do a man's work

Editor's Note: *W. E. Shetrone, a farmer near LeRaysville, Pa., shows how you can help to solve your labor problem.*

"Now, I'm not going to tell you that the Western Electric Power and Light Outfit is the best on the market. The chances are you know more about farm plants than I do. All I want is to tell how this outfit has been doing a man's work on my place—when men are hard to get. That is how it saved time enough for me to cultivate seven acres more last spring."

W. E. Shetrone
LeRaysville, Pa.



Mr. Shetrone's house is pleasantly located

"LAST YEAR I was struggling along with my little farm—milking by hand, taking a two-hour trip to the creamery every day, working hard to support my family. Then a salesman showed me how I could do the work in less time and with less effort by installing Western Electric Power and Light equipment. Well, I put the apparatus in, and right from the start it began to save time and labor. In fact, the time it saved me made it possible to plow seven acres more last spring.*

A powerful outfit for heavy work

"Power ought to be the first consideration in buying a farm plant. There are plenty of good electric sets satisfactory for lighting. But not many of them are strong on power. You can't expect them to do the hard work.

"The Western Electric has a three horsepower engine, which as you know is ample to run most all the machinery. Grindstone, feed-mixer, churn, mill—you can operate them all together from a shafting hitched up to this powerful engine, because there's a pulley on it for just such work.

"In generator and battery too, power is the feature that impressed me most. My Western Electric outfit furnishes plenty of electricity to light the house and barn, and at the same time it runs the pump, the milking machine and such household appliances as a vacuum cleaner and a washing machine.

Why the battery lasts longer

"Another big feature is the automatic control of the battery charge. At the start the current flows in at a fairly high rate, but as the batteries fill, the rate of flow becomes less and less—till at last the current is just trickling in. Then it stops by itself. This 'tapering charge' takes the strain off the batteries and *so makes them last longer.*

"Well, the Western Electric outfit certainly has helped me in my work. And talk about time saved! Those extra seven acres I was able to plow will produce some handsome profits this fall, I can tell you."

**What the Western Electric Power and Light Outfit did to make Mr. Shetrone's farm more productive, it can do for your farm too.*



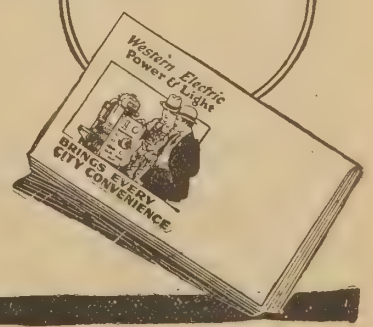
A portable motor drives the grindstone

How to save time and labor

Booklet H. D. 4 gives some facts and figures on how the Western Electric Power and Light Outfit helps solve the farm labor problem. For your copy write to the Western Electric Company at Chicago, or 195 Broadway, New York.

Some good territory still available for live-wire representatives

Write for Booklet H. D. 4



Western Electric Power & Light



Are You Getting All the Milk She Can Produce?

As long as a cow gives down a fairly good flow of milk you may think she is producing to her full capacity. But is she? A cow is a wonderful milk-making machine, but she must be properly fed to produce a good profit for her owner.

International Special Dairy Feed

Makes Good Business Cows

International Special Dairy Feed is made of high grade materials, each one of which contains certain elements necessary to the general good body condition of the animal. These ingredients are scientifically mixed in just the right proportions to produce the desired results —the most milk, the best condition and longest life.

Feed With Summer Pasture

Grass stimulates the milk flow but has no sound basis for building the body and maintaining milk flows at capacity indefinitely. Feed International Special Dairy feed with summer pasture and see how big milk flows can be maintained all year round.

Every cow in your herd must earn her board and a profit for you or go to "beef." Start feeding International Special Dairy Feed now and give the poorest cow in the herd a chance to make good. Start with a trial ton *at once*. Order from your dealer today. If no International dealer is near you, write us and we will see that you are supplied promptly.



INTERNATIONAL SUGAR FEED CO.
MINNEAPOLIS, MINN.
Mills at Minneapolis and Memphis
Live Agents Wanted

Do You Know How Much Your Milk Will Bring Per 100 Pounds of Grain Ration?

If you receive only $2.50 a hundred for your milk and the good BUFFALO CORN GLUTEN FEED grain mixture you feed costs you four dollars or less a hundred pounds — you are getting $7.50 to $10 worth of milk per 100 lbs. of the *Buffalo Corn Gluten Feed* mixture fed to good milkers.

In some sections, June milk ranged as high as $3.83 per hundred. At this price, a seventy-five-dollar ton of good BUFFALO CORN GLUTEN FEED grain mixture, properly fed with good roughage to good cows, produces $225 to $300 worth of milk—6,000 to 8,000 lbs.

Good feeding of good cows always pays. The better the feeding, the better the pay.

But good feeding cannot be done without *good* feed. BUFFALO CORN GLUTEN FEED is *the feed*—the high-protein concentrate—that makes the profitable milk yield.

Your dealer should have BUFFALO CORN GLUTEN FEED. If he does not, write us, giving his name.



Corn Products Refining Co.
New York MAKERS OF Chicago
BUFFALO CORN GLUTEN FEED

A Successful Oklahoma Dairyman

"This Is a Special Business I Have Worked Up"

CLARENCE ROBERTS, OKLAHOMA

THERE'S a dairyman near Oklahoma City, Oklahoma, who sells all the milk he produces for 25, 30, and 35 cents a quart. Milk from other dairies around Oklahoma City sells for 15 to 17 cents a quart. This man, E. C. Smith, gets 25 cents a quart for milk on the side of the city nearest his home, 30 cents through the center of the city, and 35 on the opposite side.

He does not own a "model" dairy. He has no expensive equipment. He has proven conclusively that the best quality of milk can be produced with ordinary farm equipment. His barn has a board floor and simple stalls such as are found in any farmer's barn; no stanchions of any kind. The cows are tied with halters. They eat out of boxes or half-bushel measures.

In the milk house is a home-made ice box that holds 400 pounds of ice, a galvanized iron sterilizer made to order at a cost of $40, a small work table, a sink with running water, a gasoline stove, and a gasoline engine hitched to a well around which the milk house is built.

This is all the equipment that Smith uses to produce his high quality of milk. He built the milk house, dug the well, and installed all the equipment for $400. These are all the improvements he added to the farm when he bought it. The barn was built for a horse barn. He has used it for a cow barn without any changes.

Smith keeps eight to ten Jersey cows. Ten is his limit. He does all his own work with some help from his wife. Eight hours is his usual day's work—never more than ten. He makes one delivery a day, in the morning.

He milks from seven to nine cows all the time. He has one or two come fresh at a time, at different times of the year. This gives him a constant supply of milk for his trade. He sells around 60 quarts a day, at an average price of 30 cents a quart.

Smith gets this price because his milk is clean. No other reason. Every so often the city chemist makes examinations of all milk sold in Oklahoma City. Smith's milk has often shown the lowest of that sold in the city. It generally runs between 1,000 and 3,000 bacteria per c. c. It has run as low as 700. He never neglects to call the attention of his customers to the official count. Needless to say, his customers are his best advertisers.

Smith does not produce certified milk. City regulations do not provide for certified milk. It is the aim of the city officials to secure a supply of milk of good quality for the whole city, rather than encourage the production of high-quality milk for a few people.

About half the milk Smith sells is bought by people who have bottle babies. The other half is bought by people who are willing to pay the price to put the best milk on their tables.

Here's the routine under which Smith works. It gives the how and why of the extra clean milk that he produces. Around 6:30 in the morning the cows are let in the barn, except the few mornings they remain there over night in the coldest winter. They are first thoroughly brushed off.



LADY C OF MARA ALVA, GUERNSEY HEIFER WHICH FRESHENED AT 2 YEARS, 13 DAYS, AND FOR HER FIRST 30 DAYS ON TEST PRODUCED 1,195.1 LBS. MILK, 42.42 LBS. FAT

Her best day's milking was 45.8 lbs. She is owned by Thurman Miller, Ohio. Mrs. Miller and two junior partners are shown holding her.

Then, with a bucket of hot water, washing powder, and rag, Smith washes the cows' udders—not merely wipes them. Special attention is given the openings in the ends of the teats. The udders are then wiped dry with a clean cloth which is used for this purpose but once after being washed. During this time the cows are eating their morning feed.

The cows cleaned off, Smith changes into a clean suit and eats breakfast. Breakfast over, he and his wife do the milking. They wait until breakfast is over in order to give time for the dust from the feed to settle. The first two or three draws from each teat are discarded. This cleans out the milk ducts. Covered pails are used, the milk passing through a strainer into the bucket. As soon as a bucket is filled it is at once taken into the milk house and bottled.

As soon as the milking is over the barn is cleaned out. A conscientious job is done. The board floor is scraped clean. Then air-slacked lime is sprinkled over the floor. It is swept into every crack and crevice. This purifies the barn and gives it a sweet smell. The barn is filled with lime dust and the flies are literally killed. The barn is cleaned out in this manner twice every day.

Let's get back to the bottling of the milk.

From the milk buckets the milk is poured directly into the bottles. The bottles are set in ice water. As soon as the morning milking is over the bottles of milk are put in the cases and packed with ice. The night's milk

goes into the ice box and is delivered at the same time next morning.

The steam sterilizer previously spoken of is a box made of sheet iron with a tight top, four feet long, three feet high, and two and one-half feet wide. In the bottom are two inches of water. Above the water are two racks, one above the other, on which the milk vessels are placed. The sterilizer sets on a three-burner gasoline stove.

Twice a day every bottle and vessel which touch the milk are placed in this sterilizer. The stove is lighted and the water boiled for 15 to 20 minutes. The sterilizer is filled with steam which reaches 200 degrees F. The milk vessels stay in this sterilizer until next milking. Smith places the highest value on this sterilizer. He says it is the greatest secret of his success in producing clean milk.

Smith loves his cows. Everyone is a pet. They get the best of feed. He feeds his cows in good milk flow two pounds of bran, a pint of cottonseed meal, a half pint of corn meal, and a half pint of peanut hearts. This is fed twice a day. The cows get alfalfa and oat hay, such as they will clean up at each meal.

Until eight years ago Smith was a city man. As he wanted to live in the country, he bought 10 acres of land two miles from the edge of town. He bought a cow for the use of him and his wife. As he continued to hold his position in town, he told his friends of the fine milk and delicious butter he and his wife enjoyed. Friends in town asked for any milk he had to spare. He sold a few quarts a day at an extra price.

The milk sold from this one cow paid for her feed. He and his wife figured that if one cow would do so well, more would do likewise. More cows were bought. With six cows he found he was assured a sufficient income for a living. He gave up his position paying $2,700 to stay with the cows. Since then he has bought another ten acres. He had all to learn. He tried out many suggestions that failed. He believes he has now worked out all the requirements that go to make up clean, pure milk. They are:

Milk from a clean cow in a clean barn milked by a clean milker into a clean bucket and at once bottled in clean bottles in a clean milk house and immediately cooled. Sounds easy, but takes work. In this case it pays well. Figure 60 quarts a day at 30 cents a quart, which is $18 a day, or $480 a month. His feed bills run around $125 a month.

"This is a special business I have worked up," Smith said. "But don't think I have it cornered. There is room around Oklahoma City for 20 more dairymen just like me."

Dairy Courses at Iowa State College

The six-months course in dairying begins this year September 27th. Men who have completed the eighth grade of the public school may enter for this course. It is preferred that the students have had some practical creamery experience although this is not required. The course is composed of two three-month terms and one who has had sufficient practical experience may remain for only a three-month term.

This course fits a person for a position as buttermaker, ice cream maker, cheesemaker, or operator of a market milk plant. Fifty-three students were this year registered in the six-months dairy course. These men have been placed at salaries ranging from $900 to $1,800 per year with an average of $1,445 per year. There is an unlimited demand for men who make good as operators of dairy plants. This department receives from one to more calls for such men daily.

The four-year course in dairying begins September 27th. Men who are graduates from accredited high schools may enter in that course. The eleven graduates from the four-year course this year were placed before graduation at salaries ranging from $1,800 to $3,900 per year with an average of $2,258 per year. Of these men four are engaged in work as teachers in agricultural colleges, one of them being placed in charge of the dairy department of the University of South Africa. One is a state dairy inspector, while six engaged in commercial work.

The ten-day course in dairying for experienced operators begins January 3, 1921, and is intended only for men who have had several years' experience as operators of dairy plants.

For further information address M. Mortenson, Dairy Department, Iowa State College, Ames, Iowa.

According to reports received by A. J. McGuire, Minnesota College of Agriculture, patrons of Minnesota cheese factories received 69.3 cents per pound fat in April and 65.7 cents in May.

Three reasons for cultivation: Downing the weeds, loosening the soil, saving moisture.

Twenty-dollars Cash Brings You this JIM DANDY MIXER!

YOU can't afford to mix by the old fashioned, expensive, back-breaking shovel method.

You can't afford to pay three men's wages to do the mixing that one man will do with this Jim Dandy.

You can't afford to be without the quick, cheap and perfectly mixed concrete that the Jim Dand will give you.

WRITE NOW

Drop us a post card this very minute and we will send you our latest illustrated circular completely describing the four models in which Jim Dandy Mixer is built and give you complete particulars about our special $20 offer.



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FARMERS ACCOUNT BOOK FREE

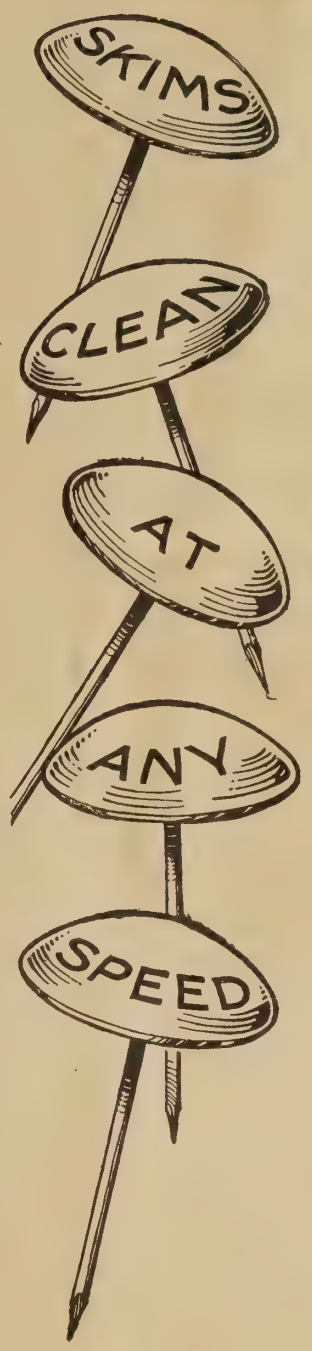
A record book you will use every day. Write for it. Also for Silo Filler Catalog. For speed in silo filling, you want a *Rosenthal.* Extra large throat, cutter head with four knives. Three sizes, self feed with automatic speed control

ROSENTHAL SILO FILLERS are the most economical you can buy. Find out why. Get catalog and record book now.



Rosenthal Corn Husker Co.
Box 20
Milwaukee, Wis.

"Get down to brass tacks"



THERE'S only *one* reason for using a cream separator—to get the *maximum* amount of butterfat from your milk.

The Sharples Suction-feed gets *all* the butterfat *all* the time—it *skims clean at any speed.* It is the *only* separator that does not lose butterfat when turned "under speed."

That should be the *fact* on which to base your choice of a separator. *Consider it above all others.* Let the Sharples dealer in your neighborhood demonstrate to you that the Sharples *skims clean at any speed.* Let us send you *signed statements* from America's leading State agricultural colleges, further proof that the Sharples *skims clean at any speed.*

In addition, the Sharples has a knee-low supply tank, single one-piece bowl (*no discs to wash*) and once-a-month automatic oiling system—*exclusive* Sharples features.

A fact: It is costing you more to be without a Sharples Suction-feed, no matter what make of separator you use, than it would to buy a Sharples.

One type of Sharples Suction-feed Separator is electrically operated with current from farm lighting system.

Write for illustrated booklet describing the many other advantages of the Sharples Suction-feed. Address nearest office, Dept. H.

THE SHARPLES SEPARATOR COMPANY
West Chester, Pa.
Branches: Chicago San Francisco Toronto

Sharples SUCTION-FEED CREAM SEPARATOR



Skims clean at any speed

"There are no substitutes for dairy foods."

EDITORIAL COMMENT



No person is fit to handle a bull unless he appreciates that the bull is dangerous and likely to turn upon his attendant at any moment. In the course of a year we read of a considerable number of deaths and many injuries through attacks of mad bulls. We now and then find a person who calmly and complacently informs us that his herd bull is perfectly gentle and can be trusted. This man has a lesson to learn and has not yet realized that no bull can be trusted. All bulls, whether they have a disposition to be cross or not, should be handled as though they were vicious. It is seldom that a vicious bull gets the better of his master. It is the one that "can be trusted". A man is foolish indeed to enter the yard or stall of a mature bull without being protected. A good dog will give this protection in the yard or pasture and about the barn the bull should be handled with a good staff. The bull stall should be so arranged that it is unnecessary for the attendant to expose himself to the bull. A man's a fool who does not fear a bull.

In the Weekly News Letter of the Department of Agriculture we find that through the efforts of dairy specialists, who have been carrying on educational campaigns in behalf of the food value of milk and its products for human food, large increases in the use of dairy products have taken place.

It has been reported by the president of the Milk Distributors' Association in Detroit that through an educational campaign the consumption of whole milk has increased in that city 10 per cent, butter 15 per cent, and cottage cheese 3 per cent. One Detroit distributing firm, since the campaign, has sold 20,000 more pounds of butter and 50,000 more quarts of milk weekly than it did before the educational work on the value of dairy products was done.

This increase in the consumption of dairy products shows how effective judicious advertising is and what an important part it plays in the building of an industry. If it is wise for other manufacturers to advertise their wares, it is equally important that the dairyman advertise his product, especially when only a few people appreciate its importance and food value.

OUR CONDITIONS NOT SERIOUS

How busy many people have been trying to analyze and to solve our present industrial condition. After every great war the world has experienced similar situations, but they have never been so general because our last war was the greatest, the most far-reaching, the most terrible, the most costly the world has ever known.

Much of our trouble is purely imaginary. A country is not in a serious condition when it has an adequate food and clothing supply and where there is work for all. Two or three months ago and for some time following, manufacturers, merchants, and other business men were meeting quite regularly in the cities to discuss ways and means of securing a larger food supply. Reports have gone out to the effect that owing to the shortage of labor on the farms much land had been abandoned and there was danger of famine in this country.

It was the purpose of these meetings to plan ways and means of supplying labor to the farmers, a most worthy motive, in order that we should have an adequate amount of food. We were not concerned over the situation, for we did not see or could we gather from reliable sources evidence that indicated any considerable number of farms being left idle.

The recent report of the agricultural crops of the United States indicates that we will have more than the average crop this year. It is estimated that we shall have 809,000,000 bushels of wheat and for our seed and food supply we need 650,000,000 to 700,000,000 bushels. Besides, this, about July 1 we had over 300,000,00 of bushels of wheat from last year's crop. The corn crop promises to be above the average, the supply of dairy cattle is increasing, the hay crop is good.

Now that it is pretty certain that we shall have an adequate food supply some of these same men that were worrying about the shortage have begun to have meetings to determine ways and means of handling this crop and they look upon the situation as rather serious.

If we permit ourselves to brood over every human activity we can keep ourselves and all those that associate with us in a state of mind that will make ourselves and other people believe that we are on the road to oblivion and to everlasting smash-up. It is well enough at times to consider the business conditions of our country and crops and everything that goes to build successful industry and to supply our needs, but there is little to be gained if every change of condition is viewed with alarm. We must ever keep in mind that we are in the days of reconstruction and what is needed is a steady head and a steady hand. It would be expecting too much for any country that has been plunged in a great war and tremendous expense to recover its equilibrium and normal condition in the course of a year or two. It seems to us that the best service that can be rendered to this nation is by every man settling to his own job and doing efficient and effective work.

MEAT AND MILK

The efforts put forth to advise the consuming public of the importance of milk and its products are bearing fruit. Mr. Whisenand, in the Breeder's Gazette, takes exception to some of the statements made regarding the food value of milk and the amount that should be expended for milk as compared with meat and fish.

Mr. Whisenand does not agree with Dr. Sherman of Columbia University that only 12 per cent of the total expenditure for food should be spent for meat and fish and that 44 per cent should be spent for milk and dairy products. Dr. Sherman is in no way connected with the dairy industry but he has studied human diets and has come to the conclusion that people would be better off if they spent 12 per cent of their money for meat and fish and 44 per cent for milk and dairy products.

As a nation we are known as heavy consumers of meat and small consumers of milk and its products. Dietitians have pointed out that our people could feed themselves more economically and would be in better health if they consumed less meat and more milk. We do not infer nor do we hold that meat is not a wholesome and nutritious food and highly desirable in the human diet. It is a splendid food.

The comparisons in food value between milk and meat have been made by us frequently. It has not been our purpose to depreciate the importance of meat but rather to show the food value of milk and to point out that the nutrients in it are cheaper than in meat, and, further, that it is a more complete food than meat. It would be shortsighted on the part of the dairy industry if it attempted to prove that meat was not highly desirable, for at the present time the dairy industry contributes a large percentage of the meat supply of the nation and in the future it will be the most important source of our meat supply. The dairy cow is a more economical producer of human food than the steer and provides a more important food.

Mr. Whisenand states that a heifer is two to three years old before she reaches a productive age and at this time the beef animal is slaughtered. He forgets to state that most heifers will produce in one year as much food as one and one-half to two steers and, as a rule, begins milking when she is two years of age. In other words, when she is three years old, she has contributed as much food to humanity as one and one-half to two steers and she is still alive to repeat the operation the following year.

He criticizes the statement that milk is one of the cheapest foods. He says, "Five and two-thirds ounces of round steak contain as much protein as a quart of 4 per cent milk. At 40c per pound five and two-thirds ounces of steak cost 13½c. Protein is thus fully as cheap in round steak as in milk and is considerably cheaper in some of the lower priced meat cuts." He forgets that it requires 7 ounces of sirloin steak to furnish the protein of one quart of milk and that in the milk there are other foods quite as essential as protein, such as mineral matter, fat, and vitamines. Moreover the protein of milk is complete and protein of meat is incomplete. He further states, "A combination of protein and calories may be obtained as cheaply in meat, potatoes, and cereals as in milk, potatoes, and cereals, and the first makes a much more palatable combination."

To this it may be said that it depends upon the individual's taste. We bring no argument against roast beef, bread, and mashed potatoes as being a good foundation for a meal for a hungry man but we cannot agree that meat, potatoes, and cereals provide as complete and nourishing a ration as milk, potatoes, bread, and cereals. Dr. McCollum's investigation showed that by feeding a combination of meat, potatoes, beans, peas, and cereals to animals they were not properly nourished and did not make proper growth or show healthy condition and disease followed, but when the same foods were supplemented with milk, the animals grew properly and were healthy and vigorous.

Mr. Whisenand falls into the same error of building a diet that is so common and that dairymen are trying to show is an imperfect diet for human beings; that is, that meat, potatoes, and cereals provide a proper diet. These are all good foods but they lack something that is found in milk and is necessary for growth, reproduction, and health.

Cheese is a more nourishing and more complete food than meat and it should be looked upon as one of the cheap sources of protein, but we would not argue that it should be the only source. Mr. Whisenand suggests letting people balance their rations according to their tastes and cites experiments conducted by Professor Evvard with swine to demonstrate how successfully this may be done. Professor Evvard has been successful in feeding swine on this system but no experiments with a dairy cow have proved such a system of feeding a success, and if we are any judges of children and their propensities for eating the wrong things, we conclude that they would exercise mighty poor judgment in the selection of proper foods. Indeed, the free choice system for pigs does not work where there is a too great variety of feed.

One of the strongest arguments that we have for milk comes from those interested in raising beef. It is not uncommon for those who desire to show calves at fairs and expositions, to not only supply the calf with its own mother's milk but also provide a nurse cow. Mr. Whiseand will admit that it is possible to raise a the beef cow with its own mother's milk, but in order that a stockman may develop the best calf, he secures reinforcements from a nurse cow. Now if milk is so essential in the ration of the beef calf for its development, to give it the vigor, a sleek coat and proper growth, then why there should be any argument raised against a liberal allowance of milk in the human diet.

Preserving Home-made Cheese

Can you tell me how to keep worms out of home-made cream cheese? I tie it up in a flour sack and swat every fly I see, but they get ahead of me occasionally.

Trenton, Mo. H. S. C.

Professor J. L. Sammis, of the Cheese Department of the Wisconsin College of Agriculture, has given us the following reply to the above inquiry:

"Your subscriber's method of tying up each cheese in a flour sack is a good one to protect the cheese from flies.

"Home made cheese was formerly rubbed with grease on the surface before the days when paraffine came into use as a cheese coating. This cheese grease was often called 'fly proof'. It would probably be very difficult to get hold of any of

this old-fashioned cheese grease for home use at the present time, although some of the larger supply firms might be able to furnish it.

"It is of great importance, however, to take care when making the cheese that a perfect rind is obtained, having no cracks or openings of any sort. Then keep the cheese clean and protect it from flies. This can be done by keeping the cheese in a small, dark room which is not too frequently opened, such as a closet in the corner of the cellar, and a wire netting can be nailed over openings to insure ventilation and avoid flies and excessive dampness. The cheese should be turned over once a day when new to keep them from sticking to the shelves.

"The modern method of dipping cheese in paraffine, then putting them in boxes for storage is quite effective as a protection from flies, and also the modern method of storage in a refrigerator, where there are no flies at all. It is not much trouble to pour melted paraffine, at about 120° F., over the well dried cheese surface and thus coat it with paraffine."

Feed Grain on Pasture

Professor G. C. Humphrey of the Wisconsin College of Agriculture suggests that cows producing less than one pound of butterfat per day and that are in good condition will undoubtedly prove most profitable with pasture alone.

It has been suggested to feed the following named quantities of grain with abundant pasture for varying production:

Holstein or Ayrshire cows producing 30 lbs. of milk daily, 5 lbs. of grain; 40 lbs. of milk daily, 9 lbs. of grain; 50 lbs. of milk daily, 10 lbs. of grain.

Guernsey or Jersey cows producing 20 lbs. of milk daily, 3 lbs. of grain; 30 lbs. of milk daily, 6 lbs. of grain; 40 lbs. of milk daily, 10 lbs. of grain.

The following mixtures are suggested for summer feeding:

1. 100 lbs. ground oats, 100 lbs. wheat bran, 50 lbs. corn meal. This mixture contains 10% digestible protein. (On good pasture.)

2. 200 lbs. wheat bran, 200 lbs. corn meal, 50 lbs. oil meal. This mixture contains 12.5% digestible protein. (On fair pasture.)

3. 500 lbs. corn and cob meal, 200 lbs. oil meal. This mixture contains 15% digestible protein. (On dry summer pasture.)

Cottonseed or gluten meal are substitutes for oil meal. Hominy feed and ground barley are substitutes for corn meal. If these feeds are not available, good commercial mixed feeds may be purchased to good advantage for the best cows of the herd.—Wisconsin Testers' Monthly News Letter.

When to Cut Sunflowers

There seems to be quite a little difference in the opinion of men with experience as to the right time to cut sunflowers for ensilage. As we have this year about 10 acres, we would appreciate your valuable advice as to the right stage to ensile sunflowers.

Ridgefield, Wash. J. G.

The best time to cut sunflowers for silage is still a matter of considerable argument and uncertainty. This is partly due to the fact that in the sections in which they have been grown to the greatest extent, the growing season is rather short and the sunflowers will never mature. In these sections, however, it has been the practice to cut the sunflowers for silage when they are about 10 per cent to 25 per cent in bloom.

It is reasonable to expect that a somewhat more nutritious silage would be secured if the sunflowers were allowed to reach a greater maturity, say, when 80 per cent of the plants are in bloom and the most advanced heads have well developed seed. For the present, at least, it might be well to ensile the sunflowers when the majority of the seed is in the milk stage and the most advanced seed heads are commencing to get hard. From personal experience, we should judge that where sunflowers and corn are planted at the same time, the sunflowers will be best for ensiling some two weeks before the corn is ensiled

Wild Sunflowers for Silage

During the last few years there has been much written in the agricultural press and several experiments reported by experiment stations on the use of sunflowers for silage. The reports have mostly been on the large Russian sunflowers. The reports of the use of the Russian sunflowers led the Dairy Department of the Kansas State Agricultural College to consider the wild sunflower found so abundantly in Kansas as a silage crop. Large amounts of wild sunflowers have been put into silos along with corn and sorghum, and have never been objected to when feeding the silage.

In the fall of 1919 a perfect stand of wild sunflowers was found within hauling distance of the college. The sunflowers yielded 4 tons per acre. About 10 tons of sunflowers were put into a silo between layers of corn silage. A feeding trial was arranged using five cows, in which the cows were fed wild sunflower silage, alfalfa hay, and a grain mixture consisting of 4 parts of corn chop, 2 parts bran, and 1 part oil meal. The cows had previously received corn silage in addition to the hay and grain mentioned above. When changed to the sunflower silage they ate very sparingly of it from the start and did not become accustomed to it as we had expected. The cows decreased in milk production and lost in body weight. At the beginning of the experiment the cows averaged 1108 pounds in weight and were producing on an average of 12.1 pounds of milk each. After a 24-day trial the cows averaged 1042 pounds in body weight and were producing 8.7 pounds of milk each. This is a loss of 66 pounds per head in body weight and a decrease of 3.4 pounds of milk daily. In the absence of corn silage, the cows were changed to cane silage, and in the same period of time gained 25 pounds per head, and all but one cow increased in milk production. One cow's production had declined so low that it failed to return with the change of feed.

As the result of this feeding trial we have not considered wild sunflowers, when fed alone, a satisfactory crop for silage.

One factor that we believe to be important in making sunflower silage and which may account for the differences reported by users of sunflower silage is the time at which the crop is cut. The wild sunflowers mentioned above were cut when in full bloom and the stems were quite woody. If cut early, the stems would have been more tender and perhaps more palatable as a result.

We are not interested in wild sunflowers for silage when other crops can be raised for silage, but in many sections of the state, wild sunflowers are abundant when other crops fail, and if they can be made into a food for cattle by putting them into a silo, many of our farmers in Kansas and in other states of the Southwest will be greatly benefitted.—J. B. FITCH, Kansas College of Agriculture.

Cutting and Curing of Alfalfa Hay

HOARD'S DAIRYMAN:—In the July 23, 1920 issue of Hoard's Dairyman in the article headed "Curing Alfalfa for Dairy and Beef Cattle", written by George Stewart, Utah Experiment Station, you speak very favorably of putting the alfalfa into cocks very soon after cutting. Would it be safe to put the alfalfa into cocks the same day it is cut in the western part of Pennsylvania where we get many showers of rain especially during the first cutting, and how do you determine when it has stood in the cock long enough or about how many days should it stand in the cock? Is there any advantage in putting a ten-quart bucket of salt on each load of alfalfa after it is put in the mow?

Sewickley, Pa. A READER.

Professor L. F. Graber gives the following recommendations concerning the cutting and curing of alfalfa hay:

"No exact date can be given for the first, second, or third cuttings but a good indication to follow is the growth of the little shoots or sprouts originating at the crowns. When the field begins to bloom quite abundantly an examination at the base of the stems will show little sprouts that later produce the next crop. When these are very numerous and at least an inch in height, the cutting time is at hand if there is favorable curing weather. If not, harvesting can be delayed until fair weather occurs. Where the delay is not too long no injury to the stand or growth of the next crop will occur but only two cuttings may be obtained. This is less serious than the harm which accompanies cutting alfalfa too early and which often causes such a serious thinning of the stand that weeds and blue grass take possession of the field. Cutting too early may also result in a weak, short, yellow succeeding growth and a shorter-lived alfalfa field. Better have the first cutting too late than too early. Avoid close cutting. Leave a stubble of about two inches.

"In favorable seasons, three crops of alfalfa may be obtained, but as a protection against winterkilling the last crop should not be taken after September 10. On farms with large acreages only two cuttings are planned for, on account of the difficulty of cutting all the alfalfa at the right stage. With smaller acreages three cuttings can often be taken to good advantage.

"To get the best quality of hay, alfalfa should be cut on a day that promises to be fair. Do not, under any circumstances, plan to leave alfalfa cure in the swath like timothy. At least half the feeding value of alfalfa is in the leaves. With their thin and much exposed surfaces they dry out quickly, become brittle, and are lost in handling. To get alfalfa or clover hay cured uniformly and with the least loss of leaves the crop should not remain in the swath longer than is necessary to become well wilted. This may require four or five hours after cutting in hot dry weather, or one or more days if the weather is cool, damp, or cloudy. The wilted hay can be raked and bunched without serious loss of leaves into cocks of about 100 pounds each. Larger cocks may heat and mold in the center. Under no circumstances should alfalfa hay, damp with dew or rain, be bunched, raked, or stored. Outside moisture of this nature will invariably cause molding, or severe heating, or both.

"Given favorable drying weather alfalfa will be ready to store two days after bunching. In cool, damp weather the curing process may require a week, in which case the bunches may need to be moved in order to give the plants beneath a chance to grow. Canvas caps, while not so popular now as they used to be in the days of small alfalfa acreages and more abundant labor, are a wonderful protection against rain. An hour or so before loading the cocks should be spread apart and opened to the wind and sun to free the interior from any surplus moisture.

"The hay is then ready to be loaded with a drum hay loader or pitched by hand. With this method the brightest green hay is obtained with the least loss of leaves. The curing process which goes on in the bunches is uniform, since the life processes of the wilted plants continue and the moisture moves up the stems and is passed through the leaves. However, with the scarcity of farm labor, farmers having a considerable alfalfa acreage prefer to take risks on the weather for the sake of employing less hand labor and more rapid hay making machinery.

"One plan of alfalfa haying is to allow the cutting to wilt in the swath, after which it is raked in windrows with a side delivery rake. Here it is left to cure out thoroughly, but a few hours before loading with a hay loader the windrows are turned bottom side up with a side delivery to allow the hay next to the ground to dry out. If no rain occurs an excellent quality of green hay is secured. In the event of rain the windrows are turned several times after fair weather returns to permit thorough drying. This, of course, ruins the green color of the hay and, to some extent, its feeding value, but experience has demonstrated that alfalfa will stand much more rain than either timothy or clover and still make good hay.

"Alfalfa thoroughly cured in the field will maintain its bright green color when stored in the mow or stack. When it is stored while still a little green, the stems contain a considerable amount of plant juice and heating and fermentation occur in the stack, resulting in a very aromatic and palatable brown hay. It is sometimes advisable to store alfalfa before it is thoroughly cured, but as a precaution against excessive heating and molding it is well to ditsribute the hay at the time of storage over several bents in the barn, instead of piling it high in one mow.

"It must be remembered that it is positively dangerous to store any alfalfa hay if it contains moisture from dew or rain. Spontaneous combustion resulting in fires may occur, or, at the least, there may be a molding and charring which injures the feeding value of the hay. The interior moisture of the stems and leaves of ordinarily cured hay will not, as a rule, cause this difficulty. It is the outside moisture on the hay at the time of storing that is particularly dangerous."

The use of salt for curing or rather preserving legume hay dates back a great many years but there has never been any definite approval of this practice as being either beneficial or wise. Some theorists have claimed that it tends to preserve the hay from mold and is also a protection against spontaneous combustion. Similar claims are made for slaked lime but these have not been upheld by investigators. It is our own opinion that there is no practical advantage in adding salt for preserving either alfalfa hay or corn silage, for both of which puropses it is occasionally recommended. Indeed, we can see specific objection to it in that there may be a tendency to get more salt into the feed than the cow requires and that may be actually detrimental to her. This would hold particularly true if a sufficient amount of salt were added to really act as a preservative. Possibly the addition of ten quarts of salt to each load of alfalfa will not be detrimental but, in our opinion, it will be of no value and is unncessary expense.

CONTENTS

Early Experience With Sunflower Silage 150
The Dairy Optimist 150
Uncle Sam's Hired Men Who Serve You 151
Feed Flights and Protein 151
Building Self-feeders for Hogs 152
Feeding and Caring for Swine 153
Bull Selection and Management 154
Butter Prices for July 155
California Milk Prices Rise 155
Work 155
Two Blades of Grass Where One Grew Before 156
Jersey Cattle Notes 156
Tuberculosis in Hogs Increases 157
Marsh Soils Need Potash Fertilizers 157
A Successful Oklahoma Dairyman 158
Dairy Courses at Iowa State College 159
Our Conditions Not Serious 160
Meat and Milk 160
Preserving Home-made Cheese 160
Feed Grain on Pasture 161
When to Cut Sunflowers 161
Wild Sunflowers for Silage 161
Cutting and Curing Alfalfa Hay 161
Heavy Production of Linseed Meal 162
New York Butter Market 162
Cheese Prices for July 162
Index to Vol. LIX 162
Producers' and Consumers' Interest in Milk Prices 163
How a Heifer Made Her Record 164
Dairying Thirty Years Ago 165
New York Dairy News 166
Louisiana Silage Suggestions 166
July Condensery Prices 166
Scotch Ayrshire Judge at the National 168
Women to Be Dairy Products Specialists 169
Bulletins of the Week 169
Wisconsin Dairy Council Report 169
Tires for the Farm Truck 170
Keep Out the Rye 170
Jersey Cattle Notes 170
July Milk Prices 171
Bell Offers Trophy 171
Cropping Facts for Junior Farmers 172
Junior Letters 173
Cow Testing Associations 176
Minnesota Testing News 177
Oregon Development 177
Veterinary—Failing Cow—Abortion—Indigestion—Boils—Barrenness 178
Washington, D. C., Weekly News 179
Louisiana Dairy News 179
Inventions and Appliances of Interest to Agriculture 182
Ringworm 182

Coming Events

Illinois State Fair, Springfield, Ill., August 20—28. B. M. Davison, Secretary.

Wisconsin State Fair, Milwaukee, Wis., August 30—September 4. O. F. Remey, Sec.

Iowa State Fair and Exposition, Des Moines, Ia., August 25—September 3. A. R. Cory, Secretary.

Ohio State Fair, Columbus, Ohio, August 30—September 4. E. V. Walborn, Secretary.

Minnesota State Fair, Hamline, Minn., September 4—11. T. H. Canfield, Secretary.

Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.

Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.

Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.

New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.

Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Heavy Production of Linseed Meal

Most Mills Operating Full Capacity—Prices Down and Demand for Export Lacking

A large output of linseed meal is indicated by reports to the effect that the majority of linseed oil crushers are running full capacity at the present time because of the exceptional amount of linseed oil which they have on contract. This meal with its rich store of crude protein and slightly laxative oil is a healthful feed for limited use with all farm animals.

Lack of domestic flaxseed has made foreign importations necessary and receipts from Argentina were very large during the past few months. As reported in the July 10 issue of The Market Reporter, Duluth received six cargoes this season up to that date and actual holdings in that market were then around 500,000 bushels. Receipts in the East were equally heavy.

The principal mills report that they are well sold up for the summer months. The market for oil meal during March this year was unusually quiet for a time of the year when there is as a rule a good demand. This, together with the lack of export demand, caused the market to decline to a low level.

When, about the first of April, the market reached the low point of $57, f. o. b. Buffalo, for linseed meal in round lots for future shipment, large jobbers and dealers anticipated their requirements for the summer and fall demand. Since that time conditions have not improved as expected and, while the mill prices held firm, jobbers and dealers are offering at prices materially below those quoted by the mills.

Linseed meal can not be handled or carried as easily as some of the other feeding stuffs. First, because the majority of crushers do not have sufficient storage space and therefore must insist on shipping directions; and, secondly, because such shipments can not always be consigned to points where they can be conveniently stored and at the same time handled at the through rate when reshipped from warehouse.

It causes, therefore, no surprise that while Buffalo manufacturers and crushers located at other points are asking $62 per ton f. o. b. shipping point for both prompt and future shipments, several dealers are asking for bids, and are actually offering linseed meal at $60 per ton f. o. b. shipping points for prompt shipment.

The export demand which is relied upon to take care of the surplus accumulated did not materialize and if the expected improvement in the foreign exchange situation does not take place few exportations will be made. This may have a depressing effect on future prices. Probably no material advance in the price will take place during the summer months.

Conditions this year are dissimilar to other years. A few of the larger manufacturers state that the American farmer and the mixed feed manufacturer have come to realize more fully the value of linseed meal and that they expect that 95 per cent of the output of their mills will be consumed in this country, where as in the past, especially prior to the war, most of this product was shipped to Europe in the form of cake.—U. S. Bureau of Markets.

New York Butter Market

NEW YORK CITY, AUG. 10, 1920:—For the past two or three weeks, there has been a feeling of pessimism in the market. That feeling developed principally because of the slow absorption of the large quantities of Holland and Danish butter which arrived simultaneously some weeks ago. While it became known that little foreign butter would be received in this country during the next few months because of the fact that our domestic production was above normal, and there were evidences that it would continue so for an indefinite length of time, there was a feeling that daily receipts would not clear readily for some time to come. There is a different tone to the market at the present time. While there is yet an absence of snap a greater feeling of confidence prevails and it is felt that in the very near future the market will again be firm and active and values will again begin to advance. While the past week witnessed some decline in values the last one or two days has witnessed the reverse. It is generally felt that by Saturday of the present week prices will be considerably higher than they are at the present time.

Foreign butter still continues to arrive, but in relatively small quantities. During the past week, 3,500 casks of Danish butter were unloaded and 8,580 boxes of Argentine butter were placed on the market. An interesting letter, recently received by a local butter dealer from an authority in Denmark, states that little butter will be shipped from Denmark during August and September. The writer further states that the production of Danish butter is rapidly declining and that Norway and Sweden are paying prices of 58@60c for Danish butter at point of shipment. Germany is stated to be a heavy buyer of butter which is an additional fact tending to prove that little butter will be received from European countries during the months to come. It is very probable that this country will have little to supply the domestic demand for butter except our current make. That is a condition which would seem to assure a consistently high active market for the balance of the season. It can not be denied that there is a shortage of butter in this country, in fact there is a world shortage of butter. Undoubtedly there will be a curtailment of consumption, to some degree at least, in this country because of the tightening up of money with the unavoidable reduction of business activity which will result. However, those whose tastes have become educated to butter will continue to purchase it for table use so long as they find it possible to do so.

On last week Monday, extras were quoted at 55c. There was practically no demand and on Tuesday the quotation fell to 54@54¼c, and on Wednesday, the price went to 53¾@54c. The lower price resulted in greater activity and on Thursday trading became very active, the quotation becoming firmly established at 54c. There was no change on Friday and Saturday but the market seemed to be gathering momentum. On Monday, the strength of the market was sufficient to cause the price to advance to 54¼@54½c. Today, there was no change but it is apparent that there will be another advance in the near future. Practically all stores found prospective buyers eager to secure stocks of high quality butter and large quantities changed hands. The quality of butter is falling off greatly and it is difficult to find sufficient fancy butter to satisfy the demand. Foreign butter is moving to better advantage, the Holland butter selling at 52¾@53c, the Danish at 53@53½c, while the Argentine butter, which is of uniformly poor quality, is offering at 47c. Established quotations on domestic butter are: Extras (92 score), 54¼@54½c; higher scoring than extras (93 score or higher), 55@55½c; firsts (90—91 score), 53@54c; firsts (88—89 score), 51@52½c; and, seconds (83—87 score), 48@50c.

W. B. LIVERANCE.

Cheese Prices for July

Cheese prices again showed a decline during July, although the total receipts at Chicago, New York, Boston, and Philadelphia, since the first of the year were 14 million pounds under those of last year. The cold storage holdings on July 31st were over one million and a half pounds less than on the same date a year ago. On the basis of receipts of cheese and storage holdings, it is somewhat difficult to understand the decreased prices of cheese, although the July make itself is considerably in excess of what it was a year ago.

The daily quotations of the United States Bureau of Markets show the following average quotations on cheese (style, Twins) for three large markets for July, 1920 and 1919:

	Average price July, 1920	July, 1919
	cents	cents
Wisconsin boards	24.61	31.72
Chicago	24.67	31.58
New York	26.78	32.54

Longhorns averaged for July of this year, 25.55c on the Wisconsin Board, or nearly 1c over Twins. This was another reduction of ½c in price from the June average, making the July price 4c under the May average.

Index to Volume LIX

The index to Volume LIX of Hoard's Dairyman is now in print and ready for distribution. This covers the issues from January 23, 1920, to July 16, 1920, inclusive. It is prepared for those readers who preserve their copies for reference as an aid in readily discovering the particular information in this volume they may seek. A copy will be sent free upon request.

The state college of agriculture belongs to you. Are you getting from it all the benefits to which you are entitled? You have only to ask.

Sale Announcements

August 25—Brown Swiss. Speedwell Farms, Lyndonville, Vt. William S. Dunn, Sale Mgr., Middleburgh, N. Y.
Sept. 6—Holsteins. Dispersal of F. C. Brinton, Jr., Herd of Registered Holsteins at West Chester, Pa.
Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Janesville, Wis., B. T. Green, Manager.
Sept. 10—Holsteins. Westham Dispersal Sale, Richmond, Virginia.
Sept. 13-14—Holseins. Dispersal Dr. R. Ivey, Glen F. Reed, and Dr. S. P. Scherer herds, Fishers, Indiana.
Sept. 25—Holsteins. John Stotzer herd, Suffield, Ohio.
Sept. 29—Ayrshires. At Dairy Cattle Congress, Waterloo, Iowa. C. H. Peverill. Amos Burhans, Sale Mgr.
Sept. 30—Holsteins. Marathon Co. Second Semi-annual Sale at Wausau. Sale Mgr., R. A. Rietzow, Edgar, Wis.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Holsteins. Dispersal of C. E. Burgess & Sons Herd at Huntington, Ind.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
Nov. 16-17—Holsteins. Second Iowa Breeders' Guaranty Sale at Waterloo, Ia. C. H. Jenness, Sec.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.

Producers' and Consumers' Interest in Milk Prices

C. P. WARBER, Manager National Milk Producers' Federation

IN asking for certain information relative to public control over the market distribution of fluid milk, a manager of one of the prominent producers' milk marketing associations of the United States recently wrote in part as follows: "Our constant trouble with the milk dealers on price adjustment convinces us that there should be some method by which prices and all other factors pertaining to the distribution of milk can be amicably adjusted from time to time by some impartial body with authority to enforce its regulations."

The present writer is aware of the fact that some of the largest milk producers' marketing associations are outspokenly opposed to any further extension of public control or regulation of the market milk business whether by municipal, state or federal government boards or commissions. The majority of farmers of certain sections of the United States, in common with business men and property holders in other industries, seem opposed on general grounds to the extension of governmental regulation of almost any kind of business. Governmental control and regulation of business is not in harmony with their theories or convictions in the realm of political science or practical politics. Besides such general considerations, however, the experience of many farmers with the activities of the United States Food Administration relative to milk prices during the war, caused them to form rather strong convictions regarding the efficacy and equitableness of governmental supervision of that kind of business; and those convictions are generally rather hostile towards the idea of increased governmental control in the market distribution of milk.

But, as already indicated in the beginning paragraph, this is by no means the unanimous opinion of organized milk producers' in all sections of the United States. For a considerable length of time after the United States' Food Administration ceased to function, various producers' associations, notably the New England Milk Producers' Association, the Inter-State Milk Producers' Association (supplying Philadelphia and several cities around it) and the Michigan Milk Producers' Association (supplying mainly the city of Detroit), voluntarily continued to formulate schedules of seasonal prices of milk, in conference with representatives of the public; variously designated as milk commissions or milk administrators. The functionings of such commissions and administrators were probably all "extra legal", i. e., they were without the sanction of either state or federal laws. But it is important that for a considerable number of months after the Food Administration ceased to function both the producers' associations and the leading milk dealers in those markets continued to abide by the decisions of such administrators or commissions.

One of the most successful examples of such regulation of the market milk business is that of Philadelphia. The following description of how the interests of the milk producers, the dealers, and the consumers were all recognized and protected by the amicable co-operation of the producers' association and the city milk dealers under the able leadership of Dr. Clyde L. King, "Milk Price Arbitrator for Pennsylvania", is taken from an article written by Dr. King and printed in the July issue of the Inter-State Milk Producers' Review, the official organ of the Inter-State Milk Producers' Association, Inc.

The Public Representatives

"It has been my duty to act as one of the public representatives in milk price matters in Philadelphia, first as chairman of the Governors' Tri-State Milk Commission, then, under the Food Administration as Milk Commissioner, and since the armistice as milk price arbitrator for Pennsylvania, appointed by the Governor. What part, if any, public representatives have played during this period it is for others to evaluate.

In this work the following principles among others have guided public officials during this period:

"1. Full and complete information has been insisted on as a basis for judgments. To this end the milk distributors in the city have filed and continue to file monthly financial statements. These and other records of these companies have been and are being examined by an accountant paid by the public, working at present under the supervision of and responsible to the milk arbitrator.

"2. Policies that increase the loads on and shorten the hauls for retail wagons have been encouraged. In many cities during the war period all sorts of plans were evolved to save milk distributing costs. These plans took the milk off the retail wagon and hence increased per quart the cost of delivering milk. Philadelphia milk has been delivered, bottled, at below the cash and carry plan for loose, dipped milk in New York City in most, if not all, of the months of the past two years and below any cash and carry plan for bottled or loose milk adopted anywhere.

"3. Every effort has been made to keep the market wholesome. Formulas that arrive at artificial prices to producers have not been used in this district as they have in others. But the need for advancing prices to producers has been squarely met as the best guarantee to consumers of an adequate supply of milk.

"4. No attempts have been made to "fix" prices by government agents. Price conferences have been and are attended by the representatives of the public as well as by representatives of milk producers and milk buyers. In these conferences the interests of all parties including the consumer, are considered, and all agencies, whether they be those of the public, or of producers, or of dealers, have been summoned to correct evils and to keep a wholesome price situation.

Producers' Milk Prices

The milk producer selling on the Philadelphia market has fared better than have producers in fats, meats and live stock throughout the United States. In 1913 and 1914, the normal seasonal variation in price to milk producers was above and below the current price level. In 1916, the price to producers in the season of greatest production fell as low as the price for milk in previous seasons, while the prices of all other commodities tended upward. In the years 1915, 1916, and 1917, the price of milk did not increase as rapidly as did the price level, and it was not until the early part of 1918 that the milk producer in this district received a seasonal increase above as well as below the price level of other commodities and an annual average price equal to the price of other commodities. By the year 1918 the milk producer in this district was getting a price for his product fully equal to the price increase in all other commodities. The producer in 1919 received an annual average of 3⅓% more than he received in 1918, as compared with an increase of about 15% in the general price level. In this district, therefore, while the prices to milk producers lagged in 1915, 1916, and 1917, they fairly caught up with the current price level in 1918, but lagged in 1919.



RIVERVIEW PANSY, AYRSHIRE COW OWNED BY BLACKBURN FARM, PENNSYLVANIA

Her 300-day production of 16,590 lbs. milk, 382.9 lbs. fat gives her third place among senior four-year-olds. On a second roll of honor test she has averaged 50 lbs. milk for four months.

"The farmer worked during the war period. He was not a profiteer. His output equalled or exceeded that of previous years. But the prices for his commodities did not rise so rapidly as did those in other industries. Whether the money price for the products of the American farm goes up or down, the relative price for what our farmers produce must increase in future months or consumers will wake up short of food. To put it another way, it was the middle class farmers and their salaried city cousins on whom the real brunt of the war fell. Unless we want to see further exodus from the farm to the city, the war debt to producers must be repaid in relative if not actual higher prices in the future.

"The milk producer selling on the Philadelphia market has received as high a net annual price as any milk producer in the country and he fared better than did producers of milk, meats and fats generally.

The Milk Dealer's Part

"The farmers selling on the Philadelphia milk market have helped to stabilize prices to consumers. But it cannot be said that the favorable retail price in Philadelphia has been at the expense of Philadelphia producers as compared with the prices received by milk producers in other districts, or for the year 1918, as compared with the price level of other commodities.

"During the year 1919 the consumer in Philadelphia paid an average of one and one-half cents per quart for each month below the average price paid by consumers in New York City, Pittsburgh, and Chicago for pasteurized milk delivered, while the milk dealer in Philadelphia paid as much to the farmer for his milk as did the dealers in these other cities. In other words, Philadelphia milk dealers have received, cooled, pasteurized, bottled, and deilvered milk at one and one half cents per quart below the average spread taken for these services, including profits, by the milk dealers in these other cities.

"In the period before the war, when milk was selling at eight cents per quart, about four cents per quart of the annual average went to the producer and four cents to the distributor. This was the situation in 1914. By 1919 the farmer was receiving nine cents per quart and the distributor five cents per quart for his services. The price to the producer, that is, had increased 125% while the share taken by the distributor had increased 25%. In other words, out of six cents increase in the price of milk to the consumer in Philadelphia during the war period five cents went to the farmer and one cent to the milk distributor.

"Can anyone point to any group of business men, other than Philadelphia milk dealers, who are today performing the same or better service at but 25% increase over the prices charged for those services in 1914. There may be such, but every consumer knows how scarce they are.

"By what principles and methods have the dealers in Philadelphia accomplished this result? The following are among the principles and methods responsible:

"1. The Philadelphia dealers co-operated with public representatives to keep costs low. * * *

"2. Milk in Philadelphia is sold from the retail wagon. Over 90% of the milk consumed in Philadelphia, probably 95%, is sold from the retail wagon. The larger the load on the retail wagon and the shorter the haul, the lower the delivery cost per quart. * * *

"3. Wages to milk drivers have been in large part on a commission basis. The result is that a driver is rewarded in proportion to the work done. * * *

"4. The price to the consumer has been stabilized. This has been possible with the co-operation of the producer, as explained above. The result is that wastes, due to fluctuations on retail wagons, are eliminated. The demand remains constant and hence many costs found where the price widely fluctuates as between winter and summer have been done away with. Stabilization does not mean the same price in winter as in summer. But it does mean that the winter price is kept as low as is consistent with winter production. * * *

"5. The milk plants in this city are well planned and carefully managed from the viewpoint of low costs. The costs in these plants in Philadelphia vary materially as between plants and not all are as efficient as the best, and all have possibilities for improvement. But the Philadelphia plant with the highest plant cost is still lower than the lowest plant cost in many a city.

"6. The newspapers and representatives of the consumers have co-oper-

(Continued on page 166)



Winter Proof Paint

PAINT is the armor-plate that protects the surface on which it is spread from the elements regardless of extremes in temperature.

The weather resistant qualities of paint are put to the acid test when a biting cold "nor-wester" whips sleet or snow into the paint film. That's the time that inborn stamina counts.

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Paint made from Carter White Lead and pure linseed oil, colored to suit, will not crack or scale because the lead and oil form a perfect film that dries hard into the pores of the wood yet keeps its "life" through years of honest service.

It will cost more to use a cheaper paint than Carter White Lead and pure linseed oil.

Carter White Lead Co., Chicago, Ill.

"Save the surface and you save all" Paint & Varnish

How a Heifer Made Her Record

MANLEY SHARP, WISCONSIN

FRANCES Lydia was born February 20, 1917. Her dam, Lydia Snowdown, is a splendid individual having a record of 324.95 lbs. butterfat as a two-year-old. Both dam and sire transmitted their milk and butter qualities to Frances Lydia. From March 4, 11919, to March 4, 1920, this cow milked 9,589.5 lbs. of milk testing about 5.5 per cent and making 501.9 lbs. of fat, placing her 11th in class GG. Within this same year she gave birth to two excellent calves. She is owned by Dr. W. A. Munn of Wisconsin.

As an economical producer of milk and butterfat we never before saw her equal. The total amount of grain fed was small, compared to what most cows eat when forced for big records. During the time that she milked 40 to 45 lbs. per day she rarely ate over nine or ten pounds of concentrates daily, ten pounds of alfalfa or clover hay, twenty-five pounds of silage, and twelve pounds of beet pulp.

Her preparation for test was begun when she was a calf and continued until she freshened. However, we began to feed her with special care about two months before she freshened. She was fed a mixture of bran, oats, corn, and oil meal, and all the silage and alfalfa hay she would consume, up to within two weeks of calving time when we reduced her rations to light succulent feeds. She was cleaned and brushed daily, and during the cold weather she was blanketed with a medium heavy blanket.

On February 28, 1919, she dropped a fine bull calf. As soon as the calf was born, the cow was given all the warm water she cared for and a warm bran and oat meal mash. She cleaned properly, had a good appetite, and was in good condition in every way. The calf was taken away after two days. The cow was then milked just twice a day for a few days and then three times. The total milk of the first few days was about twenty-five pounds, but this was increased a little each day. Her feed was increased slowly, and within fifteen days of the birth of her calf she was milking forty pounds a day and testing 5.2%.

The first month she milked 1,240 lbs., which at that time was 482 lbs. more than her bodily weight. The second month was nearly as good, for during this month she milked 1,230 lbs. And in the third month she milked 1,226 lbs. During each of these months she milked over 450 lbs. more than her bodily weight. The test was about five per cent for these three months. The following three months she milked splendidly. The seventh, eighth, ninth, and tenth months she milked well and tested high, and the last three months she tested 7.85, 8.03, and 8% respectively. During the last three months of the test she milked rather low but tested exceptionally high. The drop in milk was due in a large measure to a change in the milker and feeder and also to the fact that she had been carrying a calf for eight months.

The results of this cow's test brought to our minds more forcibly the fact that the careful study of the cow's appetite and habits, conforming to them with respect to feeding and care, is a factor which every dairyman should follow in testing for official records. The observation of these things had a big tendency to keep her appetite sharp and thus stimulate her production. The eye of the cow, her breathing, and the manner in which she attacks her food are all factors which determine how much to feed.

We found that after she had eaten one grain mixture for a month or so she would begin to grow tired of it. As soon as this was noticed, her feed was changed—that is, the more bulky portion of the ration was substituted by something else. So long as she would eat this ration with relish, she gave her maximum, but as soon as her appetite became a little sluggish, she would drop some.

Besides paying strict attention to her feed, the other important details of dairying were observed. She was brushed daily. Her stall was cleaned twice a day and well bedded. Her drinking cup was always full of clean, fresh water. She had access to plenty of clean salt.

Other records made on the Munn Farm last year were: Brownie of Linwood: 10,762 lbs. milk, 532 lbs. fat, in Class GG; Bonny Bay's Beauty Eagles, 476 lbs. fat; Flora's Sailor Girl, 300 lbs. fat in 6 months and still milking over 30 lbs. daily. From our experience with these cows we believe that breeding is first and foremost. The blood tells but, with the best breeding and individuality, if special attention is not given to the habits of the cow with respect to feeding a feeder cannot feed intelligently. Most anyone can find tables of feed and mix a balanced ration and throw it before a cow, but this may be just the thing which will throw the cow off her feed.

Within our own state are herds of pure-bred cows on test, which are not doing their best. Not because they are not fed good feeds. No, but because the feeder does not watch carefully enough the results of his feeding.



FRANCES LYDIA, OWNED BY DR. W. A. MUNN, WISCONSIN
Record: 9,589.5 lbs. milk, 501.9 lbs. fat, Class GG. Sire, Park's Billy France. Dam, Lydia Snowdown.

NOTICE THE POINT

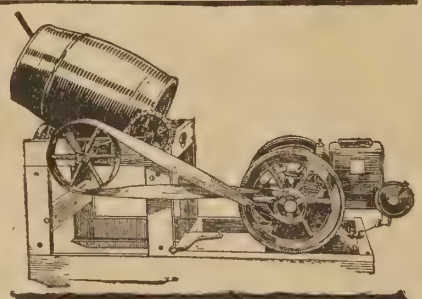
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Dairying Thirty Years Ago

Notes From the Issue of Hoard's Dairyman for August 22, 1890

A discussion was being carried on concerning the adulteration of milk with water. Cheese Instructor O'Connel of Wisconsin had stated that he had milked many cows and tested their milk and had not found one that gave milk testing below 3½% fat. He held that the state standard of 3% fat was too low and should be raised. The following editorial statement was made on the subject of adulteration:

No patron of a cheese or butter factory need to "shiver in his shoes" when he drives up to the factory in the morning and finds a state official, with his jars, ready to take a sample of his milk, if he has taken the milk to the weigh-can just as the cows gave it. If he is honest, he ought to welcome the officer's presence and encourage him to "spot" the man, if there is such a one, who is stealing money from his neighbors by making dishonest milk.

W. A. Henry, president of the Wisconsin Dairymen's Association, under the subject "Wisconsin Advancing in Dairying" spoke of the aid the newly established Wisconsin Dairy and Food Commission would be in continuing the "advanced movement in dairy matters, which, if continued as has been mapped out, will cause her to rank still higher in the dairy industry."

"One most interesting line of investigation is that of testing milk delivered by patrons at cheese factories and creameries for the purpose of determining the percentage of fat. The surprise of the patrons as they drive up to the factory at finding a state officer waiting to open the can and take samples can well be imagined, and the face 'sicklied o'er with the pale cast of thought' of the man who 'skimmed off a little cream for his coffee' that morning is a fit subject for a sketch artist."

The Nebraska Experiment Station reported favorable results with alfalfa and the following editorial statement was made:

"We hope that many of our dairy farmers will not let another spring pass without providing themselves with the seed of this hopeful for their stock. Any Wisconsin man who has tried it is invited to give his views and experience in the Dairyman."

O. Moffet of Iowa had had so ill results in inbreeding his herd of Jerseys that he was moved to the following statements concerning this practice:

"This subject resembles that of breeding for sex in that, if there is any science in it, it is so strictly scientific that the science soars far above the ken of such common plebian mortals as this writer. This conviction is forced upon my mind from experience and to my sorrow. I am not rash enough to dispute the wisdom or policy of 'judicious inbreeding' against so great an array of wisdom and science; on the other hand, but with equal candor, I beg to say that as for me I will take no more of it in mine."

The first conviction for dealing in adulterated oleomargarine had been secured. Ohio was the first state to enact a law prohibiting manufacturers from coloring oleomargarine with artificial coloring matter.

The following were current market quotations:

Elgin, Ill., Aug. 18—Market firm. Butter. Call board sales, no sales. Floor sales 270 at 22¼c. Sellers refused all call bids, holding for 23c.

August 11, 1890, butter sold at 20, 20¼, 20½c; August 19, 1889, 18, 18¾, 19c; August 20, 1888, 20c; August 22, 1887, 25c.

New York, Aug. 16—Butter. There has been a marked improvement in the general tone of the market this week. At the close fancy pails are firm at 21c. Only a few marks of Elgin have arrived this week, and they went to regular trade at about 20½@21c. Exporters have made a few purchases of pretty good stock at 13@14c. Arrivals of state dairy continue very light and there is ready sale for anything that shows merit. Best half tubs bring 17c. Imitation creamery rarely shows fine quality; an occasional lot is placed at 13@14c.

Cheese—This has been a very broken week. The strike on the New York Central prevented shipping by that route. For the last day or two there has been a fairish trade on the basis of 7¾@8c for fancy state colored and 7½@7¾c for perfect white. Oswegoes, etc., was at 7⅞c for fancy colored and 7⅝c for fancy white. Some of the fanciest parcels of large size cheese have been taken at 8@8¼c. Most of the choice Chenango Co. night skims went at 5@5¼c. Nothing doing in Ohio flats. Liverpool cable colored 40s. 6d, white 39s. 6d.

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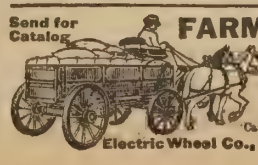
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Producers' and Consumers' Interest in Milk Prices

(Continued from page 163)

ated in Philadelphia to maintain and increase milk consumptions just because the price situation has been pre-eminently fair. Philadelphia is consuming as much milk at 14 cents as at 8 cents per quart. Milk at 14 cents per quart, under prevailing wages, is much cheaper than it was at 8 cents.

"A survey made by representatives of charitable organizations for the Food Administration revealed that the milk consumption in the congested districts had not decreased with the increase in price save in those few groups where wages had not increased. * * *

"7. There is less duplication in plants and of retail wagons on the streets in Philadelphia than in most cities. The savings in large scale plant and distributing facilities account in large part for the fact that the spread to the dealer in Philadelphia has not increased in proportion to other costs. As compared with other cities, the retail loads are larger and routes shorter. * * *

The Consumer's Part

"And, finally, may I add that the milk price situation in Philadelphia would not be as it is had it not been for the co-operation of the newspapers in Philadelphia and the representatives of women's clubs. Both have joined heartily throughout in acting after knowledge and fairly in the interests of all. The representatives of women's clubs and of charity organizations, and those in charge in the schools, all have done well their share in making and keeping the present price situation what it is. Prices are not the result solely of inexorable laws over which people have no control. Prices, especially for such a commodity as milk, are affected by public sentiment and good will and the ethical standards and public conscience of those who buy and sell. All these factors have played their part in keeping the milk price situation in the Philadelphia district all that it is."

New York Dairy News

Six Ton Cheese for State Fair:—The big cheese, which is annually one of the most interesting exhibits at the state fair, was made Aug. 1 at West Martinsburg, Lewis County, by H. A. Reese of Lowville, who is famous as a maker of monster cheeses for the last three world's fairs. Lieutenant-Governor Harry C. Walker and Commissioner of Agriculture Hogue were present to watch the process, during which the entire curd output of several factories was used.

The monster cheese will weigh about 12,000 pounds. Last year's cheese weighed 6,185 pounds and measured about 4½ feet high by 8 feet in diameter. Thus, the cheese this year will be twice as big, measuring about 6 feet in height and 10 feet in diameter. It will be cut on the opening day of the fair and sold in pound pieces to visitors.

On account of its size it will not go in a freight car, therefore it is to be carried by motor truck to the Dairy Building.

Higher Milk Prices:—Milk dealers in Syracuse have announced that the price of milk will be advanced 1 cent a quart for the month of August. The price will also be raised the same amount in New York City, making it 20 cents a quart.

During the last week in June similar announcements were made in both cities. In New York City the price was raised 1 cent a quart on July 1st, but in Syracuse the blow did not fall. The fact is established that Syracuse is getting better and more economical milk service than New York City.

New York City has greater problems of distribution than Syracuse. Still, dealers there mainly based their reasons for the advance upon the increased cost of milk to them.

Farmers do not hesitate to say that they expect four-dollar milk this winter. If that is so, and they justify it by the use of the Warren cost of production formula, it is plain that the price of milk will have to rise.

"Milk Bar" at Cortland County Fair:—For two years the state of New York in co-operation with New York City has held a milk exposition in that city which has proven to be a great success, especially at the milk bar, in drawing the attention of the public to the serving of milk in attractive and delicious drinks. This year, counties are featuring "Milk Bars" at fairs and farm and home bureau picnics, and Cortland County is among those who will have such a "Bar" at their fair which will be held August 16th to 21st.

Iced Cocoa, Guernsey Highball, Holstein Fizz, Buttermilk, and Sweet Milk are among the drinks which will be served.

The nutrition authorities at the School of Home Economics at the State College of Agriculture assert that the milk pitcher, when supplemented by the vegetable garden, is the best friend of the woman who wishes to set a wholesome and economical table and assure the safe nutrition of her family. Milk comes nearest of all foods to being a complete food in itself.

New York. E. M. L. BLANCHER.

Louisiana Silage Suggestions

Harvesting the crop at the proper stage of ripeness and putting it into the silo under the most favorable conditions are the most important factors in making the best quality of silage. Moldy silage is perhaps a source of the greatest loss that occurs from crops made into silage and every effort should be made to prevent the formation of same. Molds in silage cause not only a loss in feed but are dangerous when fed to live-stock and especially to horses and mules.

The following precautions and methods when observed in filling the silo will prevent in a large measure the formation of molds, dry rot, etc., and insure a good quality of silage.

Cut corn for silo when the fodder is ready to pull. The grain has passed the dough stage and has become glazed. Up to this time the plant increases in food value and is not ripe. Sorghum should be made into silage when ripe and the seed is in the dough stage, which is usually when the crop is ready for making syrup. All crops for silage should be cut not more than one-half inch in length, should be evenly distributed over the silo, packed well, and all air excluded. The exclusion of air from all portions of the silo is the one means that will prevent the formation of molds.

Over-ripe crops and weeds and hollow-stemmed plants prevent proper packing, cause insufficient moisture for proper fermentation to exclude all air, and furnish favorable conditions for the development of molds.



MAJESTY'S MINERVA,
New junior 3-year-old Jersey champion of Vermont with a record of 11,476 lbs. milk, 683 lbs. fat. As a two-year-old she produced 7,567 lbs. milk, 431 lbs. fat.
OWNED BY QUECHEE FELLS FARM, VERMONT

Where the crop used for making silage does not supply sufficient moisture by its juices to moisten every particle of the silage, then sufficient water should be added to furnish this moisture. This is best done by spraying the cut material as it passes through the blower of the cutter, where every particle may be moistened sufficiently. This method never gives too much water.

Crops when cut too green for the silo make silage that is sour and contains an excessive amount of acid. The silage is not palatable, does not contain its maximum food value, and a loss is sustained.

Silage made from a good corn crop this year will be worth from $10 to $15 per ton, which is sufficient reason for using every precaution and applying the best methods in the making of same. Although corn will sell at a high price this fall as usual, we hope that it will not prevent any dairy farmers from filling their silos. It should be remembered that when the corn crop goes into the silo not only the grain is prepared in the best way for feeding dairy cattle, but the stalk and fodder are also saved, and the entire crop is used for feeding the dairy herd.

Louisiana. C. H. STAPLES.

July Condensery Prices

Prices paid producers for 3.5% milk delivered at factories during July are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms operating approximately 80% of the total factories in the United States.

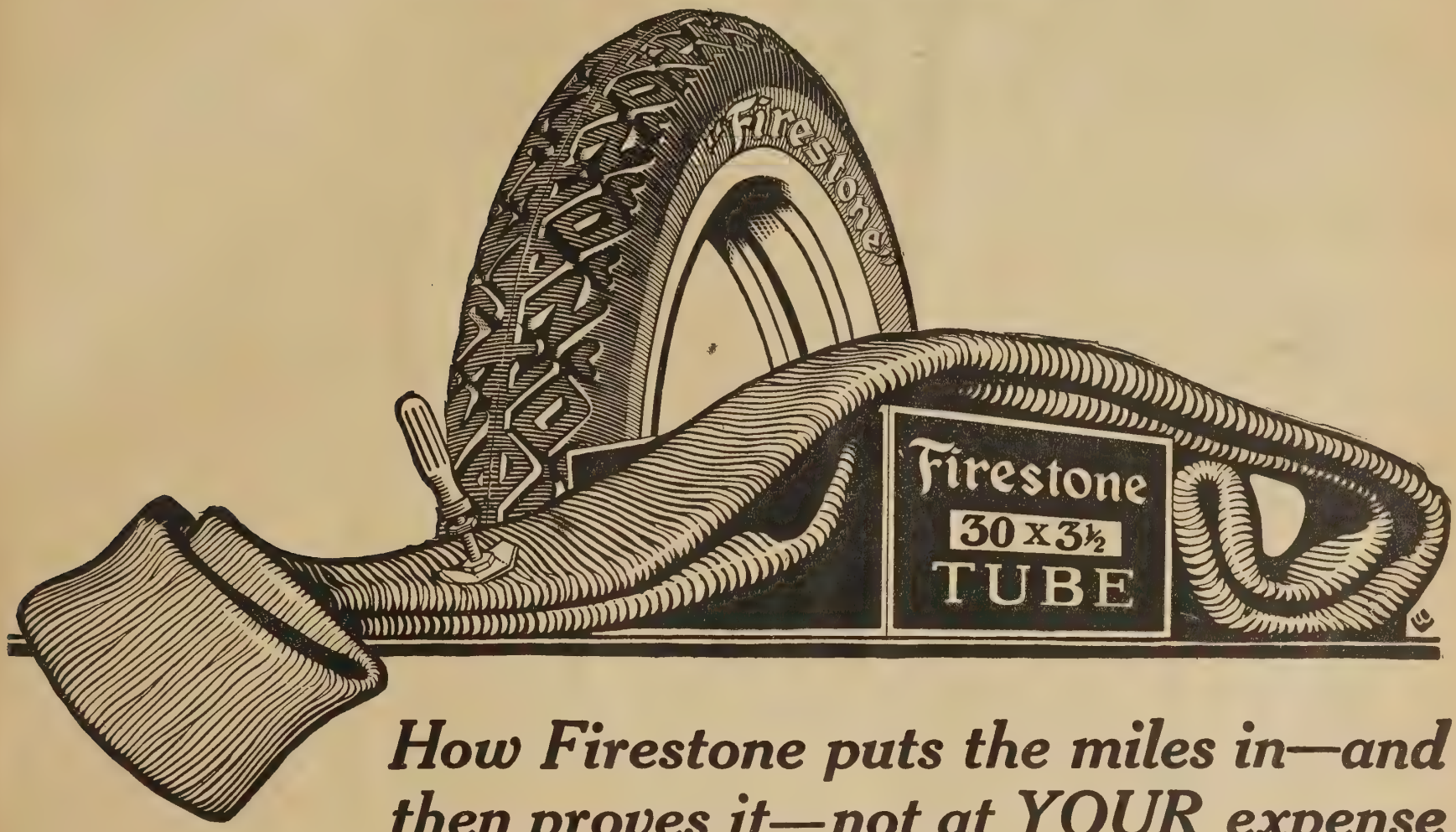
Geograhpic sections	No. firms reporting	Price per cwt. Range	Ave.
New England	4	$3.05—$3.76	$3.53
Middle Atlantic	95	2.60— 3.46	3.08
South Atlantic	7	2.60— 3.44	3.08
East North Central	119	2.50— 3.42	2.98
West North Central	15	2.45— 3.20	2.73
North Western	21	2.50— 3.25	2.69
South Western	15	2.60— 3.20	2.87
United States	276	2.45— 3.76	2.98

The wholesale prices given below are averages based on reports made by manufacturers covering actual sales of condensed and evaporated milk delivered to jobbers, wholesale grocers, and similar buyers at manufacturers distributing points on basis of cash short time credit. Foreign prices are given as f. o. b. or f. a. s. points of export in section in which sales were made.

Geographic sections	Sweetened condensed per case* 14 oz. cans		Unsweetened evaporated per case* 16 oz. cans		Sweetened condensed bulk per cwt.		Unsweetened evaporated bulk per cwt.	
	Domestic	Foreign	Domestic	Foreign	Unskimmed	Skimmed	Unskimmed	Skimmed
New England	$10.00	$10.00	$6.12	$7.00	$22.23	$16.92	$10.70	$5.77
Middle Atlantic	9.87	9.10	5.99	6.63	22.00	15.85	11.51	5.47
South Atlantic	10.22	10.00	6.29	7.00	23.00	16.78	12.00	5.55
East North Central	10.21	10.00	5.87	6.75	21.83	16.80	10.84	5.93
West North Central	10.14	10.00	5.88	7.00	21.17	17.60	9.85	5.75
South Central	10.21	10.00	6.18	7.00	23.00	17.77	12.00	7.00
North Western	10.14	10.00	5.84	7.00	21.67	17.40	11.75	5.55
South Western	10.14	10.00	5.85	7.00	23.00	18.05	11.41	
United States	10.10	9.49	5.98	6.88	21.97	16.80	11.12	5.75

*Case contains 48 cans.

A big-scale road test on 3,200 tubes



How Firestone puts the miles in—and then proves it—not at YOUR expense

No other tubes in the world are road tested on so big a scale as Firestones. The Yellow Cab Company of Chicago uses Firestone Tubes exclusively on its 800 taxicabs. The service of these tubes is checked constantly—improvements and developments are arrived at.

By close watching of a large number of tubes in service—not confined to isolated instances—the conclusions are accurate and definite.

Firestone puts the best in materials into tubes by establishing purchasing experts at Singapore, center of the world's rubber market. Firestone puts the best in workmanship into tubes by organizing the crack manufacturing organization of the industry on a profit-sharing basis.

And then subjects the finished product to this big-scale road test—in order to get you more for your tube money and most miles out of your tires.

Firestone Tubes resist heat—which everyone knows is the tubes' worst enemy. Their laminated construction, ply on ply of thin rubber sheets laid crosswise and perfectly vulcanized, gives the stoutest tube wall. Their larger sectional size means less stretch to fill the casing. Ask your dealer for Firestone Tubes. They cost no more than the ordinary kind.

30x3½ Red, $4.50; Gray, $3.75
Other sizes in proportion

Firestone



Roofings of Known Quality —

THE long established and widely known quality of Barrett Everlastic Roofings eliminates risk and uncertainty from roofing purchases.

These roofings are made by the company that has been the leading manufacturer of roofing materials for over fifty years. They are giving perfect satisfaction on thousands of farm buildings, country and city homes and factories all over America

You can use them on any and every steep-roofed building about the place. They are made in four styles—two forms of Shingles and two of Roll Roofings.

Both styles of Everlastic Shingles are surfaced with real crushed slate in beautiful, rich art-tones of red or green. You can't buy more artistic roofs at any price. They are low in price, easy to lay, highly fire resistant and wonderfully durable.

One style of roll roofing is also slate surfaced in red or green. The other—Everlastic "Rubber" Roofing—is plain surfaced and gives unfailing satisfaction wherever this type of roofing is needed.

Look for the Everlastic name when you buy. It's your protection against inferior roofings.

Everlastic "Rubber" Roofing

A recognized standard among "rubber" roofings. Famous for its durability. Made of high-grade waterproofing materials, it defies wind and weather and insures dry, comfortable buildings under all weather conditions. Nails and cement included.

Everlastic Slate-Surfaced Roofing

A high-grade roll roofing, *surfaced with genuine crushed slate,* in two natural shades, red or green. Needs no painting. Handsome enough for a home, economical enough for a barn or garage. Combines real protection against fire with beauty. Nails and cement with each roll.

Everlastic Multi-Shingles
(4-Shingles-in-One)

Made of high-grade thoroughly waterproofed felt and *surfaced with crushed slate* in beautiful natural slate colors, either red or green. Laid in strips of *four shingles in one* at far less cost in labor and time than for wooden shingles. Give you a roof of artistic beauty worthy of the finest buildings, and one that resists fire and weather. Need no painting.

Everlastic Single Shingles

Made of the same durable slate-surfaced (red or green) material as the Multi-Shingles, but cut into individual shingles, 8 x 12¾ inches. Laid like wooden shingles but cost less per year of service. Need no painting.

The Barrett Company

TRADE B MARK

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland	Cincinnati
Pittsburgh	Detroit	New Orleans	Birmingham	Kansas City	Minneapolis	Dallas
Nashville	Syracuse	Seattle	Peoria	Atlanta	Duluth	Salt Lake City
Bangor	Washington	Johnstown	Lebanon	Youngstown	Milwaukee	Toledo
Columbus	Richmond	Latrobe	Bethlehem	Elizabeth	Buffalo	Baltimore



THE BARRETT COMPANY, Limited: Montreal Toronto Winnipeg Van couve
St. John, N. B. Halifax, N. S. Sydney, N. S.

Never Take Chances on Butter Color

When you use Butter Color bearing the Dandelion Trade Mark you are getting the benefit of our experience of almost 40 years of Butter Color making—and experience does count.

Dandelion Brand Butter Color—Standard of the World

Over 90 per cent of all the successful buttermakers in the United States use Dandelion Brand, and that is one reason why they *are* successful. Better join this band.
Ask your Jobber for latest price of "Dandelion Brand Butter Color."





We guarantee that Dandelion Brand Butter Color is PURELY VEGETABLE and that it meets the FULL REQUIREMENTS OF ALL FOOD LAWS—State and National.

WELLS & RICHARDSON CO., Inc., Burlington, Vermont.
Manufacturers of

Dandelion Brand Butter Color
The color with the golden shade

Uncle Sam's Hired Men Who Serve You

(Continued from page 151)

rope and sent back parasites and natural enemies of both the gypsy and brown-tail moths. These insects are no longer serious enemies of orchard, shade, or ornamental trees. Imported enemies and other control measures have got them in hand. Even in mixed forests, a system of forest management has been devised which, with the help of the natural enemies, results in practical control wherever adopted.

A few years ago the Japanese beetle got into New Jersey on imported nursery stock and threatened tremendous damage. The Department of Agriculture, in co-operation with the state authorities, have held it to a comparatively small area, and a representative of the Bureau of Entomology is now in Japan finding out the natural enemies of the beetle and sending them to prey upon it in New Jersey.

The sugar cane moth-borer, for several years past, has been causing heavy loss to sugar planters in Louisiana, having got across the water from Cuba. The Department of Agriculture kept a specialist in Cuba last season finding out the natural enemies of the borer and sending them to Louisiana. A number of them have been established. This year men will be kept in Cuba and many more borer enemies will be introduced to help in the control of this very dangerous enemy of the sugar crop.

Another of Dr. Howard's specialties is medical entomology—he is an M. D. in addition to the scientific degrees he holds from Cornell and other institutions. He has been especially interested, therefore, in the insects that cause disease in man. The detection of mosquitoes as carriers of yellow fever and malaria made the control studies and biological studies of mosquitoes which he early made in the Department of Agriculture of the greatest help in the control of disease. So he has worked against the house fly as a carrier of typhoid fever and other diseases. His books, "Mosquitoes" and "The House Fly—Disease Carrier", were published when the compaigns against those insects were in the critical formative period, and each book has been a power against the enemy of man with which it deals.

These are just a few of the things that the Bureau of Entomology, under Dr. Howard's direction, has done. There are a great many others, some of them of even greater economic importance. Just now, the entomologists of the department are fighting the pink bollworm of cotton, the most destructive enemy of that crop, which has got into Texas and Louisiana from Mexico. But for this work, it would spread over the South, levying a heavy loss on every crop and undoubtedly destroying the cotton industry in many places. When the cotton boll weevil came in 28 years ago, Dr. Howard recommended the passage of a strict quarantine law and a campaign of extermination while it was still confined to a narrow area. State co-operation could not be secured, however, and the boll weevil has destroyed millions of dollars of cotton every year since, estimated as high as $200,000,000 in a single year. During the past few years, however, the Bureau of Entomology has discovered a means of control by dusting the cotton with calcium arsenate. The effectiveness of it is indicated by the results of one experiment in an abandoned field where a poisoned strip produced 480 lbs. of cotton against 50 and 60 lbs., respectively, for two unpoisoned strips of similar area. This system has been adopted by many planters and is already saving tremendous quantities of cotton.

The Hessian fly has long been the most destructive enemy of small grain—seriously competed with only by the chinch bug. Cultural methods of control have been developed which, where followed, reduce injury from both these pests by millions of dollars a year.

A slight modification in cultural practice was found by which the clover seed midge is controlled and the clover seed crop over a large part of the country saved.

Coniferous forests are protected against the destructive bark beetles by a system of removing a certain per cent of infested timber at certain periods, and the cost is met by the value of the timber cut.

But the story can not be told in full. Nearly half a century of work can not be shaken down into a sketch. During that time, Dr. Howard has written and published more than 800 books and papers, many of which have been translated into various languages. He is a member of more than 20 scientific societies in this and foreign countries. He is a member of the National Academy of Sciences, is president of the American Association for the Advancement of Science, and has held offices in various other scientific bodies in this country.

And all those things have not taken up all of his time. He used to be interested in all out-of-door sports, and in later years has devoted some attention to golf. But his principal recreation is people. He is always interested in the other person's viewpoint whether the other person be man, woman, or child. He talks with everybody everywhere, and learns something from all of them, he says.

Reverting to the initial estimate placed on Dr. Howard's services, I do not want to create the impression that even at half a billion dollars a year, he is the most valuable man in the Department of Agriculture. As I said before, he is a modest man, and such a statement would not please him. Anyhow, there are 16 other bureau chiefs, any one of whom has a value comparable to his.

Scotch Ayrshire Judge at the National

The Ayrshire Breeders' Association announces the selection of the Honorable Hugh W. B. Crawford of Chapmanton, Castle Douglas, Scotland, as judge of Ayrshires at this year's National Dairy Show, and Mr. Crawford has cabled his acceptance of the duties.

Mr. Crawford is not only a breeder but is in educational work as well. He has been an active participant in all dairy development work in Scotland for a great number of years. He is possibly the best known breeder of Ayrshires in Scotland at the present time, and is most highly respected by his fellow breeders.

The selection of Mr. Crawford to judge at the National is of portentious moment to the breed, and every Ayrshire breeder in America should be at the ringside to see where the Scotchman's opinion of American breeding differs from theirs, and have a good-natured ring-side explanation on all judgments rendered.

The Ayrshire runs true to form, so that the Scotchman's work will be intensely interesting to breeders on both sides of the ocean.

Mr. Crawford will visit many parts of our country while here as the guest of the Ayrshire Association, and his visit should be the cause of a great Ayrshire rally for extension work for this splendid breed of dairy cattle.—N. D. S. Publicity Dept.

Women to be Dairy Products Specialists

Is milk a food or a beverage? Is it any more reasonable to make the amount of butterfat it contains the standard of value of milk than it would be to assume that the price of meat should be governed by the fat it contains? Stockmen have long recognized the value of skimmilk as a food for animals. Since animals have



CONIE FOOTE

digestive systems which are constructed so as to use foods which humans cannot use, why should human food be fed to animals?

These and other questions suggest the field of usefulness of the dairy products specialist. Two states have regularly employed women specialists in this department, Kansas and Iowa.

A $500 scholarship has recently been established at the Kansas Agricultural College at Manhattan by P. M. Sharples of the Sharples Separator Company to prepare young women for work in this field.

Miss Conie Foote of Downs, Kansas, a junior in home economics, was awarded the honor for 1920. After her graduation Miss Foote will spend at least one year in educational work along dairy lines.

Bulletins of the Week

Electricity on the Farm, by Myron Creese. Extension Service Bulletin 9, Maryland State College of Agriculture, College Park, Md.

Variations in Farrow, with Special Reference to the Birth Weight of Pigs, by W. J. Carmichael and John B. Rice. Bulletin 226, Illinois Experiment Station, Urbana, Ill.

Dockage Under the Federal Wheat Grades, by R. H. Brown. Farmers' Bulletin 1118, U. S. Dept. of Agriculture, Washington, D. C.

Spraying Lawns with Iron Sulphate to Eradicate Dandelions, by M. T. Munn. Bulletin 466, New York Experiment Station, Geneva, N. Y.

Some Studies Relating to Calcium Metabolism, by W. P. Wheeler. Bulletin 468, New York Experiment Station, Geneva, N. Y.

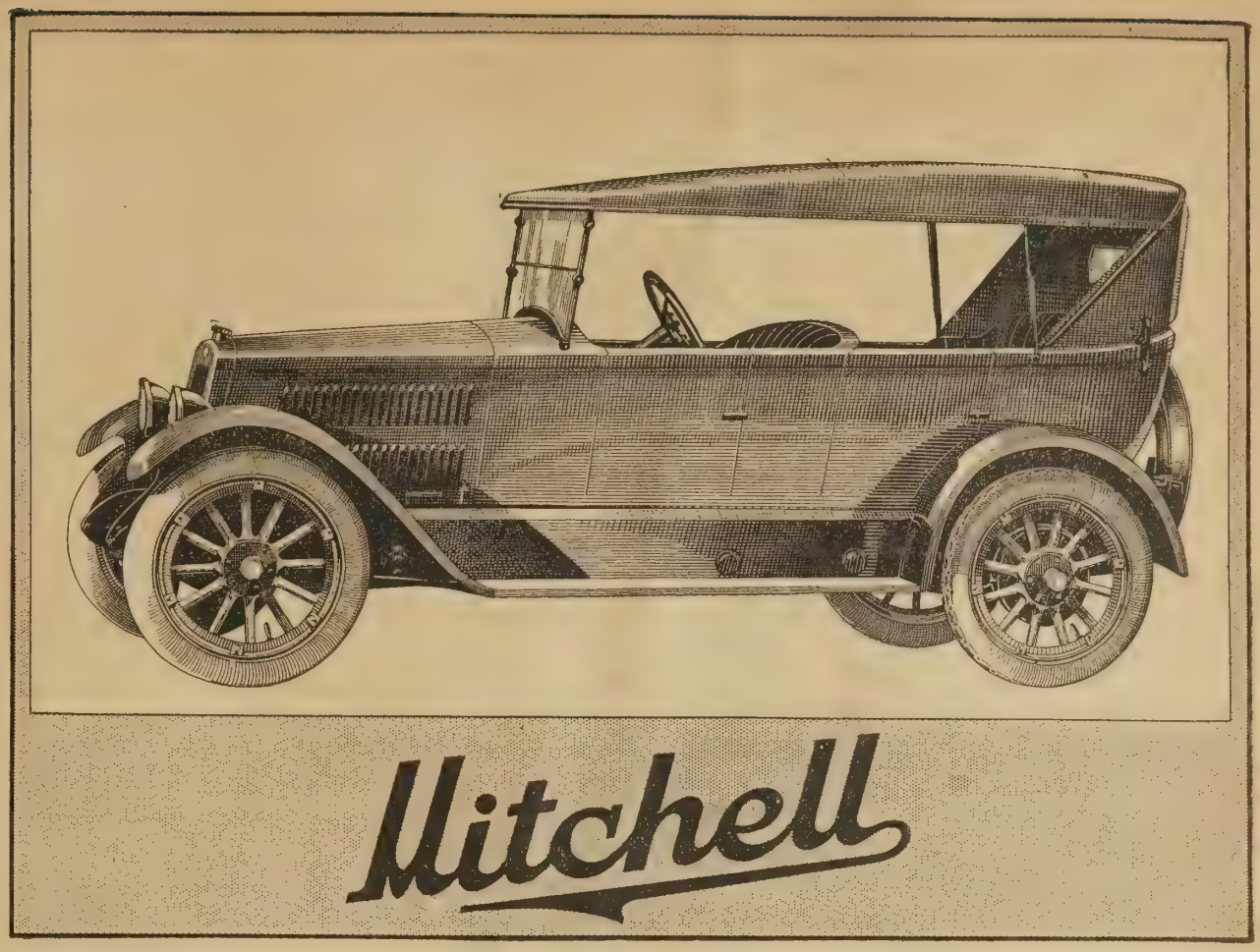
Wisconsin Dairy Council Report

The James Manufacturing Company of Wisconsin sent a check for $500 to the Wisconsin Dairy Council in July, which is their share towards a dairy advertising campaign. Mr. James also sent a letter stating that he was willing to do more if it was necessary. Now, Mr. Farmer and Mr. Creameryman, it is about time for you to wake up; you are the ones to receive the direct benefits from the work of the Wisconsin Dairy Council. We only secured money from twenty-three members during the month of July; however, we had a good many promises, but remember that the Council cannot live on promises, they must have your moral and financial support.

The members of the Wisconsin Dairy Council will be asked to exhibit their products at the State Fair in the Dairy Council booth. Arrangements have been made to display butter cartons and wrappers from the creameries who are members. The cheese factories will be asked to send a sample of their cheese. The ice cream manufacturers will be asked to send some of their advertising matter. The condenseries will be allowed to display their products. The milk distributors will be asked to send one of their market bottles and the farmers who are members will be rewarded for their support by having their names at the head of our membership. All other concerns who are members will be allowed to display some of their advertising or material handled. It is up to every man interested in the dairy business to see that his product gets proper recognition, therefore, see that you do your share towards the Wisconsin Dairy Council:

John Alexander, Sauk	$ 1.00
Wm. A. Biedenbender, Calumet	5.00
Brookside Cheese Factory, Calumet	6.19
Central Wisconsin Creamery Co., Sauk	54.27
C. W. Cootway Creamery, Brown	17.30
Eagleton Creamery Co., Chippewa	10.00
Fox River Valley Cheese Co., Brown	9.30
Ernest Hanger, St. Croix	1.00
Hudson Creamery Co., St. Croix	14.00
James Manufacturing Co., Jefferson	500.00
L. O. Kaofmann, Calumet	5.25
Kiel Dairy Products Co., Manitowoc	10.00
Kleinheinz Dairy Co., Marathon	63.25
Ladysmith Co-op. Creamery Co., Rush	10.00
Mory Ice Cream Co., Outagamie	10.00
New Lisbon Co-op. Cry. Assn., Juneau	16.90
Prairie Du Chien Cry Co., Crawford	6.00
C. C. Riedel, Calumet	7.71
Roberts Creamery Co., St. Croix	25.00
Stoddard Co-op. Creamery Co., Vernon	10.00
Westby Co-op. Creamery Co., Vernon	25.00
Wild Rose Creamery Co., Waushara	20.00
Wrightstown Bottle & Cheese Co., Brown	10.75

J. F. THOMAS,
Field Sec'y. W. D. C.



Save Many Ways

Save first on first-cost. The New Mitchell should be compared to cars costing $500 to $1000 more. Nowhere will you find such a fine car, combining new-day style with dependable performance, at such a low figure.

Save in the future. The New Mitchell affords a car of lasting newness, one that is stronger, more durable, and better built. It brings new accuracies in manufacture, finer materials, and sturdier assemblage.

It is built complete, including the bodies, at the highly efficient Mitchell plant.

The New Mitchell brings not only these savings, but a future-style car, one with new lines and refinements. It brings a roomier, more comfortable body. And a careful attention to details of finish found only on costlier cars.

We suggest, as a precaution, that you see the New Mitchell before you buy. Examine it. Then make comparisons.

A Mitchell dealer will be glad to assist you by showing the New Mitchell's superiority and giving you the points by which to judge.

Four Models
5-Passenger Touring Car
3-Passenger Roadster
5-Passenger Sedan
4-Passenger Coupe

MITCHELL MOTORS COMPANY, INC., RACINE, WISCONSIN



Alfalfa Hay

We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.

W. A. FERSON HAY CO.
511 Reliance Bldg., Kansas City, Mo.

PRINTING

Hoard's Dairyman Art Dept. designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cts. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wis. 8-tf

POSITIONS WANTED

Experienced test cow milker seeks position in herd where Advanced Registry work is being carried on. Young man 21, of good character and habits. Location immaterial. Prefer modern place with bright future. Address BOX 116, Campton, N. H.

Experienced dairy manager, college graduate, wants responsible position. Would prefer to work on living salary and percentage of net income. Understand A. R. O. work, certified milk production, feeding and breeding, and am an expert buttermaker. Address BOX 321, care Hoard's Dairyman.

Position wanted on stock farm or ranch, by a veterinarian, lately employed as veterinary inspector, in U. S. B. A. I. Year's experience in general practice. Address BOX 319, care Hoard's Dairyman.

Situation wanted as farm and dairy manager, or calf herdsman on large dairy. Address BOX 317, care Hoard's Dairyman.

Housekeeper, good manager, good cook. MRS. WM. LLOYD, Stillwater, Minn.

A young, single man wishes a position in a dairy barn or milk room; six years of experience with cattle, mechanical milker, buttermaking, certified work. State wages and particulars in first letter. Willing to go anywhere. W. V. SMITH, Gen. Del., Akron, Ohio.

Working herdsman open for position October 1, married, no children. Experienced in feeding, testing, recording, ordinary veterinary work, calf raising and mechanical milking. Good dry hand milker. Wisconsin or adjoining states preferred. References exchanged. State full particulars first letter. Address BOX 325, care Hoard's Dairyman. 5-2

Farm manager with practical experience in all branches of farming, dairying, feeding, breeding, pure-bred stock, milk production, commercial handling of highest class milk and dairy products, fruit and poultry. Married, 31 years old, agricultural college graduate, reared on farm. Progressive, good executive and organizer. At present employed as manager of large estate, pure-bred stock and commercial dairy farm. Highest references as to character, education, training, practical experience, executive and business ability. Only first class proposition considered. Answer fully in first letter. Address BOX 323, care Hoard's Dairyman. 5-2

(Continued on page 175.)

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

The WISCONSIN Broadcast Seeder



Manufactured by the

Sheboygan Machine Co.

Manufacturers of Windrowers, Grain Saving Guards, Pea Guards, Pea Harvesters and Broadcast Seeders.

Write for catalog.



U.S. Army Style Work Shoes

This wonderful extra long wearing, dark tan WORK SHOE, Munson Army style, offered to you at makers' prices. Nowhere can you beat this money-saving value, guaranteed to give best wear and full satisfaction.

$4.65 On Arrival

Send No Money

Simply write your name, address and size and you will have them at once. Postage Free. Your money back if not satisfied.

[ ] Soft Box Toe [ ] Hard Box Toe

Mercantile Shoe Co., P. O. Box 1697, Boston, Mass.

45 Years on the Line

Come to Headquarters for

Cotton Seed Meal

OWL Brand *DOVE Brand* *JAY Brand*

F. W. Brode & Co.

Established 1875
Incorporated 1915
MEMPHIS, TENN.

Our Brand on the Tag Means Quality in the Bag.

I Want a Heifer

Pure-bred Holstein

2 years or less, backed by type and production.

John P. Algie, - Como, Montana

Several Hundred Ohio Farms *For Sale*

WE are offering several hundred of the best farms in Ohio at prices that are low in comparison to the value of the property and the income assured purchasers.

These farms are a part of the Miami Conservancy District, which is a political subdivision of the State of Ohio, and represent a surplus acreage that we own in the Miami Valley.

Rich silt loam top-soil deposits make this land very productive—practically inexhaustible.

It is our earnest desire to bring more good farmers to this community, which lies within a thirty mile radius of Dayton. Quick markets are available by rail, interurban and highway.

We Would Like to Send You Booklets Giving Detailed Information. Just Address "Farm Division"

THE MIAMI CONSERVANCY DISTRICT
DAYTON, OHIO

Tires for the Farm Truck

HOARD'S DAIRYMAN:—The matter of having the farm truck properly equipped and tired is causing considerable inquiry among farmers at the present time. The difference in prices between the solid tire and the pneumatic amounts in some cases from $15 to $25 a tire and the longevity of the two is also affected by different farm conditions, such as the kind of roads, amount the truck is used, and the load hauled.

In our section the pneumatic tires are gaining more popularity, particularly because the farm truck is being used for a good deal of long distance hauling. It is not uncommon for farmers to haul live hogs 30 miles to market, although in a few cases a 5-mile run may be all the truck will have within a week or so. Because of the larger circumference of the pneumatic tire it gives a little more speed to the ordinary truck, which is geared down considerably compared with the touring car. Where the touring car type of truck is used, however, the pneumatic cord tires are used almost entirely. In some instances where dairy farmers have heavy loads of milk to deliver short distances over bad roads, the solid tire is still retained, as this gives excellent service when speed and distance is not required.

The pneumatic tire, however, is regarded as giving best service when the effect upon the truck is considered, as the resiliency of the pneumatics is quickly noticeable over the solid tires. Where a heavy load of 2 to 4 tons is transported for long distance, however, the solid tire is almost entirely adhered to.

For the average farm conditions, however, it seems that the pneumatics are being favored more than solid tires and in some cases the pneumatics are used on the front wheels and the solid tires behind but this is generally where the truck is used for a variety of conditions and must be run over all kinds of road surfaces.

Ohio. C. M. BAKER.



A MILK TRUCK USING PNEUMATICS ON FRONT WHEELS AND SOLID TIRES FOR THE REAR TRUCK

Keep Out the Rye

HOARD'S DAIRYMAN:—In some neighborhoods the man who grows rye and has it threshed when he takes his turn at the machine is a community pest. He spreads rye in every field that is planted from seed threshed in the same machine for several days thereafter. Such a mixed field tends rapidly to contain a higher per cent of rye and in a year or two new seed wheat must be bought.

Riding from Mulvane to Ashland, Kansas, this year just preceding harvest we counted the fields of wheat that touched the track on one side. Of 43 fields in succession 20 had a sprinkling of rye. One neighborhood apparently had cleaned up last year and 15 fields in succession were without a trace of rye.

Threshermen realize the absolute impossibility of cleaning every grain of rye out of the separator. One old separator man of 35 years experience remarked, "I always give them their own dose of rye. They have no business growing the stuff to maturity and then expecting us to run it through our machines to contaminate their neighbors' fields. So I always tell 'em, "we got to get that rye straw through here first and then their own wheat has a chance to take up the rye that is left in the machine."

The same trouble is experienced on the edge of the hard and soft wheat belts where some one persists in growing a smooth, soft wheat in a neighborhood that is otherwise all hard wheat. A Kanred field of 80 acres was found on inspection this year to be unfit for sale as pure seed because of a scattering of smooth headed wheat all over the field. The owner had used every precaution possible to keep it pure and the same field last year on inspection was found to be pure. A neighbor two miles down the road had threshed smooth wheat just before the machine came to the Kanred field and there was no way to clean it all out. It takes but a couple of handfuls of grain to contaminate a whole crop. The loss to this man this year is at least 50c per bushel on 2,000 bushels, all due to having a thoughtless neighbor. R KENNEY.

Kansas College of Agriculture.

Jersey Cattle Notes

Week ending August 6, 1920:

Number of animals registered: Bulls, 215; cows, 618; total, 833. Number of transfers recorded: Bulls, 170; cows, 617; total, 787.

MARKETS

CHICAGO, Aug. 13—Butter—Creamery, extras, 54c; standards, 53½c; dairy, firsts, 48@52½c; seconds, 44@47c.

Eggs—Ordinary, 46½@47½c; firsts, 42½@43½c.

Cheese—Twins, 22½c; Young Americas, 23¾c.

MILWAUKEE, Aug. 13—Eggs—Fresh, current receipts, 44@45c; recandled for city trade, 47@49c; checks, 29@30c; dirties, 33@35c.

Butter—Creamery—Tubs, 54c; prints, 55c; extra firsts 52@53c; No. 1 packing stock, 38c; No. 2, 20@30c.

Cheese—Twins, 23½@24c; Daisies, 24½@25c; Longhorns, 25½@26c; Young Americas, 25½@26c; fancy Brick, 27@28c; Limburger, new, 1 lb., 31c; Limburger, 2 lbs., 30c.

NEW YORK, Aug. 13—Cheese—Steady; state milk; common to specials, 20@28½c; skims, common to specials, 5@17c.

Butter—Firmer; receipts, 12,684; creamery, extras, 55c; state dairy, tubs, 45@54½c; imitation creamery, prints, nominal.

Eggs—Firm; receipts, 16,249 cases; nearby white fancy, 67@70c; nearby mixed fancy, 48@62c; fresh firsts, 48@57c; Pacific coast, 50@70c.

July Milk Prices

The following table from the U. S. Bureau of Markets July report presents a comparison of the net prices received by producers for fresh milk (test, 3.5%) f. o. b. local shipping points or milk plants operated by fluid milk dealers:

Sections	Range of July prices per cwt.	Comparison of average prices 1920 June	1920 July	1919 July
United States	$2.10—$6.16	$3.21	$3.33	$3.08
New England	2.75— 4.85	3.69	3.96	3.19
Middle Atlantic	2.78— 4.04	3.11	3.21	3.09
E. North Central	2.28— 3.72	3.00	3.16	2.94
W. North Central	2.10— 3.82	3.00	3.13	2.94
South Atlantic	3.25— 6.16	4.34	4.35	3.59
E. South Central	2.66— 3.52	2.91	2.90	3.15
W. South Central	2.91— 5.50	3.84	3.84	3.91
Mountain	2.45— 3.47	3.04	3.00	2.74
Pacific	2.86— 4.41	3.42	3.59	3.10

The following table shows, for certain representative city markets, the prices of standard grade milk (Grade B, test 3.5%) received by producers and paid by consumers during the month of June:

	Producer receives per cwt.	Consumer pays per qt.	Butterfat allowance per lb.*
Birmingham, Ala.	$3.15—3.50	$.20	$ .95
San Francisco, Cal.	4.07	.16	.29
San Diego, Cal.	4.45		
Denver, Colo.	2.90	.13	.80
New Haven, Conn.	4.75	.17	.40
Washington, D. C.	4.13	.16	.40
Jacksonville, Fla.	5.81	.25	.50
Atlanta, Ga.	5.23—5.82	.25	flat
Chicago, Ill.	3.70	.15	.40
Indianapolis, Ind.	2.89	.14	.82
Des Moines, Ia.	3.50	.15	.50
Kansas City, Kans.	3.60		flat
Louisville, Ky.	3.11	.16	.50
New Orleans, La.	4.39	.17	.50
Portland, Me.		.15	
Baltimore, Md.	4.00	.16	
Boston, Mass.	4.42	.17	
Detroit, Mich.	3.70	.16	.40
St. Paul, Minn.	2.80	.13	.50
Kansas City, Mo.	3.33	.15	
St. Louis, Mo.	3.77	.15	flat
Butte, Mont.	3.32	.15	.95
Lincoln, Neb.	3.00	.14	flat
Carson City, Nev.	2.91	.12	flat
Trenton, N. J.	3.94	.14	.40
New York, N. Y.		.16	.40
Ashville, N. C.			
Fargo, N. D.			
Cleveland, Ohio	3.78	.15	.58
Cincinnati, Ohio	3.60	.15	.45
Okla. City, Okla.			
Portland, Ore.	3.35	.13	flat
Pittsburg, Pa.	3.95	.15	.50
Philadelphia, Pa.	3.41	.14	.40
Providence, R. I.	4.42		
Sioux Falls, S. D.			
Memphis, Tenn.		.18	
Fort Worth, Tex.	3.50	.20	1.00
Salt Lake City, Utah	3.43	.13	flat
Burlington, Vt.	3.12	.14	flat
Richmond, Va.	5.06	.16	flat
Seattle, Wash.	3.58	.14	.70
Milwaukee, Wis.	3.60	.13	flat
Beloit, Wis.	3.22	.13	.40

*In actual practice this allowance is made on the basis of a certain price per hundred of milk of a certain test, one-tenth of the price per pound fat being paid or deducted for each one-tenth per cent above or below the stipulated basic test. Where the word "flat" appears in this column, it means that no allowances are made for butterfat content but the milk must not be lower in test than legal requirement and must not be adulterated or skimmed.

The prices quoted for producers are for milk testing 3.5 per cent and delivered f. o. b. city, from which must be deducted the various transportation costs in order to get the actual price. In certain cities the prices given apply only to that portion which is considered as the producers' average production, the surplus being either handled by the producers' association or the dealers at somewhat lower prices.

The prices given are here reduced to the comparable basis of 3.5% fat, as different cities vary from 3% to 4% as the basic fat test. To reduce the prices per hundredweight to either a gallon or a quart basis divide by 11.63 or 46.33, respectively.

The prices paid by consumers are for average testing milk delivered in quart bottles. It is the grade of milk most generally sold in these cities and in most cases is for pasteurized milk.

Country Shipping Stations

Prices per cwt. paid at the dealers' country receiving stations or at producers' railway shipping plants are given as follows for July:

New Haven	$3.34	Butte	$3.15
Washington	3.49	Lincoln	2.65
Chicago	3.20	New York	3.15
Baltimore	3.25	Albany	3.23
Boston	3.72	Cleveland	3.25
Detroit	3.40	Cincinnati	2.75
Kansas City	2.42	Pittsburgh	3.15
St. Louis	3.25	Philadelphia	3.41

Retail Prices

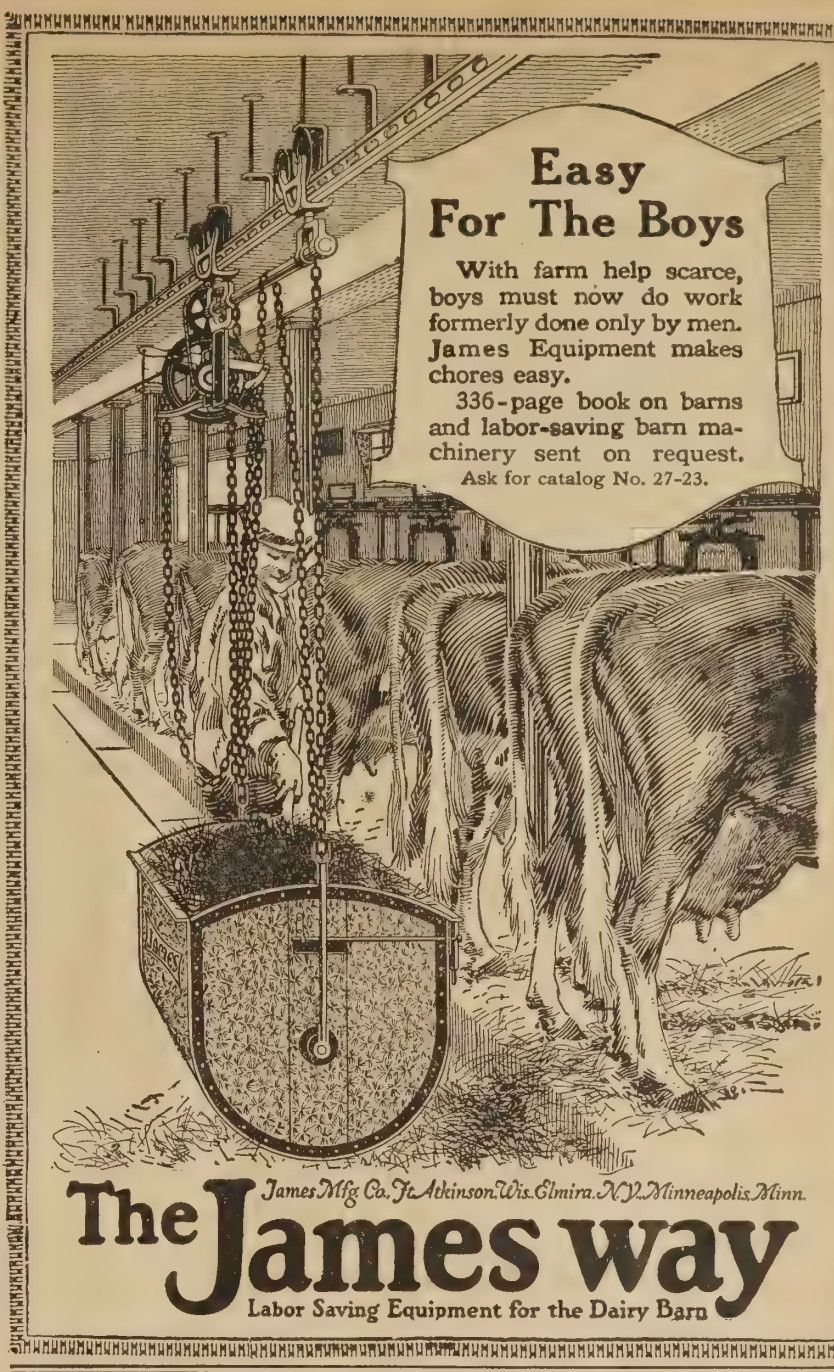
The following table gives, for a few cities, the retail prices of milk, cream, and buttermilk for July, 1920:

Cities	Common milk per quart	Special milk per quart	Certified milk per quart	Light cream (18-20 per cent B. F.) per half pint	Cultured buttermilk per quart
	Cents	Cents	Cents	Cents	Cents
Boston	17	20	26	16	11.5-12
New York	16	19	26	21	12
Philadelphia	14	16	28	18	
Pittsburgh	15		25	18	
Cleveland	15	20	32	20	15
Chicago	15	22	25	17	15
Minneapolis	13		20	15	12
St. Louis	15	18	22	17	18
Washington	14-16	16	30	17-18	20
Jacksonville	25	30			
New Orleans	17	19		16	15
Memphis	18		25	18	
Portland	13		21	17-18	14
San Francisco	15-16		23	15	16
Average	15.87	20.00	25.25	17.40	14.88

Bell Offers Trophy

John A. Rell, Jr., owner of Bell Farms in Pennsylvania, offers a $1,000 trophy at the National Dairy Show this year for the best three generations of Holstein females. Himself a breeder of Holsteins, Mr. Bell desires to encourage other breeders and, therefore, in offering this trophy specifies that two of the three generations must be bred by the exhibitor. The basis of award will be 60 per cent on type and 40 per cent on production. It must be won three years in succession by a breeder before it becomes his permanent property.

The trophy is a solid bronz likeness of the Bell Farm sire, Echo King Sylvia, 21 inches long and 14 inches high. The honor of possessing it for a year makes it well worth keen competition.



Keep Tab on Your Cows

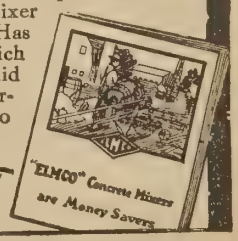
Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. **Hoard's Dairyman, Fort Atkinson, Wis.**



Save That Concrete Bill —Do the Job Yourself

EVERY good farmer recognizes the economy of concrete improvements on the farm—feeding floors, barn floors, foundations, tanks, troughs, walks, fence posts. Most of this work you can just as well do yourself. But mixing concrete by hand is a back breaker—and hiring expensive labor from town costs lots of money. Get one of these handy little mixers, especially adapted for the farmer to use himself—and you can build in your own spare time those many improvements you've wanted to put in—permanent improvements that add to the value of your farm.

THE "ELMCO" Concrete Mixer mixes two and a half to three cubic feet per batch. A one and a half H. P. engine operates it. It fills from one side and dumps from the other—anyone who has ever worked around a mixer knows what an important feature this is. Has four mixing paddles, turns 30 r. p. m., which means 120 mixings per minute. Built on solid steel frame, with either steel or cypress barrels—also with truck and engine for users who prefer this equipment.



YOU will soon have to decide if you are going to buy a mixer for fall work. You'll not be satisfied with your mixer if you buy before you first look into the merits and prices of the little "ELMCO". Let us send you our catalog of the entire line. We can make immediate shipment—a guarantee with each mixer. Mail back the coupon today for the book. It shows the line and gives some valuable tips on concrete mixing.

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HOARDS DAIRYMAN JUNIORS



A DEPARTMENT FOR THE DAIRY FARM BOY

Cropping Facts for Junior Farmers

Junior farmers should know just as much about the crops which they raise to feed their stock and should take as much interest in this side of farm life as they do in many of the other things which seem to them to be more attractive perhaps, but it is just as important for a good farmer to know the best varieties of crops to raise as it is for him to know all about the breeds of cattle and hogs and the best bred families within each breed, but we dare say that less is known about crop varieties than about breeds of stock among our juniors.

Many of you juniors have been helping with the harvest during the past three and four weeks and we are wondering whether or not you know what varieties Dad is growing and from where they came. Believing that so little is known, we are going to try to help you out by telling you some of the interesting things about corn and grains.

Wheat

Among winter wheat growers a variety called Turkey Red is considered to be among the best. This wheat is not only hardy, that is, it does not winterkill very easily but it is a very good yielder and produces a wheat of excellent quality. Flour made from Turkey Red wheat is considered to be of the very best. Turkey Red is a pedigreed wheat having rather short heads and a smooth chaff. Most of the experiment stations located in winter wheat sections have purified this variety so that now it is possible for farmers to have the very best kind of Turkey Red winter wheat. There are many other varieties of hard winter wheat but none have proved to be better than the Turkey Red which seems to have superior qualities for a wheat variety.



MARQUIS, BEST HARD SPRING WHEAT

Marquis

The word "Marquis" is just about a pet name in the home of every spring wheat grower. This probably is the best spring wheat variety that is known at the present time. It is a beardless wheat, smooth chaff, and produces a grain that is short and stubby, having a rich brown amber color.

You may well ask, —"Why is Marquis so superior to such varieties as Fife, Blue Stem, and Velvet Chaff spring wheat?" This is the answer. Marquis spring wheat matures at least a week earlier than these last mentioned varieties and therefore it is very liable to escape bad rust epidemics and dry hot weather, both of which conditions are bad for spring wheat. There is no prettier wheat in threshed sample than Marquis. The Canadian people originated this variety. They crossed a wheat known as Hard Calcutta which was quite early in maturity with Red Fife, a spring wheat which had always been known for the quality of flour it produced. Marquis combines good qualities from each of its parents. It has some of the earliness of Hard Calcutta and a good flour making quality of Fife, therefore it is considered much superior to either of its parents. This wheat has been a great contribution to the wheat growers of the country and we are all indebted to the Canadian plant breeders for giving us this wonderful variety.

Of course, all spring wheat growers are not growing Marquis Spring wheat. Many are still continuing with the varieties which were in existence long before Marquis was thought of. These are Fife, Blue Stem, and Velvet Chaff. There is an interesting bit of history connected with the development of Fife wheat.

David Fife was a Canadian farmer. A friend of his in Europe sent him a small sample of wheat which he had taken from a cargo of wheat in the harbor of Danzig. When Mr. Fife received his wheat he did not know whether it was spring or winter wheat and it being in the spring of the year when he received it he sowed it. However, he was quite disappointed for it proved to be a winter variety and with the exception of one or two plants the crop did not mature. But David Fife was an optimist. He carefully harvested the heads of grain from the plants that did mature and seeded these the following spring. The result was a hard spring wheat which he continued to grow and which has ever since been known as Fife.

The greatest criticism that Fife wheat has had is that it is rather late and hence is liable to be struck by drouth and rust. Now that we have Marquis spring wheat, Fife is not being grown so much. Neither is Blue Stem which is a downy chaff wheat and which is just about as late as Fife in maturity.

Perhaps you already know that Velvet Chaff spring wheat hasn't been very well named for it is not Velvet Chaff as the name would suggest. Its chaff is smooth and it has beards. It goes under several other names as well. It is sometimes called Preston and in other localities it is called Blue Ribbon, but it is all one and the same wheat and looks something like Turkey Red winter wheat excepting that the heads are longer.

The Canadians are still doing some wonderful work in wheat breeding. What they desire to get are early varieties which will escape rust and dry weather and even the frost because wheat is often frost bitten right in the fields because their growing seasons are so short. Among some of the very early varieties which they have produced are Prelude, Ruby, and Red Bobs. While these are all very early, they are not very good yielders because it is very difficult to combine earliness with high production among plants. Nevertheless the Canadian breeders are not discouraged and in time they may accomplish something which will be better than the Marquis spring wheat which we now hold so valuable.

Rye

Rye is not such an extensively grown crop as wheat but still the rye plant is very interesting. There are two kinds of rye, winter rye, and spring rye. The former is far more preferable because it is so much better in yield. Rye is a grain crop for the sandy soil farmers. It produces well where other grains fail and for that reason it has been called the "poor man's" crop or the "poverty" grain. There are only a few varieties of winter rye which seem to excel. They are Petkus, Schlandsted, Ivanoff, and recently the Michigan Experiment Station has produced a winter rye which they have named Rosen.

This has been named after a student who attended the agricultural college there and who furnished some seed which came direct from Russia. It is a great mistake for any rye grower not to grow pedigreed winter rye, since all the tests which have been made show that it outyields common rye by from ten to fifteen bushels per acre. If you have any doubts about this ask some grower whom you may know who is growing pedigreed winter rye and then I am sure you will be convinced.

Barley

Some farmers do not like to grow barley because they say it is such a miserable grain to handle but perhaps you know better. Although the barley which you may know does have long, disagreeable beards which break off easily and stick to your clothes when it is handled, we must not forget that barley is a wonderful crop because it yields so well per acre and because it makes such good feed for all kinds of stock if fed in the right way.

Most of us associate barley growing with beer making. But now we must change our ideas on that point since the country has gone dry. Farmers are now realizing that barley makes an excellent grain feed for both cattle and hogs and for that reason we should not expect to see the barley acreage decrease but on the other hand it should increase.

Perhaps the most famous variety of barley is a six-rowed type, known as Manshury barley. It came from China into Germany about 1857. Some years ago a man from Iowa County, Wisconsin, was visiting in Germany and while there he became acquainted with a director of one of the German Experiment Stations. This man gave him some of the Manshury barley and he brought this small sample of seed back to Wisconsin and it is from this that all of the Manshury barley has been derived. The other name, Oderbrucker, is evidently nothing but a new name for Manshury barley which somebody has given it for they prove to be the same thing.

The Wisconsin Experiment Station has perhaps done more work in barley breeding than any other station and Wisconsin is now known as the leading state for the production of Pedigreed Oderbrucker or Manshury barley. But there are other kinds of barley which are used in various sections of our country. In Wisconsin, Dakotas, and Montana they grow what is called a two-rowed barley.

The leading variety of two-rowed barley is Chevalier, one which has a rather long, loose head. Another one is Svanhals, which has a shorter head, more erect, and more compact than Chevalier. These are two of the leading varieties of two-row barley but are of interest only to those whose condition limits them to two-row barley instead of six. For the states in the upper part of the Mississippi Valley there is no variety which excels the Pedigreed Oderbrucker or Manshury.



PETKUS WINTER RYE

Then there are a couple of barleys that are known as Hooded barleys on account of the peculiar little hood which is attached to the upper part of the kernel. Many times these are called awnless barleys. But it is better to call them Hooded barleys since there is a regular awnless barley.

Oats

Like all other crops, the kind of oats which you are familiar with is determined by your location. Usually we classify oats into five distinct groups according to the color of the hull, white, yellow, red, black, and gray. For all oat growers in the northern part of the country, varieties of the white and yellow group are by far superior because they are much better yielders and the market pays a better price for oats of these colors. While there are a great many varieties of oats there are some which



GOLDEN GLOW



EARLY YELLOW DENT, WISCONSIN NO. 8

STATE FAIR
MILWAUKEE
Aug. 30, 31; Sept. 1, 2, 3, 4
Six Days; Six Nights

50 CENTS DAY OR NIGHT
Automobiles Free

SPECIAL RATES ALL RAILWAYS

BEST IN THE LAND
of Cattle, Horses, Sheep, Swine, Poultry; Dairy, Agricultural, Horticultural, Apiary Products; Women's Work, School Work, and THE YEAR'S ROUND-UP of Badger State Boys' and Girls' Club Activities.

EVERY DAY!
ETHEL DARE
GIRL WITH A SPARTAN HEART, Changes Planes 4,000 Feet From Earth!
—ALSO—
MARVEL OF ALL AGES, THE DAREDEVIL SUPREME
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SIX NIGHTS!
WORLD'S GREATEST SHOW
Presenting the
$20,000 Fireworks Spectacle
"SIEGE OF THE DARDANELLES"
500-Foot Stage, 1,000 People, and 25 STAR CIRCUS AND VAUDEVILLE ACTS on two mammoth stages.

MUSIC EVERYWHERE!
Famous Million Dollar Band, with Six Soloists; Eight Other Bands and Orchestras Day and Night.

AUTOMOBILE SHOW and "TRUCK TOWN"
150,000 square feet of exhibits and demonstrations, including all 1921 models.

HARNESS RACING!
MONDAY, WEDNESDAY, THURSDAY, FRIDAY—First Race at 1 P. M.

AUTO RACING!
TUESDAY AND SATURDAY at 2 P. M.—America's and Europe's greatest dirt track drivers and cars.

HORSE SHOW!
STOCK PAVILION
MONDAY, TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY NIGHTS, at 8 o'clock.

50 ACRES OF TRACTORS AND OTHER FARM MACHINERY.

SPECIAL EXHIBITS
U. S. Government, State Marketing, Wisconsin Department of Agriculture, Household, New Era and a score of other added exhibits.

SPECIAL SHOWS
THE C. T. KENNEDY 10-ACRE EXPOSITION.

THE MUDLESS AND DUSTLESS FAIR.
MONDAY, AUG. 30—All Wisconsin School Children Free.

THE WISCONSIN STATE FAIR "Educates, Inspires, Entertains on Biggest Possible Scale."

The Improved Humane Stanchion

is the handiest, strongest, and most practical Stanchion on the market. Write to Humane stanchion Works, Baraboo, Wis., for literature on a complete line of barn equipment.

seem to have quite superior qualities.

Among white oats the Swedish Select has not been known for about a period of twenty years. It is grown extensively in all of the northern states from Montana to Maine and it has been estimated that at least fifty million bushels of Swedish Select oats are annually produced in the United States. This is a big white oat which is medium late in maturity. It is very pretty in threshed samples and in exhibits usually carries off many of the prizes. It is not the best kind of oat to grow on real rich soils because it gets so big and is very liable to lodge.

Many of the experiment stations have pedigreed strains of this variety and one of the leading varieties grown in Wisconsin is known as Pedigreed No. 5 which is an improved strain of Swedish Select.

Then there is another white variety that is worthy of mention. This is Wisconsin Wonder or Pedigree No. 1. It looks much like the Swedish Select but is not as coarse and the kernel is more slender in its shape. It seems to have one good quality that excels Swedish Select and that is the straw is stiffer and hence a crop of Pedigree No. 1 oats will not lodge quite as readily as will Swedish Select.

The Kherson oats is perhaps the most popular variety of early oats. It came from Russia in about 1896 direct to the state of Nebraska. Its qualities are very good. It is early, a good producer, and has a thin hull. It is a good oat for the richer soils because it is early and because it does not lodge as easily as do the large white varieties.

Corn

It is well known among those who are working with the juniors in their club work that corn is perhaps the most interesting crop to them.

Now, we want to say right here, that no junior can afford to enter corn club work who does not grow pure-bred corn because if there is any one thing that club work should stand for it is "purity". It is much more interesting to work with something which you know to be the very best in its line than it is to work with scrub stuff. Every state has its favorite varieties of corn and any junior interested can write to the experiment station and he can get all the information about corn which applies to his conditions.

A very favorite variety of corn in Wisconsin, Iowa, and even Illinois and Indiana is Silver King. Some of the highest yields which northern juniors have produced have been from this variety.

Then there is the Golden Glow variety which has reached fame, especially in Wisconsin, Nebraska, and the Dakotas. This variety was produced in Wisconsin about fifteen years ago and ever since that time there are thousands of acres of Golden Glow produced each year.

Juniors who live so far north where the growing season is short must confine their attention to varieties which mature early and hence they do not have such a large choice. But there are varieties even for these conditions. Such varieties as Wisconsin No. 8 and Minnesota No. 13 give the best results in the northern parts of Wisconsin and Minnesota, and even farmers who live farther south and could grow later varieties oftentimes favor these early ones because they are more certain of getting ripe corn.

It is always well to keep an ear to the ground and listen to the advice of the plant breeders, those who are doing the work in testing varieties and producing new ones. Just because one may be growing a variety which he thinks is very good it is no reason why he should not attempt to keep up-to-date and to get the very best that has been found. Every live junior who is interested in learning all that he can will do this and we assure you that it not only will be a greater pleasure to harvest the crops but it also means a fuller pocketbook.

During the month of May 202 cooperative creameries of Minnesota paid their patrons nearly two million dollars, the average price paid for fat being 64 cents a pound and the average receipt of fat per creamery being 14,487 lbs. for the month.

Why not put in a supply of butter for next season? A copy of Extension Bulletin 33 on "Making and Storing Butter for Home Use" is yours for the asking. The state college at Ithaca, N. Y., will send it.

The boy or girl who is not a member of a junior project club is likely to be lonesome. Are your boys and girls missing out on fun and instruction to which they are entitled?

Do you feel you need a bracer? Milk's a drink that needs no "chaser".

Junior Letters

Hoard's Dairyman Juniors:—I am feeding a calf and pig and I would be glad to know what some of the other juniors are feeding theirs. I feed my calf 18 lbs. of milk, 2 quarts of oats and I give it all the hay it wants. I feed my pig corn and buttermilk mixed with ground barley. I try to get tankge but I can not. We have 14 calves now, 7 bulls, and 7 heifers.

I was 11 years old last May. I made the 6th and 7th grades in 1 year and I am now in the 8th grade.

We bought 2 registered Duroc-Jersey gilts last fall and they had 20 pigs. I had some rabbits but I sold them all. I wrote the juniors a letter and told about them. After that I had several inquiries for rabbits but I sold them all around home.

My mother has about 150 chicks. We have Rhode Island Reds.

I wish some of the juniors would write me and tell me about their calves and pigs. My address is Route 1, Box 12, Union Center, Wis.

Richard K. Wagner.

Hoard's Dairyman Juniors:—The pony I had died Christmas but I have another. His name is Billy. I feed him oats, Sudan grass hay, and grass.

We have six work horses, 3 young mules, and a colt that was a year old Saturday.

We are milking nine cows now of which I milk two. We take cream to Comfort twice a week in the automobile.

We have not threshed yet but most everybody around here has. We feed green corn to the hogs.

Texas. Annie Blaschke.

Hoard's Dairyman Juniors:—We have a farm of 50 acres and are going to annex some more land to it. We keep pure-bred Ayrshires and sell our milk to the Plymouth Creamery System. It is owned by the farmers of New Hampshire, Vermont, and Canada. I have a registered Ayrshire heifer I bought at an auction. Her name is Lassie's Helen F. I have 4 shoats and a brood sow, 2 horses, and 4 cows. We are going to buy some more registered Ayrshires this fall. Well, I guess this is about all this time. I am 17 years old and 5 feet, 10 in. tall and weigh 165 lbs.

New Hampshire. William C. Graves.

Hoard's Dairyman Juniors:—I said I would write as soon as I became a junior.

I am interested in chickens. If I take care of the chickens father feeds my chickens and lets me have the eggs. I bought a new hen today. I have four hens and a pullet. I raised a hen and a pullet and bought the other three. We have about 140 Leghorn chickens.

We have eight registered Holstein cows and thirteen registered Holstein heifers. Mother has three full blooded bronze hen turkeys and a full blooded gobbler.

I would like to hear from some of the juniors. I will answer as soon as I get it. My address is R. D. 1, Kingsley, Pa.

Giles Adams.

Hoard's Dairyman Juniors:—I received the button, the fob, and the creed. The creed I believe every word on it is true.

On our farm we have 12 horses and three colts and a Shetland pony, Their names are Dido, Barnie, Dick, Billy, Teddy, Ned, Star, Lid, Dan. The colts' names are Molly, Sallie, Black Beauty. The Shetland pony is Jim. My father owns 90 or more head of cattle. I can't name them all here because there are so many. I know the name of all of them though. We have a Scotch Collie dog. Her name is Lassie. She has had four litters of puppies, 34 in all. My brother had two pigs; he butchered them and is going to get another one. He belongs to the pig club.

Vermont. Murray Dunsmore.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Mo. 19*

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

Holstein and Guernsey pure-bred and grades. Write me. If it is 1, 100, or 1,000 head I can please you. H. A. KUHTZ, Waukesha, Wisconsin. 19*

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

20 high grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old. $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

For Sale—Twelve high grade Holstein cows, some fresh, others to freshen soon. Write WALTER W. MAAS, Route 5, Merrill, Wisconsin. 3-3

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis 3*

Cows for Sale—100 head of Holstein springers, to freshen from one week to three months. Will sell singly or in car lots. A. E. LEWIS, Lancaster, Wisconsin. Long distance phone 114R. 3-3

Pure-bred and grade Holsteins, pure-bred Ayrshire cattle for sale, 75 head grade Holstein cows, 3 pure-bred Holstein bulls, 2 pure-bred Ayrshire heifers. Association records on all stock. CEDAR GROVE COW TESTING ASSOCIATION, Cedar Grove, Wis. 4-2

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

High grade Holsteins—40 high grade Holstein cows and heifers at prices that are right. PAUL C. SPIEGELBERG, Stratford, Wisconsin. 3-4

Holstein bull, ready for service. Dam, 15-lb. two-year-old, 28-lb. sire, $150. Two September bulls $100 each. W. E. RAY, Kewanee, Ill.

5 registered Holstein and 4 registered Guernsey heifers for sale. BURR OAK STOCK FARM, Whitewater, Wis. 4-4

We have for sale 75 head of cows (grade Holsteins) with cow testing association records; also 2 Ayrshire heifers 1½ years old (pure-bred). CEDAR GROVE COW TESTING ASSOCIATION, Cedar Grove, Wis. 4-2

Holsteins—Some choice pure-breds and grades at moderate figures. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wisconsin. 4-2

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

STOCK FOR SALE

For Sale—10 head choice high grade Holstein heifers to freshen from September first to fifteenth. All my own breeding and raising. These heifers from one of the best herd of cows in Lee County. A. H. BOSWORTH, Dixon, Ill. 4-2

Serviceable Holstein bull for sale. Good 7-day and yearly backing. WALTER AHLERS, Grafton, Wis. 5-2

For Bargains in registered and high grade Holsteins, try us. LOVELAND FARM, Holland, Ind. 5-3

For Sale—Six high grade Holstein heifers and one cow, five years old. 3 to freshen in October, 4 in January. G. J. TEN HOPE, Waupun, Wis.

24 head of high grade Holstein cows from three to six years of age, due to freshen within 60 days. HOMESTEAD DAIRY FARM, Palmyra, Jefferson Co., Wis. 5-2

We have for sale a big, straight, husky, Holstein bull calf of excellent quality, five months old, sired by a nearly 1,100-lb. son of Sir Pietertje Ormsby Mercedes 37th. If you are looking for a bull you can be proud of this fellow may interest you. O. E. GIBSON, Eau Claire, Wis.

Registered Holsteins for Sale—Eight young cows, Ormsby, Pontiac and King Segis. Selected stock. Big producers. Priced to sell. LITTLES DAIRY FARM, Kewanee, Ill. 5-2

High grade Holstein heifer calves $20.00 crated. JOS. NIEBRUGGE, Effingham, Ill.

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 5-6

Holstein heifer and bull calves. Pure-bred, rgistered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

For Sale—Well bred bulls from grandson of the $50,000 bull, King Segis Pontiac Alcartra, and A. R. O. dams. Herd tuberculin tested. Describe your requirements. Pedigree, photo and price on request. ARTHUR C. DAILY, Springfield, Mo. 5-2

For Immediate Sale—250 high grade heavy producing springer cows, and heifers. Cows two to six years old. Heifers eight to sixteen months old. Very reasonable prices. Correspondence solicited. BRAZELTON MURDOCK FARMS CO., Morocco, Ind. 5-2

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

For Sale—Several registered Guernsey bulls 7 to 12 months, grandsons of Imp. Clara's Sequel and Langwater Frenchman. Dams 500 to 752 lbs. fat. See display ad page 143. Sale list. HOMER F. RUNDELL, Livingston, Wisconsin. 2*

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write for photos and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

Guernsey Bulls—New sales list now ready. Exceedingly good values in bulls ready for service of May Rose and Glenwood breeding and priced to sell. Federal Accredited herd. THE GROVE FARM, Deerfield, Ill. 4-2

For Sale—Registered Guernsey bulls from six weeks to 2½ years whose dams are doing well in A. R. Also have grade females, some bred to a son of Pencoyd's Golden May Secret. Satisfaction guaranteed. EWING GUERNSEY FARM, H. R. Burg, Mgr., Wausau, Wis. 4-3

For Sale—A few registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wis. 4-3

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Guernsey bull calves for sale. Out Dairymaid's Hero of Fox Valley and A. R. dams, with butterfat up to 622 lbs. ANTON O. BERGE, Valders, Wis. 4-3

For Sale—Our May Rose herd sire, three years old, dam's Advanced Registry 740 lbs. fat. GEORGE TURNER, Monroe City, Mo.

STOCK FOR SALE

I have seven high grade Guernsey cows for sale bred to a grandson of Galaxy Sequel and to freshen in September, October and November. First check for $1,200 takes them. H. M. WALTERS, Dexter, Minn. 4-2

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

For Sale—15 head of good dairy cows consisting of 8 head of high grade Guernseys, 7 Jerseys. DR. E. G. L. HARBOUR, Lawrence, Kansas. 3-3

High quality grade Guernsey heifers, 4 to 10 months old. B. McADAM, Mosinee, Wis. 3-4

On account being short pasture will sell ten choice grade Guernsey cows three and four years old $125 to $150 each. QUINEILO FARMS, 297 East Water, Milwaukee. 5-2

For Sale—Sixteen Guernseys consisting of 9 grade cows, 2 grade heifers, 4 registered heifers and 1 registered bull. R. H. TRACY, Brighton, Iowa.

A Real Bull—Son of 500-lb. two-year-old, record made in pasture, 10 years ago. She milked 45 lbs. daily at 12 years of age. A show bull. Other well bred bulls for sale, some of serviceable age. FRISSDALE FARM, Hopkins, Minn. 5-4

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Ayrshire bulls and heifer calves. Sired by Bloome's Mischief Maker. OAK GROVE FARM, Brookfield, Wis. 4-2

Jerseys—Carload of high grade Jersey cows and heifers. All tuberculin tested. GEO. AUSMAN, Elk Mound, Wis. 4-4

Registered Jerseys—One cow, two yearling bulls. Most approved breeding. S. G. BANKS, Eldorado Springs, Mo. 5-4

Jerseys for Sale—Fresh cows, springers, heifers, heifer calves, bull ready for service. L. R. KUNEY, Adrian, Mich. 5-2

Public Auction—I will sell at public auction on my farm about three miles east of Juneau, Wis., on Wednesday, Aug. 25th, 46 head of Jersey cattle, consisting of three 2-year-old heifers, ten yearling heifers, eleven calves, twenty-one milch cows, one registered Oxford Jersey sire out of an excellent family, his brother having sold for $11,500. Sale includes seven head of horses and a complete set of farm machinery. W. F. SCHUNEMAN, R. 3, Juneau, Wis.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

For Sale—Registered Hampshire litters, ready for shipment. JOHN C. SJOLANDER, R. 1, Clearbrook, Minnesota.

July pigs $5.00. Good team, harness, $350. D. SEXTON, Calderwood, Mich. 5-2

For Sale—Some Duroc spring boars. Sired by the world's greatest boars and out of the largest and best sows in the state. Several by Pathfinder that sure are killers. BRIAN L. RUNDELL, Livingston, Wis. 5-spl

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

RABBITS

Rabbits, Pet Stock—Read The Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

FOXES

Wanted—Red Foxes; state age, sex and price. W. C. WILSON, Stephen Girard Bldg., Philadelphia, Pa. 2-6

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

SALESMAN WANTED

Wanted—Men owning rig or auto to sell known line lubricating oils, house paints, barn paints and roofing materials direct to farmers. Commissions paid weekly. Special monthly bonus paid on sales. Old reliable concern selling farm trade for years—financially responsible and standing back of every material sold. Write us today for our complete sales proposition. CENTRAL PETROLEUM CO., Cleveland, Ohio.

Experienced salesman to represent us in southern and western territory, one who can show clean record and understands creamery, dairy and ice cream manufacturers' supplies. Address BLANKE MFG. & SUPPLY COMPANY, St. Louis, Mo.

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Agents—Mason sold 18 sprayers and auto-washers one Saturday; profits $2.50 each; square deal. Particulars free. RUSLER COMPANY, Johnstown, Ohio. 25-spl

FARMS FOR SALE

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red, White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Hardwood cut-over land, silt loam, clay subsoil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4. NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison Wis. 22-13

I know of some exceptional farm bargains in New York State, small and large. Fine buildings, spring water, alfalfa land, good roads. Eighty to hundred twenty per acre. Easy terms. These are unusual bargains. Write me. BOX 256, care Hoard's Dairyman. 26*

For Sale—Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

Choice dairy farm of 170 acres near Syracuse, New York. $24,000 equipped. M. VOORHEES, Memphis, New York. 2-5

Real Farm Bargains in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (not Inc.), Medford, Wisconsin. 3-4

Greatest stock and dairy district on earth. You cannot go wrong if you buy your future farm home in Aitkin County, Minnesota. Rapidly becoming America's greatest farming center. Our free information will tell you how to secure one of these farms on a small down payment and easy terms. Write L. B. ARNOLD, Land Agent, 154 Wolvin Bldg., Duluth, Minnesota. 3-4

Join Our South American Colony. Choice land $5.00 per acre. For literature, address BOX 277, Gridley, Calif. 3-4

240 acres, mostly alfalfa, plenty of water, buildings in good repair, a bargain if taken at once. Possession to suit the buyer. Want to sell direct and save middle man's profit. Do not write, but come, I mean business. R. D. LEE, Cazenovia, N. Y. 3-3

Over 100 acres fine land, 17 miles macadam roads to City Hall, Philadelphia. 1½ to large manufacturing town of Amber. Modern cow barn, 48 standing, 4 box stalls. Milk room, feed room, cement floors. Large implement and tool house. Large hollow tile slate roofed house (not finished inside.) Macadam roads each side and through farm. Very moderate rent, desirable tenant. Immediate possession. Rent free for one year. FARM, 2024 N. Tenth St., Philadelphia, Pa. 4-3

For Sale—Alfalfa farm, 112 acres, $6,500. For particulars address owner GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 4-4

New York State Dairy Farms—Fine Delaware county dairy farms, all sizes, all prices, fully stocked with choice dairy cows, fully equipped with farm machinery and other personal property; sold on easy terms; by government reports, the greatest dairy county in the greatest dairy state in the Union. Write for catalogue. THE JOHN O. HILLIS FARM AGENCY, Hobart, Delaware County, New York. 4-4

Bargain, 71 acres, improved. Choice location. Immediate possession. 40 acres can be put in fall wheat; 240 acres rich bottom land; well improved. 3 miles Ottawa. Write for full descriptions and descriptive booklet. MANSFIELD LAND COMPANY, Ottawa Kansas. 4-2

New York State, greatest guaranteed farm bargains. Before buying send for my list at once. FRANK J. BASLOE, Herkimer, New York. 4-2

Bargain for Sale—530 acres, two fine improvements, 100 head stock. Write for terms and state the amount you have for first payment. BOX 641, Delhi, N. Y. 4-2

Great Chance, Men. Good land, easy terms, free list. BAKER A-76, St. Croix Falls, Wisconsin. 7-spl

Would you like $1,000 monthly milk check from 230-acre farm, modern buildings, priced $10,000? Come East! Write NEW YORK FARM AGENCY, Westfield, New York. 9-spl

We have several fine dairy farms for sale, with or without stock, located about 30 miles west of Washington, D. C., in this great blue grass section. Also farms to meet every want. N. R. HANES, Ashburn, Va.

Improved farms, in crops; good markets. JOHN O'CONNELL, Marathon, N. Y.

160-acre rich clay loam. No waste land. Barn 36x110, Good house, etc. 80 acres plowed. Located Taylor County, near Medford and Stetsonville. Also have extra fine 80 located on pretty lake; 40 acres under plow; fair buildings; ⅛ mile to school. Will sell to worthy man on small payment. Write WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin. 5-spl

For Sale or Lease—An extra fine stock farm for lease or sale containing seven hundred and fifty acres all workable land. Three big barns and five houses, land extra well watered. Will sell for $100 per acre or lease at 6% interest. All of this land is in grass. I have about two hundred and fifty acres of creek bottom land in this. It is about one and a half miles from the County Seat, Caryville, Tenn., and is thirty-five miles from Knoxville on the Dixie Highway. Can give possession September first. J. G. STERCHI, Knoxville, Tenn. 5-2

110 acres in alfalfa belt—80 acres tillable. 3 barns, new silo, 8-room house. One mile from hustling railroad town. $4,000. Terms. Send for our lists. COUGHLIN'S FARM CLEARING HOUSE, 121 S. Warren St., Syracuse, New York State.

FARMS FOR SALE

$2,200 cash secures 875-acre farm with valuable growing crops, 28 cows, 2 horses, calf, bull, machinery, tools, implements, dairy utensils; in heart leading dairy section; 100 acres fields, spring-watered pasture, woodlot, fruit trees, sugar maples; 9-room house, running spring water; big 3-story barn, new garage; affairs must be settled; everything for $7,200, only $2,200 cash, balance easy terms. Details page 24 Strout's Big Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150 DL Nassau St., New York City.

Farm Buyers—I have improved farms in Wayne County, Ohio, for you. Priced right; located right. Send for list today. D. WENGER, Orrville, Ohio.

For Sale—An extra well equipped dairy farm, only 40 miles from St. Louis and one mile to railroad station. 275 acres, 250 in cultivation, 5 living springs, one at barn, flowing 20,000 gallons daily. Family orchard, 10-room residence on beautiful sight. 3 tenant houses with all necessary outbuildings, concrete block barn 36x100; large concrete silo. Horse barn, cattle shed, and ice house. Owner a widower and wishes to retire. Price $125 acre. $20,000 worth of improvements on the farm. B. A. THORNHILL, Cashier Bank of Gray Summit, Mo.

156 acres of the best alfalfa soil, 20 acres of timber, 5 horses, 30 Holsteins, excellent machinery. Mammoth modern buildings. Everything, $22,000. Terms. Send for our lists. COUGHLIN'S FARM CLEARING HOUSE, 121 S. Warren St., Syracuse, New York State.

Fine 200-acre stock and general farm, 80 mile St. Louis, cultivating 60 acres bottom land, creek watered pasture, good improvements. M. METCALFE, Leasburg, Mo.

Free! Free! Free! To every housekeeper our new summer and fall land list, showing photographs of a large number of choice Central Wisconsin dairy farms in the banner dairy district of the United States. Write today for this free list and map. GRAHAM'S LAND OFFICE, Marshfield, Wis.

For Sale—Improved and unimproved farms. Wood, Clark and Marathon counties. Write for farm list. E. R. BEHRINGER & CO., Marshfield, Wis.

Fine Maryland farm on stone road one mile south of Chesapeake City, near the Delaware and Chesapeake Canal; 133 acres rich soil, 110 tillable, balance woodland. Buildings in good repair. Two silos. Twelve-room modern house, all conveniences. Address EDGAR C. ELLISON, Chesapeake City, Md.

For Sale—240- acre irrigated farm in famous Smith River Valley, Montana. Adjoins county seat town, all advantages. Alfalfa and clover, grains, roots, etc. Fine modern, new improvements. A money maker. Price $125 per acre including crops, hay in barn and stack, etc. Registered Holsteins and personal property at bargain if wanted. MARK HUNT, White Sulphur Springs, Mont.

For Sale—By owner, 80-acre farm, sandy loam, good house, double corn crib, chicken house, machine shed, hog houses, two silos, barn room for 15 cows, young cattle, 9 horses, farm fenced hog tight, 1 mile to consolidated school; mail route, school route, telephone, electric line, gravel roads, ¾ mile to good market. ARTHUR G. YOUNG, Jesup, Iowa.

160 acres black clay loam soil, lays fine. Modern buildings, 1½ miles Roberts, Wis. 30 miles on State Highway, St. Paul. C. H. JOHNSTON, 1630 Selby Ave., St. Paul, Minn.

A Dairy Farm of Real Value—An exceptionally productive dairy farm of four hundred thirty-eight (438) acres, located one mile from Chautauqua, N. Y., known the world over as a summer resort and educational center is offered for sale at $100 per acre, if sold by November 1st. The farm has never been leased, is carrying at present 97 head of pure-bred Holstein-Friesian animals, is beautifully watered, well located and exceptionally fertile. As a matter of good faith, the owner will pay one-half of the railroad fare of anyone from any place, who upon investigation fails to find that this farm has the local reputation of being at least one of the most fertile productive farms in the section. The owner is a manufacturer in Detroit. He has owned the place nearly twenty years. His reason for selling is to transfer his stock operations from New York to Michigan. Terms can be arranged and a discount will be given for cash. The property is free from all kinds of incumbrances. Arrangements can be made to buy a portion of the stock. G. E. WILDER, Gemmer Manufacturing Company, Detroit, Michigan. 5-4

160-acre New York farm $7,500; $3,000 down. Machine-worked fields, spring watered, new buildings alone worth amount asked for all. Will include 20 head stock and farm machinery. Must sell at once. If you want a money maker write BOX 324, care Hoard's Dairyman.

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

DAIRY FOR RENT

Dairy for Rent—Good opportunity for man with small capital. Dairy can be handled separate from farm. Equipment for twenty-five cows. Plenty of silage, beet pulp, beet tops, and alfalfa hay delivered at barn. Within four miles of the Lamar plant of the Helvetia Milk Condensing Company. A milk route goes by the front gate. For further particulars write L. M. SWEITZER, Secretary of the Prowers County Dairy Breeders' Association, Lamar, Colorado. 5-2

LIGHTNING RODS

Lightning rods, exclusive agency and quick sales to live agents selling "Diddie's Universal Rods". Our copper tests 99.96% pure. Write for agency. Prices are right. L. A. DIDDIE CO., Marshfield, Wis. 13-24

FEED BAGS

We pay 14c for beet pulp bags. Proportionate prices for other sizes. Better write for price list now. LARIMER BAG COMPANY, Washington, D. C. 19-spl

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

Farm for Rent—120-acre farm, all plow land with all equipment. 30 cows, registered or high grades, as preferred. 20 rods from school, 80 rods from cheese factory, 1 mile from church, 4 miles from town. New house and new barn and two silos. Man must be able to make part payment on his half. Will rent on 50-50 basis. ANDREW FRANK, Fox Lake, Wis. 4-4

Here is a real opportunity for a modern dairyman and farmer to make money. I have a 216-acre farm located 45 miles west of Chicago, 1 mile from the railroad station; 60 Holstein cattle, including 5 pure-breds, a good basic herd on which I have production record; also good 8-room house. Prefer married man with sons and if possible one who has some Holsteins. Write fully to ARCH E. RICHARDS, Geneva, Ill. 4-2

Farm for Rent—Equipment for sale. Two-year lease on an excellent spring brook 150-acre dairy farm. Cleveland-Akron brick road, milk truck at door, close to Twinsburg and consolidated school. 28 head of cattle, 4 horses, hogs and poultry, crops and full equipment of tools, including maple syrup equipment. Gross sale from cows alone for 12 months over $6,000. Possession Nov. 1. BOX 91, Twinsburg, Ohio.

Farm for Rent on shares for a term of years. 580 acres; 150 acres under cultivation, the remainder cleared for breaking, cleared meadow, pasture and woods. About 25 milk cows, about 15 yearlings and 15 calves, some pigs and chickens. Six horses and some colts. All farm machinery; 144-foot modern barn, etc. Large 8-room dwelling house, six miles from creamery and seven miles from Sandstone. References demanded. DOCTOR SCHWYZER, Sandstone, Minn.

MACHINERY

For Sale—One Disbrow churn size D 4, working capacity 45 to 200 lbs. In good repair and only run about six months. Reason for selling putting in larger one. First check for $60 takes it. THE WINDSOR CREAMERY, Windsor, Ill. 3-3

Three-unit Hinman Milker complete. Good as new. D. OFFRINGA, Ames, Iowa. 3-3

For Sale—Liberty milking machine, double unit alternating action, practically new. Price $125. C. L. HULL, R. 1, Whitewater, Wisconsin. 4-2

For Sale—Ronning ensilage harvester outfit complete, brand new in original crate, just received. Farm sold. Will sacrifice 10% to early buyer. Address BOX 306, care Hoard's Dairyman. 4-2

For Sale—18-inch Appleton silo filler used very little and in good running order. Equipped complete with pipe and distributor pipe for 40 ft. silo, also two sets of knives. Price $200. A. H. MORSE, Osage, Ia. 4-2

For Sale—Moline Model D tractor complete; plows, truck, starter and lights; slightly used; $1,000. Case four bottom self lift tractor plow, plowed 100 acres, $275. United States tread power, $50. Perfection 250-lb. churn and worker and cream vat, $150. Two double unit Empire Milker and pump used three months. $275. E. A. KNOKE, Shiocton, Wis. 5-2

For Sale at a Bargain—One Fairbanks Morse 4 horse Special Electric kerosene engine. One dynamo. One switchboard. Excellent condition. Reason for selling, installed city light. F. E. FOX, Waukesha, Wis. 5-3

Empire Milker, two double units complete with pump, tank and piping. Price $200. Fordson tractor, used but little, fine condition, tractor and plow $800. C. E. PEEBLES, Peebles, Wis.

For Sale—15-30 International tractor used less than 60 days. In good condition. A bargain. BEN HUNTER, Collier, West Virginia.

For Sale Cheap—One model B. La Crosse tractor, one 12 horse-power Sta-Rite gasoline engine, with friction clutch pulley and magneto on steel truck. One 1½ horse-power Staing, in good condition. One 5 horse-power Rite gasoline engine. 54 ft. of rubber belt-William Galloway engine. STARCH BROTHERS COMPANY, La Crosse, Wis. 5-2

For Sale—Hinman Milker, 3 single units, 2 extra pails, 1 extra valve chamber. Complete for $50. W. M. STANDLEY, R. 7, Carrollton, Missouri. 5-2

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

SEEDS

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 3*

For Sale—Genuine Grimm alfalfa seed. 63 cents pound. SAM BOBER, Newell, S. Dakota.

Fall wheat and rye. Pedigree stock. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wis. 5-2

For Sale—Michigan Red Rock winter wheat. Pure and clean. Noted for hardiness, large yields, good milking qualities. $3.25 per bushel. Sacks free in orders of ten or more bushels. W. E. BISHOP, Pioneer Farm, Arcadia, Wisconsin. 5-3

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Wanted—Carload lots of alfalfa and straw. Quote delivered prices first letter. F. MARQUARDT, Morris Plains, N. J. 25-spl

For Sale—2 cars clover and timothy, $30. 3 cars oat straw, $15. F. O. B. cars. E. A. KNOKE, Shiocton, Wis. 5-2

SILOS

For Sale—Indiana stave silos, 10x20, 12x24. LUCIE KEVIL, Princeton, Ky. 24*

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Wanted—Three men—dairyman, hogman and general farmer—on profit sharing plan worked out with state university whereby each man should make more than prevailing wages. Good herds, good equipment, fair school, church and good living conditions. Needed groceries at wholesale prices. Monthly guarantee. Give experience and references. OLUSTEE MANOR FARM, Olustee, Fla. 3-3

Herdsman—Dairyman wanted for good herd of 30 Holstein cows. Must be clean and neat, both in appearance and work. Give salary expected, age, references, whether married or single and when at liberty. Address J. R. SMITH, MGR., Box 326, Colver, Cambria Co., Pa. 3-3

Testers Wanted—Experienced men for cow testing association work. Can pay as high as $125 per month and expenses. Write C. S. RHODE, University of Illinois, Urbana, Illinois. 2*

Help Wanted—Reliable married man without children to work on small farm. One who can milk. Wife to do general housework. Good wages and entire maintenance. MORGAN HEIGHTS SANITARIUM, Marquette, Michigan. 3-3

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Herdsman Wanted—Single herdsman at once to take charge of Guernseys. Must have experience and a good calf raiser. ADAMS & SWAIN, Algona, Iowa. 2*

Wanted—A farm manager, first class, thoroughly experienced man. None other need apply. State experience, references and salary expected. Address BOX 289, care Hoard's Dairyman. 3*

Wanted—Working herdsman for Holstein herd. Must have experience in A. R. O. work. State reference and salary expected. M. L. ENRIGHT, East Grand Forks, Minn. 4-2

Wanted—Two teamsters for general farm work, one willing to milk. Also one man for all round work. Single men preferred and only those of good steady habits need apply. Wages $70 per month with board with one week's vacation on full pay for every six months of employment. MERRYGLADE FARM, Somerset, Pa. 4-2

Wanted—Herdsman to take charge of herd of 20 cows and 15 young cattle, Jerseys and Holsteins. State wages expected, experience and references. RAY McCAULEY, Hicksville, Ohio. 4-2

Wanted—Experienced man, with capital for working interest, to build and manage ice plant, cold storage and creamery. Junction of Milwaukee; end of electrification; shops, two benchland irrigation projects, oil, 1,200-barrel flour mill; population 3,000. Big opportunity for right man. FRANK F. GOSS, Harlowton, Mont. 4-2

Herdsman wanted near Columbus, Ohio. Must have had some experience and plenty of ambition. Registered Holstein cattle. Modern buildings. Reference furnished. Address BOX 311, care Hoard's Dairyman. 4-2

Wanted—Young man for general farm work. Must milk. Sept. 1st to Dec. 1st, then if both suited, for year. Write giving experience, age, nationality, wages wanted. No booze or cigarettes. H. E. PRESTON, Elgin, Minnesota. 4-2

Wanted—Young man for Central Oklahoma cow testing association. Must know how to test milk and balance rations. Salary $100 per month. C. W. RADWAY, Stillwater, Oklahoma. 4-2

Wanted at once, single man, good buttermaker, and understanding care of high grade milk, machinery, etc., in retail milk plant handling about 1,500 quarts daily near Pocomoke, Md. In first letter state wages and when can come. Address BOX 316, care Hoard's Dairyman. 4-2

Wanted—Married man to care for milking herd of pure-bred Holsteins and to raise calves. Milking machine used. New house. Opportunities for right parties. State wages and experience. BAIRD BROTHERS, Waukesha, Wisconsin. 4-2

Wanted—Single white man for general farm work. Must milk three cows. State wages and age. S. P. PLOUTRY FARM, Silver Hill, Md. Station H., Washington, D. C.

Wanted—By September first four dairymen for pure-bred Jersey herd. Can use a man and three boys. Salary $50 per month each with wood, house and garden free. Apply J. G. STERCHI, Knoxville, Tennessee. 5-2

Wanted—Several four time milkers. Pay eighty dollars and keep. Good chance for advancement. GRAHAMHOLM FARMS, Rochester, Minn. 5-2

Wanted—Young man, good milker, to help in dairy, 25 Guernsey cows. Good home to the right man. H. C. HURLEY, Rockville, Maryland. 5-3

Manager for large dairy farm. Third interest in personal property given gratis for ability. BOX 327, care Hoard's Dairyman.

Wanted—Men to do official testing in Iowa. Work to start about October 15. Offers opportunities to earn and learn by visiting best herds in the state. State experience and references. DAIRY SECTION. Ames, Iowa.

HELP WANTED

Wanted—Married man as working herdsman. Registered Holsteins. Also single man as milker. Must be workers and have references. BOX 157, Gaithersburg, Md.

Wanted—September first, married man to operate 100-acre modern equipped farm with dairy of 20 cows, located near Indianapolis, Indiana. Am starting herd of registered Holsteins. Must understand registering and feeding for milk production. Profit sharing basis preferred. Write, C. B. WILLIAMSON, 201 W. Morris St., Indianapolis, Indiana.

Wanted—Experienced farmer and wife for general farm work on a 43-acre farm. Privilege of renting farm if desired. FRANK LEEB, Mt. Marion, N. Y. 5-3

Wanted—Married man to bottle milk, separate, clarify, etc., and assist in taking charge of most up-to-date dairy in Florida. Must know how to make A. R. O. records, understand feeding, and experienced in raising calves. Beautiful bungalow partly furnished, hardwood floors, hot, cold running water, electric light, tiled bath and toilets. Must not be over 45 years of age. Preference given to couple with grown son who can milk. Salary $100 month, and yearly bonus. Railroad fare, one way. Must give references. ORANGEHURST FARMS, Orlando, Florida. 5-4

Wanted—Man to drive wholesale milk truck from farm to Minneapolis, do milkhouse work and help to milk. Don't apply unless experienced. Seventy-five dollars per month. J. C. CAMPBELL, Hopkins, Minn.

Wanted—Reliable man to care for small herd of registered Guernseys. Must be good milker. Give experience, references and wages desired. THOS. L. ROSSER, Charlottesville, Va. 5-3

Wanted—Competent herdsman, for a registered herd containing 100 head, on a farm within fifteen miles of the Twin Cities. Plant and living conditions modern in every respect. Wages and terms subject to negotiations. Address BOX 328, care Hoard's Dairyman.

Wanted—Good dry hand milkers for semi-official test cows. Wages, $80 per month. Good chance for advancement for the right kind of men. Address GRAHAMHOLM FARM, Rochester, Minn. 5-2

Wanted—Married man for position as second man on large certified dairy in Bucks Co., Pennsylvania. Must be experienced, farm raised, willing worker, and able to handle men. One with some agricultural training preferred. Good modern dwelling and $30 per week wages. JOSEPH HEACOCK COMPANY, Wyncote, Pennsylvania. 5-2

Wanted—A thoroughly competent, aggressive, intelligent man, having expert knowledge of the proper feeding, care and breeding of registered Holstein cattle, to take charge of a first class herd producing fancy milk for city market. Applicant must be good natured and able to handle men and work in harmony with other departments on farm; to keep accurate records of costs and expenditures in his department, and to carry out owner's ideas; one who knows the difficulties and can surmount them. Model equipment. Ohio. If not fully qualified, do not answer this. Give complete information with qualifications, references, and salary wanted in first letter. Address BOX 320, care Hoard's Dairyman.

Wanted—September 1st, a good, clean, wide-awake, single man who is a hustler for barn work in small registered Jersey herd where Register of Merit work is done. One interested in Jerseys preferred. Modern equipment. Good chance to learn herdsman's work. Permanent position to right man. Long hours. $70 per month. Address R. H. VAN SLAMBROUCK, Crystal Bay, Minn. 5-2

Will pay $1,200 per year, board and room, for a good, clean, industrious young man who is willing to work with cows and do all kinds of work connected with an ordinary dairy farm. Hinman Milker used. Commence any time. CHAS. M. FARGO, Doland, S. D.

One of Minnesota's largest Holstein herds is looking for a herdsman. Man to take charge of the working end and co-operate with manager. To handle men and barn in a systematic and business-like manner. Prefer a married man, any age, who has made a success of testing Holsteins. Wife to board from five to eight men on a salary or at a flat rate per man. Will also consider applications from successful, single man, any age, trained under Gockerel, Wilson, Nims, Juve, Wollin or Dunham. This is a rare opportunity as the first daughters of one of Minnesota's greatest young bulls will freshen here this winter. Position open immediately. Address BOX 322, care Hoard's Dairyman.

POSITIONS WANTED

Wanted—Manager's place on good farm. Sixteen years' experience as manager on dairy and stock farm; also understand hog raising and stock feeding. W. R. JONES, R. 3, Bell Buckle, Tenn. 4-2

Manager, 36 years old, graduate agricultural college, thoroughly experienced in general farming, stock raising, A. R. O. work, soil development, drainage, building construction, handling of men, wants position. No proposition too large. Write BOX 302, care Hoard's Dairyman. 4-3

Wanted—Position as manager of large dairy farm, in Eastern United States, stocked with pure-bred Holsteins. Want to take financial interest in business. Graduate of New York State College of Agriculture. Six years' experience as farm manager. Married. No children. Address BOX 318, care Hoard's Dairyman.

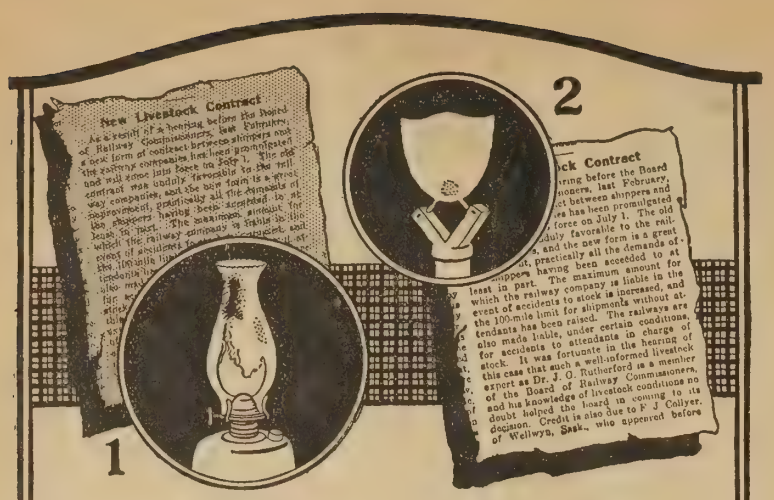
Employment about October first, on a farm which a single 23-year-old lad may rent next spring. Experienced herdsman and farmer. References. Graduate Wisconsin Short Course 1916. BOX 444, Cudahy, Wisconsin.

Man and wife, both good milkers with one child want position on dairy farm. Prefer state of Washington. Address WALTER VANDERMEER, 10923 Michigan Ave., Chicago, Ill.

Herdsman, married, age 30, seeks permanent position. First class feeder and milker, experienced in A. R. O. work. Can run Babcock Tester. Reference. JOHN CREE, R. 2, Ravenna, Ohio.

Good experienced dry hand milker wants position. State wages and particulars. Go anywhere. Address BOX 326, care Hoard's Dairyman.

Other Classified Advertisements will be found on Page 170.



Let Your Own Eyes Decide

Study these pictures carefully. They show why Carbide Gas is used on more than 300,000 farms in preference to all other forms of lighting.

1. An oil lamp flame; large, wasteful, dim and smoky, consumes much of the life-giving oxygen from the air. Has an unpleasant smell and discharges soot into the room. *The clipping shows how ordinary newspaper type looks to normal eyes by lamplight at a distance of 12 feet.*

2. The Colt Carbide Gas Flame. Note its small size. Consumes far less oxygen than an oil flame. It is economical, bright, smokeless and odorless; gives the nearest light to actual sunlight—ten times as efficient as lamplight. *The clipping shows how ordinary newspaper type looks to normal eyes by Colt light at a distance of 12 feet.*

COLT TRADE MARK REG. U.S. PAT. OFF.

CARBIDE LIGHTING AND COOKING PLANTS

furnish this remarkable light to every room in the house and to barns and outbuildings too. Just a twist of the fingers—no matches needed—no more filling and trimming lamps.

Colt Carbide Gas is easily made right at home. It gives a hot cooking flame *when you need it.* It keeps the kitchen cool and clean and supplies a self-heating flat iron.

The Colt Plant is easily installed and requires scarcely any attention. It is economical, efficient and dependable.

J. B. COLT COMPANY

Carbide and Carbon Building

30 East 42nd St. New York City, N. Y.

C 14

"Yours for Real Tobacco"

says the Good Judge



Men are getting away from the big chew idea. They find more satisfaction in a little of the Real Tobacco Chew than they ever got from a big chew of the ordinary kind.

Costs you less, too—the full, rich tobacco taste lasts so much longer.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

RIGHT CUT is a short-cut tobacco

W-B CUT is a long fine-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ohio	Muskingum	J. F. Martt	June	433	84	74	Martin Est.
"	Washington Co.	Erna Moore	July	167	22	79	C. E. Chase
Wis.	North Crandon	Chas. Stivers	June	305	26	93	H. Peterson
"	Wausau—Marathon	N. M. Nelson	"	466	54	75	A. Volhard
Ill.	Lake Co. No. 1	G. A. Gregory	July	353	17	64	V. J. Dushek
"	Vermilion—Champaign	T. R. Lovett	"	428	5	65	Fred Hubbard
Iowa	Monona—Farmersburg	Ernest Lihn	"	392	21	86	G. A. Sabbaun
Colo.	Platte—Boulder—St. Vrain	L. L. Simpson	"	371	28	66	Ewing & Son
Wis.	Amherst—Nelsonville	G. W. Baumel	"	429	31	63	M. Domaszek
Ind.	Posey—Gibson	L. H. Russell	"	196	10	49	A. Redman
Pa.	Juniata	K. A. Fettig	June	297	16	55	H. I. Gray
Kans.	Jackson Co.	O. H. Lauridsen	July	99	11	50	Sam Sequist
Ill.	Knox County	J. B. Countess	"	243	39	75	A. R. Landon
Colo.	Johnstown	W. Geurkink	"	316	58	76	C. H. McNeil & Son
N. H.	Claremont—Lebnon	A. E. Norman	"	371	19	53	C. T. Rossiter

Association Notes

Muskingum, Ohio:—Of the 55 herds tested in this association, all except three use pure-bred sires. In June 3.3% market milk sold for $3.50 per cwt. The creamery paid 54c per pound for fat and milk retailed for 14c per quart. Bran is rated at $3.15 per cwt. and corn at $2.50.

North Crandon, Wisconsin:—Four unprofitable cows were sold or butchered during June and five cows sold to new settlers. Three members are feeding balanced rations showing an increase in production of about 30%. Pastures are not as good on account of dry weather and grasshoppers. All grain crops are good. Four herds were tuberculin tested, but no reactors were found. The creamery paid $.57 per pound for fat and the cheese factory 50c. Milk retails for 15c per quart, butter for 57c and 60c, and cheese for 25c per pound. Feed prices are: Dairy ration, $90 per ton; oil meal, $86; oats and peas, $76; oats, $66; hay, $24.

Wausau—Marathon, Wisconsin:—In June one pure-bred Guernsey bull was purchased and six cows sold to make room for better producers. This association is co-operating with the Guernsey Breeders' association in buying feed for next winter. Four members have started official testing. A few farmers are feeding their cows grain in addition to pasture. June market milk testing 4% sold for $2.60 per cwt., 6½c paid for each point above. The creamery paid 63c per pound for fat and the cheese factory 58c. Milk retails for 14c per quart, butter for 58c per pound, and cheese for 36c. Hay is rated at $28 per ton; silage, $6; bran, $50; middlings, $54; oil meal, $69; Wisconsin Balanced Ration, $70; International Dairy Ration, $51; gluten, $68; oats, $1.25 per bushel; and barley, $1.45.

Lake County No. 1, Illinois:—Every scrub sire has been rooted out and at present we have one hundred per cent pure-bred sires. Soiling crops are being fed by a number of the members to supplement short pastures. Most of the men are using home mixed rations, although there are still a few who persist in using the high priced ready rations. July market milk sold for $3.20 per cwt., testing 3.5, and 4c for each point above. The condensery paid 56c per pound for fat. Feed prices are: corn meal, $3.25 per cwt.; bran, $3; dried brewers grains, $3.50; cottonseed meal, $3.75; barley, $3; oil meal, $3.60; gluten, $3.60; oats, $3.90.

Vermillion—Champaign, Illinois:—A carload of oil meal was purchased in July. Thirteen "visitor" cows were sold. Market milk testing 3.5% sold for $3.50 per cwt., and 4c per point above. The creamery paid 90c per pound for fat. Milk retailed for 17c per quart and butter for 62c per pound.

Monona—Farmersburg, Iowa:—The third carload of cottonseed meal has been bought. Five cows were sold, and two pure-bred heifers and one Red Poll bull calf were purchased. Production is falling off on account of dry pastures. Most members are starting supplementing with grain. Nearly all of the silos were emptied last spring and scarcity of help prevents soiling except with dry hay. Cottonseed meal is rated at $70 per ton and oats at $60.

Platte, Boulder, and St. Vrain Valley, Colorado:—The condensery paid 70c per pound for fat in July, and the creamery paid 75c. Milk retails for 12½ to 15c per quart. Feed prices are: Alfalfa, $16 to $18 per ton; corn chop, $4 per cwt.; bran, $3; barley, $4.15; oats, $4.20; linseed, $5.25; cottonseed meal, $4.75; dried beet pulp, $1.75.

Posey—Gibson, Indiana:—Two "visitor" cows were sold in July. Several members are preparing exhibits for county fairs and some for state fair. The creamery paid 52c per pound for fat. Milk retails for 16c per quart, butter for 70c per pound, and cheese 45c. Hay is rated at $25 per ton; bran, $60; cottonseed meal, $72; and oil meal, $75.

Juniata County, Pennsylvania:—Members are trying to keep up production this summer by feeding balanced rations on pasture, and are getting good results so far. There has been a carload of cottonseed meal ordered. June market milk sold for $3.51 per cwt. The creamery paid 70c per pound for fat. Milk retails for 12c per quart. Cottonseed meal is rated at $90 per ton; bran, $65; ground oats, $66.80; corn and cob meal, $53; Union Grain, $78 to $80; Larro Feed, $77—$78; Peerless Dairy feed, $70.

Jackson County, Kansas:—Members who have been pasturing Sudan grass report excellent results in helping to keep up the milk flow and in economy. July milk sold for 28c per gallon. The condensery paid 54c per pound for fat and in addition 55c per cwt. milk; the creamery paid 56c per pound for fat. Bottled milk retails for 15c per cwt. Feed prices are: oats, 70c per bushel; chops, $3.60 per cwt.; oil meal, $4.60; bran, $3; alfalfa, $20 per ton.

Claremont and Lebanon, New Hampshire:—Two unprofitable cows have been disposed of. One pure-bred bull calf was sold by one member to a farmer who has never used a pure-bred bull before. Several members have installed lighting system and are

well pleased with them. Haying is pretty well along, although the weather has been somewhat unfavorable and good help scarce. July market milk testing 3.7% sold for $3.73 per cwt. and 6c per point above. The creamery paid 75c per pound for fat. Milk retails for 14c per quart and butter for 70c per pound. Feed prices are: Bran, $66 to $73 per ton; gluten, $83; cottonseed meal, $78 to $92; oil meal, $80 to $88; ground oats, $86; corn meal, $77 to $85; Stock Feed, $80; Ready Rations, $74 to $87; peas and oats, $6.

Johnstown, Colorado:—Owing to the scarcity of competent herdsmen, Tobey and Wailes sold their herd of 42 registered Holsteins to Letford and Crowley and to Whowell and Polley. The average price was $350 per head. The herd remains in the state and in the Johnstown association. The herd of 22 cows has an average of 466 lbs. fat for the year ending May 1, 1920, in this association. July market milk testing 4% sold for 2.80 per cwt. The condensery paid 70c per pound for fat and the creamery paid 59c, Milk retails for 15c per quart. Alfalfa (second cutting) is rated at $12 to $18 per ton; corn silage, $7 to $10; ground oats, $71; ground barley, $69; ground corn, $68; ground milo maize, $64; dried beet pulp, $1.75 per cwt.; bran, $2.70 to $3.20; cottonseed meal, $4; oil meal, $4.40.

Minnesota Testing News

This is the first of a series of monthly letters to be issued by this office for the purpose of giving wider publicity to the official test work which is being carried on in Minnesota. This initial issue is introductory in character, and the plan is to report in these letters the number of breeders testing, number of cows on test, number of supervisors employed, and also tabulate the highest records completed during the previous month. The scope of the letter will be enlarged to include items of interest to breeders of dairy cattle, and special mention will be made of cows completing notable records.

We invite the co-operation of the breeders, supervisors, and all interested parties in making these monthly reports more valuable by offering suggestions and submitting information for publication. There are many daily occurrences of general interest which could be disseminated in this manner, and it will serve to bring the breeders of the state in closer contact at least once a month.

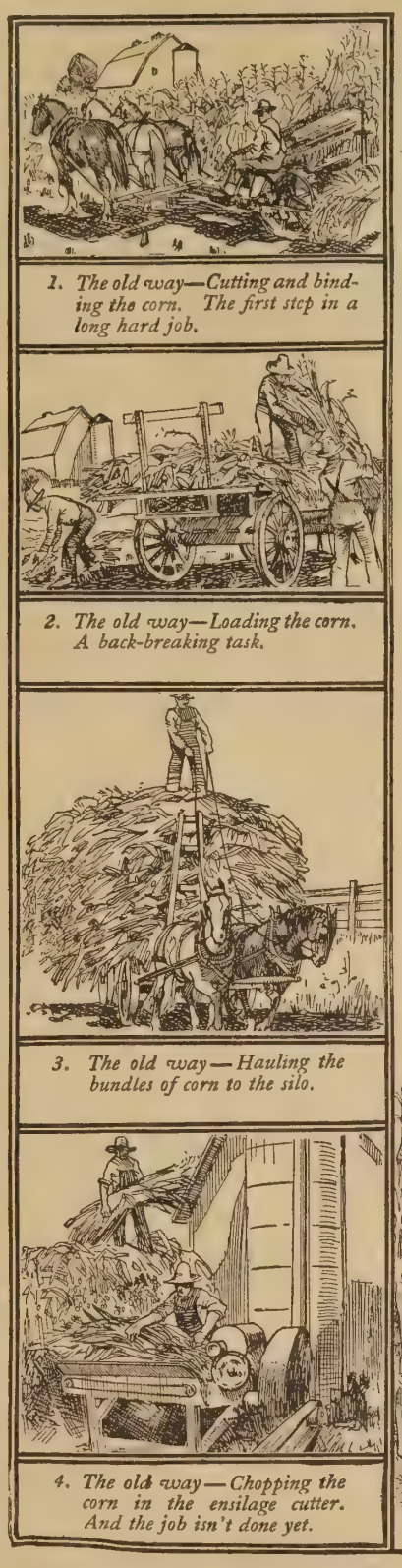
Record prices of pure-bred cattle here and elsewhere have attested to the value of official records, and that Minnesota breeders are fully aware of this fact is apparent by the large increase in volume of test work done during the past year. No investment which the breeder makes will return him as much on the dollar as the money he spends for official testing.

The following statement summarized last year's official testing. In round numbers they show an increase of about one hundred per cent over the preceding twelve-month period.

During the year ending June 30, 1920, tests were supervised for 182 Holstein breeders, 27 Guernsey breeders, 13 Jersey breeders, 4 Shorthorn breeders, and one breeder each of Ayrshire, Red Polls, and Brown Swiss—a total of 229 breeders.

There were 4,119 two-day tests on Holsteins, 1,158 on Guernseys, 676 on Jerseys, 154 on Shorthorns, 84 on Red Polls, 12 on Ayrshire, and 4 on Brown Swiss—making a total of 6,207 two-day tests. In addition the Holsteins provided 1,053 seven-day tests, 81 30-day tests, and one 60-day test.—M. H. Fohrmann, Superintendent Official Testing for Minnesota.

RONNING ENSILAGE HARVESTER



1. The old way—Cutting and binding the corn. The first step in a long hard job.

2. The old way—Loading the corn. A back-breaking task.

3. The old way—Hauling the bundles of corn to the silo.

4. The old way—Chopping the corn in the ensilage cutter. And the job isn't done yet.

Get One—

You Can If You Act Today

TWO weeks ago we announced that we would do everything in our power to fill the orders of dairy farmers who wrote or wired us at once. The response has been tremendous. Dairy farmers all over the United States have written saying: "I'll do anything to get a RONNING ENSILAGE HARVESTER in time for silo-filling this year. If I can't get it my silo will have to stand empty."

We took care of these dairy farmers to the best of our ability. We realize that dairymen need their silos filled more than any other class of farmers. We are giving them special attention.

If you will write or wire us at once, we will try to get a RONNING to you in time for silo filling. We know how short of help you are—we know how badly you need a RONNING. We are publishing this announcement to give you a final chance to get one.

From Corn to Ensilage in One Operation

The RONNING ENSILAGE HARVESTER actually takes your green corn as it stands in the field, reaps it, chops it and loads it into the wagon box ready for the silo all in one operation. Three men and three half grown boys can put up as much ensilage as 10 to 12 men working the old way. No twine bills—no additional machinery—fewer teams—only half as large a crew to pay, house and feed. And the job is all done at one time.

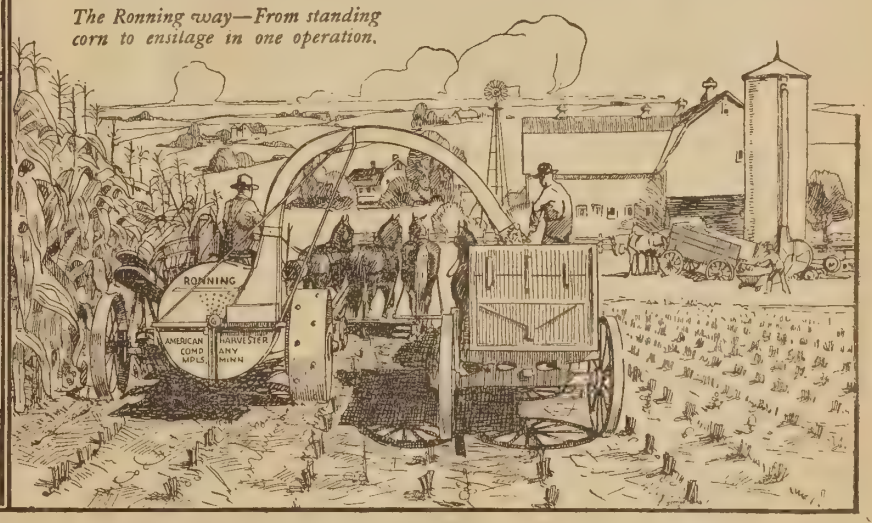
Write or Wire

This is your last chance. Write—or better still—wire us today. We will put you in touch with the distributor near you and will send complete information. If it is humanly possible we will get a RONNING to you in time for ensilage harvesting this year. But you must act at once.

American Harvester Company

1738 Central Avenue Minneapolis, Minnesota

The Ronning way—From standing corn to ensilage in one operation.



Oregon Development

HOARD'S DAIRYMAN:—The Ochoco project is now nearing completion and will be finished next month. There are 22,000 acres of land under this project which are producing good crops this year and will encourage many farmers to go into stock raising and dairying. This land now under the ditch used to be called "Poverty Flat", as it never produced a crop but once in four or five years and the settlers were poverty stricken. Many new fields of alfalfa were started this spring and are showing up fine, also all kinds of grain.

Crook County has always been considered a good stock country with plenty of free range, but the settling up of large territories by homesteaders has brought about many changes. The land is being brought up as fast as possible and fenced and the scrub cattle have to give place to the pure-breds and high grades. The large stockmen have been up against a hard proposition the last two years with the high price of hay and are selling off all of their inferior stock and only aim to keep enough good stock for the amount of feed they can produce on their own land. This will also cause a hardship for the hay ranchers who heretofore have depended on the stockmen to buy their alfalfa in the winter.

All these changes are paving the way for the dairy cow and it will only be a short time before many hay ranchers will be compelled to go into dairying or sell out and make room for those that will dairy. We can grow rich hay here which, when fed to beef cattle without any grain, produces prime beef. It is equally good with the dairy cow. Many cows are making good records here, fed mostly on hay with very little concentrates. Some fine pure-bred herds are established in this county—mostly a beef type and a number of good dairy herds to blaze the trail for more and better farming.

Oregon. W. FREUND.

TABER LINED SILO

"LINED" (Pat. App. for) Acid-Proof Lining keeps air out—and moisture and juices of corn away from staves. Prevents rot—freezing and spoilage.

Shipped in 24 Hours

Made of *absolutely clear* Long Leaf Yellow Pine boiled in Creosote. Acid-Proof Lined, Painted outside, Double Anchored. Won't blow down.

Non-Shrinkable

Rot-Proof Acid-Proof

No shrinking or swelling of staves. No frozen silage. Finest circle doors and frame.

FREE BOOK (just out) on Silos and Silage. *Write for it Today!*

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Est. 1855





Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field

Send for catalog No. 6

W. S. Dickey Clay Mfg. Co. Macomb, Ill. Kansas City, Mo. Chattanooga, Tenn.

Lowe's



A dollar or two keeps your truck and tractor new

Buying a new truck or tractor is one thing. Keeping it like *new* is another. One takes a roll of bills—the other takes but one bill off the roll. One is good for the other fellow's business—the other is good for your business. What's good for your business, is good for you.

It's surprising what a little paint will do to keep your trucks and tractors new.

We make a paint that's the best paint for trucks, tractors, wagons and machinery that we know how to make. Knowing the reputation of Lowe Brothers' Paint, that's about all you need to know about this particular paint.

You can buy Lowe Brothers' Paint from the one best dealer in each town. If you want some sound sense paint *facts*, send direct to us for them. Just as sure as corn grows on a cob, some of the facts will make you open your eyes to the money to be saved by a half dozen or so paint savings.

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Paints

A Guaranteed Remedy for

Contagious ABORTION

Are you letting this scourge cost you calves, milk and cows? If your cows are affected, stamp it out.

ABORNO

the guaranteed treatment for Abortion, has been successful on thousands of cows. Give it a chance in your herd. Easily administered by hypodermic syringe—acts rapidly on germs in the blood. Can't harm the cow.



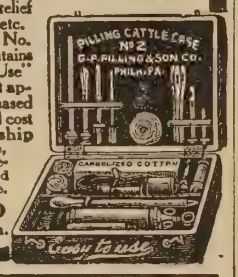
Write for our booklet and guarantee.

ABORNO LABORATORY
Section A LANCASTER, WIS.

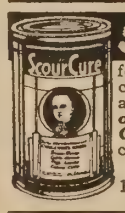
"First Aid" for Cows

EVERY farmer, dairyman and stockman knows that prompt treatment saves loss. With a Pilling "Easy-to-Use" Cattle Case, you can give an animal immediate relief from milk fever, bloat, etc.

Pilling Cattle Case No. 2, shown here, contains high-grade "Easy-to-Use" instruments of the latest approved designs. Purchased separately, they would cost $18.00. But we ship complete set, in oak case, with "Easy-to-Use" directions, only $12.50, postpaid Order today. Booklet free.



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SCOUR CURE

for pigs, calves, colts, lambs, hogs, cattle, sheep and horses. Cures after animals are too weak to eat. The ***only Guaranteed Preventive*** and ***Cure.*** Order today. Pay $2.08 per can on delivery.

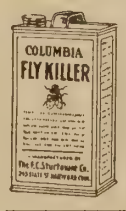
Dr. W. P. STATTLER, D.V.M.
133 E. Locust St. Lanark, Illinois

ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis



Columbia Fly Killer

kills every fly it strikes, also destroys lice on animals and poultry. If your dealer won't supply you send direct. Sent prepaid on receipt of price. ½ gal., 90c; 1 gal., $1.50; 5 gals., $6. Salesmen and agents wanted.

F. C. Sturtevant Co., Hartford, Conn.



BOOK ON
DOG DISEASES
And How to Feed
Mailed free to any address by the Author
America's Pioneer Dog Medicines
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

HIGH SCHOOL GRADUATES

If you wish to make yourself independent—study Veterinary Science. Write for particulars.

INDIANA VETERINARY COLLEGE
816 E. Market Street Indianapolis, Indiana

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Failing Cow

Six weeks ago one of my pure-bred Holstein cows gave birth to twin heifer calves. She is now two years old. Before the calves were born she was in fair physical condition, but ever since calving she was exceedingly poor in flesh. Her udder is still somewhat congested and she gives only twelve to fourteen pounds of milk per day.

Milwaukee, Wis. A. H. F.

If it has not been done you should have this cow tested with tuberculin and at this season of the year the intradermal method of testing would be preferable. If she does not react then a trained veterinarian should examine the womb and ovaries and if necessary treat for pyo-or endometritis, which we suspect possibly may be present, following the tardy expulsion of the afterbirth. That probably would be due to infection with the contagious abortion disease. Meanwhile flush out the vagina, every other day, with lukewarm, boiled water containing 30 grains of permanganate of potash to the gallon. Internally give her twice daily 20 grains of quinine, 30 grains of powdered nux vomica and 1 dram of powdered gentian root, in half a pint of thin gruel, well sweetened with molasses.

Abortion

I have six cows open and want to breed them right away. One of my cows lost her calf at about three months; another at about seven months. The first one I had her blood tested and the report came back that her blood showed abortion. She lived about three weeks and died. Can you determine the disease by blood test, and is vaccination successful?

Belton, Mo. J. A. McD.

The blood test determines whether or not contagious abortion disease infection is present in the blood; but it does not indicate whether cow has aborted, will abort, or when she will abort. It also determines presence of infection in the blood of a bull, but that does not indicate that he can spread abortion infection by service. Vaccination has not, thus far, proved satisfactory as a means of combating the disease, but it may be worth trying, if the local veterinarian has had good success in its use. See other recent answers regarding abortion.

Indigestion

Would you like to tell us what ails our heifer 4 months old? Am feeding separated milk with Blatchford calf meal, 4 lbs. at a feed, no meal and cold at noon. Has had only the one attack we know of. He will be still and then kick and paw with all four feet. Will turn on other side and do the same way.

New Mexico. J. J. L.

Physic the calf with castor oil and then feed more carefully. For a time mix an ounce of limewater in each pint of milk fed. Make the limewater by slaking a lump of caustic lime the size of a walnut in a quart of water. Allow sediment to settle and then use the clear liquid. Keep all feeding utensils scrupulously clean. Have the milk blood warm at feeding time and make calf drink slowly. Remove separator foam. Change to whole oats, bran, and oil meal, fed dry, in addition to fine hay, or grass.

Boils

I would like your advice in regard to some ailment of my cows' udders which I have suspected might be garget, but am not sure. A small lump appears on the teat where it joins the udder. This lasts a week or ten days and then disappears to appear later on another teat in the same manner. I have had two cows which stand close together affected in this manner. They are normal in every other way and the milk does not seem to be affected.

Denton, Mont. E. R.

Pus infection is the common cause of such a condition as you describe and it is liable at any time to cause ruinous cases of garget. For that reason isolate affected cows and twice daily bathe the affected part with hot water containing all the boric acid it will dissolve; then dry gently and apply a little 10 per cent oleate of mercury ointment. If a boil starts paint it with tincture of iodin daily and open when soft; then continue using iodin until it heals. Cleanse udders and teats before milking and milk with clean, dry hands.

Barrenness

I would like your advice on getting cows safe with calf. We have a hard time getting some of our cows with calf. Some skip a period of 3 weeks, others 6 weeks, sometimes 9 weeks. They come in in fine shape. We have two herd bulls. Our youngest one nearly always gets them the first time. Our senior herd sire we have in partnership with another breeder two miles away. He has a little of the same trouble, but not so bad. This bull is generally real fat, which might be the cause. He is most always quick about serving. What would be your advice to keep the bull less fat or serve cows more than once?

Grand Rapids, Mich. J. C. B.

Put the herd bull to work in harness, or a tread power, or at least make him take plenty of exercise every day by butting at a big empty barrel or block of wood hung by chains from an overhead beam in his paddock. Syringe out his sheath with a mid antiseptic solution before and after each service. The abortion disease infection is the probable cause of the difficulty in getting the cows in calf. Before breeding any cow syringe out her vagina daily with lukewarm, boiled water containing 30 grains of permanganate of potash to the gallon. That also will serve for disinfecting the bull. Continue the vaginal injections every other day after service, until it is seen that the cow is not going to come in heat again.



Washington, D. C., Weekly News

[Special to Hoard's Dairyman]

WASHINGTON, August 9—There have been no public developments during the past week in the milk controversy in this city. An attorney named O'Brien has been quoted in the newspapers as having filed with the Department of Justice a complaint on behalf of consumers of milk, charging a conspiracy on the part of the Maryland—Virginia Milk Producers' Association members. Who he represents is not yet plain, but it is reasonable to suppose that distributors are interested as consumers. The facts are that the milk producers' association is securing contracts with its members whereby they sell their milk to the association, for a period of a year, under a well tested form of sale contract, the same as is in force in Baltimore milk territory. Dr. Harvey W. Wiley, president of the milk producers' association, refutes all the O'Brien charges positively by showing that there is no conspiracy, no effort to keep milk from the city, and nothing else involved except the contract for the sale of milk by co-operative marketing, as indicated.

Washington health regulations permit no milk to come into the city for sale, except from tuberculin tested herds. This is one of the facts alleged in the O'Brien statement as an evidence of "conspiracy". Dr. Wiley asserts that this indicates that the attack on the milk producers is in reality an attack on the health regulations, and an effort to let the bars down for the introduction of uninspected and unlicensed milk into the district.

The whole controversy may have a desirable result in one particular, although, if this happens, it will compel the milk producer's organization to fight a law suit through the district courts. I refer to the possibility of having this clear cut case tried out in the federal courts to a decision as to whether or not a co-operative marketing contract, such as is involved here, is or is not a violation of the Clayton amendment to the anti-trust law. This question is involved in the effort to secure the Volstead Substitute for the Capper—Hersman bill, and it is also involved in the so-called "California plan" of co-operative marketing just now under national discussion as the result of the recent grain and live stock marketing conference in Chicago, where this plan was proposed by Aaron Sapiro of California as the proper method of handling all staple farm products. If the effort to put this plan into effect here should be decided as a "monopoly in restraint of trade" it would be the signal for a nation-wide effort either to amend the present statue, or else work out another method of co-operative marketing. The issue is very clear cut in this particular, and it may be the opportune time and case for a quick and clear decision.

⚜

What about Hebe? Information as to a new and extensive advertising campaign to market this much discussed product is coming to attention both in the columns of the farm papers and the city papers. The fiction behind which this product hides should be punctured so every one understands it, not as an attack on Hebe, nor as a criticism of its manufacturers, who are scrupulously careful to sell it for what it is, a mixture of skimmilk and vegetable and other oils, but as a statement of the actual facts. The sale of Hebe does not open a market for a farm product; it closes a market for a farm product, for it is sold not as a separate product, but in direct competition with condensed whole milk. Every can of Hebe which is sold comes very nearly preventing the sale of an equal can of condensed whole milk. The trouble with Hebe in spite of every camouflage is that it is an imitation product, in the same class with oleomargarine and nut margarine. It makes its appeal to the public because it contains a fat, in spite of the fact that that fat does not contain the vital elements which set milk fat or butterfat out and above every other human food in importance. The undivided attention of the public must be centered on this vital value of butterfat, that which makes the dairy cow the foster mother of the human race, and when this is understood, then the necessity for legislation to protect whole milk, condensed whole milk, and butter from imitations which do not contain any appreciable amount of butterfat, will be well understood. Hebe stands on the counters of hundreds of grocery stores alongside of the recognized brands of condensed milk. A customer who asks for "condensed" or "evaporated" milk is asked which she wants, "Heebe" or some other brand, and on learning the price decides, without the necessary information by word of mouth—no matter if the label says that Hebe does not contain butterfat. What about Hebe?

⚜

Farmers' Bulletin 717, recently issued by the Division of Home Economics, on the uses of milk as a food contains a very strong endorsement of the vital principles in milk, although even this bulletin which is a strong endorsement of the value of dairy foods as a whole, veers off without using the commonly accepted terms and names for the vitamines, now so widely recognized. What this bulletin says about the use of butter in place of other fats in the child's diet, deserves the widest reading and approval.

Louisiana Dairy News

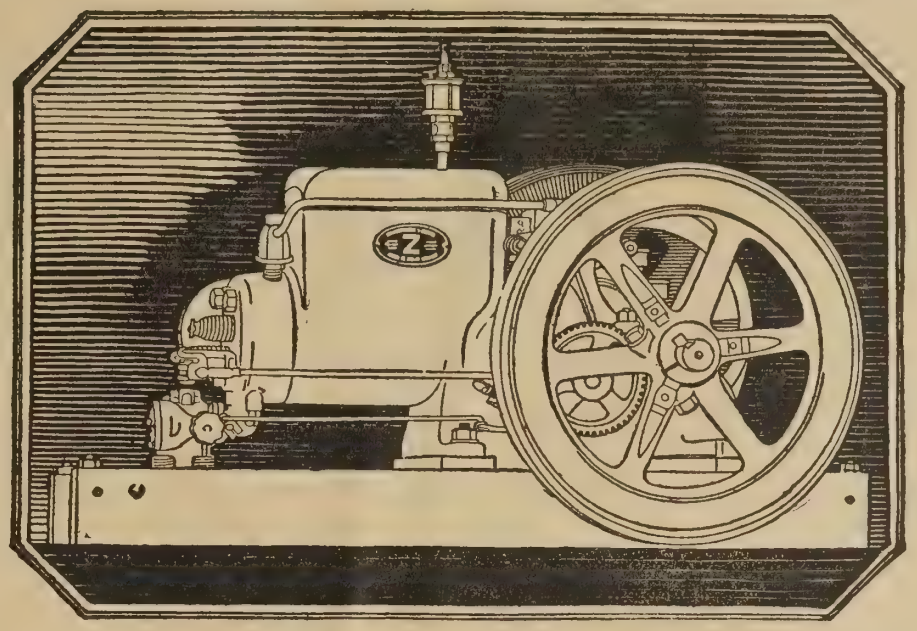
Mr. E. C. Jefferson has been employed by the Extension Department and took up his new work as Dairy Specialist August 1. Mr. Jefferson is filling the position recently made vacant by the resignation of Mr. H. C. Vetter.

Mr. Jefferson is a graduate of the Louisiana State University and has had charge of the large dairy herd owned by the Estate of H. C. Minor, where he has rendered most valuable and efficient service and the experience gained while working with this dairy herd has been of much value to him and especially fits him for extension work.

The dairy farming operations at the Minor Estate are among the largest in the country consisting of both pure-bred Holstein and Jersey cattle and in his work with this herd Mr. Jefferson has had most every kind of experience that is involved in the operation of an up-to-date dairy farm, and the great progress that has been made there under Mr. Jefferson's supervision should be sufficient evidence to the dairy farmers of the state that he is fully qualified to render them most valuable service.—C. H. STAPLES, Louisiana University.

Hog cholera is the swine raisers' chief enemy. Inoculation locks the stable before the horse is stolen.

FAIRBANKS-MORSE "Z" FARM ENGINES



As Clean Cut as a Thoroughbred

The clean-cut business-like design of the "Z" Engine was not just accident. A farm engine, to be efficient, *must* be properly designed. The "Z" has graceful, natural lines—free from geegaws.

The parts are strong—weight where weight is needed. Strains foreseen—contact parts case hardened—*all* parts carefully, precisely made by accurate machine work.

Looks like a thoroughbred—*is* one. Delivers a steady flow of power—runs smoothly—operates economically. Correct design and precision methods give the "Z" its built-in quality. It is a mighty pleasing engine to look at.

Other "Z" features are: Runs on kerosene, as well as gasoline; Bosch magneto; more than rated power; parts interchangeable; long life.

Let your nearby dealer show you why you should have a "Z."

PRICES:

1½ H. P.	$ 85.00
3 H. P.	135.00
6 H. P.	220.00

All F. O. B. Factory

FAIRBANKS-MORSE QUALITY F M 100%

FAIRBANKS, MORSE & CO.

MANUFACTURERS — CHICAGO

Eastern Branches: New York; Baltimore; Boston.

Feeding and Caring for Swine

(Continued from page 153)

This well shows the high value of pasture over one of the best dry-lot rations (corn and tankage, for growing and fattening pigs.

Amount of Grain to Feed on Pasture

Even on the best pasture, young pigs fed no grain will make little or no growth and soon become stunted. It is very important that enough grain be fed to keep them growing vigorously. This will take at the least 2 to 3 lbs. of dry feed for each 100 lbs. live weight per day. In 1916 we fed one lot of pigs on good alfalfa pasture 2 lbs. of corn and tankage daily for each 100 lbs. live weight, another lot 3 lbs., while a third lot was self-fed all the corn and tankage they would eat. When new corn was ready the first two lots were finished on all the new ear corn they wanted. Even with corn and tankage high in price, the self-fed pigs made more money, as they actually required less corn and tankage for 100 lbs. gain. The pigs fed the two per cent ration received too little grain and some became stunted. This trial and others show that under Wisconsin conditions it pays best to feed growing, fattening pigs on pasture all the grain they will eat. We prefer to use a self-feeder for everything except the breeding herd.

Feed Tankage or Skimmilk on Pasture

Corn and ground barley must be supplemented by tankage, skimmilk, or buttermilk even on the best hog pastures as alfalfa, clover, rape, or oat-pea-rape mixture. Whey alone will balance ground barley and probably nearly balance corn if fed in sufficient amount on good pasture.

Best hog pastures for Wisconsin are:

1. **Oat-pea-rape mixture.** In two years' trials this proved the best annual crop tested. Seed at usual time for oats. Drill mixture of one bushel oats and one bushel field peas per acre; and at same time broadcast four lbs. rape per acre. Pasture ready in June or when peas are well podded. If not pastured too heavily will furnish grazing until hard freeze.

2. **Rape.** Next best annual crop. For early pasture seed as early as possible, broadcasting at rate of 5 lbs. per acre. Begin to pasture when rape is a foot high. Lasts till hard freeze.

3. **Red clover.** Excellent long season pasture crop. Clover furnishes pasture from early spring till fall.

4. **Bluegrass or native pasture.** Bluegrass (often with some white clover) furnishes earliest spring pasture, but not much forage in midsummer and one of the first three mentioned pasture crops should also be supplied.

5. **Alfalfa.** Alfalfa is an excellent forage for pigs, but pigs may not be so good for the alfalfa. Trials are in progress to find how many years alfalfa can be pastured by hogs before it is killed out.

6. **Soybeans.** A good crop for late summer and fall. Drill at corn planting time at rate of one-half to two-thirds bushel per acre. Don't turn pigs on until beans are formed in pods as chief value of forage is in the beans and not the leaves.

Hogging down corn is often an economical way of fattening pigs in the fall. In corn which is to be hogged down, broadcast 3 lbs. of rape per acre at last cultivation. Many plant 1 lb. of pumpkin seed per acre in addition which is not a bad idea.

Barley for Fattening Pigs

Due to the large demand in the past for barley for malting purposes in this state, this grain has been for the most part grown as a cash crop instead of being fed to live stock on the farm. For this reason many Wisconsin farmers do not appreciate the high value of barley for stock feeding.

To determine the relative value of corn and barley for fattening swine and to find the best methods of feeding barley to pigs, three feeding experiments have been carried on at the College of Agriculture this year, three carloads of pigs being fed in all. These trials have shown that barley is an excellent feed for pigs, especially when fed with dairy by-products or tankage. They point out the great possibilities for pork production in Wisconsin through utilizing our high grade pedigree barleys for feed.

In these trials one lot of pigs was self-fed shelled corn and tankage and another lot was self-fed ground barley and tankage. With feeds at market prices last winter, the feed cost of 100 lbs. gain was $11.51 on corn and tankage and $10.10 on barley and tankage. Ground barley was worth 5.5 per cent less than shelled corn per 100 lbs. for feeding hogs. Deducting the cost of grinding (5 cents per bushel), barley before grinding was worth 10 per cent less than shelled corn. With shelled corn at $1.50 per bushel or $2.68 per 100 lbs., barley is worth $1.16 per bushel, or $2.41 per 100 lbs. for feeding hogs, before grinding.

Our trials show plainly that barley should be ground for hogs. A lot of pigs fed soaked whole barley and tankage required 42 per cent more barley and 50 per cent more tankage for 100 lbs. gain than a lot fed ground barley and tankage.

Barley and Dairy By-Products Excel

In one trial several lots were fed to compare the value of various supplements to barley. Wheat middlings and linseed meal made rather poor showing, the pigs gaining only about 1.2 lbs. a head per day. Tankage gave much better results, the pigs gaining 2.0 lbs. daily. Skimmilk, however, was still better. Pigs fed about 1 lb. of skimmilk for each pound of barley gained 2.1 lbs. a day. With ground barley at $.92 per bushel, skimmilk was worth $.68 per 100 lbs.

The surprise of the trial came in the results from barley and whey. Pigs fed about 2 lbs. of skimmed whey for each pound of ground barley gained 2.5 lbs. per head daily, actually more than any other lot. The feed cost of 100 lbs. gain was only $9.31 for this lot. Whey was worth $.44 per 100 lbs.

These pigs weighed 129 lbs. at the start. Had they been younger, a greater proportion of skimmilk or whey would have been needed to balance the ration.

In the barley growing sections and especially in those dairy sections where most of the corn goes into the silo, these discoveries are of great importance. It is apparent that corn can be economically replaced with ground barley and that the great dairy by-products are the most valuable supplements. As to the quality of pork produced, it is interesting to note that Danish bacon produced on barley has long been considered the finest in the world.

SWINE

REGISTERED DUROC-JERSEYS



We are offering **For Sale** until **October 1st,** Spring **Duroc Gilts** and **Boars,** a number of Fall gilts and a number of brood sows including sows from **King Orion** and boars and gilts from **Crimson Orion Cherry King 2nd.** No better **Duroc** blood to be obtained. We will book orders now for pigs that will be farrowed in August. Satisfaction guaranteed on our **Durocs.**

EDGEWATER STOCK FARM, Ft. Atkinson, Wis.



Green Valley Cherry King 2nd, No. 260435n.

SPECIAL PRICE

on Duroc pigs of May and June farrow. Sired by State Fair winners. Gilts bred for fall litters. Write for Catalog and price list.

We deliver the Hogs before you pay.
GREEN VALLEY STOCK FARM
BOX 6. LOUISVILLE, ILLINOIS

ISLAND FARM DUROCS

We are offering a few choice spring pigs, either sex, at $30 each at weaning time. Write us your wants.

ISLAND FARM, - Floodwood, Minn.

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois.

Alfamarl Springs

Offers for sale Rex of Alfamarl Springs by Union Star, a richly bred Yeksa bull whose dam, Reunion made 576 lbs. fat at three years; out of Goldie Belle, a good daughter of Tricksey's Sam. He is ready for service.

F. M. TESS, Mgr., - TROY CENTER, WIS.

JERSEYS

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Sultan of Rockland 121150 R. of M.

Son of Eminent's Pilot, Gold Medal sire, two of whose daughters won Gold Medals as three-year-olds, and whose fourth Gold Medal daughter is full sister to Sultan of Rockland.

Out of Sultan's Nelly of St. Martins, R. of M. 598 lbs. butter, 85% fat, and dam of one Gold Medal cow, Eminent's Nelly Sultan 892 lbs. butter, full sister to Sultan of Rockland.

Sultan of Rockland has six daughters in R. of M. as two-year-olds, records 556 lbs. butter at 1.11, 490 lbs. at 2 years. He sired the bull "Glen Tana Stoke Pogis" that Sharp sold to Ayredale to be used on the World Champion cows.

We are replacing him with his own son, because we believe the son is better than the sire. Sultan of Rockland was dropped October 20, 1913, so he is just seven years old, and his sire did his greatest work after that age. He is a bull of proven ability, and proven better than three-fourths the registered bulls in the country. We cannot use him and give his young son a chance and so will part with him, if he can go into a herd where he can continue the good work he has begun.

Glen Tana Farm Dairy, - Spokane, Wash.

Cedar Crest Farms JERSEYS

We have a few young cows and heifers for sale. Write for particulars.

J. K. Dering, Lake Villa, Ill.

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.

Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.

Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.

Price, $150 f. o. b. cars our station.

Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

Hillcrest Jersey

Bull calf, 6 mos. Sire—Figgis Wingold. Dam—on R. of M. cow sired by grandson of Golden Fern's Lad. For particulars and price write

ROLLIE VANDERVORT, TOMAH, WIS.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY, BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. buttert Granddaughter Jacoba Irene, young stock; St. Lamberf breeding for sale. **R. C. Green & Son, Albion, Wis.**

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.

Address: **J. Q. Emery & Son, Edgerton, Wis.**

Tierra Bella Stock Farm

Public Sale of Registered Chester White Hogs

We have reserved 40 choice Chester Whites, including 16 tried sows and fall gilts bred to Jumbo for fall litters, 10 big type fall boars sired by Pay Streaks Monarch, a good son of the Grand Champion Pay Streak, also 14 spring sows and boars sired by these big type boars. Everything will be registered. Write now for catalogue and plan to be our guest at Mauston, Wisconsin. Sale day August 14th.

V. C. TIEDT - - - - - - - - - - MAUSTON, WIS.



MISS NARCISSE 4th
R. M. 9,495.5 lbs. milk, 621 lbs. butter as a sr. 3-yr-old.

JERSEY CREST FARMS

Offers Her Son—Ready For Heavy Service

Narcisse's Varsity Diamond is a splendid individual, solid color, 2 years old. We have withheld him from sale until now in order to test his dam, a double granddaughter of Keepsake's Golden Lad. His sire is Favorite's Golden Lad from Lad's Golden Favorite, 822 lbs. butter R. M., one of the best daughters of Keepsake's Golden Lad. Herd under federal supervision. Write for complete information.

Jersey Crest Farms, - Oconto Falls, Wis.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right—put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right—put an
AYRSHIRE BULL
at the head of your herd





Four World's Record Cows at Ravinia

You Want Bigger Cream Checks

You may like a cow for her looks but she pays for her feed bill in milk.

Ravinia Ayrshires

are beautiful to look at too; but the big thing about them is that they "milk like a pump."

They have proved this by the world's records they have made; and will prove it to you in the bigger cream checks you get from them and from the herd you can breed out of them.

We can tell you some things about increasing your cream checks that you ought to know, and we'll be glad to do it. Get some paper and write us a letter right now about your breeding problems.

GOSSARD BREEDING ESTATES
Martinsville, Ind. Preston, Kans. Axial, Colo.
1007 South Michigan Avenue, Chicago



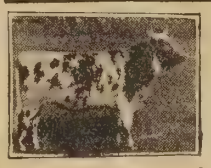
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan
Sons of
Ringmaster's Brae Burn Diplomat
For Sale
GEORGE F. WHITE, WESTFORD, MASS.

5 Ayrshire Cows Fresh 5
and Service Bull of the best blood lines. Priced for quick sale.
L. W. McCONNELL, Wellington, Ohio

Brae Burn Farm

Cavalier's Model Champion
1st at National 1919
Heads Our Herd



L. W. NEWTON, ASHBURNHAM, MASS

MIDDLESEX MEADOWS FARM
SOUTH LINCOLN, MASS.
AYRSHIRES
A. Henry Higginson

Wisconsin Ayrshire Breeders' Association

Aldebaran Farms
Choice Stock For Sale
RACINE, - - WISCONSIN.

Union Valley Farm Ayrshires
A few finely marked and bred for production heifers; also some well marked bull calves for sale. Herd headed by Midland General No. 17404. R. R. Chicago, Milwaukee and St. Paul.
F. A. Bollig, Black Earth, Wisconsin.

Ayrvale Farm
Herd Sire Norah's Netherton No. 19427
Dam's 4-yr.-old record 12,364 lbs. milk, 517 lbs. butter. Young stock of both sexes for sale.
A. J. McNab, Black River Falls, Wis.

Orchard Home Stock Farm
Herd headed by Cavalier Beuchan Lindsey and Star of Silver Pet, bred for production, both sexes for sale.
J. A. Dalton, - Oconomowoc, Wis.

EDELWEISS FARMS
AYRSHIRES
Young stock for sale. Our aim is breeding for production. Fred Tschudy & Sons, Monroe, Wis.

Pure-bred Ayrshire Cattle For Sale
Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
WM. NISBET & SONS, Richland Center, Wis.

For complete sale list of pure-bred and grades address the secretary,
STEPHEN BULL, - Racine, Wisconsin.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 { Rena's Champion No. 11816; 17 A. R. daughters incl. Henderson's Dairy Gem; Addington Queen 3d No. 29558; Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

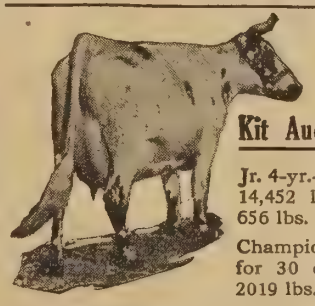
ALTA CREST AYRSHIRES
Special Offering of
Ayrshire Bull Calves
Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS



"Ayrshires of Quality"

Kit Auchenbrain

Jr. 4-yr.-old record 14,452 lbs. milk, 656 lbs. fat.

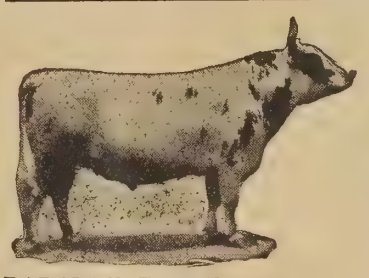
Champion of Breed for 30 days with 2019 lbs. milk.

Her bull calf, Kit's Surrel, by Surrel for sale.

WEYMOUTH FARMS,
North Weymouth, Mass.

Aldebaran Farms
Racine, Wis.
AYRSHIRES

Pure-bred Ayrshire Cattle For Sale
Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis.



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

WORLD'S CHAMPION AYRSHIRES
Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

South Farm

250 Registered Ayrshires
Stock of all ages for sale.
Write for prices.
George A. Cross, Mgr., Willoughby, Ohio.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.
Aged cows, bred to Glenury, an A. R. son of Finlayston.
Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.
Heifers, bred to these two great sires.
Young heifers.
Bull calves.
All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

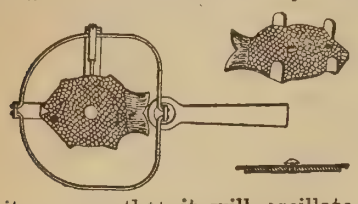
DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

When writing advertisers please mention Hoard's Dairyman.

Inventions and Appliances of Interest to Agriculture

Artificial Bait

The bait here is stamped from sheet metal with flukes or upturned projections and is covered with luminous paint. It is attached loosely to the

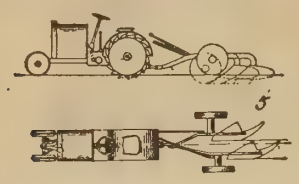


bait pan so that it will oscillate in waves or rotate in running water.

(Alexander Berg, St. Louis, Mo. U. S. Patent 1,319,832.)

Tractor

This small tractor is only two furrows wide and as a result can pull a two furrow plow without side draft and can travel entirely on unplowed

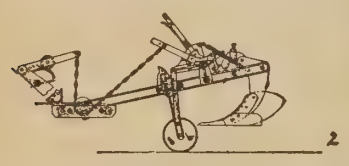


land while doing so.

(Hudson Motor Car Co., Detroit, Mich. U. S. Patent 1,305,433.)

Power-lift

The new feature here is that each plow of the gang is raised horizontally and therefore the points do not

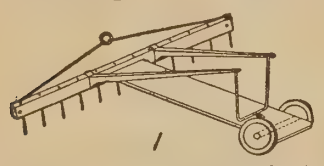


strike obstructions or gather trash.

(Avery Co., Peoria, Ill. U. S. Patent 1,312,281.)

Brush Rake

This rake is used to gather up vine cuttings and prunings in an orchard. The driver stands on the platform, which is hinged to the head, and lifts

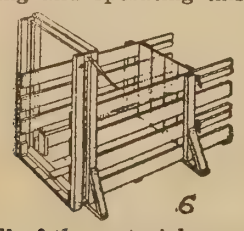


the handles to discharge the brush in rows convenient for loading or burning.

(Wm. Duncan, Fresno, California. U. S. Patent 1,323,460.)

Hog Breeding Gate

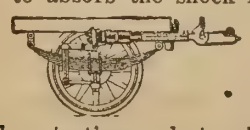
Farmers' Bulletin 966, "A Simple Hog Breeding Crate", gives directions for making and operating this crate,



and a bill of the materials needed for its construction. Write for it to: Superintendent of Documents, Washington, D. C. It costs five cents.

Trailer Truck

The trailer truck shown here is designed for trailers which are to be connected in long trains and are the same at both ends. The improvement lies in the draw bar which has strong springs to absorb the shock incident



to sudden starting and stopping.

(Warner Mrg. Co., South Beloit, Ill. U. S. Patent 1,304,216.)

Canada. C. J. LYNDE.

Ringworm

Kindly advise whether you have ever had trouble with ringworm on cattle. If so, please give reliable treatment for same.

Watertown, Wis. F. D.

Ringworm is one of the commonest skin diseases of cattle and especially of calves. It is caused by a vegetable parasite that also lives on damp walls and woodwork. Isolate affected cattle. Cleanse, disinfect, and whitewash stables and all rubbing places. Treat by perfectly removing crusts and scabs, if necessary, first saturating daily with sweet oil, then apply tincture of iodin twice daily.

RED POLLED

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls, also heifers and young bulls by them. Don't forget the date. Send for catalog.

Jean Du Luth Farms, Duluth, Minnesota.

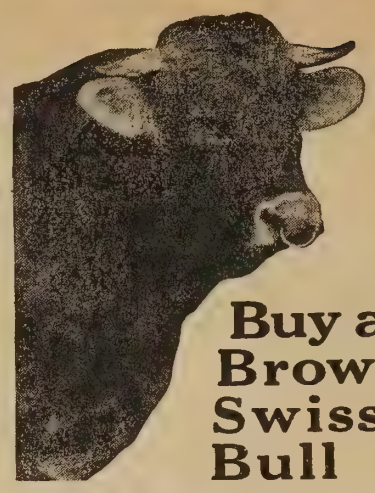
BROWN SWISS

Undefeated Show Bull

for sale. Because of sickness it is impossible for us to show this year and we are offering Gallatin Brownie for sale. He was undefeated at 4 state fairs, Waterloo and the National in 1919. Grand champion at the National. Now 3 years old and in even better show form. His dam is on official test and going strong.

We also have several very promising yearlings and bull calves, good show prospects.

HULL BROS., - PAINESVILLE, OHIO



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.

RA INMAN, Secretary Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.

15,540.9 lbs. Milk
613.60 lbs. Fat

Is the average official production of his two nearest dams. This Brown Swiss bull is 16 months old and ready for service.

Two other fine yearlings and several younger bulls. Entire herd FEDERALLY ACCREDITED. Write for pedigree and prices.

WALHALLA FARMS, Middleburgh, N. Y.

Speedwell Farms, Lyndonville, Vermont

Estate of the late Theo. N. Vail

(W. M. HUBBARD, Mgr.)

Announce The Closing Out

Auction Sale

of their well known herd of

Registered Brown Swiss Cattle

Wednesday, Aug. 25th, 1920

AT ONE P. M.

The herd consists of forty head. KUNDRY, the three-year-old world's record cow of the breed, two of her daughters, and a son are a few of the attractive offerings in the sale. Nine daughters of the great bull Tom Phyllis. Several fifty-pound cows in the herd.

For Catalogue Address

GEO. BAIN, Auctioneer **WILLIAM S. DUNN, Sale Manager**

MIDDLEBURGH, N. Y.

GUERNSEYS

Shuttlewick Farms

Offer

A two-yr.-old Guernsey Bull

Daphne's Crusader of Shuttlewick

No. 53595

A grandson of Don Diavolo of Linda Vista, No. 23565, who sold for $10,000, the then top price for a Guernsey bull. His fourteen nearest sires are in the Advanced Registry and his ten nearest tested dams averaged 725.12 pounds of butterfat. He traces once to Imp. Golden Secret, four times to Imp. King of the May, three times to Imp. Hayes Rosie and three times to Dolly Bloom. Address **Myron A. Wick, 232 East 131st St., Cleveland, Ohio.**

CLELAND FARMS
GUERNSEYS

We always have a few good females in both bred heifers and cows in milk to offer.

At this time we can offer two choicely Golden Secret bred bulls most ready for service.

CLELAND FARMS, Chagrin Falls, O.

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137
Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

Your Opportunity

to obtain the blood that breeds on, sons of

Langwater Raritan

the only GUERNSEY BULL that has a full sister (Langwater Nancy) with 1000-lb. fat record.

Send for sale list.

Herdlea Stock Farms, - New Hope, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

For Sale

Guernsey herd sire Zac of Elm Springs 36132, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

Guernsey Bulls

All ages sired by Caribou Gold's King and Rosewood of Briarcombe; out of dams who are daughters of Governor of the Chene 1287 P. S., Langwater Raritan, Prince Charming, Violet of the Forgettees and others. Write for prices.

PETER SIMON, - ALTURA, MINN



Economy in Production ← GUERNSEYS → Quality of Products



The Guernsey is the earliest maturing of all dairy breeds. Let us submit proof.

The American Guernsey Cattle Club, Box H 76, Peterboro, N. H.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.
Federal Tuberculosis Free Accredite' Herd.
Mountain Bros., Carrier 485, Des Moines, Ia.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow
Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.
C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale.
(Herd Federal tested for tuberculosis)
Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Registered Guernsey Bull Calf

Born 12-14-19. Dark fawn, white points, solid head. Fine type. Sire, King Masher 5th 18361 A. R. Dam, Glenwood Girl of Springfield 2d 42759 A. R. with 12,978.4 milk, 662.25 fat at 3½ years. Price $250. Write for pedigree.
Broad Acres, Springfield Center, N. Y.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.
August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.
Folly Farm, - Libertyville, Ill.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.
Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.
Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.
Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)
Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.
Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $600. Write for particulars
Meadowland Farms, Litchfield, Conn.

We are now offering a few well bred

May Rose Bull Calves

Sired by Langwater Renown 39636 and out of Daughters of Pencoyd's Golden Secret 16550. The dams are on test and doing very well. Also *an extra fine Yearling*. Now fit for light service. He is fawn and white, with clear nose. Anyone wishing to get the blood of this great family will do well to consider the above breeding. For price, pedigree, and all particulars address
GREEN MEADOW FARM,
Walter Jauncey, Mgr., Williamstown, Mass.

The Mixter Farm

325 GUERNSEYS 325
Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.
HARDWICK, MASSACHUSETTS.

Hillswold Farm

Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr**

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are gh grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.
TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).
BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.
A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.
Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.
Wern Farm, Waukesha, Wis.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.
Send for sale list.
M. L. Welles, Rosendale, Wis.

Herd Bull For Sale

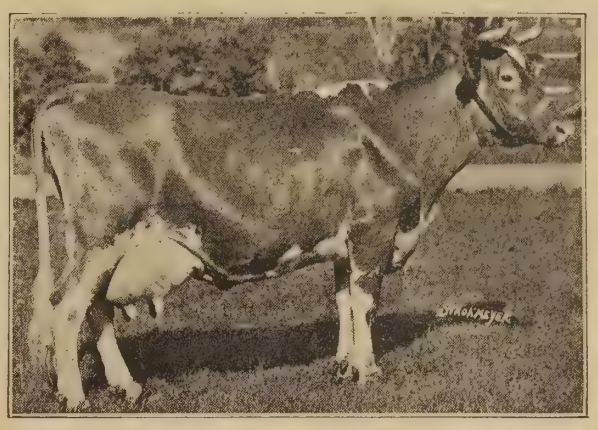
5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.
Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.
Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.
RALPH TRATT, WHITEWATER, WIS.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.
10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"
We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.
Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.
C. W. BARRON, Prop. **(Address) W. S. KERR, Manager.**

Do You Want A Bull Calf Sired by Anton's King Confidence?

His dam, Ma Chere Confidence 55851, A. R. 5727, has a record in Class C, of 764.65 lbs. of butterfat in one year.



Anton's King Confidence 43517

At the present time, we are offering several very desirable young animals that will be ready for service this fall. They are all out of A. R. dams or two-year-olds, that are now on test.

The strong May Rose breeding on the sire's side (A. K. C. traces five times to May Rose 2nd) combined with Starlight's Excelsior and Yeksa traces on the dam's side make these young bulls representative of the best blood in Guernsey circles.

Their conformation is of the very best—straight tops, long, deep barrels, and good width, all linked firmly with refinement and dairy temperament. Write for complete information.

HOARD'S DAIRYMAN FARM, FORT ATKINSON, WIS.

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.
Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write
WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - - WAUKESHA, WISCONSIN.

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.
FOR SALE
Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.
Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.
WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.
B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.
Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis

Minnesota Holstein Breeders' Association

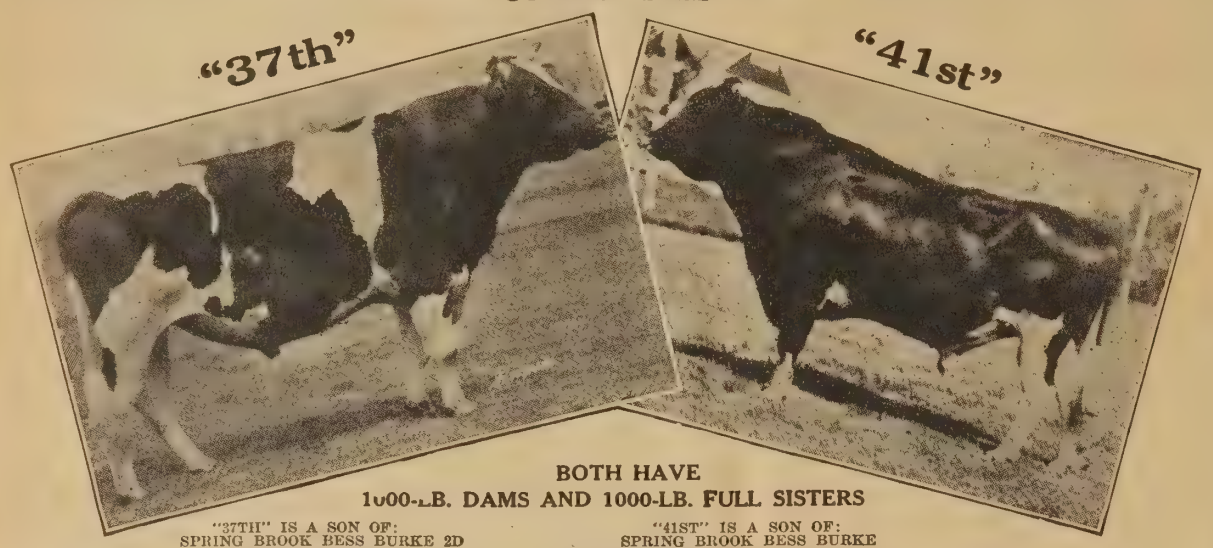
Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

SIR PIETERTJE ORMSBY MERCEDES

"THE WORLD'S GREATEST YEARLY RECORD SIRE"

OUR HERD SIRES



BOTH HAVE

1000-LB. DAMS AND 1000-LB. FULL SISTERS

"37TH" IS A SON OF:
SPRING BROOK BESS BURKE 2D
Butter, 365 days 1,290.91
Butter, 3 years 3,380.14
"The World's Largest Dairy Cow"

"41ST" IS A SON OF:
SPRING BROOK BESS BURKE
Butter, 365 days at 9 yrs. 1,094.16
Butter, 3 years 2,903.93
"The Greatest Mother of the Breed"

E. C. SCHROEDER FARMS, - MOORHEAD, MINNESOTA

(A FEDERAL ACCREDITED HERD)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



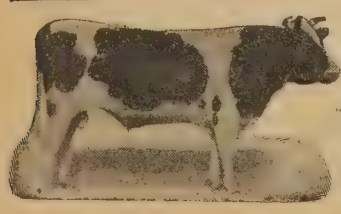
MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

If You Could See

the daughters of King Segis Pontiac Fayne Star, you would be impressed with their uniformity and type. You cannot get his daughters for love or money but you can get one of his sons. The bull circular tells all about them,

FLECKS FARMS, - Faribault, Minn.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d, a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm
William Schmidt, Prop. St. Peter, Minn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.

Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. GRAHAMHOLM FARMS,

H. R. Searles, Mgr. Rochester, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - - E. GRAND FORKS, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

365-Day Milk Production

STILL ANOTHER ONE

Grandson of Sir Pietertje Ormsby Mercedes 44th out of a granddaughter of Lord Homestead Netherland De Kol, born Jan. 4, 1920.

Handsome calf beautifully colored, more white than black, well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within reach of the farmer or small breeder.

CERRO GORDO FARMS, - Mason City, Iowa.

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

FRED S. BALL

SPECIAL HOLSTEIN AUCTIONEER

I sell a big per cent of all the Imported sales in the south-west. Wire early for dates as I sell every day in sale season. **EL RENO, OKLAHOMA.**

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG
Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

TOYON FARM ASSOCIATION

Mills Building San Francisco

AMERICA'S ONLY HERD OWNING EXCLUSIVELY TWO SONS OF SIR PIETERTJE ORMSBY MERCEDES

SIR PIETERTJE ORMSBY MERCEDES 43d
Dam's record 1250.35 lbs.

SIR PIETERTJE ORMSBY CANARY
Dam's record, 3½ yrs. - 862.88 lbs.
Dam's dam's record - 1009.87 lbs.

SIR AAGGIE MEAD
His 5 nearest dams average 1177 lbs.

350 HEALTHY HOLSTEINS—UNDER FEDERAL SUPERVISION

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH

WHEATFIELD FARMS

A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.

Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS

J. C. Dold, Owner. R. F. D. No. 14, LA SALLE, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Cattle For Sale



Two Carloads of Young, High Grade, Springing Holstein Cows. Priced right for immediate sale.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

Here's Your Chance to Get a

Choice Bull

From a sire whose 4 nearest dams averaged 29 lbs.

❖ Born November 1916 Black and white ❖ Born February 1917 Black and White ❖

❖ Born May 1917 Black and White ❖

3 Choice Bargains

L. H. HUNTER, RANDOLPH, MINN.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

M & P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - - CADDOA, COL.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME. - - CAZENOVIA, N. Y.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.-072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

Buffalo Creek Farm
Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.
H. L. Bingham, Supt., Arlington Heights, Ill.

Warwood Farm

Has for sale
Holstein Bulls

from two to twelve months old, of excellent breeding.
FRED C. LANDORF, Foreman, Lisle, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.
WOODLAWN FARM, STERLING, ILL.

Grandson of King Segis Pontiac
Ready For Heavy Service

We have for sale a 2-year-old grandson of King Segis Pontiac from one of our best "all the year" A. R. O. cows. He is a splendid individual, well marked and very well grown. Priced to sell. Also have a few bull calves. Write today.
PINEHURST FARMS, ROCKFORD, ILL.

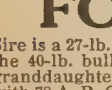
Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.
A. F. Randolph, Prop., CANTON, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.
Long Distance Phone 389.
DUETT ROBINSON, R. 3, Capron Ill.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont**, the **First Tuesday and Wednesday of every other month**, Feb. 4-5; Apr. 1-2; June 3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*
Address The Purebred Live Stock Sales Company.

2 Choice Bulls for Sale

No. 1. Born Dec. 19, 1919, good individual, good length, and a straight top line, three-fifths white. Dam, A. R. O. 18.10 lbs. butter as a senior yearling, milk 400 lbs., and daughter of 35.68-lb. bull, King Colantha Lyons. Sire, King Korndyke Gem, whose dam's A. R. O. record is 32.74 as a 3-year-old. Price $225. No. 2. Born January 9, 1920. A good, growthy fellow, heavy body, about three-fifths white. Dam, A. R. O. 22.50, milk 520 lbs. Sire, King Colantha Lyons, a 35.68-lb. bull. Price $225. Pedigree and photo on request. An accredited herd.
MICHAEL SEBERGER SCHERERVILLE, IND.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 180512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **O. I. Reamer, North Liberty, Ind.**

ORMSBY BULL - Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

HOLSTEINS AND GUERNSEYS

Why not buy your cattle from a reliable firm established in the cattle and dairy business for twenty-five years? We can fill your order for any number, pure-bred or high grade, any age desired from four weeks up. Give us your mail order to insure satisfaction.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed to have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.
Pinehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms
Headed by General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.
C. A. Schroeder & Son, West Bend, Wis.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.
H. B. Kellicut, R-2, Westby, Wisconsin

Exceptional!

Registered Holstein Bull Calves
From 3 to 6 months old
at Farmers Prices'
Apply H. Schuster,
R. R. No. 2, Nashotah, Wis.

Bulls—Ready for Service

Sired by a son of former world record cow and out of A. R. O. daughters of Homestead Jr. De Kol 2d.

Their sire is a grandson of King Segis De Kol Korndyke out of Finderne Pontiac Netherland, a world record jr. 2-year-old, 28.26 lbs. butter in 7 days, 10.72 lbs. in 30 days, (31 lbs. at full age on three quarters). These youngsters are priced to sell,—$200 to $500. Write
Wm. Millar, Jr., R. 2. Menominee, Wis.

5-10 WELL BRED HEIFERS
SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.
ANDREW FRANK, FOX LAKE, WIS.

King Waldrof Pietje Echo
Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.
Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

Facts in BLACK & WHITE



You Should Become a Member

The Holstein-Friesian Association of America, the organized breeders of the popular and prosperous Holstein cattle, was founded in 1885. Today it has nearly 15,000 members, registers over 80,000 Holstein-Friesian cattle each year, giving employment to 150 clerks, and has over a quarter of a million dollars as a Reserve Fund. It spends nearly $50,000 in Holstein publicity and Extension work, and a member directly and indirectly reaps the benefits of the progressive work of this truly great organization.

If interested in Holstein cattle write today for our free booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.



BEECHER WYTHE 2ND
Butter 7 days 19.65, milk 534.6 at 15 years of age, 75 days after freshening; 19.1 lbs. butter, 548 lbs. milk, 109 days after freshening.
At 14 years of age, Grand Champion Cow of Indiana 1918; 22,554 lbs. of milk, 800 lbs. of butter, as a ten-year-old. Dam of 12 consecutive heifer calves and one bull calf. Nine A. R. O. daughters.

2 Serviceable Bulls For Sale

Sired by King Colantha Lyons, a 35.68-lb. son of King Lyons, out of a 29-lb. daughter of King Segis.
No. 1. Born April 18, 1919. Two-thirds white, nicely marked, good individual. Dam: 16 lbs. butter in seven days at 24 months. His grandam, Beecher Wythe 2nd. This cow has produced over 100 tons of milk and is now nearly 16 years old, is still milking at a great clip. Price $500.
No. 2. Born March 11, 1919. Five-sixths white, good individual. His dam, 13 lbs. butter at 2 years. Price $250.
M. J. SEBERGER
Schererville, - Indiana

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois
BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale
Combining Type, Size, Constitution and Production.
Write for Bull Sale List. **LISLE FARMS CO., LISLE, ILL**



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.
His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.
His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.
The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.
ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.
G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

Head Your Herd With a Bull!

Get a son of King Superba out of one of our good cows. King Superba's offspring won first and second in get-of-sire and calf herd at the Wisconsin State Fair, 1918. His four daughters sold in the Waukesha Sale, Nov. 1919, averaged $959. King Superba's dam was the first cow to be strictly officially tested for the entire year. She produced 1231 lbs. butter, 26,433 lbs. milk as a four-year-old. She has twice produced over 33 lbs. butter in 7 days. If you wish to combine individuality and production, head your herd with a Son of King Superba. We now offer a number of his choice sons, serviceable age and younger, out of dams with records up to 24 lbs. Several of the dams are on yearly test. Don't wait. Come and see them now. **BAIRD BROTHERS, WAUKESHA, WISCONSIN.**



One of the sons of King Superba. They are all excellent individuals.

A SON OF THIS GREAT SIRE

AT THE HEAD OF YOUR HERD WILL MEAN DOLLARS IN YOUR POCKET



MATADOR SEGIS WALKER, Jr. 6-year-old

DON'T OVERLOOK THIS YOUNGSTER

E. T. 1061. MATADOR SEGIS WALKER HARTOG. Born 4-27-19. This young bull is 90% white. His sire is MATADOR SEGIS WALKER, who at the present time has 29 tested daughters, and still a Junior 6-year-old bull. We have over 125 of his daughters in our herd and about 50 will freshen during the year, from which we expect great results. 28 of his daughters in two-year-old form average 20.08 lbs. butter from 405.59 lbs. milk. 3 of his daughters in three-year-old form average 30.03 lbs. butter from 531 lbs. milk. His first three 2-year-old daughters to finish yearly work averaged 798.68 lbs. butter from 20,761.5 lbs. milk. We predict MATADOR to be one of the youngest century sires of the breed.

His dam, HAZELWOOD AAGGIE HARTOG, has a very creditable record of 24.94 lbs. butter in 7 days. She will freshen again in May and is a very good prospect. We will run her for a year. She is a very good show animal, very large and weighs 750 lbs. In fact, she is one of the good foundation cows in our herd. She is beautifully marked, just as straight as a string, the real dairy type, and her son is a chip of the old block. Don't overlook this bull, for he is going to make some one a great future herd sire.

Price on him for immediate sale $750.00

Write today for our new sales list No. 103 offering for sale sons of Carnation King Sylvia, Avon Pontiac Echo and Matador Segis Walker.

Eastern Office: 811 Consumers Bldg., Chicago, Ill.
Western Office: 811 Stuart Bldg., Seattle, Wash.

Carnation Stock Farms

FARMS
Western Farm, Near Seattle, Wash.
Eastern Farm, Oconomowoc, Wis.

2500 Healthy Holsteins 2500

Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.
Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis.

Check Or Bond Buys Dandy Bull Calf
Born June 29, 1920. His dam and sire's dam average over 30 lbs. butter and 657 lbs. milk. Dam and granddam have good yearly records. Rich in Pontiac Korndyke and King Segis blood. Dark in color. Cut price. **Chic Dairy Farm, - - Juneau, Wis.**

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 8-month-old. Homestead Jr. De Kol breeding. Write at once.
W. E. BUSSEWITZ, - JUNEAU, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.
O. E. SETTE, • • • JUNEAU, WIS.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.
Iola Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.
OTTO F. BRANDT, - HORICON, WIS.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.
150 head in the herd—tested annually.
HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.
S. L. De Smidt, Manager. - - - - - - - Burnett, Wisconsin.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY

WISCONSIN

Send for list of 40 bulls in service in Waukesha County whose dams have records of over 30 lbs. of butter in 7 days or 1000 lbs. of butter in 365 days.

When in the market for Holstein Cattle for foundation stock, grades or pure-breds, buy them in Waukesha County. If you want a bull, reasonably priced, send for list.

Tuberculin tested herds—State and Federal.

Individuality Short and long time production records.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin Office 254 Broadway

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.



W. J. Gillett & Sons, Rosendale, Wis.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.
J. D. McDONALD, - - - WEST SALEM, WISCONSIN

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly.
S. A. BAIRD & SON, WAUKESHA, WIS.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to
WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.
JOHN PULS, - HARTFORD, WISCONSIN



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.
Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.
F. H. HEMBROOK, Chetek, Wisconsin.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.
Walcowis Farms, Lake Geneva, Wis.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address
C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

1000---HERD---1000
Quality Holsteins

GRADES AND PURE-BREDS
Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.
Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.
EZRA BLUMER, MONROE, WISCONSIN

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write
Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

Oconomowoc, Waukesha Co., Wis.

CATERPILLAR

Reg. U.S. Pat. Off.

TRACTORS



THE latest 5-Ton "Caterpillar" Tractor—with 25 drawbar horsepower at three miles per hour—means four 14-in. plows—eight inches deep or more—and a perfect job in hardest, sunbaked soil.

The Holt motor with no waste of fuel means steady belt power at lowest cost.

Ask any Holt dealer—or write us—for copy of our new booklet "'Caterpillar' Tractor Performance"

THE Holt Manufacturing Company INC.

PEORIA, ILL. STOCKTON, CAL. CATERPILLAR Reg. U.S. Pat. Off. New York, N.Y. Spokane, Wash.

READING ROOM
AGR. BLDG.
URBANA ILL

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX FORT ATKINSON, WIS., AUGUST 27, 1920. Number 6

NEIGHBORS COSTLY INSTITUTIONS

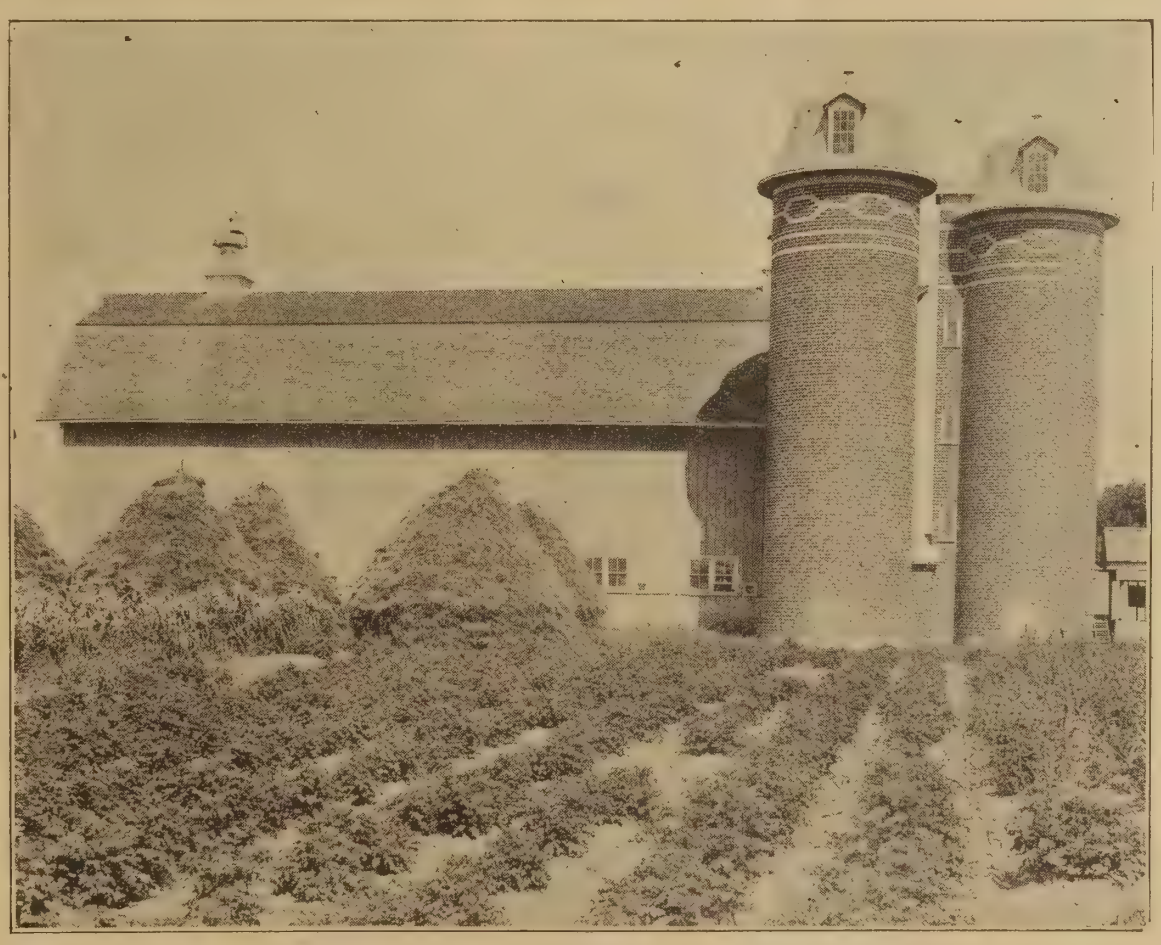
HELEN S. K. WILLCOX, New York

NEIGHBORS are pretty important folks in your and my scheme of things, especially if we live in the country. The neighbor joke is as old as the hills, on the order of unloved mothers-in-law and newlyweds and the first baby. Story writers have dwelt long and energetically on the unfortunate apartment dwellers who are invariably supposed to be cursed with the borrowing neighbor, the latter taking due advantage of his unavoidable proximity to use the other's telephone night and day, to seek the loan of unnumbered postage stamps, and to casually demand anything in the grocery line which happens to be lacking on his own pantry shelves. Oh, yes, neighbors are well and familiarly known through out the world and their commissions and omissions would fill a veritable giant of a book. But the fact that we mainly pass over in cussing and discussing our neighbors is that we are neighbors ourselves and while we are engaged in gossiping about the beam in the next-door man's eye, he may, at the same instant, be employed in a heartfelt prayer to be delivered from any more neighbors of o own personal persu sion. For just such state of affairs generally exists in every hamlet, town, and city anywhere.

Someone has said that your neighbor is the man whose good opinion you crave. This ought to be true if it isn't always. But at least we can all agree that life would be a pretty strange, prosaic affair if it weren't for those neighbors we call friends and fellow citizens.

The man in the back woods whose farm is one of the few and far between in his vicinity generally has started something when he decides to buy a Ford or a Buick in order to get to town and city market and amusements more quickly. His neighbors begin by speculating darkly on his ultimate arrival in the poor house, then nine times out of ten end by purchasing duplicates in the motorized vehicle—and each and all live much more happily for ever after.

Or a certain farmer, better read, and a bit keener, perhaps, than the grand average, decides that the time has come to junk his scrub dairy and invest in something more profitable. That man is the one his community should value as more precious than oil wells or wild cat mines—for the neighbor who persuades first himself and then his co-workers that pure-bred stock pays, and that maybe cow testing associations and balanced rations and up-to-date barns and so on are strictly necessary in this day and age—well, I leave it to you. Such neighbors are worth watching closely in case they try to put something over on us that all the rest can't follow, and so cheat us from becoming likewise more respected and forward-looking and prosperous ourselves.



JUST BEFORE SILO FILLING TIME ON THE E. H. TURNER, FARM, WISCONSIN

Yes, such will bear close and careful consideration where their next progressive move is concerned.

It's a pretty big thing, this of being a neighbor, and it's a wonderful fact that here in America we choose about every time to be good neighobrs instead of bad ones. The late unpleasantness known as the World War was caused by the butting-in and nosiness of neighbors who, if they had only known it, might ten million times have better been forever engaged in minding their own prosperous businesses instead of seeking to start something which concerned them not at all. We know today that England and France and Belgium and Italy and the United States—of course there were others—were peaceable, friendly, live-and-let-live neighbor nations, while it is unnecessary to mention their trouble-borrowing cousins who bit off more of the adjacent nations' affairs than they could chew—and have been conducting post mortems about the unhappy but very natural results ever since.

Yet there are many folks left who remind one disagreeably of the big nations who were kicked down and out by their more public-spirited neighbors. For instance, there is the farmer who seemingly has everything to make him contented and happy and popular, but who bears a reputation in his locality verging on the mean, small, and selfish. He probably owns several good farms and at least half a dozen mortgages on as many others and is recognized as a power for wealth and influence locally. Yet he is known first of all, in spite of his financial standing in the neighborhood, as a brutal, domineering husband to his patient, toil-worn wife; as a driver and tight-wad to his children who leave the family acres before they are barely knee-high; and as a foreclosser of widows' mortgages—a man who in truth can make the eagle on long-suffering currency squak in his grip, but who yearns even in his sleep to grab the possessions of others and add to his already swollen stores. It is not difficult to recall that a great nation was similarly afflicted with the lust of earthly accumulations and ended, even as this occasional poor neighbor of ours will end, friendless and alone, held in contempt and hatred among those with whom it and he might have cut such an inspiring and worth-while figure.

But such neighbors rarely infest our countryside today, we are glad to state, and in their places we are encouraging by envying and emulation those neighbors who sometimes go to the other extreme and thereby set almost as pernicious examples as the villian tight-wad and unscrupulous one. You know this kind also and probably know him far better—in

(Continued on page 216)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
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A. J. GLOVER, P. C. BURCHARD,
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Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Guernsey Products Won at National Milk and Cream Shows

A total of 87 gold and silver medals have been offered at the Milk and Cream Show, held annually since 1906 in connection with the National Dairy Show. Seventy-one of the winners have informed us regarding the breed of cattle that produced the products exhibited. The 71 reports show that Guernsey milk and cream have won 17 gold medals and 14 silver medals. Milk and cream from two or more breeds, including Guernseys, won four additional gold medals and eight additional silver medals. In other words, Guernsey products, in pure form or in mixed form have won more than 60 per cent of all gold and silver medals reported.

AMERICAN GUERNSEY CATTLE CLUB.

Hairy Vetch

Hairy vetch seed is perhaps not used as much at present as it was some time ago, but this is due primarily to the small importations from abroad and the consequent increase in the price of seed.

The American supply of seed for market purposes is grown almost entirely in the state of Michigan. It is still, however, one of the best cover crops and green manure crops to be found along the South Atlantic border, being more hardy than crimson clover. The use of this crop could be very much extended if farmers would save their own seed, which is not at all difficult to do but requires some trouble. Every farmer could easily devote a half acre to seed production which should supply as much seed as the ordinary farmer would need to use.—C. V. PIPER and A. J. PIETERS, U. S. Dept. of Agriculture.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Absolute Contentment

I've never longed to leave the farm
And scoot to some high-powered place.
Toil puts the muscle in my arm,
Town puts the worry in your face.
Go to your desk, your crowded cars,
Your constant hustle, bustle stuff.
My desk is underneath the stars;
I eat and sleep—and work—enough.

I've never longed to leave the farm,
Because it's peaceful here, and fine.
Pure air, and freedom from alarm,
The riches of the earth are mine,
At dawn I'm up and with the herd;
Then down the lane, and out with them
To meadow, clover, stream, and bird,
The young sun, like a giant gem.

I've never longed to leave this place
Of growing crops and earnest toil.
The soft rains wash my eager face,
My heart is rooted in the soil.
But you must have love in your heart
For simple things and simple ways,
To share with God, a little part
Of things near Him through holy days.

The Dairyman's Philosophy

Poets say that living on a farm means living a little nearer Heaven. That's not poetry—it's just plain truth. You can't sit in Nature's lap without looking up into God's face once in a while.

Never fear about America going into the doldrums. All life is a balance, and there are enough folks out on the farms of the country who love work and home well enough, to balance the discontented chaps in town.

When you speak of the riches of a community—gold and silver and precious stones and bank balances and international credits, do not forget that milk comes in for mention. It means health, and health means wealth.

A Prohibition Argument

Dairy farmer, John King, who lives near Durham, North Carolina, was treated to a surprise not long since. He discovered his cows acting mighty strangely in a meadow. They were unsteady on their pins, hilarious, sleepy in spots. A veterinarian was called in and he made an examination.

"Those cows are intoxicated," said he.

"What!" exclaimed the dairyman. "Impossible."

"I know I'm right," said the vet.

They started looking around and guess what they discovered. In a secluded part of the pasture, but on another piece of property, a moonshine still. The cows had eaten a quantity of the mash that had somehow gotten into the little stream.

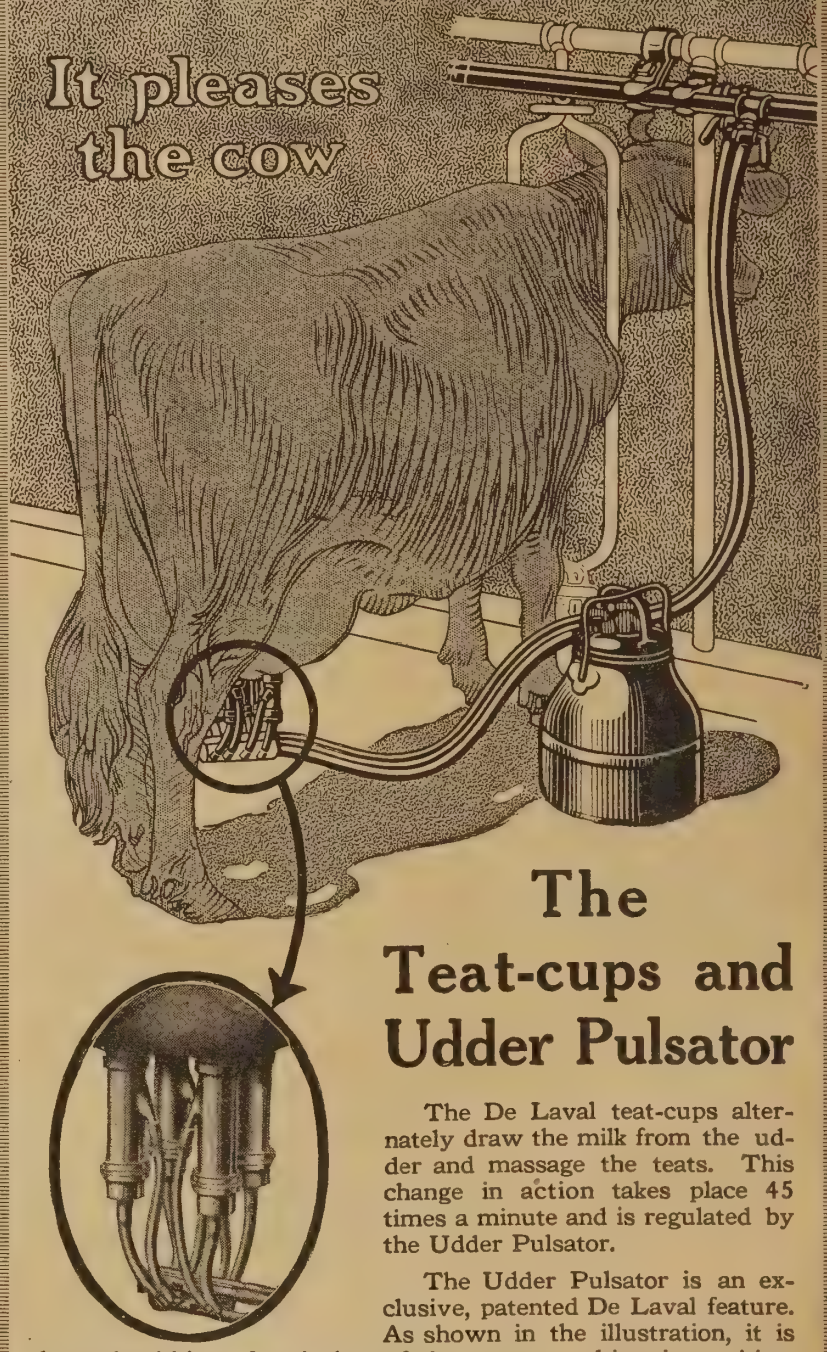
And, as the vet remarked, what fine milk punch they must have gotten at milkin' time that evening.

The Country Mother

Her snow white hair.
The kindly touch of her loving hands.
Her keen interest in her children.
The way she loves the homestead.
Her ability to cure everybody's ills.
The pies she bakes.
And the perfectly wonderful bread.
Her ability to keep smiling.
The tidiness of her home.
How the farm hands respect her.
That butter she churns.
And the cheese she makes.
Her treasure-trove of a cellar.
Sacrifices she makes for the young folks.
The vision of her in her rose garden.

The De Laval Milker

It pleases the cow



The Teat-cups and Udder Pulsator

The De Laval teat-cups alternately draw the milk from the udder and massage the teats. This change in action takes place 45 times a minute and is regulated by the Udder Pulsator.

The Udder Pulsator is an exclusive, patented De Laval feature. As shown in the illustration, it is located within a few inches of the teats, resulting in positive, snappy action of the teat-cups. Every cow is milked in the same way every day and the result of this gentle, regular action is maximum production.

There is only one moving part in the Udder Pulsator—a plain piston—requiring no oiling, adjusting or repairing.

The De Laval teat-cups and Udder Pulsator are a distinct step in advance in milker construction, and the success of the De Laval Milker depends to a very great extent upon their functions.

The De Laval Milker possesses many other new and exclusive features that are of inestimable value to the careful dairyman and owner of valuable cows. Its action is positive and uniform from day to day, and it is faster, more reliable and more sanitary than any other method of milking.

Wherever cows are milked the world over, the name "De Laval" stands for quality and highest value to the user. The fact that it bears the name "De Laval" is a guarantee that it will give the service claimed for it.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway, New York
29 East Madison Street, Chicago
61 Beale Street, San Francisco

AN OLD-TIME JERSEY BREEDER

A Vermonter Who Has Stuck to One Family of Jerseys Since the Eighties



J. C. GREENE

IT is a great thing to develop a champion producer—to so feed and care for a cow that she excels the records of all others in her class. More than common skill is needed for that achievement. To keep an animal at her best for a full year and bring her through a record breaker is an honor worth seeking. "'Tis a consummation devoutly to be wished."

But an even greater accomplishment is to breed such an animal—to bring about a blending of blood lines from which shall come an animal capable of leading a breed in the production of milk and fat. Quite as great honor is due the breeder who intelligently directs out-crosses which lead to improvement or consistently intensifies a single line of breeding to the end that heavier producing qualities result, as to the feeder and tester who develops an animal and by that development measures the degree of success attained by the breeder. One perfects a machine, the other demonstrates its efficiency. One is an inventor of a great machine, the other an expert operator.

Many champion cows have made their records for the men who bred them. A number have not, however, and when they have finished their work and are heralded as champions, the names of the breeders responsible for the cows themselves go unsung. One of these is the Jersey cow, Successful Queen, which was a gold medal junior four-year-old with a production of 16,389,-.3 lbs. milk, 852.72 lbs. fat. She has four AA records totalling 59,907 lbs. milk, 3,071.32 lbs. fat; averaging 14,-976.5 lbs. milk, 767.83 lbs. fat. It seems worth while to know something of the breeder of such a cow, for neither her developer nor her present owner bred her.

J. C. Greene bred Successful Queen. He lives on a small Vermont farm, several miles over the hills from a railway station, and has bred Jerseys there since the early eighties. He selected the Jersey breed because of their production in his neighborhood more than a third of a century ago. Two cows were purchased at the beginning for $100 and two others were kept fifteen months to pay for a third female, a calf. No cows have been purchased since that time, new blood being brought in only through the use of sires not closely related. Mr. Greene is an old timer in Jerseydom. His own experience goes back to years the present generation of breeders never knew and to animals which served as the foundation of many present day families of prominence. He is no newcomer, and yet as he tells of the early Jerseys his listener must marvel that the modern dairy industry has been builded from so small a beginning in a single lifetime.

The sire of Mr. Greene's first two cows was Scituate Albert, a grandson of Duke of Darlington who was out of Eurotas, credited with a production of 778 lbs. 1 oz. of butter and who is inbred strongly enough to trace to Saturn, Register number 94, and Rhea, Register number 166, six out of a possible eight times in the fourth generation of his pedigree. This first sire was also a grandson of Couch's Lily, credited with 71 lbs. of butter in 31 days, a great granddaughter of Splendid, the second bull registered by the American Jersey Cattle Club. Scituate Albert was out of Scituate Princess, a granddaughter of Jersey Belle of Scituate whose butter test for a year was 705 lbs.

Another bull whose blood was used in the herd which was to produce Successful Queen was a son of King Riomentor and the sire of the dam of Successful Queen. The sire of the champion was the next to the last bull used on the Greene herd, Torono 2nd of Hood Farm's Son, a double grandson of Torono. The last bull used was a son of Pogis 99th.

Mr. Greene believes that in developing a herd from a few cows and using intensely line and inbred sires of one line of breeding, all the animals produced are much alike in their production capabilities. He believes Successful Queen to be the logical outcome of the kind of breeding followed. He believes, too, that the present day Jersey does not greatly excel the type of cow with which he started more than thirty years ago. When recent Register of Merit records are quoted to show the increased capacity of the cow, he cites such productions as the 1885-6 record of Landseer's Fancy of 936 lbs. 14¾ oz. of butter, that of Eurotas of 851 lbs. in 1879-80, and the production of 705 lbs. by Jersey Belle of Scituate in 1877-8. He holds that the present large records are possible because of more knowledge of record making rather than because of the improvement in the cow herself. He says Successful Queen with her world record is no better than her sisters which are similarly bred and which average about 325 lbs. fat per year.



MR. GREENE STARTED WITH SUCH COWS AS THIS MORE THAN A THIRD OF A CENTURY AGO

She bred until eighteen years of age and produced profitably. Among her descendants is Successful Queen, a world record cow.



THE GREEN FARM IN VERMONT—THE SECOND SETTLED IN THE TOWNSHIP, SO EARLY THAT ITS FIRST BUILDINGS WERE BURNED BY THE INDIANS IN 1870. JERSEYS HAVE BEEN BRED IN ITS STABLES SINCE THE EARLY EIGHTIES



SUCCESSFUL QUEEN, WHOSE CHAMPION FOUR-YEAR-OLD RECORD IS 16,389.3 LBS. MILK, 852.72 LBS. FAT. HER FOUR A. R. RECORDS AVERAGE 14,976.5 LBS. MILK. 767.83 LBS. FAT

Mr. Greene is optimistic over the opportunities for the beginning breeder. In his opinion it is much easier to be successful now than when he began with pure-breds. Perhaps he has not taken advantage of the opportunities offered him in the development of his cows, but he has consistently adhered to a breeding plan which has given results. He well deserves the honor which should go to him whose efforts produce better animals. He has bred a world champion.

National Jersey Sale

In conjunction with the State Fair of Louisiana at Shreveport, October 28 to November 7, there will be held this year the first annual National Jersey Cattle Show, fostered by the American American Jersey Cattle Club. Many of the leading Jersey herds of the United States and Canada are expected to be represented in the show, and if plans are carried out there will be operated a special train for the accommodation of owners and their cattle from Chicago at the close of the National Dairy Show.

Premiums to be awarded at the Jersey Show total $6,000, which is said to be the largest amount of premium money ever offered on dairy cattle exhibits.

The show will be held in the State Fair Coliseum, which in previous years has been devoted to vaudeville and similar attractions. In compliment to the exhibitors from other sections, the Louisiana exhibitors will not try to place their cattle in the Coliseum, but will show under tents to be pitched for their accomodation.

An auction sale is scheduled as a feature connected with the Jersey Show, and, in view of the great interest taken in dairying in this part of the country, the bidding is expected to be very lively.

Adyices from Washington indicate that a government dairy exhibit may be sent here in connection with the big Jersey Show.

Premium money has been increased in all live stock departments, and record-breaking exhibits are expected at the Louisiana Fair.

Louisiana. D. G. FRANTZ.

A Real Job for Agricultural Graduates

PAUL T. MENZEL, MARYLAND

IN agriculture there has been a co-operation between farmers and the graduates of the agricultural colleges that has not been found in any other industry. The ideal of the graduate of the agricultural college is not only to make a success of his own future, but to be a servant of the state and community and pass on the benefits of his education to those who have not been quite so fortunate as he has been. He has gone out into the world with full realization that he still has much to learn and that he must be cautious not to go beyond his experience. It has been this spirit of modesty and willingness to recognize his own limitations that has engendered the close feeling of co-operation between the farmer and the college graduate. As a result, agricultural extension work has taken deep root, and its work has brought about immeasurable advancement and benefits.

The greatest need today of improvement along any phase of agriculture is in milk production. Scrub cattle must give way to pure-breds or high grades, and inefficient methods of feeding must be supplanted by more effective ones, the unprofitable cow must be detected by reliable records, the farmer must be taught how to feed his cattle with rations that give more milk at less cost and he must be educated to the advantages of better stock and the realization that the *pure-bred bull* is the *salvation* of the future of the dairy industry. This change and reformation will not come about in a day, nor even in a few years, but unquestionably it will largely be brought about under the leadership of college trained men, mostly in the capacity of supervisors of cow testing associations.



A WISCONSIN TESTER AT WORK

During the war, women took up cow testing and proved equal to the job. Several of them have continued in the work, yet there are many associations still waiting for a competent tester. Wages are good and the opportunities for service and education are excellent for both men and women graduates of agricultural schools.

Profits That are Secure

Cow testing associations will be more important in reducing the cost of milk production and increasing profits than any reduction in the cost of feed, labor, marketing, and incidentals, one or all. Any changes in any or all of these items are automatically met by corresponding changes in the price of milk, whereas improvement in milk production by either more milk per animal or by smaller feed cost is largely clear profit regardless of the costs of the necessary expenses. For example, no matter what relationship there may be between the cost of milk production and the selling price, there will always be greater profit from a herd that averages 6,000 pounds of milk per animal for a year than from a herd with a 5,000 pound average. It has been well established that the heavier producers do not eat much more feed than poor producers and that the increase in the feed cost is only a small fraction of the increase in profit. Likewise, if a man can get a certain quantity of milk by correct methods of feeding at a lower cost than would be the case by using ineffective methods, the gain is virtually clear profit.

The universal experience and observation of those acquainted with the actual results obtained through testing associations has been that almost every member has been enabled to derive some advantage from the association which has enabled him to obtain greater profit immediately by improved methods of feeding or has in time improved his herd to such an extent that far greater profits were realized than formerly.

The Dollars That Should Be Saved

In the state of Maryland the average production per animal is less than 3,900 pounds a year, whereas if the average was 5,000 pounds of milk, the milk producers of the state could put about $7,000,000 more profit into their pockets. Pennsylvania's million cows average a little above 4,000 pounds, and an improvement of 1,000 pounds for each animal (which could easily be done by a pure-bred bull in one generation) would bring an increased profit of at least $30,000,000. Similarly, there are many other states in which corresponding improvement could be made. Throughout the country it is evident that several hundred million dollars could be added to dairy profits by improvements along the lines suggested.

These improvements will largely be brought about by cow testing associations. Some folks may think that the farmer will gradually bring about this betterment of his own accord. However, he is very reluctant to take on the extra work and will usually leave it undone if he cannot get someone else to do it. For example, the farmers of a certain community were given the opportunity to have their herds tested and the records kept if they would weigh the milk from each cow and bring in a sample for the Babcock test. Despite good publicity given the offer and personal interviews of the teacher of agriculture with a number of the herd owners, not one man went so far as to bring his samples. All of those interviewed expressed an interest on the formation of a testing association and indicated that they would rather pay to have the work done for them than to be bothered with even half an hour a month to take a few samples and record the weights of the milk from each animal for two milkings.

The Association Without a Tester

From this experience of the writer it is evident that the farmer is willing to be a party to anything that will bring better dairying if he can hire someone else to do the work that he is not ordinarily used to doing. It is for this reason that there is such a tremendous demand for trained men to act as supervisors of testing associations. The farmers are willing to be led, and in most cases actually thrust upon the tester opportunities for bringing about better methods of feeding, better management, and herd breeding. A cow tester has unparalleled opportunities for extension work, not only along dairy lines but also in any phase of farming. There is hardly a farmer who is not virtually hungry for information as to how he can better his crops or stock, and he looks upon each visit of the tester as a splendid chance to learn all he can.

In a measure the tester is more effective than the county agent, because he goes into the farmer's home and in most cases is treated as one of the family. After supper the conversation runs into all the problems of the farmer, from cows to potatoes, and even a word from the farmer's wife about the chickens. In my own experience as a cow tester I well remember some of the farmers who asked me to arrange my work so that I could be with them over Sunday, in order that they would have more time to talk over things. The cow tester is a great factor in bringing to the farmer the practical gist of what he has learned in college and is a heretofore unrealized yet powerful factor in educating the farmer in better methods of agriculture. The tester is virtually a private tutor to the farmer and, by going into the farmer's home, is able to help him solve his problems according to individual needs and to a degree that cannot be done even by the county agent.



A COW TESTING PICNIC

The social as well as the educational side of our nature is developed by these get-together organizations.

Valuable Experience as a Tester

In view of these facts cow testing offers the college graduate an unexcelled opportunity to do altruistic extension work that will bring about immeasurable good, and at the same time gives him an experience that is broad and diverse and that far excels any experience that he could get in any other way. We know that broad experience obtained under diverse circumstances is necessary to cope with large and unexpected problems. Many years of hard knocks and expensive mistakes are sometimes necessary to obtain such experience.

The twenty-six or more members of an association comprise men who usually are above the average and who represent all phases of agriculture. One may be primarily an orchard man, another may be a trucker, some may be general farmers, each of whom has some specialty about which the tester can learn something worth while. Such a diversity offers a wide opportunity for observation and first hand experience. By taking the best pointers from each member, the tester can piece together a wealth of knowledge and information that cannot be obtained in any other way. A year of cow testing will be of more benefit than any one other thing that can be done, and from it one cannot help but gain a maturity and feeling of security in definite knowledge, in good management, and solutions of difficult problems that are only obtained after many years under ordinary circumstances.

Aside from its practical value, cow testing has untold value as a means of social education. By actually liv-

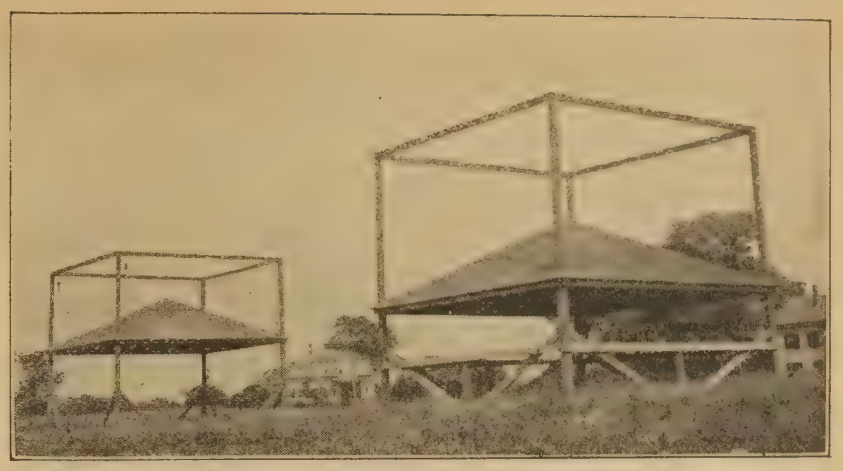
(Continued on page 220)



ADVERTISING WHAT A COW CAN DO



A HAY LOADER IS INDISPENSABLE AS A LABOR SAVING DEVICE ON THE AVERAGE FARM



STACK COVERS COST A BIT BUT THE PROTECTION TO CROPS THEY OFFER PAYS BIG DIVIDENDS

BETTER HAY BY THE SIMPLEST WAY

C. A. LE CLAIR, WISCONSIN

ALTHOUGH not the best of feeds, timothy is the most widely grown hay crop in America. There are a number of reasons why farmers stick to timothy. In the first place, the seed is cheap. Furthermore, it is a hardy crop which seldom fails to catch. Again, it is a staple food for horses. In the feeding of city work horses, it has been termed fool proof, because even the most inexperienced of teamsters cannot feed it to excess.

Farmers who have begun to find difficulty in getting stands of clover and alfalfa find timothy ha/ a stand-by with which to round out their rotations and which assures a crop without demanding much labor. Professor L. F. Graber, the alfalfa expert, in his most recent publication on how to get a crop of alfalfa, recommends sowing it with timothy. He says:

"When a mixture of one-fourth timothy and three-fourths alfalfa is sown, the combination insures a more uniform stand of hay and the timothy helps to keep out the blue grass and weeds when winter-killing occurs."

Time to Cut Timothy

One of the things which very greatly influences the quality of hay is the time it is cut. An extensive grower of timothy hay in Massachusetts in speaking of this matter said: "A farmer who year in and year out waits until after the Fourth of July before he begins to make hay, generally gets no more than one respectable crop in five. To my way of thinking hay making, like the Einstein theory, is based on relativity. In other words, it is related to the degree of maturity of the crop. I plan to cut my timothy any time after the heads blossom and before the seed is ripe. This makes hay of excellent quality."

Tests at the Missouri Agricultural Experiment Station where animals were allowed to be the judges of the quality of hay cut at different times bear out the truth of this man's opinion. A part of a field of timothy, in the experiment referred to, was cut on the 12th of June when the grass was in full head. A second strip was cut in the same field on June 20th when the crop was in bloom. Another block was cut July 1st when the seed had formed; the fourth, about July 8th, when the seed was in the dough. Finally, a fifth lot was cut when the seed was ripe.

To determine which kind of hay the animals preferred, steers, milch cows, and sheep were given access to racks having some of each. Sheep showed little preference but steers and cows relished the early and medium early cut hay. The investigations brought out, however, that the earliest cut hay was more difficult to cure, yielded somewhat less to the acre, and tended to weaken the succeeding stand. From the standpoint of favorable weather for curing, yield, and subsequent life of the grass, medium late cutting of timothy seems to be most profitable. I have found that men who have had considerable experience in making hay on an extensive scale always begin mowing when the grass is a bit too green to make good hay. Under this plan, if rains put haying late, they stand a better chance to get the bulk of the crop cut before it gets too ripe.

Next to the harvest of grain crops, haying is the biggest job on the average farm. It is at best a hustling job and requires considerable head work. In advance of the harvest the mowers and other equipment should be tuned up to the minute so that there will be no delays when the rush begins. The use of seven foot mowers and side delivery rakes capable of handling two swaths at once facilitates much economy of time. In fair weather grass cut in the afternoon of one day can be kicked about with the tedder before noon of the next and if nothing hinders it can be raked into windrows before night. At times when things move fast it is the wise man who is prepared with an extra sickle and other parts for the haying equipment which may be put in place without deday in case of break-downs. A trip to town, even with an auto, for such necessaries means for most men at least a quarter of a day lost time for himself and perhaps a crew as well. If the local dealer happens to be out of stock, complications are even worse.

Most of what has been said regarding the making of timothy and mixed hay applies equally well to the curing of the far more nutritious but less extensively grown clover. In all cases where first cuttings of either grass or clover are made, the sickle of the mower should be raised so that enough stubble is left to protect the bulbs or crowns of the plants.

Unloading Hay

Fully one-half of the 80,000,000 tons of hay produced each year in this country is stored in out of door stacks. Probably not more than one-fourth of the men who put up hay in this way are properly equipped for the work.

When hay is pitched from cocks or windrows on to a rack and then lifted again in the making of the field stacks, a great deal of labor is needlessly wasted. It is to lighten the burden of such work that the hay loader has in so many cases been put to use where hay making without a "bucker" rake and stacker is practiced. There is certainly an advantage in the use of a loader under such conditions. However, there is need for a more general application of devices for making the unloading of hay as easy as the loading.

To this end the hay fork is admirably adapted. While it has long been used in the loft storage, the fork is too seldom employed in field stacking. A farmer of Ramsey County, Minnesota, has devised a scheme of stacking which undoubtedly merits the attention of men who are not owners of complete haying equipment. This man dug the necessary holes and placed telephone poles at suitable intervals on the stacking ground. After anchoring an end of a one-inch steel cable in the ground he securely fastened the line to the tops of the poles. It was then stretched tightly and the free end made fast at another ground anchorage in line with the poles. A hay fork made to operate from a swivel pulley attached to the cable permits the making of stacks between the poles. With this device a load of hay can be stacked in less time than it takes to tell about it. If care is taken not to load the fork too heavily, the men on the stack can do as good a job of stacking as when hay is pitched to them by hand.

It takes very little time to set the poles, string the cable, and attach the fork. Most farmers need not make any special investment in order to erect this handy device. The wood lot in many instances will furnish the poles. The fork from the barn loft can be temporarily used for the field stacking. A piece of hemp rope although not as good as a steel cable lends itself as a support of the fork. Thus, for little or no cost it is possible to make a hay stacking outfit capable of turning a laborious job into comparatively easy work. This is a time when any device that will eliminate labor on the farm counts. Why not try out this scheme?



AT LEAST A QUARTER OF THE HAY IN THIS POORLY BUILT STACK WAS RUINED THROUGH EXPOSURE TO THE WEATHER

Far too much well cured hay is ruined by improper storage. One sees everywhere low, flat hay stacks which have one-fourth or more of their contents exposed to the weather. With even coarse marsh hay or wild hay worth in some places as much as thirty dollars a ton, the chances to spoil the profits in hay by needless exposure to weather are apparent. Adjustable stack covers, though somewhat costly to erect, soon pay for themselves in the protection they afford. They have a particular value in cases where it is necessary to open a stack and remove hay at intervals.



THREE POLES, A CABLE, AND A HAY FORK MAKE UP THIS SERVICEABLE STACKING DEVICE

We are not so much concerned as some seem to be about the freezing of silage in the silo. Freezing may be inconvenient but it in no way affects the quality or palatability of the silage. If the frozen silage is raked off the walls and thrown to the center of the silo in a pile it is usually thawed out by the time of the next feeding. The only precautions necessary are to see that the silage is well thawed out and then is fed at once. Frozen silage spoils quickly after being thawed out.

Uncle Sam's Hired Men Who Serve You

An Organizer of a Nation-wide System of Education and Research in Agriculture and Home Economics Is Dr. A. C. True, Director of the States Relations Service

This is the third of a series of articles prepared by the U. S. Department of Agriculture, and which we are publishing at the request of Secretary Meridith to acquaint our readers with the type of men who are making possible the wonderful service the department is rendering and stands ready to render our readers that those not now availing themselves of these services may do so.—EDITORS.

CAPTAIN H. P. SHELDON

"A GREAT winner of battles." That was the description I had of the man; and the search for him took me to the top story of a gray office building in Washington. I wanted to see this warrior, this man who fought the battles of the farm boy and farm girl, the farm woman, and the farmer himself. Quite naturally, I expected to find a typical fighter, a man lean of frame and strong of jaw; a man of steady eye and brief, curt address. But when a door opened and I stepped into the office of Dr. A. C. True, Director of the States Relations Service, United States Department of Agriculture, I met a man who had none of these marks which denote the warrior—excepting, perhaps, the eyes, which were steady and direct in their gaze. The man looked more like a scholar than a fighter; yet I had another's word for it that he was a winner of battles.

But was that all that my informant had said on the subject? Wasn't there another phrase? Oh, yes! "He wins his battles without fighting them!" That was the rest of the sentence; the qualifying statement that helped me to reconcile this scholarly appearing man with his reputation of accomplishment. "Winning battles without fighting them!" Strategy instead of force of arms. Didn't a great general say that more battles are won by marching than fighting? Haven't history's greatest soldiers been scholarly men? I began to understand.

Dr. True is not a fighter in the sense of plunging against obstacles; rather he is a diplomat and wins his point by clearing away the trouble-making barriers. He has great faith in common counsel, mutual understanding, and broad-minded co-operation. In the days when Dr. True was beginning the task that was to be his life work he was often met by strong, sincere opposition from men or from organizations. When this occurred, did he rave and rant and argue and antagonize? Indeed he did not! He gave his opponent credit for a sincerity equaling his own, and then set about to find why their "minds did not meet", as the lawyers would put it. Nine times out of ten he found the obstacle, nine times out of ten it was only the confusion of two minds striving for the same worthy goal, but approaching along different paths, and nine times out of ten he succeeded in clearing the misunderstanding away and enlisting the support of his one-time opponent in the great cause for which he worked—the elevation of agriculture to its true rank as a profession, and the enlisting of effective co-operation of all worthy forces to this end.

Dr. True was educated at Wesleyan University, graduating from that institution in 1873. He attended Harvard University from 1882 to 1884. His education was classical and scientific, though it proved to be admirably adapted for the service he was to perform. His interest in agriculture came later, when the establishment of agricultural experiment stations and the development of the land-grant colleges opened the door to professional training in agriculture. Dr. True's work, after he left college, was that of teaching, but he was soon called to Washington to organize and edit the Experiment Station Record, which is now recognized as the most complete review of scientific investigation in agriculture in the world. This was in 1889, and from that time on Dr. True's effort was directed toward organizing and establishing agricultural research on a sound scientific basis, putting agricultural subjects in pedagogical form—shaping the science of agriculture so that it could be more effectively taught in American colleges and schools—and making agriculture a recognized, honored, and useful profession.

"Judge a carpenter by his chips" is a homely way of stating the great truth that a man must be judged by the work he has done. Dr. True has heaped his bench with the right sort of chips. His tool has been the Office of Experiment Stations and its enlarged successor, the States Relations Service of the Department of Agriculture, and here are some of the finished products turned out by this bureau under his direction.

It has helped greatly to bring about the present system of agricultural experiment stations, which is "unsurpassed in the world for its efficiency and practical usefulness to agriculture."

It has been influential in putting the subject matter of agriculture and home economics in teachable form for the use of agricultural colleges and lower schools.

It has helped the masses of farm people, who could not go to college, through the educational extension work in agriculture and home economics carried out by the county agricultural agents, home demonstration agents, club leaders, specialists, farm bureaus, and publications.

A widespread revival of the production and conservation, by canning and other means, of fruits and vegetables for home consumption is a notable achievement of the extension workers of the service.

Alaska owes its agricultural awakening to the service, and hardy cereals and vegetables are now grown within a comparatively short distance of the Artic Circle.

The agriculture of our insular possessions—Hawaii, Porto Rico, Guam, and the Virgin Islands—is also being developed and made more nearly self-sustaining by the work of the service.

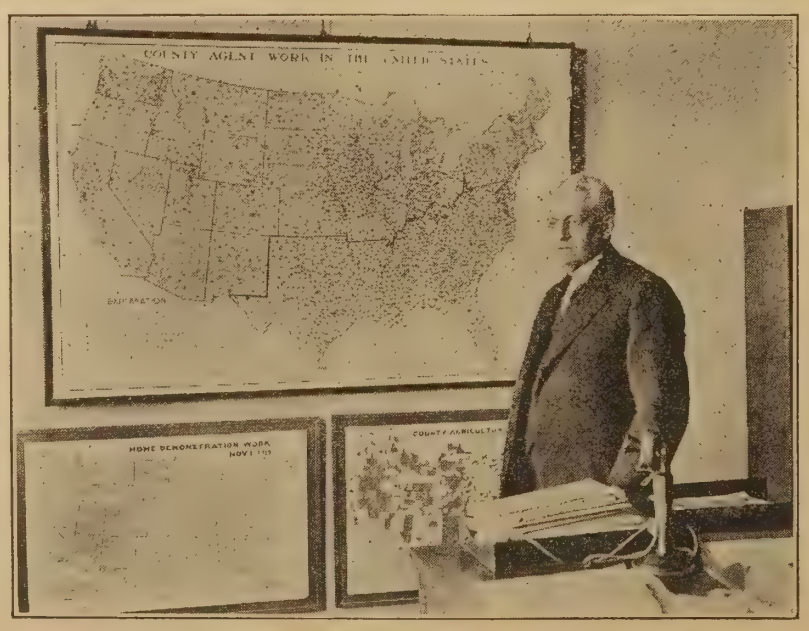
It has made important contributions to the scientific and practical knowledge of the economical and efficient use of the products of agriculture and to the subject of home economics in general through its investigations relating to foods, diet, clothing, and household equipment, work, and management.

To the inquiring person, Dr. True will probably emphasize especially the contribution of the States Relations Service toward making the science of agriculture an accepted course in American educational institutions, but you will find many men high up in farming affairs who hold this accomplishment second to that of organizing and developing experiment station work under the Hatch and Adams Acts, or the co-operative extension work in agriculture and home economics under the Smith—Lever Act. In the latter case there was a new idea in agricultural education to be tried out on a broad scale. If it should prove successful the extension system promised to be the most intimate and effective means for carrying precise and specific information to the farm people.

Thanks to the efficient organization which was built up, the extension system did work, and it worked so well that in the years since the first county agent went out to his work the number of county agents, home demonstration agents, club leaders, and extension specialists engaged in extension work has increased to about 5,000 specially trained men and women—the infantry of the Department of Agriculture and the state agricultural colleges; the live, intimate, friendly personalities who help the farmer and the farmer's wife, as well as the boys and girls of the farm, in their daily battles with farm problems.

The ideal of service to the farmer that is the motive power back of every project of the Department of Agriculture is expressed by the States Relations Service, mostly in terms of agricultural and home demonstration agents—"men and women county agents". The department aims to have one each of these useful citizens in every county in the United States. At present, the score shows one-third of the total number of counties supplied with both, one-third with men agents only, and one-third with none at all. The battle is not yet won—there is still much to be done in the way of organizing the co-operative forces throughout the country, and training men and women for the very exacting work of the profession, but the Doctor is steadily scoring his quiet victories, and he will win for his idea, if there is any virtue in straight thinking, clear vision, and unwavering faith in the cause he advocates.

Dr. True's relaxations and recreations are what one might suppose them to be—travel, trout fishing, and botanizing. He loves to spend his vacations in the beautiful Champlain country of Vermont, where he finds ample opportunity to indulge in his pastimes. His Vermont neighbors remember instances when, with the hay out, and a summer storm approaching, they have welcomed the appearance of the scholarly volunteer and his pitchfork. In these tasks as well as in the greater work of the office he holds, in the Department of Agriculture, Dr. True has been as loyal in nature as he is True in name.



DR. A. C. TRUE, DIRECTOR, STATES RELATIONS SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE

Pennsylvania Farmers Seek Accredited Herds

A recent meeting in a small community in McKean County, Pennsylvania, was held of the dairymen of that particular community on the night of July 6 for the purpose of discussing the value of tuberculosis free cattle in milk production.

After discussing this subject for nearly two hours, 37 men stepped forward and signed agreement blanks applying for the federal and state test, through which plan the herds are to be accredited.

The farmers of this community are to be paid a premium of ten cents for every hundred pounds of milk that comes from tuberculosis free cattle. These farmers are not large producers, but the ten cents per hundred will mean on an average to all the dairymen of this community an increase of the yearly income of at least $180.

Since that time the work has been progressing quite steadily so that McKean County will soon be on the map as one of the foremost in eradicating tuberculosis.

P. S. CROSSMAN, County Agent.

You can't can corn for folks without cans; and you can't can corn for cows without a silo. Have you enough silo capacity on your farm?

It isn't so much a question of what tools you use in gardening as how much you keep those working that you do use.

Thrift in Handling Straw

ORIN CROOKER, ILLINOIS

AN Iowa farmer handles considerable of his straw by passing it first through a baler. "Like many other things, straw is best," he states, "when it is clean and fresh. I go after the straw pile just as soon as I can following threshing. I like to get to it before it rains, for it seems to me straw is never quite the same as it is when it is baled from the fresh stack. Putting straw into a bale insures its future condition, since it is always possible to find a place to put it under cover. This isn't the case, of course, with loose straw, but if one happens to be short on mow space the bales can be stood or piled in the outbuildings almost anywhere until they are needed. In such condition it is easily moved from place to place if necessary. I usually bale up more than I think I'm going to use and along late in the winter I take stock, as it were, and sell about what I judge to be my surplus. There appears always to be a market for straw that has been baled.

"Stock will eat considerable straw if it is bright and crisp. That's the reason they nose into the stack in the barnyard. The less the straw has weathered the better they like it. I aim to have such a stack for the animals to browse around, but I bale first of all as much or more than I know I'm going to use in the stables and inside feed racks. The stock can munch over what's left and trample it all they please. Eventually it goes to the fields. I never have to use any of it in the stables.

"Baling pays in other ways aside from making it possible to store a lot of it in a small space. It is easier to get it into the stables for one thing. Did you ever try to dig straw out of a stack in a high wind? Well, then you know what I mean. And it stirs up far less dust to open a bale of straw and distribute it as litter than it does to pass it down from a mow overhead. There's some advantage in that, too. Straw isn't appreciated by most farmers because they don't handle it right. It's got more fertility ton for ton than manure and will produce more humus in soil than an equal quantity of barnyard waste. There are but few other materials that will absorb more liquid manure—and on top of this it is a good roughage for certain farm animals. It costs a little money to bale it, but I clear out on the expense through what I sell later on."



SAVING STRAW FOR WINTER

It is sometimes difficult, if not impossible, to build a good straw stack that does not waste half the straw. By baling, the straw may be put under cover and saved for winter feed for horses and for bedding at the end of the winter when otherwise it would be gone or of poor quality.

Southern Wisconsin Guernsey Breeders Organize

Fifty southern Wisconsin Guernsey breeders met at Whitewater on July 27 and organized the Southern Wisconsin Guernsey Breeders' Association. A meeting had been held at Janesville two weeks previous, at which time preliminary arrangements for the organization had been completed.

After adopting a constitution and by-laws the following directors were elected: Wayne A. Munn, Ralph Tratt, James H. Murphy, Otto Onstad, T. Ridge, P. C. Burchard, H. A. Main, A. S. Knudsen, and Grover Kull. The board of directors selected the following officers: Wayne A. Munn, president; Ralph Tratt, vice-president; James H. Murphy, secretary-treasurer.

The purpose of the organization is to assist in sales and purchases, arrange Guernsey meetings, and carry on co-operative advertising. At the organization meeting definite steps were taken to hold a sale of seventy-five pure-breds at Janesville on October 14. This sale will be under the immediate management of the board of directors. The members present were emphatic in deciding to run a strictly high-class sale. They agreed that the committee should subject every animal consigned to a rigid inspection, and list only those of approved individuality and acceptable breeding record. With the numerous excellent herds in this locality, the members felt that in no way could they co-operate to greater advantage than by establishing a reputation for quality and guaranteed satisfaction.

Breeders from the following counties are enrolled in this association: Rock, Green, Jefferson, Dane, Walworth, Kenosha, and Racine. Many of the largest and best herds in Wisconsin are to be found in this locality, and many hundreds of the choicest pure-bred and grade Guernseys have been bred and owned on the farms of this part of Wisconsin for many years. Their excellence alone heretofore created a sufficient market, but the breeders hope by organizing to give buyers better service, and bring to their excellent herds the publicity they well deserve.

Wisconsin. JAMES H. MURPHY.

Yield of Each Cow Figured for You



By the CP Pail Balancing Scale

Has two indicators. Weighs the milk in the pail. Eliminates errors. First hang the empty pail on the scale. Turn the thumbscrew in the center of the dial, which moves the red indicator until it is at the 0 mark, thus balancing the weight of the pail. Then add the milk or cream and the result shown by the red indicator gives the net weight of the milk or cream, and at the same time the black indicator gives the gross weight of pail and milk.

The capacity of these scales is 30, 60 and 120 pounds, according to size, in pounds and tenths of pounds. With each scale we furnish special blanks that will contain the record for two milkings a day for one week for 14 cows.

The scale can also be used for all weighing purposes.

Price each, 30 lbs. capacity by 1-20 lb. $4.55, 60-lb. $5.65, 120-lb. $8.85. Postage 30c extra. Extra records per dozen, 15c.

Price each 4.55

Send for Big Dairy Mail Sales Catalogue.

The Creamery Package Mfg. Company

68 W. Kenzie St., Chicago



"I bring Better Butter Prices ~ because I keep Butter Better"
Paterson Parchment

More Profit From Butter

No matter how good *you* consider your butter, your *customer's* opinion governs the price you get for it.

Butter is always fresher, sweeter, cleaner and more salable when it reaches your customer wrapped in

Paterson Pioneer Parchment Paper

And butter so protected from dirt, dust and bad odors, brings top market prices.

Paterson Parchment comes in rolls, sheets and circles to suit all methods of marketing.

Write for free samples and book, "Better Butter". Full of valuable information for every dairyman.

THE PATERSON PARCHMENT PAPER CO.
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THE PATERSON PARCHMENT PAPER CO. PIONEER PASSAIC N.J. TRADE MARK

Newly Invented SAW RIG



Low introductory offer puts this new saw-rig within reach of all, at small part of cost of other rigs. Saws your winter's wood in few hours. Powerful 4-cycle motor. Easy to operate, light to move. 30 days' trial to prove our claims. 10-year guarantee. Send today for FREE BOOK of FACTS.

Pat. Appl'd For

OTTAWA MFG. CO., 134 Main St., Ottawa, Kans.

Thousands of Happy Housewives in

Western Canada

are helping their husbands to prosper—are glad they encourged them to go where they could make a home of their own—save paying rent and reduce cost of living—where they could reach prosperity and independence by buying on easy terms

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years has yielded from 20 to 45 bushels of wheat to the acre. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. With such crops come prosperity, independence, good homes, and all the comforts and conveniences which make for happy living.

Farm Gardens—Poultry—Dairying

are sources of income second only to grain growing and stock raising. Good climate, good neighbors, churches, schools, rural telephone, etc., give you the opportunities of a new land with the conveniences of old settled districts.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, and Alberta, reduced railway rates, etc., write Department of Immigration, Ottawa, Can., or

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Canadian Government Agent.

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Come to Headquarters for
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Established 1875
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Our Brand on the Tag Means Quality in the Bag.

AJAX CORD

EXCLUSIVE features built into the Ajax Cord combine to give the extra life and strength which "country" service requires.

First and foremost is the method by which these tires are constructed.

Each ply of cord is laid gently in position—*never pulled or stretched.* This means that full resiliency is retained, so that the tire can flex and give as it should when it strikes a rut or bump.

And that Cleated Tread — it holds like the heavy calks on a horse-shoe. And those "Shoulders of Strength,"— they brace and re-inforce the tread.

There is exceptionally good mileage in Ajax Cords. Your car should wear them.

Ajax Cord, Ajax Road King, Ajax Tubes and Ajax H. Q. (High Quality) Tire Accessories, are sold by Ajax Franchised Dealers everywhere.

AJAX RUBBER COMPANY, INC.
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Factories: Trenton, N. J. *Branches in Leading Cities*





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ANTI-COW-KICKER
Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.

TABER LINED SILO

"LINED" (Pat. App. for) Acid-Proof Lining keeps air out—and moisture and juices of corn away from staves. Prevents rot—freezing and spoilage.

Shipped in 24 Hours
Made of *absolutely clear* Long Leaf Yellow Pine boiled in Creosote. Acid-Proof Lined, Painted outside, Double Anchored. Won't blow down.

Non-Shrinkable
Rot-Proof Acid-Proof
No shrinking or swelling of staves. No frozen silage. Finest circle doors and frame.
FREE BOOK (just out) on Silos and Silage. *Write for it Today!*

TABER LUMBER CO.
1204 Main St. Keokuk, Ia.
Est. 1865

GRADING BUTTER

W. B. LIVERANCE, NEW YORK

TO the inexperienced, the terms applied to the different grades of butter mean very little. To the average producer of milk and cream, what is the significance of the term, an extra? Which is considered of better quality, butter that is classed as a first or as an extra? Ordinarily, one would feel that a grade of butter which was classified as a first would be of top quality. However, such is not the case as a first is considered an undergrade in all butter markets. Why there should be an apparent ambiguity in grading butter is difficult to understand but it is very probable that the whole system of classifying butter according to grades is a development of years, and a natural conservation that obtains in all markets has caused the ambiguity.

In grading butter, three physical senses, viz., sight, smell, and taste, are brought into use. Occasionally, when the butter judge lacks confidence in his judgment on a certain sample of butter, a fourth sense, that of hearing, is allowed to play a part in that the judge allows himself to be influenced by the opinion of others. That, of course, is a condition to be deplored. There is a considerable criticism of the present day method of grading butter because two equally competent judges will have widely varying opinions of the same piece of butter. It must be remembered that all judges of butter are subject to the frailities of the human body and that factors affecting their physical well being may warp their judgment at times. To the writer's knowledge, a certain authority on butter, who was considered to be an excellent judge of butter quality, scored a tub of butter before going to lunch. Upon returning from his noon-day meal he inadvertantly rescored the same sample. The difference in score occasioned by his changed mental attitude after having the inner man satisfied was a full seven points. This instance merely serves to show the unreliability of the human senses, particularly that of taste, when it comes to passing judgment on a food product. Grading butter, however, can not be done on the basis of a mechanical formula, hence the method that is practiced is the only one that can be employed.

Theoretically, if a piece of butter were perfect in every respect it would be scored 100 points. However, as yet, never in the judgment of any authorized butter judge has a theoretically perfect sample of butter been made. It always happens, and undoubtedly always will, that there is some characteristic of any sample of butter that will not correspond with the theoretically perfect butter. As a rule, the principal deduction made in scoring butter is on flavor, that being, very naturally, the most important characteristic of butter. It frequently happens, however, that deductions are made because of nonconformity to standard of any of the other characteristics of butter that are given consideration in placing a numerical score on butter. The theoretically perfect piece of butter would show the 100 points distributed as follows: Flavor, 45 points; body, 25 points; color, 15 points; salt, 10 points; package, 5 points. The total points allowed for each characteristic is supposed to represent the comparative value of that characteristic so far as it influences the quality of butter. However, in a commercial way, the distribution of points may not always be equitable, but for practical purposes no better scheme can be devised.



KAYEWOOD JOYCE KORNDYKE

Her 7-day production of 607.5 lbs. milk, 31.3 lbs. fat, makes her champion of Pennsylvania. She has recently completed a 365-day test of 24,548 lbs. milk, 892.72 lbs. fat. She is owned by Bell Farm.

The placing of a numerical score on any of the characteristics of butter is a matter of judgment on the part of the judge. No one can develop ability to grade butter over night, but it requires years of experience and even then some who have devoted the greater part of their lives in passing judgment on butter lack confidence in their ability in that regard. In scoring butter, the judge uses an instrument, known as a trier, with which he draws a pencil of the butter from the entire depth of the sample to be scored. The odor of the butter is noted as the trier is withdrawn from the mass as it is at that time that the volatile odors, which indicate the flavor of the butter, are most noticeable. He then judges of body, or texture, of the butter by noticing if the trier full withdrew from the mass without breaking, if the brine on the under side of the trier is free from buttermilk, and if there is no butter adhering to the trier. Also, the butter is broken to see if the grain resembles the grain of a piece of steel when fractured. His experience then assists him in placing a numerical score on that particular characteristic of the butter. By tasting of the butter and bearing in mind its odor he can pass judgment on the flavor.

Unless there is something radically wrong with the other characteristics

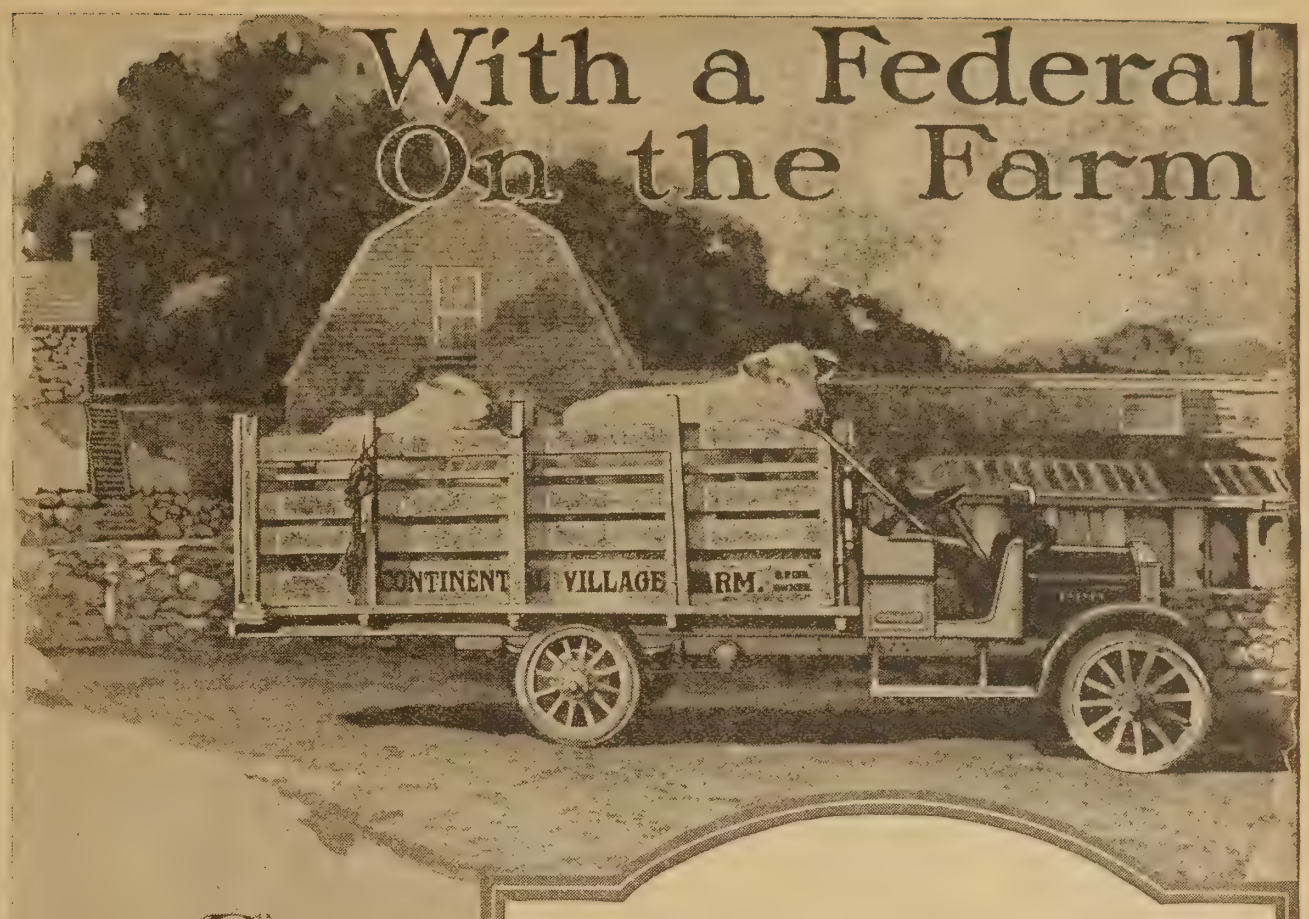
of butter, the sample is passed as perfect in regard to them. The color may be either high or low and yet the butter will not be scored down. However, if there is unevenness of color, if there is waviness of color or mottles a reduction will be made. Uneven coloring is a very undesirable characteristic. Mottles will place the butter in the grade of a second even though the flavor is excellent. While certain markets may desire a butter of low salt content, and others demand a high salt, the butter is not reduced in grade unless the salt is in excess or is undissolved and shows a gritty condition. It then rests with the judgment of the judge as to how much the score will be cut. While the package is given little consideration and is rarely given anything but a perfect score, it has a marked commercial influence on the sale of butter as the buyer is oftentimes prejudiced against certain lots of butter if the package is dirty or unattractive. However, the judge considers the characteristics of the butter itself rather than its container. When all of the characteristics have been given a numerical score and the several scores added the full score of the sample is available and it is then placed in the grade in which it belongs.

The grade of the butter is automatically fixed by its numerical score as rules of the various produce exchanges govern that feature. In the New York market grades of butter are known as extras, higher scoring than extras, firsts, seconds, and lower grades. Formerly a further classification into thirds and fourths was given but such low grades are of no commercial value. Extras is a class of butter that will score 92; higher scoring than extras means butter that will score 93 points or higher; firsts score from 88 to 91 points; seconds, from 83 to 87 points; and, lower grades constitute all grades of butter inferior to a second. The term, "packing stock" applies to butter of inferior quality, which invariably falls in the class of lower grades, which is of no value except to be made into renovated butter. It requires no expert judgment to classify it.

While the numerical scoring of butter and the grading of it is subject to much criticism it is very necessary in all butter markets, as it is the only way by which butter can be marketed on an equitable basis. The one just criticism of the method that is in vogue is that there is no uniformity of opinion among judges of reputation as to what constitutes a theoretically perfect butter. Then, too, judges in the large markets oftentimes allow conditions to warp their judgment in grading butter. If the judge knows that by scoring a lot of butter higher than it really should be, the merchant can profit thereby, providing the inspector is himself safe in doing so, he invariably will do so. On the other hand, if he may get himself criticised by grading a lot of buttter as high as it should be during a time of considerable supply, he will underscore it. The grading of butter is largely influenced by the mental and physical condition of the judge, but, on the whole, it is very satisfactory. It is to be regretted that frequently judges allow themselves to be influenced by desires and opinions of interested parties in placing scores on certain lots of butter.

Larger Dividends from Fresh Cows

"In order to get a good start when she freshens, a cow should have six weeks' rest prior to the new lactation period," says L. V. Wilson, University Farm, St. Paul, agent in dairying for the United States department of agriculture. "Cows that are to freshen in the fall, therefore," adds Mr. Wilson, "should receive the best of care before freshening. It is often impossible to dry a cow up if turned on pasture such as exists this season. It is better to limit her to dry feeds, very litle grain, depending on dry roughage such as clover and alfalfa. Having dried the cows off, one may start them if time will permit. A cow in poor condition at the start of her lactation period is not capable of the best, as the feeds she consumes following freshening must be devoted largely to the building up of the body rather than toward the manufacture of milk and butterfat."



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Thoroughbreds—

Transporting cattle to fairs and expositions so that they always arrive in the pink of condition calls for qualities not commonly considered in the selection of a motor truck.

Perfect ease in riding and control and an unfailing reliance on the truck to reach its destination with more than ordinary dispatch and certainty are absolutely essential.

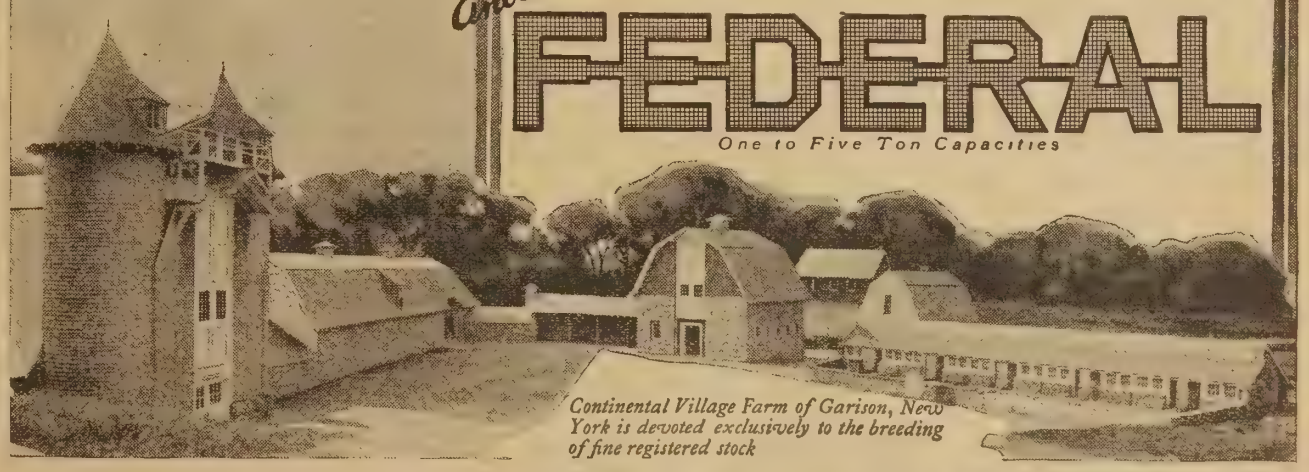
Extra qualities, to be sure, in a truck, but it is the extra qualities that fine cattle and trucks possess over the common herd that marks so surely the thoroughbred.

For ten years now Federal has been building into trucks this extra measure of economy, dependability and endurance that has marked it everywhere as a thoroughbred truck.

FEDERAL MOTOR TRUCK CO., DETROIT, MICH.

Another FEDERAL

One to Five Ton Capacities



Continental Village Farm of Garison, New York is devoted exclusively to the breeding of fine registered stock



Clay Steel Stall —Only 3 Parts

Contented Cows Give More Milk

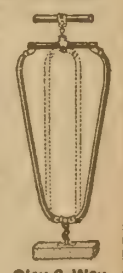
The dairy cow is "temperamental." No farm animal responds more generously to good treatment. None is so quickly and adversely affected by anger, fright or discomfort. That's why safety, orderly handling and pasture comfort in the dairy barn insure more milk and greater profit. These necessary features, with economy and convenience, are provided by

CLAY Sanitary Cow Stalls

Bolting only 3 parts together completes a **permanent** stall of smooth, strong steel tubing. No dangerous corners. No cumbersome castings. Easily kept clean. CLAY 2-Way Stanchion is instantly closed or opened **both ways** with **one hand.** Adjustable to any size cow or heifer. No sure-stops needed. Cow-proof lock. Users say CLAY Equipment quickly pays for itself. **Reasonably Priced.** Fully guaranteed. **Sold on 30 days' trial.**

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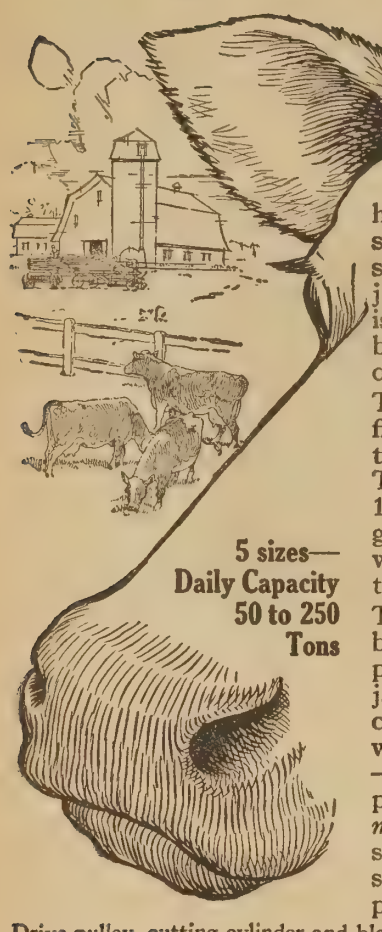
IOWA GATE CO., 101 Clay St., Cedar Falls, Ia.



Clay 2-Way One-Hand Stanchion

Silver's "Ohio"

The Logical Silo Filler



5 sizes—
Daily Capacity
50 to 250
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Cut your feed costs—give your stock highly nutritious "Silverized" silage—short, clean-cut, uniform, that packs solid and ferments evenly. The sugar juices mix better—the pulp and fibre is broken down, making it more digestible. Your herd will give a bigger yield on it and be less "scrubby" in the spring.

The "Ohio" makes you independent of filling crews—you can cut silage at any time. The "Ohio" is light running. There's a size for every power. "Ohio" 11 and 13-inch throat for 6 and 8 h. p. gas engine up to the 19-inch throat with 250 tons capacity daily for larger tractors.

The sturdy, cylinder-type knives, backed by 14 inches of ring-oiler bearings, give a positive quick shearing cut and cannot jam. Revolving like a buzz saw, cutting only 5 inches from the shaft, and with patented knife-block adjustments—no leaves, shreds or joints can possibly pass uncut. The Beater self-feed *saves a man.* The friction reverse prevents gear stripping. A single lever controls stopping, starting or reversing, at finger pressure.

Drive pulley, cutting cylinder and blower fan, though separate, are all on one shaft. Bevel gears are eliminated—the direct drive saves power. The blower fan is *explosion proof.* The "Ohio" is *safe.*

65 Years of Experience Back the "Ohio"

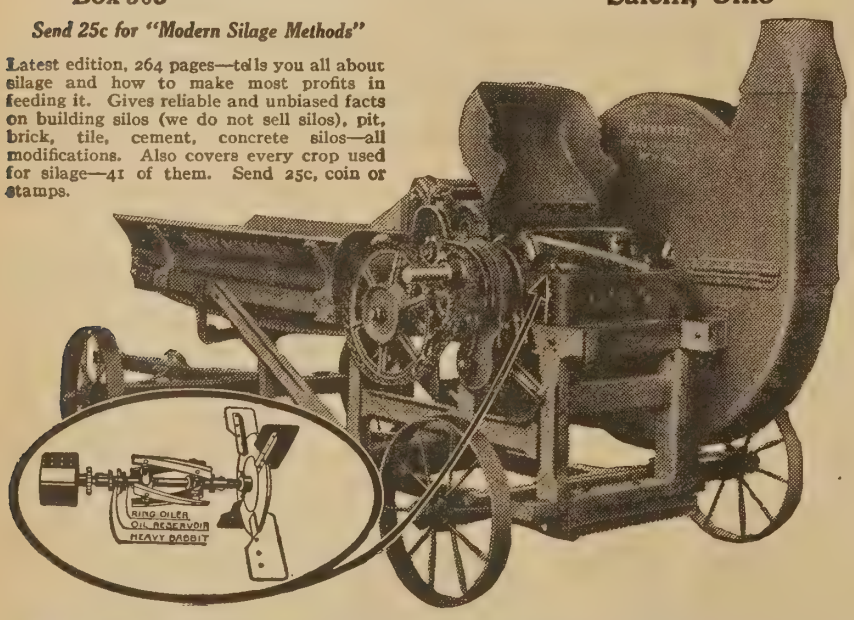
The "Ohio" is durable—built for a lifetime of service. It has enormous capacity and strength. Operating costs are unusually low. Made in 5 sizes—easily converted into shredders by changing the knives. Suitable for pit silos or fodder cutting. Works without blower if desired. Write for color catalog *today*—free.

We are pioneers in the manufacture of silo fillers and have kept ahead of all improvements. There are now probably more "Ohios" used by Experiment Stations and Agricultural Colleges than all other fillers combined.

The Silver Manufacturing Company
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Send 25c for "Modern Silage Methods"

Latest edition, 264 pages—tells you all about silage and how to make most profits in feeding it. Gives reliable and unbiased facts on building silos (we do not sell silos), pit, brick, tile, cement, concrete silos—all modifications. Also covers every crop used for silage—41 of them. Send 25c, coin or stamps.





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THE only sure way to save your late corn that has a big chance of being frosted, is to put it in a Silo.

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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Wis.	Edgar—Marathon	J. G. Maxtel	July	515	71	64	B. Baeseman
"	Richfield	A. R. House	"	325	34	61	Alvin Schowalter
"	Ellington	M. E. Nelson	"		83	70	H. Kreutzberg
"	Rockfield	W. F. Liesener	"	301	24	63	Mrs. C. Hoclz
"	Byron	A. W. Cowles	"	567	37	82	F. G. Stroup
"	Fort Atkinson	Wm. Seales	"	495	13	53	W. A. Stark
Ohio	Butler Road	F. L. Rostocil	"	265	82	61	M. O. Fay
Ill.	Madison Co. No. 1	L. Rasmussen	"	334	1	51	J. R. Hollard
Tenn.	Rutherford Co.	W. H. Oliver	"	127	20	70	W. E. Carter
"	Wilson County	H. L. Brown	"	342	35	122	Adams & Suddarth
Ohio	Geauga Co.	C. M. McEwen	"	270	29	63	P. H. McNish
N. H.	Contoocook Valley	M. W. Smalley	"	108	7	69	G. M. Putnam
W. Va.	Ohio Co.	Luke W. Frame	"	295	41	69	H. C. Garrison
N. Y.	Western Broome	J. H. Sherwood	"	551	15	53	Deyo Bros.
Wash.	Wahiakum Co.	W. J. Carter	"	505	207	82	M. Peterson
"	Stillaguamish	M. C. Hong	June	572	143	72	F. O. Coe
Pa.	Clinton	K. S. Bailey	May	382	83	70	F. S. Wildenstein
Mich.	West. Allegan Co.	C. O. Robb	July	230	9	50	J. D. Wedge
Pa.	Tyler Hill	E. L. Gillow	"	232	6	56	I. L. Canfield
"	Tyler Hill	E. L. Gillow	June	200	21	49	Lassley & Son
"	Southern Blair Co.	C. H. Detwiler	July	298	16	52	T. Hileman

Association Notes

Richfield, Wisconsin:—One carload of oil meal was purchased through the local dealers at $69 per ton. Six unprofitable cows were sold, three milking machines installed, and one electric light system installed. Pasture is the poorest it ever has been in this county. Some members are trying to keep up production by supplementing hay and green corn. The majority of members have whitewashed their barns. In July the condensery paid $3.10 per cwt. for milk and the cheese factory 78c per pound for fat.

Ellington, Wisconsin:—One carload of oil meal was purchased at $69.50 per ton. The condensery paid $3 per cwt. for 4% milk and the creamery paid 60c per lb. for fat in July.

Rockfield. Wisconsin:—Three milking machines have been installed, two concrete silos built, and three barns remodeled and equipped with stanchions. The condensery paid $3.10 per cwt. for 4% milk in July. Fifty tons of oil meal were purchased.

Byron, Wisconsin:—Farmers are feeding silage if they have it and it makes a big difference in the amount of milk the cows give. The creamery paid 72c per lb. for fat in July and the cheese factory paid 60 to 68c.

Fort Atkinson, Wisconsin:—Silage is supplementing the majority of the short pastures. When silage is lacking, hay is used. July milk sold to the condensery for $3.20 per cwt., 4c being paid for each point above 3.5%. The creamery paid 59.64c per lb. for fat. Feed prices are: Hay, $25 per ton; silage, $7; oil meal, $70; bran, $53; corn and cob meal, $55; gluten, $68; oats, $1 per bushel.

Butler Road, Ohio:—This association is buying feeds co-operatively. It has weeded out four poor cows and is buying good registered Holsteins in their places. July market milk sold for $3.50 per cwt., 5c being paid per point above 3.5%.

Madison County No. 1, Illinois:—We have now reached the time when the dairymen are letting their cows go dry, the draught and flies assisting them greatly in this, and also the high, almost forbidding prices on feed. In July the condensery paid $3.25 for 3.5% milk, and 4c per point above this test. Milk retails for 14c per quart and butter for 70c per lb. Clover hay is rated at $30 per ton; alfalfa, $32 to $35; cottonseed meal, $4.25 per cwt.; hominy, $3.70; ground corn, $4.30; bran, $2.80.

Rutherford County, Tennessee:—Several members of this association have been selling off their grades and low producing registered Jerseys to make room for more pure-bred animals that will make the R. of M. in the future. Many of the dairymen are also adopting more scientific methods of feeding. Milk retails for 8c per quart and butter for 70c per pound.

Wilson County, Tennessee:—The fifth month of this association ended with a very creditable showing. Wonderful progress has been made in weeding out the boarder cow. Several pure-breds were purchased during these months. One new concrete silo was erected and one milking machine installed. The creamery paid 61c per lb. for fat in July. Cow Chow sold for $4.40 per cwt.; Schumacher, $3.50; Dairy Feed, $3.50.

Geauga County, Ohio:—July market milk sold in this community for $3.25 per cwt. and 5c for each point above 3.5%. Gluten is rated at $3.30 per cwt; hominy, $3.85; oil meal, $3.34; bran, $3.25.

Contoocook Valley, New Hampshire:—Twelve Jerseys from two herds were tested for yearly records. One pure-bred Guernsey bull was purchased, Pride's May Day of Knollwood, an excellent show ring individual. Two profitable and sixteen unprofitable cows were sold. Feed prices are: Bran, $60 per ton; gluten, $87; cottonseed meal, $78; oil meal, $72; Union grains, $85; ground oats, $90; corn meal, $80; flour middlings, $70; mixed feed, $67; stock feed, $67; Four X, $75.

Western Broome, New York:—Improvements for July are few, as other farm work requires so much extra time that the dairying is somewhat neglected. As usual, all cows show a marked decrease in production for July. Pasture is short and flies bad. In general, hay is a light crop and other crops backward. July 3% market milk sold for $2.95 per cwt. Milk retails for 14c per quart, butter for 60c per lb., and cheese for 40c per lb. Gluten is rated at $72 per ton; oil meal, $73; cottonseed meal, $74; hominy, $74; wheat bran, $64.

Wahkiakum County, Washington: The creamery paid 55c per lb. for fat in July. Feed prices for the month were as follows: Linseed meal, $5 per cwt.; prepared dairy feeds, $3 per cwt.; rolled oats, $4; and mill run, $62 per ton.

Stillaguamish, Washington:—Several cows have been sold for beef. The members of this association will buy their hay through the United Dairy Association of Washington. June market milk testing 3.6% sold for $3.20 per cwt. and 7c per point above. Milk retails for 13c per quart and butter for 70c per lb.

Clinton, Pennsylvania:—During the month, the fine herd of John Gewther was sold at public auction and several of the association members made purchases at the sale. Twenty-nine unprofitable cows were culled from the

different herds, and many more will follow. May market milk testing 3.7% sold for $2.53 per cwt. and 4c per point above. The creamery paid 62c per lb. for fat. Milk retails for 7c per quart and butter for 65c per lb. Feed prices are: Gluten, $85 per ton; cottonseed meal, $86; horse feed, $90; mixed feed, $69.

Western Allegan County, Michigan:—July market milk testing 3.5% sold for $3.20 per cwt. and 4c to 6c per point above. The creamery paid 56 to 60c per lb. for fat. New hay is rated at $20 to $25 per ton; silage, $8; Unicorn, $80; Larro, $80; cottonseed meal, $83; oil meal, $80; middlings, $70; bran, $64; corn and oats, $85.

Tyler Hill, Pennsylvania:—I. L. Canfield owns the best two-year-old in this association. He says it pays to feed cows, especially during the hot days of July and August. Corn for silage does not look very promising in this vicinity, with the exception of a little situated on the hills with red shale foothold. July market milk testing 3% sold for $3.02 per cwt. and 4c per point above. June market milk sold for $2.92 per cwt. and 4c per point above 3%. A carload of gluten was purchased in June, and it is expected that a carload of cottonseed meal and linseed meal will be bought.

Southern Blair County, Pennsylvania:—Six poor cows were sold and one pure-bred sire purchased in July. Market milk sold for $3.42 to $6.72. Corn and oats chop sold for $70 per ton; Larro, $80; oil meal, $75; cottonseed meal, $80; International Dairy Feed, $79.

Idaho Short Course in Dairy Manufacture

Dairying in the West is a prospering industry. Manufacturing plants are growing rapidly and increasing in number to take care of the raw products. Experienced and well trained men are in demand to take charge of such plants.

The University of Idaho this winter is offering, in addition to the regular four-year course in Dairy Husbandry, a five-months' course in practical commercial dairying, to meet the demand for factory operators. No longer have guess-work methods and slipshod management a place in modern dairy manufacturing. Upon sanitary and efficient dairying depend much of the health and prosperity of the nation.

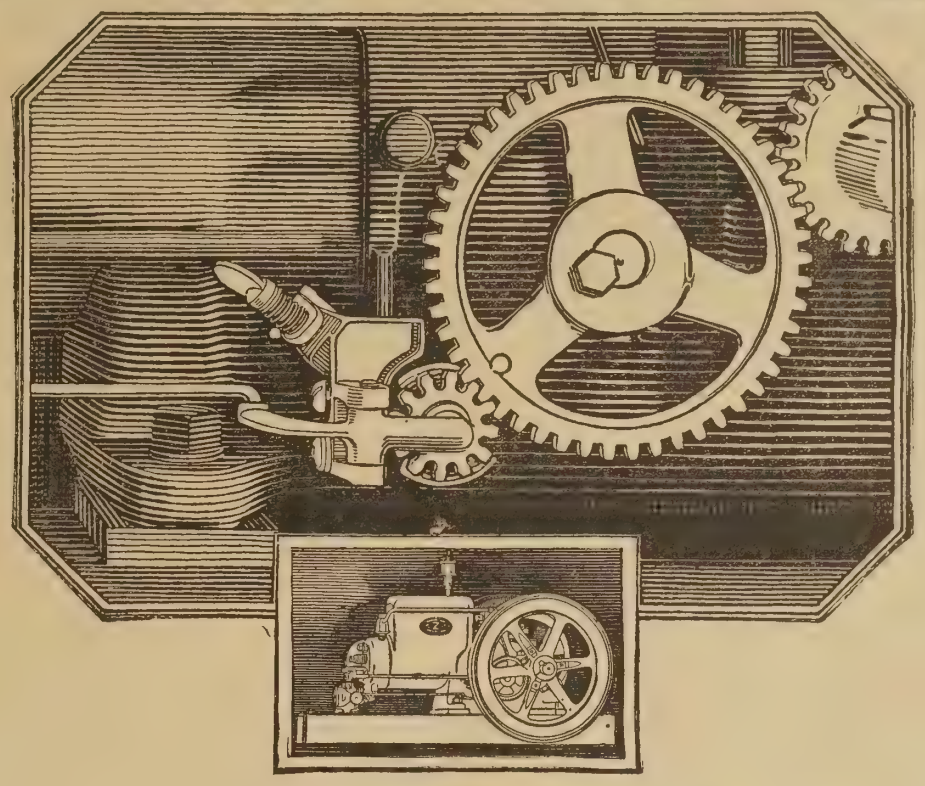
Employers all look for trained men who know what to do and how and why to do things under various conditions. Most of the mechanical work can be done by machinery, but an employee should be able to think, to improve, and to perfect plant operations. To do this, he must know the fundamentals that underlie modern practice, every detailed step of procedure, and every precaution necessary to insure a wholesome product. Without this fundamental knowledge he is lost in his work and unable to progress.

The five months' course offered by the University of Idaho beginning October 12 is meant to give to practical dairymen an understanding of the fundamental principles of dairy manufacturing. All applicants sixteen years of age or over having completed eighth grade work are admitted without examination. Others may enter if they are deemed qualified to undertake the work. A fee of $5 a term is charged to cover supplies and breakage. No tuition is asked.

A three-story brick building is devoted to the work in dairying, providing classrooms and laboratories with the necessary equipment for buttermaking, cheesemaking, ice cream making, and the testing of dairy products for fat, moisture, salt, adulterants, acidity, etc.

Idaho. H. A. Bendixen.

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Every "Z" Engine is equipped with a sensitive throttling governor. Regulates the amount of fuel and air admitted to cylinder—maintains uniform speed—summer or winter, regardless of work being done.

Throttling governor enables the "Z" to run on kerosene as well as gasoline—saves you money.

Governor is a complete, high grade assembly unit—not a makeshift device. Its case-hardened contact parts resist wear.

The throttling governor has mighty important duties: Helps maintain uniform cylinder temperature—gives smooth, steady flow of power that saves wear and tear on belts and the driven machinery.

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High School Agriculture

The agricultural department of the average high school in Wisconsin is doing a commendable work in the improvement of the general farming conditions in its community. These departments are under the direct supervision of directors who are trained agriculturalists. These directors in order to be successful must be able to meet the farmers and to advise them wisely concerning the better methods of present day agriculture. These directors must be rural minded to such an extent that they can make the boys from the farms who attend our high schools see the possibilities of the farm and to fire them with a determination to return to the farm after having attended high school for four years.

The projects which are worked out in connection with the class work give the boys valuable training and information concerning the underlying principles of successful agriculture. Since the projects are usually worked out by the boys at home on the farm, the benefits derived extend beyond the class room. The fathers and the neighbors usually watch these projects with considerable interest. In the majority of cases they also learn something of value.

The writer has just had the pleasure of visiting the boys who are carrying on projects under the direction of H. M. Knipfel, director of agriculture in the Neillsville high school, Wisconsin. One of the best projects noticed is a pure-bred pig club. The members are either students in the high school or in the rural schools of the vicinity. The club meets regularly to discuss the feeding and the care of hogs. The way the young farmers discuss the value of the different rations and kinds of green pastures for hogs proves the value of the work.

This club is financed by the Commercial State Bank of Neillsville. The bank purchased 12 pure-bred Chester White sows. These sows were given to 12 boys who are attending the schools. In payment for the sow each boy is to give the bank the choice of two of the litter when the pigs are about eight months old. These 24 pigs are then to be given to 24 more boys. This work will result in making the county a center for Chester Whites. The boys now own some 90 registered Chester Whites. All of these pigs are to be exhibited at the county fair when the officials are offering liberal prizes. Although the club was financed by the bank, the work is being done under the supervision of the agricultural department of the high school.

There is no question but that work of this nature will do much to keep the majority of these boys on the farm. Since one of the problems of the day is to keep farm boys interested in the farm and to eventually make successful farmers out of them, it seems that agricultural departments ought to receive the best thought of the high school educators of the state.

Wisconsin. E. J. McKean.

EDITORIAL COMMENT



BREAD AND MILK

It is recognized by those who employ a large number of people that efficiency is not wholly dependent upon mental training. Men and women must have healthy bodies before employers can expect 100% efficiency.

Results of investigations concerning the nutritive properties of milk have lead employers of labor, in many instances, to advocate its use and in a few cases employers are serving bread and milk lunches to their employees.

The Fleischmann Yeast Cake Company started the practice of serving bread and milk lunches to its employees several months ago. Its vice-president, Mr. Joseph Wilcher, writes the National Dairy Council concerning the results, as follows:

"We believe that the resulting health and efficiency among our employees is higher by at least 50%.

"When Chicago concerns were complaining of a 25 to 50% shortage of help during the last influenza epidemic, the shortage at The Fleischmann Company's office was practically nil and our absentee list is low at all times. It is a simple proposition: Bread and milk is food with 100% nourishment. Taken regularly each day it is bound to build up health which increases powers of resistance and produces greater energy in daily work. That is the way it is working out with us. I am glad to give the bread and milk office lunch my personal endorsement."

BONE MEAL FOR COWS

In recent years more attention has been given to the necessity of mineral feeds for farm animals than in the past. The increased efficiency of dairy cattle brings about new problems. The native cow, or the cow that is permitted to freshen in the spring and go dry in the fall, could gather sufficient amount of nourishment in grasses to sustain her milk flow, and to provide her with adequate nutrients to keep her body in a healthy condition and to produce strong, healthy calves.

The increased milk function has put a much larger strain upon the cow and this in turn has led to the necessity of providing her with a different system of feeding. It must be borne in mind, too, that many cows are fed liberally of by-products from our mills and many of these do not contain the mineral content found in the natural grains.

Professor E. B. Forbes of the Ohio Experiment Station has devoted many years of research in order to determine the mineral requirements for various kinds of farm animals. He points out that rations abnormally poor in mineral matter may be due to excessive proportion of grain to roughage in the ration and that roughage grown upon impoverished or infertile soil is poor in mineral nutrients.

Professor Forbes states that the best form of mineral matter, as well the safest to use, is steamed bone meal finely ground. It is termed by some as bone flour. This product contains a liberal supply of calcium and phosphorus. There are certain conditions when calcium may be the only mineral needed. Ground limestone or marl has been used, but as pointed out by Professor Forbes phosphates are more palatable than carbohydrates, and may be taken in much greater quantities without disturbing the digestion.

The dairyman must bear in mind that milk is very rich in mineral matter, bone making material, and unless the soil on which the forage, such as alfalfa or clover, is rich in available mineral matter, the rations are likely to be short of these substances, especially if the cows are heavy producers. Professor Forbes in his experiments did not discover that the bone structure of the animals fed bone meal seemed to be any larger, but rather the bones were more solid and stronger, and the animals seemed to remain in better health, although there has not been discovered an appreciative increase in the milk flow, but he found the animals resisted disease better and the reproductive function strengthened, all of which are highly essential to the development of high producing dairy cows. It may be said a number of good dairymen believe that feeding mineral matter liberally tends to prevent abortion. It should not be inferred by this that mineral matter is a specific cure for abortion, but by keeping the reproductive organs strong and vigorous, there is less opportunity for this disease to develop. It is our opinion that unless a dairyman feels his cows are getting a liberal supply of mineral matter, that he could afford to feed three or four ounces daily of bone meal to each cow. It is not infrequently observed that cows eat earth, manure, and various other materials. This indicates the rations lack something and it is generally held to be mineral substances.

COWS FOR MILK

Since the inception of Hoard's Dairyman, we have fully appreciated that men who keep dairy cows do so for the returns that they bring for the milk and other dairy products sold. This is why we urge every dairy farmer who keeps cows to know the returns they are giving. We desire the cows to keep the dairy farmer rather than the dairy farmer to keep the cows.

The best way of determining whether cows are profitable or not is to know how much milk and fat each animal produces and what the herd will average one year with another. We are a little surprised in reviewing the returns of the census taken by the Holstein-Friesian Breeders' Association of America to find that five out of six breeders of pure-bred cattle found the sale of milk more profitable than the sale of stock. This shows that the breeders of pure-bred Holstein cattle are overwhelmingly engaged in the business for the returns they can obtain in the sale of milk and its products. It emphasizes the importance of all breed associations giving attention to factors which influence dairy conditions.

It is not enough, as President Aitken so well points out, that a breed association simply record pedigrees, but it must consider the whole dairy industry and create conditions that will make dairying profitable. When five out of every six breeders of pure-bred animals find milk and its products giving them larger returns than what is obtained by selling stock, it emphasizes the necessity of every pure-bred association having an interest in all factors that influence the return of dairy products. It is their business to help improve marketing conditions, to point out to the consumer the food value of milk and its products, and to provide such other conditions as will make dairying remunerative.

EDUCATION OR LAW

We are in hearty accord with the movement to eliminate all grade and scrub bulls and put pure-breds in their places. It is an educational movement which means much to the dairy interests of this country. In the canvass that has been made among the dairy farmers many useful lessons have been pointed out as to why a dairyman should choose efficient machines. The dairyman has no right to expect a profit from his cows unless he keeps good cows—those capable of converting the feeds of the farm economically into milk.

We would urge every educational and persuasive facility for pointing out the value of the pure-bred bull but we cannot place our approval upon a law which has been enacted in Ontario which compels a dairyman to keep a pure-bred bull. It is going too far to force a man to keep certain kinds of live stock. There is too much autocracy extended to governmental officials when they are permitted to enter a man's farm and force him to sell his herd bull and buy a pure-bred.

We understand that the farmers of Ontario are up in arms against the law which forces them to keep pure-bred bulls and a resolution was recently passed by a group of agricultural representatives asking for the elimination of the pure-bred bull enactment. We seem to be living in a time when we desire to govern every human activity with some law or regulation. It seems that we are not willing to let educational facilities and desires of the people have any part in their activities. Men and women do not make their best development under a paternal form of government. We need laws, regulations, and rules to permit freedom to carry out business and social activities, to prevent restraint of trade, monopolies, and profiteering but it is going too far when the state extends to its officials the opportunity of entering into private affairs and directing a person to follow the dictation of a group of individuals.

It is stupid indeed for any man to keep a scrub bull at the head of his herd if he desires to make a profit from his cows but the remedy, or the so-called remedy, in Ontario for the elimination of the scrub bull is far worse than the evil committed. Let us proceed with forces of education and persuasion to show the dairy farmer the necessity of good blood but let us look with disfavor on any law which forces him to carry on his business as may be dictated by a few governmental officials.

FORCED CO-OPERATION

We were in conversation with a person a short time ago who is very enthusiastic over farmers co-operating. He pointed out the advantages of farmers uniting in their products for market. We agree that the farmer would be better off if he would co-operate with his neighbor in the establishing of cheese factories, creameries, and co-operative selling agencies, for we know agriculture has been handicapped because farmers have sought to work individually instead of co-operatively.

This man went farther than we believe is wise for he stated that he would have a law forcing all farmers in a community where there was a co-operative enterprise, to support it. In this we could not agree. We do not believe in laws which force the individual to do certain things even though the doing of them would be to his advantage. We cannot conceive of a greater autocracy than to require every farmer in a community to support a co-operative creamery or cheese factory, pure-bred bull associations or cow testing associations. If farmers cannot, through their own initiative and desires, develop a co-operative enterprise and support it, no law will be successful in bringing them together. It is a matter of education, of a desire on their part to develop the business in the community together.

Some are concerned that if there is too much co-operation, individual effort will become lost; initiation destroyed, but we believe this concern is unwarranted. In the conduct of the farm, the handling of products, the breeding of live stock, the development of the farm home, and the many activities of the farm will leave a sufficient amount of work to keep and develop individualism. Uniting with his neighbor in the preparing of his products for market, in selling them, in establishing more direct routes for his products to market, and the various other enterprises which can be carried on co-operatively, will work to his advantage but to force him to enter into co-operation with his neighbors is tyranny—no less oppressive than that of kings but such is the conception of many of our so-called modern thinkers and reformers. These men are asking for freedom of the people but if their ideas were followed out, every person would be forced to follow a plan provided by them, to wear their yoke. Isn't it strange that they cannot see that this is tyranny?

An Extra Gallon of Gas and Oil

HOARD'S DAIRYMAN:—Dead engine. That means a walk to the next gas station. But with us it means that we pull up that back seat cushion and get a can of gasoline and go the rest of the way.

The carrying of an extra gallon of gasoline is a habit that I started about five years ago. One seldom finds a driver that runs very many miles a year who won't forget to look after the gasoline tank some time. It seems as though the mileage

decreases sometimes or we miscalculate the distance we've traveled and the first thing we know the engine dies on the road with that "I-hate-to-quit" sort of a stopping that every driver knows the sign of.

Most any one-gallon, cylinder oil can will make a fine emergency gas tank for your car. The can's top must be in perfect condition or it will leak. It is about as irritating to one's nerves to look for a gallon of gas in the tool box and find it leaked out as to not have any to look for. A tack got under my gallon can once and punched a little hole through the side of it and I didn't have the extra fuel. Now I watch for anything that might injure the can before it is packed away. I wrap the can in a burlap sack, too.

I also carry a quart of cylinder oil along. Sometimes I forget that, too. But one is more apt to watch oil than gas. Or possibly you know how much you have but go further than you expected to with no handy filling stations to buy oil from. Then the quart of oil means the engine gets what it needs.

The gas can should have a rubber gasket around the filling hole. This will absolutely keep gasoline in. You'll never regret carrying both cans all the time.

Ohio. EARL ROGERS.

Tool for Trimming Cows' Hoofs

Kindly advise where I can get a pair of nippers for trimming cows' feet. There is a place where they make a special nipper for cattle.

Hopkins, Minn. W. P.

Not having any knowledge of special nippers for trimming cows' feet, we referred this inquiry to several men who we thought might have knowledge of such a tool if it were in existence.

The reply of all these men is that they do not know of anything of this character. They do use the same kind of nippers as are used by blacksmiths and a knife similar to that the blacksmith uses. One man writes that he has used horseshoer's nippers, saws, chisels, rasps, etc., but he has found a good paring knife to be the best tool.

The Tallest Silo

Where is the tallest silo in the world now and how many feet high?

Barton, N. J. C. D. S.

The tallest silo of which we have any knowledge is reported in a publication issued by the Portland Cement Association, which contains a report of a concrete silo 108 ft. high that was built on a farm at Saloma, Pennsylvania. We have occasionally had reports of silos up to 60 ft. in height but it is unusual to have them any taller than this. A silo taller than 60 ft. complicates the process of filling and can scarcely be considered economical except under very unusual conditions.

Fall Plowing Clover for Sugar Beets

HOARD'S DAIRYMAN:—A reasonably large crop of sugar beets cannot be grown on a field unless there is a sufficient quantity of available plant food and the necessary humus in the soil for plant growth. The green mass of clover when plowed under furnishes food for myriads of soil bacteria. These bacteria will work over this material and together with other soil action will bring about decay of the green mass. It is through this action that nitrogen, phosphoric acid, and potash are set free—the foods so essential for the best growth of plants.

The green mass, too, when plowed under will serve the soil considerable moisture and act in the capacity of a sponge. It will retain moisture in addition to the plant food which it affords. Since sugar beets contain about 87 per cent water, it will be seen the great need for moisture that this crop has. With the plant, it is just as with the animal. It needs to keep on growing continuously from the time it is planted to maturity. Any obstacle that may enter, such as the need for food, for moisture, for warmth, for attention to fungus and insect attacks during the growth of the plant will be sufficient cause to bring about material reduction in the yield of the crop.

The need for humus in the soil may be determined in the field by noting the baking, cracking, and packing condition of the soil. In worn out soils it takes a long time to replace humus properly. Rotation of crops in which clover should always be a member should be planned carefully so as to maintain the soil in high state of fertility.

Frequently from two to three tons of green crop of clover is plowed under per acre. This produces an enormous mass of lumifying material and, together with the application of a ton to a ton and a half of air-slacked lime to the acre, applied to plowed ground before planting, will give excellent results in the growing of sugar beets. The green crop when plowed under should be placed as deep down in the soil as possible. It is practically an easy matter to work up material from the bottom of the plow furrow, when once it is placed there. The deeper the crop is put down the greater is the body of the soil which is benefited physically and chemically, from the green manure crop.

Wisconsin College of Agriculture. J. F. WOJTA.

Cleaning Test Bottles

My milk test bottles have a brown coating inside and I am writing to ask you how it can be removed.

Oakland, Md. G. D. S.

In running the Babcock test the bottles are most easily cleaned if they are shaken and emptied while hot, immediately after reading the test. There is usually a quantity of white mineral matter, consisting largely of calcium sulphate, in the bottom of the bottle and if the bottle is inverted and shaken hard while the contents are running out, this mineral will be washed out with the liquid contents. If not shaken, the mineral matter remains in the bottle and is more difficult to remove afterward.

This can be most easily done by pouring into the bottles some ordinary muriatic acid such as the tinsmith uses in soldering. This will dissolve and loosen the mineral matter in a little time.

After test bottles are freed from mineral matter in this way it is sometimes seen that they contain some brown material adhering to the glass which is not dissolved in acids, but which can be dissolved in alkali. That test bottles may be perfectly clean, we always recommend that after the acid is shaken out they should be dipped into a pail of hot soapy wash water, filled with this liquid, and emptied two are three times. If necessary a small brush may be pushed down the neck and revolved inside the bottle to remove any hard, solid particles. The bottles are finally rinsed in clean water and are then in perfect condition for use. Most any kind of good washing powder or salsoda can be used instead of soap, as most of these powders contain more or less alkali.

J. L. SAMMIS.

Wisconsin College of Agriculture.

Damages for Breachy Bull

A owns a herd of cattle which he values quite highly and which he is breeding up to a Guernsey herd as rapidly as possible. In this herd is a certain pure-bred Jersey which, judging by the way she is going at this time, will crowd 300 lbs. butterfat in her lactation period. A is breeding to a pure-bred Guernsey as suggested above. Fences are all good all around pasture lot in which these cows pasture.

B owns a Holstein bull, which may be a pure-bred but I am not sure either way. B's pasture lot runs along the main highway just across from A's. B's bull breaks out of his pasture and into A's pasture lot and serves the pure-bred Jersey mentioned above. From present indications, she is with calf. B's bull had been constantly breaking into A's pasture but had never done any damage before except to break down some fence.

I wish you would tell me what a reasonable amount would be to ask as damage in this case. I have written the owner of the bull informing that I would expect damage in case the cow is with calf and also that I would consult you with reference to the proper damage to ask.

S. Boardman, Mich. A. B. D.

The problem presented is difficult to handle because we are dealing wholly in futures and the resulting animal can not be considered otherwise than as a grade.

We can well appreciate that the Holstein-Jersey cross for the particular herd conditions may prove undesirable, but the selling price of the calf would, perhaps, be quite as large in the one case as in the other. We also have to consider that we are dealing in probabilities as to the sex of the calf, and inasmuch as it would have been a grade under either system of breeding, a male would be worth no more than veal prices.

Damages might be assessed at $5 to $10 or it might be more than this, but it is difficult to say whether any jury would actually grant very large damages, if any, in a case of this character. While the Holstein-Jersey cross is not a desirable one to make, yet it has occasionally resulted in a good producing animal. Possibly the best way to solve the difficulty would be to have the neighbor comply with the laws of Michigan, which, we believe, requires that he keep a bull in confinement and not allow him to run at large in the pasture.

Have any readers of Hoard's Dairyman ever collected damages in cases of this kind? If so, we would like to secure the details of the case.

Wages in New York State

HOARD'S DAIRYMAN:—Crops in the dairy districts of the state so far as I can determine are likely to be better than was thought possible only a short time ago. It is true that we hear of now and then a section where the grass crop is considerable below average but in the eastern and central where much of the fluid milk for the city comes from for the big city we have production fully up to the average. Nor is there the shortage of help that was thought likely at an earlier date. We have very little so far as I know of the city help that was suggested, and while wages are high, too high for real profit I think, we are not paying what is reported in many of the papers.

It would still be difficult to state just what wages for haying really are. We get statements of a dollar an hour but cannot find any such cases. Six to seven dollars a day were contended for and are still in reports and statements, but on following these up it is difficult to locate them. I found one case where sixty cents an hour was paid and for one or two days there were twelve or more hours put in. This is different, however, from a regular wage of seven dollars a day. By the day it seems to me that five dollars is about as high as we can state and many are working for less. Where relatives or acquaintances are helping the wages are not always the first factor, and these cases count quite a proportion.

In addition to this we find among these classes that hay is handled sometimes on the old-fashioned plan. That means getting in six to ten loads in a day instead of the usual three or four that we have had to do for some years with the ordinary hired man such as we have been employing. It is true that many farmers have still to depend on the usual hired man if he can be found, but sometimes he cannot be had and as intimated, friends sometimes come along and try to help out for the accommodation of the thing. It is these cases where men want to help and make the time as short as may be that things are put through more swiftly than the usual run of help can do. It is serious business all the same and is not for those physically unfit for a big job in a short time. Yet I think that farmers are getting out of the situation better than we thought possible at one time.

With the average dairy farmer in my section fairly supplied with hay and forage crops he next considers the feed situation. Some are already buying part of their feeds, not so much this time because they feel sure that feeds have reached their lowest, as to make sure of feeds at any price. Business men tell us that they are seeing no improvement in the railroad situation, in fact some say it seems to be getting worse. I do not know how much ground there is for the feeling but some who have a good chance to know say that it is the employees more than cars or rates that keep the roads throttled. There is no doubt that many of the employees want the government to operate the roads again and they are thought by some to be using tactics of obstruction and destruction to register their wishes. Of course that is not true in all cases but it looks as though there may be enough of it to cause apprehension on the part of business men and farmers.

Some of the recent declines in feeds, however, are significant and under other conditions dairymen might well be justified in delaying to buy some of their supplies. The G-L-F Exchange is certainly likely to be a factor in helping out local farmers in New York and nearby territory. None of the things that are being done can release the dairyman from looking ahead for his own safety and causing him to stock up on suppiles as soon as he can see a good reason for that course.

There is a real feeling that milk prices must be fairly good until spring at least. Should some condition cause an unprofitable price in the winter it will bring surprise to the average farmer. Help is not going to be flush even in winter from present prospects. I saw a small manufacturer yesterday who complained that his help is leaving him because big competitors pay more. A neighboring concern had just donated a week's pay extra and farmers are paying for harvesting more than he could pay. This is the first complaint that I have heard for the farmers on the wage scale. After harvesting farmers will seldom pay wages that will interfere with manufacturers getting help.

New York. H. H. LYON.

CONTENTS

Neighbors Costly Institutions - - - 189
Guernsey Products Won at National Milk and Cream Show - - - - - - 190
Hairy Vetch - - - - - - - 190
The Dairy Opimist - - - - - - 190
An Old-time Jersey Breeder - - 191
National Jersey Sale - - - - - 191
A Real Job for Agricultural Graduates - 192
Better Hay by the Simplest Way - - 193
Uncle Sam's Hired Men Who Serve You - 194
Pennsylvania Farmers Seek Accredited Herds - - - - - - - - 194
Thrift in Handling Straw - - - 195
Southern Wisconsin Guernsey Breeders Organize - - - - - - - 195
Grading Butter - - - - - - 196
Larger Dividends from Fresh Cows - - 197
Cow Testing Associations - - - 198
Idaho Short Course in Dairy Manufacture 199
High School Agriculture - - - - - 199
Bread and Milk - - - - - - 200
Bone Meal for Cows - - - - - - 200
Cows for Milk - - - - - - - 200
Education or Law - - - - - - 200
Forced Co-operation - - - - - - 200
An Extra Gallon of Gas or Oil - - - 200
Tool for Trimming Cows' Hoofs - - 201
The Tallest Silo - - - - - - - 201
Fall Plowing Clover for Sugar Beets - - 201
Cleaning Test Bottles - - - - - 201
Damages for Breachy Bull - - - 201
Wages in New York State - - - - 201
Decline in Grain Ends - - - - 202
Free Cheese and Butter at State Fair 202
Milk Making Efficiency - - - - 202
National Dairy Union - - - - - 202
Decline in Feeding Stuffs Gathers Momentum - - - - - - - - - 203
New York Butter Market - - - - 203
Dairy Exhibits at County Fairs - - 204
Dead Seed Ears are Expensive - - 204
A Progressive Convert - - - - - 205
Washington, D. C., Weekly News 206
Tillamook County Guernsey Club's Second Sale - - - - - - - - - 206
North Dakota's First Holstein Sale - 210
Beware of Conditioners - - - - 210
Accredited Herds in Wisconsin - - 210
Feeding the Dairy Calf for the Show Ring 212
Give Him a Chance - - - - - - 212
Junior Letters - - - - - - - 213
Handling Help on Dairy Farm - - 215
Search for Visitor Cows - - - - 215
Bulletins of the Week - - - - - 218
Veterinary—Return of Heat Period—Vaginitis—Mammitis - - - - - 219
Dimple Queen of Wakpala, Third in Class FF - - - - - - - - - 219
National Board of Farm Organizations to Meet at Columbus, Ohio - - - - 219
A Mayor's View of the Breeder - - 220
Dairying Thiry Years Ago - - - - 221
Fifteen Teams in Junior Judging Contests a National - - - - - - 222
Alsike Clover - - - - - - - - 224

Coming Events

Wisconsin State Fair, Milwaukee, Wis., August 30—September 4. O. F. Remey, Sec.
Iowa State Fair and Exposition, Des Moines, Ia., August 25—September 3. A. R. Cory, Secretary.
Ohio State Fair, Columbus, Ohio, August 30—September 4. E. V. Walborn, Secretary.
Minnesota State Fair, Hamline, Minn., September 4—11. T. H. Canfield, Secretary.
Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.
Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.
Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.
New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.
Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.
Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.
Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.
Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.
Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.
Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.
National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.
Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Decline in Grain Ends

Week Makes History in Grain Markets—Heavy Recent Decline Half Recovered

The week ending August 7 made history in the grain markets. On Monday, the decline that started some two weeks earlier ran its course, and a reaction began on Tuesday. The decline would have been phenomenal even during the war markets. Chicago December wheat which opened on July 15 at $2.72 to $2.75, sold at $2.06½ on Monday, August 2, a decline of approximately 67 cents. In the same period, Minneapolis December wheat declined 66 cents to $2.07, and Kansas City 63½ cents to $2.05½. Yet by Friday, August 6, Chicago had advanced to $2.48, Minneapolis to $2.42, and Kansas City to $2.36. Thus, approximately one-half of the decline was recovered in less than a week. In the corn market, the December future declined 17 cents in the two weeks' period, selling at $1.19½ on the 2nd, and reacting to $1.31¾ on the 6th.

During the big decline, there were many reports of a heavy movement of grain from first hands, and a desire on the part of country buyers to ship grain, particularly wheat, in large volume, and it was said that only the lack of cars prevented the terminal markets from being flooded. Unquestionably there was a free movement of wheat in the Southwest, particularly toward the Gulf ports. Yet, cash wheat in all markets commanded good premiums over the December future, which was hardly consistent with the reports of the heavy movement. In fact, the heavy movement never materialized at the terminal markets, and the premiums on cash wheat were well maintained.—U. S. Bureau of Markets.

Free Cheese and Butter at State Fair

Dairy and Food Commissioner Behind Novel Scheme to Advertise Wisconsin's Dairy Products

Of vital interest to every butter and cheese producer in Wisconsin is the plan of Dairy and Food Commissioner George J. Weigle, for advertising these products at the State Fair next month. Samples of Wisconsin butter and cheese donated for that purpose by manufacturers and dealers throughout the state are to be distributed free on four afternoons of Fair week, so that the people of the state may learn what two of their most important home products taste like and so that their interest in these products may be stimulated. Only high quality cheese and butter will be used in the demonstration.

"Many of our citizens are not cheese eaters," said Mr. Weigle when discussing his plans," "and by means of this demonstration we confidently expect to awaken the interest of such people and make consumers out of the majority of them. There are also many who do not realize how much better a really good, high scoring butter is than the product which they buy as just "butter". We will accept for distribution no cheese or butter which does not score 93 or better so the public will be assured of getting a sample of high grade goods."

The plans for this unusual advertising scheme are being worked out by Mr. Weigle in co-operation with the Wisconsin Dairy Council. There will be a booth in the dairy building attractively decorated in white and each afternoon from Tuesday to Friday between the hours of 2:00 and 5:00 o'clock white-capped and white-gowned young ladies will distribute to all comers dainty squares of cheese and butter served on crisp soda wafers. On one day Swiss cheese will be featured; on another day Brick will be given away; while on the other two days American cheese will be distributed. Samples of butter will be distributed on all four days. Each person receiving one of these samples will also be given a neat card prepared by the Dairy Council showing the high food values of butter and cheese as compared with other foods and containing arguments for the increased consumption of dairy products.

The Robt. A. Johnson Co. of Milwaukee has donated the supply of crackers for the entire demonstration, and already considerable amounts of cheese and butter have been promised. According to Mr. Weigle several concerns wanted to provide the entire lot of cheese and butter to be given away but this was not in accordance with the plans made. "We want these dairy products to be representative of the entire state," Mr. Weigle said, "and we wish every manufacturer of a high grade cheese or butter to have a chance to participate in what we feel is one of the biggest opportunities ever offered to boost the dairy industry of Wisconsin. We expect to give away at least 200 lbs. of butter and 500 lbs. of cheese and public credit will be given for every cheese and lot of butter accepted. So far there have been only three men to whom the matter has been presented who have not been eager to donate some of their product."

Anyone desiring to assist in this plan for increasing the consumption of Wisconsin's dairy products by contributing either cheese or butter should communicate with Geo. J. Weigle, Dairy and Food Commissioner, Madison, or should send the cheese or butter to the Dairy Building, State Fair Park, West Allis, Wis., in the same manner as an exhibit but plainly marked "For Free Distribution" so that it will not be confused with exhibits sent in for prize competition.

Milk Making Efficiency

One needs only to watch the milk coming into any milk plant in the city to tell which farms are run as a business or which farms let the business run them. Efficiency can and should be introduced into everything we do. There is no place where the results will show more clearly than on a farm. Let us look over a few of the chances for introducing efficiency.

First, we will turn to the stable. Has your stable at least one square foot of window glass per stanchion? Sunlight, you know, is the most efficient germ killer. Have you whitewashed the stable this year, especially the ceiling? Do you know that dust, spider webs, etc., will not collect on the ceiling half as quickly if it is whitewashed? Is the manure pile in front of the barn door placed so the cattle must walk through it and thus get their legs and udders dirty when coming into the stable? Does your milk can stand in the stable during milking where the milk may absorb the cowy and barny odors? Are you using a small-top milk pail? These are all minor details, you may say. Certainly they are. It is the small details combined which make the large results.

Are you efficient in your efforts at cooling the milk? How do you know unless you have a thermometor? Isn't it efficient to purchase and use a dollar thermometer and thereby save a couple of cans of milk from becoming sour or condemned?

Are you spending an extra half hour each day trying to cool your milk in a wash tub when that time can be saved by installing an efficient tank or aerator cooling system? Do you realize that an aerator will pay for itself in time saved in about a month and a half?

Let us look into the milk straining proposition. Are you still among that class of milk producers who think that by straining out the dirt from milk the quality is as good as it was before the dirt entered it? If you are, you are about one generation behind the times. Remove the cause and you will stop the effect. Make your efforts count. Clean the cow's udder and flanks with a damp cloth before milking and remove the greatest source of milk contamination.

Do you allow the milk to stand in the sun without protection for an hour or more, waiting for the milk hauler? Experiments have shown that milk will heat up only half as much when protected by a wet blanket or sack as when left exposed to the sun. —Flint, Michigan, Health Department.

National Dairy Union

This is to certify I have today (August 13, 1920) audited the books for George Caven, treasurer of the National Dairy Union, and find the receipts from July 1, 1920, to July 31, 1920, to be $128.67, and the amount paid out for which he holds vouchesr, the sum of $330.75, leaving a balance on hand August 1, 1920, of $4,193.14. F. P. COLLYER, Auditor.

Sale Announcements

Sept. 6—Holsteins. Dispersal of F. C. Brinton, Jr., Herd of Registered Holsteins at West Chester, Pa.
Sept. 8—Holsteins. E. D. Humphrey & Son, Geneva, Ohio.
Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Evansville, Wis., B. T. Green, Manager.
Sept. 10—Holsteins. Westham Dispersal Sale, Richmond, Virginia.
Sept. 13—Holsteins. Edward Wagner, Wheeling, West Virginia.
Sept. 13-14—Holseins. Dispersal Dr. R. Ivey, Glen F. Reed, and Dr. S. P. Scherer herds, Fishers, Indiana.
Sept. 18—Guernseys. New York State Geurnsey Sale, Albany, N. Y., L. F. Herrick, Sale Mgr., Worcester, Mass.
Sept. 21—Guernseys. Langwater Farms, North Easton, Mass. L. F. Herrick, Sale Manager, Worcester, Mass.
Sept. 25—Holsteins. John Stotzer herd, Suffield, Ohio.
Sept. 29—Ayrshires. Ayrshire Dispersion of C. H. Peverill of Waterloo, Ia., at Dairy Cattle Congress, Waterloo, Ia. Amos Burhans, Sale Mgr.
Sept. 30—Holsteins. Marathon Co. Second Semi-annual Sale at Wausau. Sale Mgr., R. A. Rietzow, Edgar, Wis.
Oct. 1-2—Holsteins. Vermont Breeders' Sale at Rutland, Vermont.
Oct. 5—Holsteins. Hall Bros., South Denver Station, Denver, Colo.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
Nov. 16-17—Holsteins. Second Iowa Breeders' Guaranty Sale at Waterloo, Ia. C. H. Jenness, Sec.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Price Decline in Feeding Stuffs Gathers Momentum

Break Largely Due to Improvement of Transportation Conditions and Augmented Supplies

The principal feeding stuffs recorded further declines during the week ending August 7. Wheat bran which sold July 31 in Minneapolis at $43 was quoted at $39 on August 7. Soft winter wheat bran was offered on the same date in Memphis at $43 with buyers holding off. Season bran was quoted at around $44 delivered Baltimore with country trade buying sparingly. Freer production of feeds and the arrival of delayed cars, augmenting supplies on the spot, caused lower prices in all markets. The transportation situation is reported as much improved. A spirit of conservatism still prevails in spite of rumors with reference to European complications.

Wheat and Mill Feeds.—The demand for standard middlings for hog feed is good. While the price of this commodity declined from $1 to $2 per ton, it is still selling at from $10 to $12 per ton over bran. Formerly its average price was slightly $2 higher than bran. Practically all markets report declines from $4 to $5 in the price of bran. Reductions of $2 per ton overnight were not unusual. The official price on soft western winter wheat bran is 100-lb. sacks in the Philadelphia market on August 4 was $53 to $53.50, on August 5, $51 to $51.50. Stocks of wheat feeds are good.

Buffalo and Minneapolis report large stocks of bran and fair stocks of middlings. Market is stagnant and no immediate improvement is expected. September shipment of middlings can be bought in many markets at $7 per ton less than track stuff.

Cotton Report Affects Meal Prices

Cottonseed meal.—A continued improvement in the condition of the cotton crop on July 25 resulted in a further easing off of prices. First shipments of new meal from central and southern Texas are expected the last part of this month. New crop 43 per cent meal is quoted at $53 f. o. b. Texas common points. Sterling exchange declined during the week to $3.55¼ and no resumption of export business to any extent is expected in the near future. Southern markets report stocks as good and the demand poor. Trading in new meal is said to be mostly of a speculative character. The movement was light.

Linseed Meal.—The price of linseed meal remained practically unchanged. Mills in Minneapolis territory report that they are receiving shipping instructions in large numbers since the date of rate increase was formally announced. The eastern demand is quiet. Shipping is fairly heavy on August contracts. Stocks in manufacturing centers are large. Northwestern mills report the market as dull and that the recent decline in the seed market has had a bearish effect on country trade which is holding off expecting lower prices.

Alfalfa Meal.—The demand for alfalfa meal is quiet. Kansas City reports that Colorado mills are quoting No. 1 meal at $34.50 f. o. b. Kansas City, which is a lower price than that quoted by the local mills. Offerings in the principal markets are liberal. In northeastern territory Colorado No. 1 meal is quoted around $45 prompt shipment delivered Philadelphia rate points, and August—September shipment at $43.50. The movement is heavy.

Gluten Feed.—Gluten feed manufacturers report prices unchanged from last week and that plants are being operated full capacity. Orders are said to have slackened up a little. Supplies of corn seem to be more easily obtainable. Stocks of corn in this country reported at 7,029,000 bushels compared to 3,200,000 bushels a year ago. Offerings for August shipment are good, stocks and movement fair.

Hominy Feed.—Chicago jobbers quote hominy feed at $60 f. o. b. Chicago, with small demand from country points. Kansas City and a few other markets report lower quotations than prevailed last week. but the larger mills advise that the strength in cash corn necessitated a slight advance. They state, however, that the demand is mostly for immediate shipment, as buyers seem anxious to avoid payment of higher freight rates due on or about August 26.

Other Feeds.—Los Angeles wires that beet pulp for 10 days shipment is quoted at $55. Price of the imported material in eastern markets declined from $1 to $2 per ton. Mixed feed in northeastern markets is easier. The price is about $66 in San Francisco, Los Angeles, and Seattle, and the supply appears equal to the demand. Barley feed is quoted at $60 in Denver and rolled barley ot $56 in Los Angeles.—U. S. Bureau of Markets.



MARTHA'S MAJESTY, JERSEY HEIFER OWNED BY J. E. SIMMONS, JR., ILLINOIS
Starting her test at 22 months of age, she produced in 10 months 6,209 lbs. milk, 374.4 lbs. fat. She is a granddaughter of Royal Majesty.

New York Butter Market

NEW YORK CITY, AUGUST 17:—As is usual at this time of the year, the quality of butter being received at the present time is, on the whole, poorer than that received during the past two or three months. That condition is resulting in an under supply of high quality butter and an over supply of undergrades. In consequence, quotations on fancy butter are gradually advancing and the range of quotations on undergrades is correspondingly widening. At the present time, there is a strong active demand for extras and higher scoring butter and but medium demand for all lower scoring butter. That condition almost invariably prevails during the month of August and continues until cooler weather in the fall when production gradually begins to increase because of the usual freshening of cows in early fall. Production has held up remarkably well this summer and, taking all things into consideration, buying has continued active the greater part of the summer. Had it not been for the influx of the large quantity of foreign butter at one time, an exceptionally active market would have obtained throughout the summer.

During the past week or ten days, the market has gradually been gaining in strength. At one time, about two weeks ago, it seemed that a marked decline of butter prices must result. However, out-of-town buyers became active purchasers of large quantities of high quality butter and, as a result, a greater confidence in the market quickly became apparent. Since one week ago Monday, the total increase in the quotation on extras has been 1½c. The advance, however, is no indicator of the difference in feeling in the market. From extreme pessimism, the feeling has become one of great optimism.

One week ago Saturday, extras were quoted at 54c. On the following Monday, the out-of-town buyers began to arrive and local buyers became active. On that day, the quotation advanced ¼@½c. There was no change on Tuesday, but on Wednesday there were additional gains of ¾@½c. The market was firm and active throughout the balance of the week, but there was no change in quotation except an advance of ¼c on Friday. Yesterday, the week opened with considerable activity and the price again advanced ¼c. Today has seen no change in general conditions, nor in prices, and the market can be said to be firm and active. It invariably pleases receivers of butter when price advances are fairly constant but small. It indicates that no unusual factors are at work but that the advances are due to healthy normal conditions. It always reduces nervousness to the minimum with the result that jobbers become large buyers as they feel little risk in accumulating considerable stocks of butter. Established quotations are: Extras (92 score), 55¼@55½c; higher scoring than extras (93 score or higher), 56@56½c: firsts (90—91 score), 53@54¾c; firsts (88—89 score), 51@52½c; and, seconds (83—87 score), 48½@50c.

Immediately after the large shipment of Danish butter was received, reports from Denmark indicated that practically no more butter would be received from that country. However, small shipments are being received each week. While such shipments have little influence on the market, they are factors which must be considered. It is expected that an additional 4,600 casks of Danish butter will reach this port this week. No additional shipments of Holland butter have been reported but some Argentine butter is said to be on the water headed for this port at present. While Canadian butter is a factor which has little influence on this market, considerable of it is being received each week. It is very doubtful if it becomes a factor of any consequence as the greater part of the Canadian output is being consumed at home and in Great Britain.

W. B. LIVERANCE.

"No Flies On Me"

Twenty-Four Hour Protection

COWS will not produce large quantities of milk unless they are allowed to feed in peace and contentment. Flies torture them and when cows are not protected from these great enemies, they cannot yield the maximum quantity of good milk and butterfat. A single spraying of

KOW-PROTECTO
KEEPS FLIES OFF

not only at milking time, but for 24 hours. By spraying just once a day, you save a lot of time; protect the vitality of your cows and increase your profits through the bigger flow of milk. It is absolutely harmless and cannot taint milk or blister skin, yet flies cannot live where this liquid is exposed or applied, in pens, stables, yards, manure pits, etc.

25 to 35 Per Cent More Milk

Get Our Money Back Guaranteed Trial Offer-Prepaid.

Limited time offer. Send $1.25 for prepaid 1-2 gallon, enough to protect two cows 10 weeks. Or we will prepay one gallon for $2.00. State P. O. and Express Address.

Money Back If Not Satisfied

Agricultural Chemical Co.
Dept. C.
946 W. North Ave., Chicago, Ill.

Every Farmer needs them. Double Clevis for 2-3-4-5 or 6 horses on wagons or farm machinery. All singletrees and eveners always swing clear. All horses pull equal. Just the thing when driving a slow, tired or lazy horse. Easier pulling. Easier driving. At dealers or from the factory.

CLEMENS CLEVIS

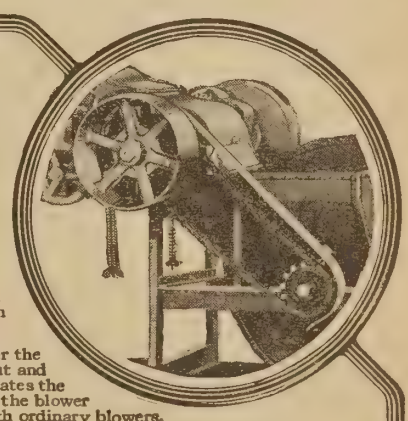
CLEMENS CLEVIS CO., Inc.
419 Palace Bldg. Minneapolis, Minn.

A New Fly Repellant For Stock

Safe, sure economical—non-poisonous, no odor, easily applied. Made at home from commonly used household supplies. Also safe, sure fly poison absolutely guaranteed or your money back. Send $1.00 for both recipes.

George E. Hardin, Lock Box 6, Weiser, Idaho

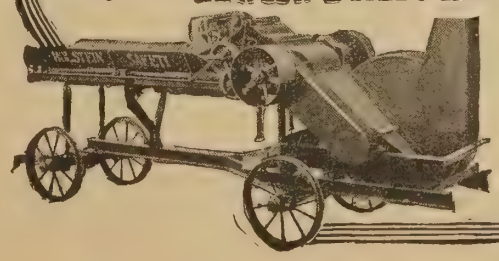
Direct Driven Blower



In the Holstein method of driving, the sprocket is connected direct to the pulley, securing the advantage of uninterrupted drive of blower should cutter head be thrown out of action by safety-stop device.

Hence the blower continues to operate after the knives stop, thoroughly emptying the spout and fan chamber of all cut silage. This eliminates the annoyance of opening up and cleaning out the blower before starting up again as is necessary with ordinary blowers.

There Are Many Other Reasons
Why the HOLSTEIN SAFETY is Superior



Free Booklet

For the information of progressive farmers we have published an interesting booklet on modern ensilage cutting devices. It's yours for the asking. Send for it today.

The Meili-Blumberg Company
Dept. B New Holstein, Wis.



JUMBO FARM ENGINES

Jumbo Oversize Valves Reduce Carbon

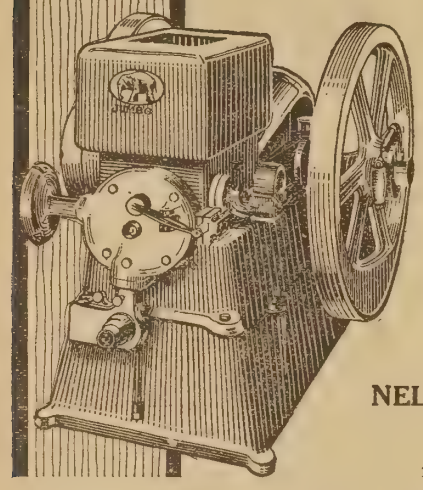
Carbon forms when the cylinder walls and head of an engine become hot enough to burn the lubricating oil.

Jumbo Engines have oversize exhaust valves—burned gas escapes quickly and less heat is absorbed by the metal, thus helping the adequate Jumbo cooling system to prevent overheating and the resulting carbon formation.

Unusually large intake valves insure a full charge of fuel.

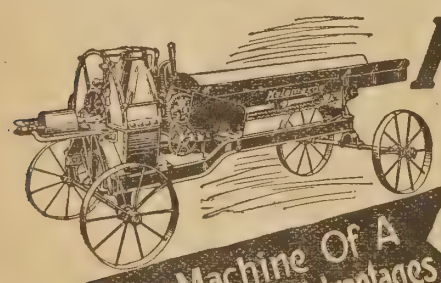
More than 100,000 Jumbo Engines are in use—they *must* give satisfaction. Sold through dealers who make it their business to help you get unusual service.

Positive ignition — Webster Oscillating Magneto—and a Special Mixer, insuring uniform fuel, make it easy to start Jumbo Engines quickly in any weather.



The Jumbo Farm Engine book will mean money to you. Write for it.

NELSON BROTHERS COMPANY
Saginaw, Michigan
Engines, Feed Mills, Pump Jacks
Also Makers of the Famous Jumbo Motor Trucks



Kalamazoo CUTTERS
Order Yours NOW

The Machine Of A Dozen Distinct Advantages

Delays won't mix with ensilage to make profit. It don't pay to depend on railroads, community cutters, or custom fillers—Silo your crop quickly—when it's exactly right.

Get a Kalamazoo on Easy Terms—Quick Shipment

An Iron-clad Patented Center Shear Cut puts the Kalamazoo 15 years ahead of all others; prevents vibration, equally distributes cutting strain, requires less sharpening and adjusting, runs with less power. We have a size to fit your need.

Write for catalog of Kalamazoo Cutters and Wood Stave Silos, the pioneers of America.
We ship quick.

Kalamazoo Tank & Silo Co.
Dept. 133-C Kalamazoo, Mich.

2024-C

A Postal Brings You The Big Kalamazoo Catalogs



Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

GUERNSEY BREEDER'S JOURNAL

Indespensable toall interested in Guernseys or improving their herds of dairy stock. Well gotten up. Full of pertinent facts. Giving latest records of production. With Hoard's Dairyman 1 year, $2.75.

Send for sample copy.

GUERNSEY BREEDER'S JOURNAL
Peterboro, New Hampshire.

WITTE LEVER CONTROL
"Arm Swing" Drag Saw



You have **Absolute Control** of the Saw at all times.

Push on lever to start saw—**Pull** to stop.
Arm Swing motion as in hand sawing.
Low Prices. Big 3-Color Folder FREE.

WITTE ENGINE WORKS
Kansas City, Mo. 1646 Oakland Ave.
Pittsburgh, Pa. 1646 Empire Bldg.

Dairy Exhibits at County Fairs

THE greatest need of the dairy industry is consistent advertising and publicity. As a result two customers will be created where there is now but one, and each will be made to feel that dairy products are indispensable foods—nourishing, healthful, and economical. This will mean better health, increased efficiency, and a saving of money on the part of the consumer, and increased profits for those engaged in this industry.

There are many ways of advertising, one of which is by exhibiting at local, county, state, and national fairs. Every man engaged in the dairy industry should see to it that the products of this vital industry are advertised continually before the public. The public should be continually reminded of the importance and economy of dairy products. Every opportunity should be used by dairymen and representatives of dairymen to call the public's attention to these fundamental foods.

The accompanying picture illustrates a suggestive dairy booth for fairs which can be quickly and conveniently prepared. The National Dairy Council, 910 So. Michigan Ave., Chicago, is prepared to supply the material for the booth shown herewith to any persons desiring it.

County Agents will find this material ideal for their use. The exhibit is unusually attractive. All the posters, except two, are in colors. The National Dairy Council supplies everything except the foods shown on the table.

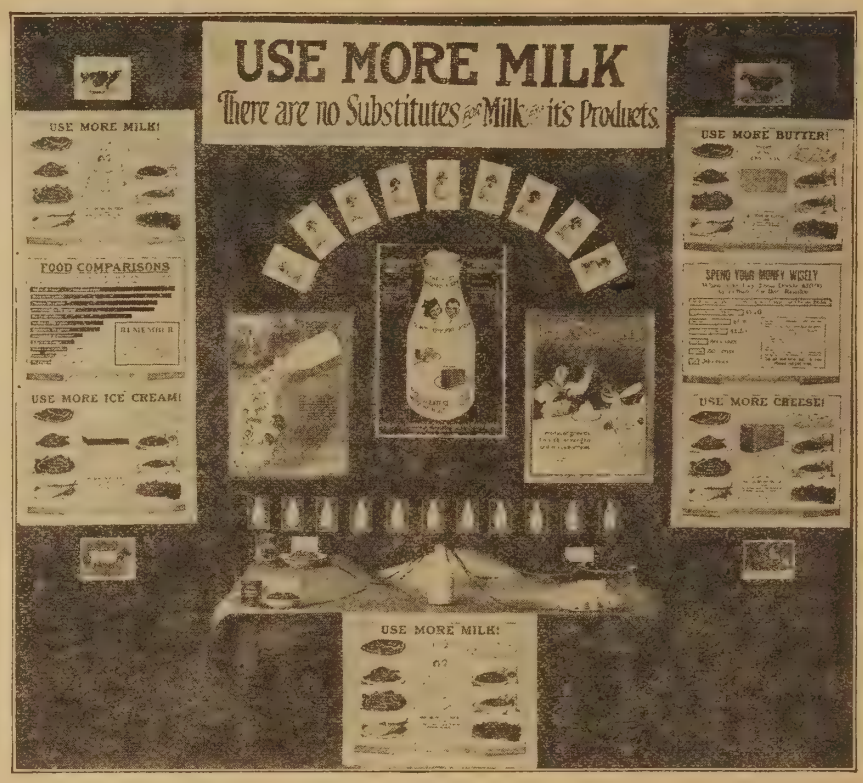
The exhibit is simple and easy to handle. It can be made elaborate if desired, however. A counter can be arranged, and other features can be added, but the idea of the National Dairy Council is to feature a simple, inexpensive, yet attractive booth which can be prepared and used in tents, sheds, or outdoors if necessary, as well as at regular fairs. A few pins, small nails or thumb-tacks, together with a background, is all that is required in order to get this booth under way. The exhibit requires a space 10 feet wide. The height can be varied, depending on conditions.

This material is now all ready for use. It will be sent to any one requesting the same, upon receipt of $2 to partially cover cost of preparation, wrapping, and postage.

If you are interested in seeing dairy products advertised, in seeing that the public is educated to a greater use of your products, get busy and get this exhibit now or have your county agent get it and display it at all fairs and conventions in your county. It can be ordered through your State Dairy Council or direct from the National.

Begin today to think seriously of your business. Advertising is essential. The facts about milk and its products must be told to the public or your harvest will be light. Support your State Dairy Council.

NATIONAL DAIRY COUNCIL.



Dead Seed Ears Are Expensive

HOARD'S DAIRYMAN:—The corn crop of 1921 will be determined in no small measure by the care used in harvesting and storing the seed ears to be selected from the crop that is now standing in the fields. Although few farmers realize fully what a losing proposition it is to plant untested corn, fewer yet realize how important to good germination is the care that seed corn should receive. It is not unusual in driving through the country to see a row or two of seed corn hanging under the eaves on the outside of some barn or other building. Safe it is, to be sure, from rats and mice, but these constitute by no means the only menace to corn that is being saved for seed. Injury done by freezing when the ear contains more than about 14 per cent of moisture renders it powerless to bring forth of its kind. The life germ contained in each fertile kernel will retain its vitality under considerable extremes of temperature if excess moisture is eliminated, but to leave seed ears exposed on the side of a building is to subject them to conditions which must result necessarily in disappointing germination.

Dead seed ears constitute the most expensive corn that is handled on our farms. A single ear means a loss of several bushels of corn the succeeding season. To secure good

seed corn that will give a high germinating test it is necessary that proper care be given it from the very moment that it is selected in the field. This is something that experienced seed corn men are not slow to emphasize. Ordinarily it is not unusual for farmers to go through their fields and select good ears, bring them in from the field and spread them out in some place to await a convenient season for putting them away, either on the racks or hangers. Such a method will almost always, according to one man long in the business, result in corn of uncertain germinating power. Freshly snapped corn contains a great amount of moisture. At the moment it is broken from the stalk its life processes cease. Elimination, by artificial means, of the moisture which Nature no longer is able to remove through the ripening process must begin at once. To this end it should be put up to dry the same day that it is picked. Even though spread out on the floor for a few days, this initial drying will not go on fast enough to give the best results.

It is not alone necessary to eliminate surplus moisture out seed corn must be kept in its dry condition until planting time. This is essential to high germination. When corn is thoroughly dry, freezing will not make any material difference in its power to germinate but corn that is left in the crib, or that is subject to the dampness incident to fall or winter weather, will suffer severely in case a sudden cold snap catches it before it is thoroughly cured. With cribbed corn it is almost certain to happen several times during the winter that a sudden drop in temperature will follow a period of warmish weather with high humidity. The cribbed article takes on a certain amount of moisture and the freeze up that follows takes toll of the life germ in many kernels simply because of the excess moisture present. Repeated tests have shown that cribbed corn is a most uncertain article for seed purposes.

In most climates a special drying room or house will well repay for the cost it may necessitate. Where this is not practical an unused room in the house, or even the attic, may be called into service. Storage of this kind is objectionable, however, because of the extra labor, the litter and the mice which will be drawn into the house by the presence of so much corn. A special mouse-proof room in the barn is the best and least expensive solution in many cases. Any room of this sort can be made mouse-proof by lining it with a cheap grade of wire screening such as is used on windows and doors. A small stove for use as the season advances to keep up the drying during periods of damp, wet weather is necesssary. The risk of fire should be held in mind. For this reason the separate, isolated structure is to be preferred.

The means of racking seed corn are various. There is little choice between them so far as effectiveness is concerned. The chief thing is to keep the ears sufficiently separated to permit good circulation of air on all sides and to minimize labor both in the way of storing the ears and in the matter of making the germinating tests. The several forms of wire drying racks are effective, but where several hundred of them have to be purchased the cost figures to a snug sum. Posts and 2x4's, well studded with large finishing nails or nails from which the heads have been clipped, can be made to answer at slight expense. When testing large numbers of ears, the large "pigeon hole" rack —either of wood or wire—will no doubt lend itself to rapidity of work and accuracy. With them there is little extra handling and but slight chance of confusion.

Seed corn will dry out very largely without artificial heat if ventilation is good. Late in the fall it becomes necessary to resort to a low fire, particularly in the northern states where the autumn is hardly long enough to complete the drying. With a variable climate—wet one week and cold the next—the low fire is also necessary much of the winter. A temperature of 40 degrees in the drying room or house is sufficient to ward off danger.

Illinois. ORIN CROOKER.

A Progressive Convert

"Monroe County (Wis.) has a farmer who less than a year ago ridiculed scientific farming and dairying and called the agricultural graduate a stand-up-collar dude. Four months ago this man joined a cow testing association and to date has replaced fifteen of his seventeen scrub cows with high grades and a registered bull with a pedigree a yard long. Just a matter of letting in the light."

Lye solution will kill mites in the hen house, and sodium fluorid gets the lice.

You Need This Equipment Now More Than Ever Before



JOHN DEERE MOLINE, ILL. THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Select the type of John Deere Elevator you require and order now. The shortage of labor has caused a shortage of labor-saving equipment. To delay ordering may mean disappointment. See your John Deere dealer at your first opportunity. He will help you in selecting the equipment and size to meet your needs.

Also write for our big free elevator booklet that fully illustrates and describes the full line of John Deere Elevators. Write to John Deere, Moline, Ill., and ask for Booklet EL-514.

You are confronted with labor-shortage. Labor that you can get is high-priced. Labor-saving equipment right now is more important to you than ever before. It will help solve your harvest-time problem.

The John Deere Elevator is labor- and time-saving equipment that you need this harvest. It elevates faster than the biggest thresher can deliver the grain. It does away with the extra shovelers ordinarily required to empty the grain wagons.

The John Deere Elevator elevates faster than the biggest corn-husking crew can bring in the corn. It saves hours of time for corn-picking because it does away with scooping entirely.

Besides, this elevator saves all that back-breaking work of shoveling.

The John Deere Elevator elevates the biggest load in from three to five minutes, delivering all of the grain or corn where you want it—no waste. A team of horses or a three to six-horse-power farm engine furnishes ample power.

JOHN DEERE GRAIN ELEVATORS

FURNISHED IN TWO TYPES

JOHN DEERE PORTABLE STEEL ELEVATOR—for farm use where elevator must be moved from one crib or bin to another. Steel construction—will not warp or decay. Each section trussed and thoroughly braced—no sagging.

Head and boot shafts run on roller bearings. Light draft and quiet running. Special overhead dump stops automatically and lowers instantly by gravity; controlled by friction brake.

JOHN DEERE INSIDE CUP ELEVATOR—the type for permanent installation in building where entire grain crop is stored. Easy to install—always ready for use. Roller bearings lighten the draft. Delivers grain to any point in building. Will last for years.

JOHN DEERE

JOHN DEERE MOLINE, ILL.

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS



Drain Before Winter Rains

Get ready for ditching and terracing your farm NOW. Don't delay. Water standing on your land during the winter will smother the soil, kills big crop chances for next year. You can solve the open ditch or tile ditch problem **at low cost.** You can make sure that your land will be in finest condition for early spring work. Seed will germinate much quicker and be healthier n well-drained soil. Write for new book that tells how to do it with

Model 20

THE Martin O.D.&G.CO. PATENTED **FARM DITCHER Terracer & Grader**

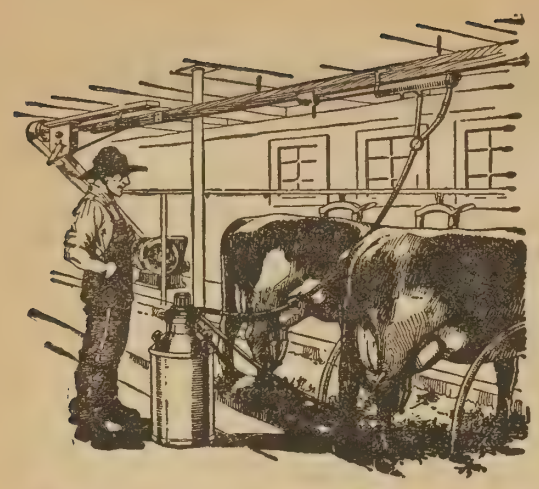
All-steel, reversible, lasts a lifetime. Cuts V-shaped farm ditch, open drain, tile or irrigation, down to 4 ft. deep; cleans old ditches; grades roads; builds farm terraces, dikes and levees; works in any soil, wet or dry. 2, 4 and 6 horse sizes; large size fine for tractor. Does work of 100 men. Solves all dirt-moving problems. Write and find out how to make big crops sure. New, free book on drainage, irrigation and terracing. Address

SOLD ON 10 DAYS TRIAL

OWENSBORO DITCHER & GRADER CO., Inc.
Box 812 OWENSBORO, KENTUCKY

Keep Tab on Your Cows!

Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. **Hoard's Dairyman, Fort Atkinson, Wis.**



Power Milker

Electric Motor or Gas Engine Drive

For herds of twelve cows and up. A simple, superior milker at *a great saving in price.* The greatest simplicity, the greatest ease of operation, the greatest durability—and still, an outfit for sixteen cows costs only

$210

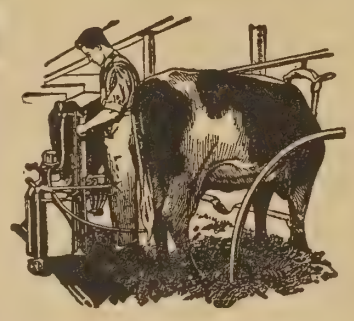
PAGE MILKER

Simple—Durable—Economical

No pipes, no tanks, no pulsators. No expensive installation. Milk flows into valveless glass chamber *in plain sight;* you see just how the cows are milking. Simple teat cups—no rubber lining. Patented air control gives perfect natural release to cows' teats, at last! No special pails. You milk into your own ordinary milk can. The Page is the only milker with these and other features of simplicity, economy and easy operation.

Hand Milker $123

At last a milker for the farmer with six to twelve cows. *Run by hand.* One-fourth the work of hand milking. A child can operate it. Does the work on small herds just as the most expensive power outfit does on very large herds. A superior milker, too. *No installation expense.* Even if you need engine power, here is a chance for you to find out at small cost what machine milking can do for you.



Try It!

Send for free catalog and information about the Page Milker. Get the *facts* about all milking machines; how to get the most milking service at least cost. *Arrange to have a demonstration on your own herd*—try it yourself—you can try a Page Hand Power milker without installation—see what the Page Milker can do in solving your labor problems and taking the drudgery out of milking. No extra cost of any kind. Write for free catalog and full information today.

BURTON PAGE CO., Dept. C962 9 South Clinton St., Chicago, Ill.



A Water System *Without a Tank*

Draw water direct from the well or other source of supply at a turn of the faucet. Open the faucet and the pump delivers a steady stream of water *under ample pressure.* Close the faucet and the pump stops. All done by the

WESTCO

Tankless Water System

—the lowest priced, automatic, power water system. Has no storage tank—no tank to leak, freeze, rot, rust, overflow or collapse. No stale, stagnant water. The WESTCO Pump has only one moving part—no belts, no valves, no gears, no springs, no oiling.

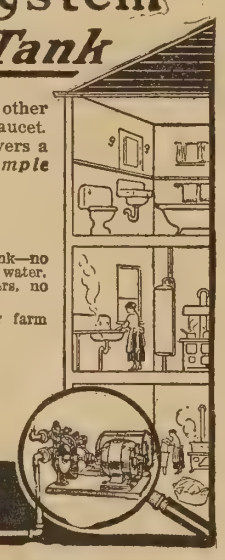
The WESTCO System can be run off the regular electric light circuit or farm lighting plant. Thousands are in daily, successful operation.

Send today for our bulletin C-4, which tells the story.

WESTERN PUMP COMPANY

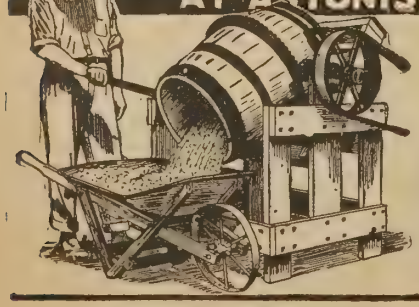
DAVENPORT, IA. MOLINE, ILL.

Branch offices and distributors in principal cities



There's a Westco pump for every purpose

CONTRACTORS MIXERS AT ASTONISHINGLY LOW PRICES



Perfection

BARREL TYPE CONCRETE MIXERS

With Steel Armored Oak Drums and Massive Semi-Steel Gears.

Lowest-Priced "High Speed" Mixers in the World.

Machine mixed concrete 50 per cent stronger, several times as fast and easier than hand mixing.

WE SAVE YOU 20 PER CENT on concrete tools, block, post, tile or brick machines. Ask about our larger mixers at correspondingly low prices. Write or wire

Contractors' Equipment Co. Keokuk, Iowa

380 PAGE BOOK FREE with each outfit. Tells how to build your silos, barns, floors, tanks, manure pits, ice houses, etc.



When Writing to Advertisers, Mention Hoard's Dairyman

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, AUGUST 16:—The decision of the Interstate Commerce Commission to grant the rate increase asked for by the express companies, has its angle which hits the dairy business. The recent freight increase decision hit the dairy industry much harder. Both decisions raised the question very sharply as to the wisdom of present methods of fixing milk and cream prices on the basis of shipper paying transportaion charges. The express rate increase authorized by the I. C. C. on August 14, amounts to 12½ per cent. This, it is estimated, will increase express companies revenues by 35½ million dollars. The I. C. C. specifically states that in making this award it has not taken into account the recent wage increase granted express company employees. This presages another rate increase in the near future.

⚜

Figures are available this week at the office of the Dairy Division giving the total production of renovated buttre in the United States for the year ending June 30, 1920. The figures, compared with 1919 figures are of unusual interest. The 1919-20 total of renovated butter, 12 months ending June 30, was 9,641,675 lbs., a decrease of 7,026,780 lbs. below the totals of the 12 months ending June 30, 1919. This is a decrease of 58 per cent. The production of renovated butter in this country has shown a steady decline for several years, but this year's reduction is much greater than heretofore. It indicates a trend in the industry which is of economic value, for the large amounts of renovated butter made and sold in past years were an index of the large amount of butter which for various reasons reached market in an unsalable condition, whether one cause or another, and therefore had to be reclaimed. The decreasing amount seems to indicate two things: first, better methods in both farm and creamery methods—chiefly farm, probably; and second, the extension of the more economic practice of the sale of cream at the dairy to central gathering stations, rather than the home manufacture of butter, with all its attendant liabilities of fluctuating quality and non-standard packages.

⚜

T. E. McLaughlin, manager for the Maryland—Virginia Milk Producers' Association, reports the work of completing the marketing organization here as going steadily forward, with little difficulty except the delay incident to covering the big territory. There are no further indications of activity in the threatened anti-trust suit, a local newspaper putting it this way, "If the department of justice has taken any cognizance of this complaint, their activities are shrouded in secrecy."

⚜

G. P. Warber, secretary for the National Milk Producers' Federation, is back in Washington, after a trip through the Central South visiting the milk producers in Tennessee and Kentucky. He is now making plans for a meeting of the board of directors of the National Association, to be held at Columbus, Ohio, at the time of the National Board of Farm Organizations marketing conference there the first days in September. Mr. Warber is watching closely the New Orleans case against the milk producers there charged with a conspiracy in restraint of trade, and is also in touch with the situation which has developed here by the activity of the Washington city milk distributors petition to the attorney general for action against the Maryland—Virginia producers. Mr. Warber expects that the Milk Producers' Federation will take an active part this winter in legislation affecting co-operative marketing, and various other legislation especially affecting dairy products.

⚜

The National Society of Record Associations' activity in support of the McFadden Rural Credits bill and demanding that the special committee authorized by the last Congress, to hold a judicial investigation of this subject, be appointed at once and get busy, is having a tremendous result. The Washington offices of Senator Grona, chairman of the senate committee on agriculture, and of Louis T. McFadden, chairman of the House committee on banking and currency, are being flooded with letters from dairy and beef cattle breeders, sheep, swine, and horse owners throughout the nation, asking for action. Adequate credits is recognized as one of the chief obstacles to the more rapid development of pure-bred animal industries, and these association leaders have apparently struck a popular chord in urging their members to bring pressure to bear on Congress. The committee authorized, is to consist of 12 persons, three from each of the four committees primarily interested, House and Senate committees on agriculture, and on banking and currency.

⚜

The Market Reporter indicates butter markets generally weak, with fancy butter short of market demands and trading heaviest in under grades. This with indications of a shortage of storage space, and storage movement totaling an increase in storage during the week of upwards of 3,800,000 lbs., easily explains the market condition. One Danish shipment of 1,900 casks is reported, with rumors of another large shipment enroute, still officially unconfirmed.

Tillamook County Guernsey Club's Second Sale

The eighteen head of imported Guernsey heifers which Tillamook County, Oregon, was alloted from the Peer Importation bought by the Oregon State Guernsey Club were dispersed at public sale in Tillamook City, July 9th. The average price per head for the females was $562.-89. The highest priced animal was Imp. Country Laura II, sold for $1150 to I. G. Lance. The next highest price was $750 paid by Chas. McKillip for Imp. Goosdove's Jewel.

Two Tillamook bred bulls sold, the highest priced one being Ra's Ultra King of Tillamook consigned by R. C. Jones and going to Wm. Glick for $475. This is a yearling bull whose 6 nearest dams average 500 lbs. butterfat.

Five of the purchasers obtained their first Guernseys at this sale.

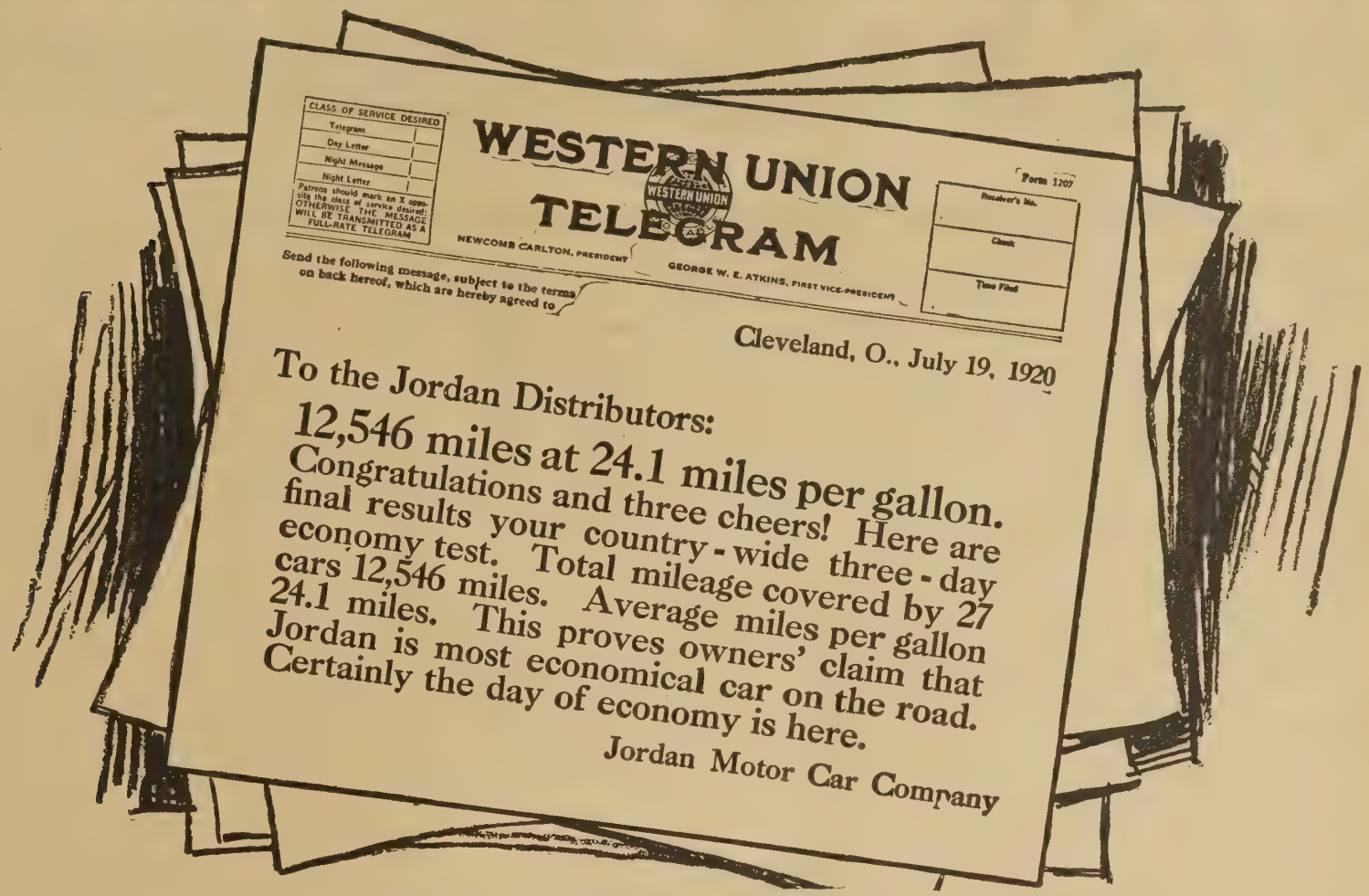
Oregon. ROY C. JONES.

Jersey Cattle Notes

For week ending August 13:

Number of animals registered: Bulls, 160; cows, 490; total, 650. Number of transfers recorded: Bulls, 226; cows, 614; total, 840.

Jordan Smashes all Economy Records in Nation-wide Test—



12,546 Miles at 24.1 Miles Per Gallon

Twenty-seven stock Jordan cars in twenty-seven different sections of the United States, traveled 12,546 miles averaging 24.1 miles per gallon in a big country-wide three-day economy test.

The run was staged by Jordan distributors under the supervision of official observers, chosen by the local newspapers.

Here is how it came about. Jordan built the lightest car on the road for its wheelbase—2800 pounds—superbly balanced—1400 pounds forward —1400 pounds astern.

Jordan owners at once began making startling claims of economy.

Jordan dealers were incredulous at first. The Jordan factory waited. The owners furnished more proof.

Then the run was organized. Note in the figures listed below, taken from telegrams, the striking similarity of averages under favorable road conditions. The day of economy has dawned at last.

The hour of the light-weight, compact, high-grade, good-looking, perfectly-balanced, rattle-proof, comfortable and economical motor car is here.

Economy with distinction—describes the Jordan perfectly. That's what lifts this car with a personality so far above the mass.

CITIES	Average Miles Per Gallon	Miles Covered
Boston, Mass.	22.6	450.9
New York, N. Y.	32.92	460.9
New York, N. Y.	27.45	452.
Philadelphia, Pa.	23.7	450.
Rochester, N. Y.	26.11	450.
Raleigh, N. C.	17.4	458.6
Jacksonville, Fla.	21.9	301.
Pittsburgh, Pa.	22.0	464.
Cleveland, Ohio	25.13	459.6
Toledo, Ohio	22.8	406.
Cincinnati, Ohio	23.56	455.
Atlanta, Ga.	26.2	437.8
Detroit, Mich.	24.8	450.3
Chicago, Ill.	26.87	450.
Milwaukee, Wis.	24.68	450.
St. Louis, Mo.	24.1	450.
Memphis, Tenn.	23.1	453.5
Shreveport, La.	21.0	451.
Minneapolis, Minn.	31.11	453.
Des Moines, Iowa	20.93	450.6
Kansas City, Mo.	23.95	544.8
Omaha, Neb.	24.09	489.2
Tulsa, Okla.	23.6	462.
Dallas, Texas	27.8	274.3
Denver, Colo.	22.4	498.
Los Angeles, Cal.	23.78	502.
San Francisco, Cal.	27.66	464.
Portland, Ore.	22.23	458.

Every Jordan owner averaging 20 miles or better per gallon is eligible for membership in the JORDAN TWENTY MILES TO THE GALLON CLUB. Write for your beautiful gold membership insignia

JORDAN MOTOR CAR CO., INC., *Cleveland, Ohio*

JORDAN

UNIVERSAL—
Used For Official Tests o



The Perfect Teat Cup

The Universal Natural Milker has the Perfect Teat Cup. It milks just like the calf with an intermittent suction-release-massage action. It is easily and quickly assembled and taken apart without tools, and is extremely easy to keep clean. The rubber liner is absolutely seamless—cannot form pockets to hold dirt and bacteria. It can be easily cleaned without removing it from the shell. At the top of the teat cup is a rubber ring—soft, like the calf's nose, leaving no cold metal part to touch the cow.

The Alternating Action



The famous Universal alternating action, produced by the positive and uniform action of the pulsator, milks two teats while two are resting and being gently massaged. This action means a cleaner, faster job of milking with less vacuum, less power and with absolutely no strain on the cow.



READ THE LETTER sen
of Rosendale, Wis., noted
ning, pure-bred Holstein catt
who bred and raised Colant
only cow to ever hold all w
other champions have been d
The dairy world have come
formance from their herd.

With the Gilletts, milk production i
They have studied every phase o
management and breeding. No one
knows better than they, how to make
a good cow produce her utmost.

Note their statement:—"We think
the Universal is the greatest milker on
the market. We have reason to think
so."

Gillett Brothers speak from experience. Twice a day—every day in the year—their famous pure-bred herd is milked with the

Univer
natural r

Actual trial has convinced them that on officia
milking, the Universal gives them consistently be
skillful hand milking. That is why they trust the
why they run all of their official tests with this f

Increased milk flow, cleaner milk, bigger p
are the things the Universal has given Gillett
very things this efficient, reliable milker will bri

It will most certainly be to your advantage to learn th
your dealer at once, or sit down and drop us a request fo
Mechanical Milking". Both contain information of inesti

The Universal Milking Machine Co.,

The natural milker
In Finest Purebred Herds

...s by Gillett Brothers
...reeders of prize-win-
These are the men
... 4th's Johanna, the
...rld's records. Many
...eloped on their farm.
...o expect noted per-

...cientific to the last degree.

Following is the tribute of one dairy authority of national repute (name sent on request), to the integrity and skill of Gillett Bros., as breeders of good dairy cattle and general good will:

"Gillett Bros. of Rosendale, Wis., are among the leading Holstein breeders in Wisconsin. W. J. Gillett, the father, was unusually active, not only in the Holstein affairs of Wisconsin, but of the nation. He has the abiding confidence of all breeders.

"We are safe in saying that no man has any better standing among Holstein breeders than Mr. Gillett. He bred good stock and dealt honestly with all people. He bred Colantha 4th's Johanna and she was for a number of years the champion dairy cow of the world. She was clearly the product of his skill and breeding as he had owned her ancestors for several generations back.

"His boys are now in active charge of this splendid breeding establishment and they are doing very good work."



March 30, 1920.

The Universal Milking Machine Co.,
Columbus, Ohio.

Gentlemen:

You will no doubt be interested to learn that we have just completed several records of note, all of which were made with the UNIVERSAL.

We have completed a record of 27.03 lbs. butter from 630.30 lbs. milk with 95.50 lbs. milk in one day on the pure-bred Holstein-Friesian, Johanna Decia No. 217925. This cow was run on hand milking for several days and was making but 23 lbs. of butter and milking around 65 lbs. milk when we decided to put the machine on her. The results are as mentioned above. An interesting feature of the record is that the member of our firm that was milking Decia by hand holds the honor of making the state milk record of 120.5 lbs. milk in one day, 833.9 lbs. in seven days. It shows that it was the machine and not poor hand milking.

Since Decia made her record we have milked all our cows by machine, and her daughter, Johanna Decia 2d at four years just made 26.08 lbs. of butter from 640.00 lbs. of milk with 95.30 lbs. her best day. Johanna Crescent at three years just made 25.64 lbs. and Johanna Paulinda 2d at 26 months made 21.45 lbs. of butter from 400.80 lbs. of milk.

We are milking all our cows with the machine and we are pleased to say the results are more than expected.

We have been looking into the machine matter for several years and after visiting herds where the different makes were used we decided on the UNIVERSAL.

We have had no trouble of any kind and every cow is in as good condition as when we first put the machine on her.

We think the UNIVERSAL is the greatest Milker on the market. We have reason to think so.

Very sincerely yours,
W. J. GILLETT & SON,
By Forrest W. Gillett.



W. J. GILLETT,
Developed the Johanna and Colantha families. Bred Colantha 4th's Johanna, the only cow to hold all world's records.



ELTON S. GILLETT,
Has fed and milked many champions including Johanna Darkness with a record of 120.5 lbs. of milk in 1 day.



FORREST W. GILLETT,
Has milked cows ofover 100-106 lbs. per day by hand. Uses and praises the Universal Natural Milker.

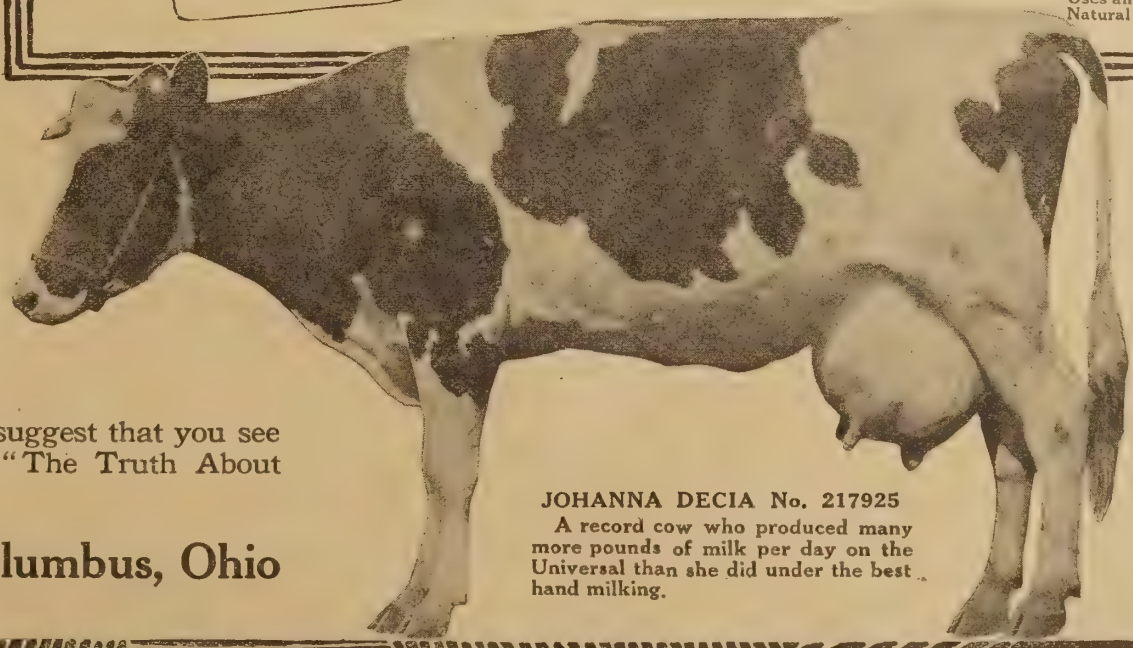
...ral
...ilker

...ests as well as for every day
...r results than even the most
...best cows to the Universal—
...ous natural-action machine.

...*fits with less labor*—these
...others. And these are the
...to *you* in *your* dairy.

...ll facts about the Universal. We suggest that you see
...ur catalog and the new booklet, "The Truth About
...ble value to every dairyman.

...38 West Mound St., Columbus, Ohio



JOHANNA DECIA No. 217925
A record cow who produced many more pounds of milk per day on the Universal than she did under the best hand milking.

North Dakota's First Holstein Sale

The North Dakota Holstein-Friesian Breeders' Association held their first sale at Valley City, June 29th. Those in attendance participated in a banquet the evening before that was replete with good strong after-dinner talks.

Mr. T. X. Calnan, county agent of Barnes County, held down the position of toastmaster and performed his task in a very capable manner.

John Christiansen, a pioneer Holstein breeder of the state and president of the North Dakota Breeding Circuit at New Salem, gave a very interesting talk, telling of his thirty odd years as a farmer-dairyman in the country west of one hundred. The speaker stated that he and his neighbors had always been dependent upon the cow as a source of a livelihood, but that their real progress dated from the time that they finally made arrangements to purchase a carload of pure-bred Holsteins, which was distributed, a few to each one. From this small beginning the female increase was retained until the present time their herds are all practically pure-breds. The Holstein cow has enabled them to improve their buildings and the system of farming they have followed has so improved their farms that their community has become an outstanding one in the land of hard wheat.

Ex-president Taft, who chanced to be in the city, was the next speaker. He stated that he was not a breeder of Holsteins, but could qualify as a one time owner, thanks to the generosity of Uncle Isaac Stephenson, who insisted on his taking, as a White House boarder, Pauline Wayne, "a cow of royal lineage". Pauline did not produce in keeping with what might be expected of an animal so royally bred, but we were glad to hear that in the hands of a more recent owner Pauline has proved to be a good cow and an excellent producer.

President Aitkin of the National Association was then introduced and gave the principal address of the evening. He excused the seeming failure of Pauline to live up to what might be expected of her by stating it was possible that the atmosphere at the seat of the national government was not conducive to twenty-four hours of labor per day, and that Pauline, like many great men sent there, seemed to slow up and did not accomplish as much while there, as they did before they went or after they came away. President Aitkin gave an unusually strong talk, full of good thoughts that everyone could reflect on. He certainly hit from the shoulder when he said that the producer of dairy products has no right to complain or ask for cost of production plus, unless he is using the most efficient and economical machine that can be used, which means the Holstein cow.

Dairy Commissioner Osterhous followed, telling of the great strides made by the state in dairying in the last year and of his belief that the Holsteins were the logical cattle for dairy purposes in North Dakota. He then explained a recent law passed with the idea of furthering dairying, by which farmers are aided in getting long time money to finance the purchase of dairy cattle.

Although the hour was growing late, those present would not allow the meeting to close without a few words from the live wire Minnesota Secretary, Bertram D. Scott. Scott responded in his usual apt manner with words of encouragement to the members.

As to the Sale

North Dakota, having very few breeders with surplus cattle, found it a rather difficult matter to get enough consignments to stage a sale. Fifty-one head, which included three small calves, sold for $19,320, an average of $380 per head, which is very creditable considering that four figures was reached in only one instance, that being made on a double granddaughter of Sir P. O. M. 38th from the consignment of Wallace Manikowske. Floyd Caldwell of Minnesota purchased her for $1,000. The highest priced bull was a son of Sir P. O. M. 41st, that fell to the bid of Edwin Thorn, North Dakota. Thorn sure can consider himself lucky for it is not often that one has an opportunity to buy a son of 41st for that price.

While many of the cattle could have sold for considerable more money and still have been good buys, the prices received were quite satisfactory. All the cattle except five head, that went to Minnesota, remained in the state.

The sale was under the management of Everson, Scott read the pedigrees, and Mack, Krause, and Northridge did the selling.

North Dakota. A. C. GOLDTRAP.

Beware of Conditioners

The New York State College of Agriculture issues a statement with reference to stock conditioners in which it states: 'They may contain some beneficial ingredients but proportions and value in any case are a gamble. Most of the so-called stock conditioners and patent feeds, like patent medicines, contain a little of some good drug that is applicable to and beneficial for some conditions. In the general purchase and administration of these feeds, the owners of animals pay excessive prices for an uncertainty, for as a rule they know nothing about the drugs they are buying or the effect upon their animals, say the men at the state veterinary college at Cornell.

"A recent chemical analysis of several different brands of patent stock conditioners showed them to be composed largely of common salt, baking soda, Glauber's salts, copperas, charcoal, sulphur, gound barks, screenings, and a small amount of powered drugs. These are all relatively cheap substances, yet many men are engaged every year in trying to convince farmers they can treat their stock properly with these preparations rather than employ competent medical service for them."

Accredited Herds in Wisconsin

According to Dr. J. S. Healy of the Department of Agriculture, Wisconsin has passed the 300 mark in the number of Federal-State Accredited Herds and from the twelfth place in relative position among the states in January has advanced to third place at the end of July with 302 fully accredited herds. During the month of July 162 herds containing 3,590 cattle were tested; 82 of these herds passed one test without reactors and 39 herds became fully accredited.

MARKETS

CHICAGO, Aug. 19—Butter—Unchanged; receipts, 6,907 tubs; creamery extras, 54@55c; firsts, 48@53c; seconds, 44@47c; standards, 53c.

Cheese—Unchanged.

Eggs—Unchanged; receipts, 7,080 cases.

MILWAUKEE, Aug. 19—Butter—Creamery, tubs, 55c; prints, 56c; extra firsts, 53@54c; firsts, 50@51c; No. 1 packing stock, 34@35c; No. 2 do, 20@30c.

Eggs—Fresh firsts, recandled for city trade, 46@47c; current receipts, 44@45c; checks, 30@33c; dirties, 34@35c.

Cheese—Twins, 23¼c; Daisies, 24c; Longhorns, 25½c; fancy Brick, 22½c; Limburger, new, 1 lb., 27c; Limburger, new, 2 lbs., 26c.

NEW YORK, Aug. 19—Butter—Firm; receipts, 4,000 tubs; creamery, higher than extras, 56½57c; creamery, extras (92 score), 56c; creamery, firsts (88 to 91 score), 51@55½c.

Eggs—Firm; receipts, 11,751 cases; fresh gathered, extra firsts, 54@56c; fresh gathered, firsts, 49@53c.

Cheese—Steady; receipts, 5,446 boxes; state, whole milk, flats, current make, white and colored, specials, 27½@28½c; do, average run, 26@26½c; state, whole milk, Twins, current make, specials, 27@27½c; do, average run, 25½@26½c.

"BIG ROCK COUNTY FAIR"

Annual Holstein Sale and Cattle Show

EVANSVILLE, WISCONSIN

Friday, Sept. 10, 1920

50 Registered Holsteins 50

Consigned by 16 Different Breeders

These animals have been selected for their outstanding individuality and breeding, to represent the breeders of this community. Write

BENJ. T. GREEN, Manager

MACK, Auctioneer. L. P. EAGER, Cashier
F. B. GREEN in the Box

"QUALITY THRU CO-OPERATION"

AUCTION SALE To be held by Col. D. L. Perry, in the beautiful little town of Harlem, Ga., Sept. 4, 1920

A golden opportunity is offered to the Dairymen and Farmers of Georgia to buy Dairy cattle from the best herds of pure-bred Holsteins, Guernseys and Jerseys in the state.

On September 4, Col. Perry will sell, rain or shine, 13 head Registered Guernseys, dairy type and bred; 1 Registered Guernsey bull from the best blood lines; 7 pure-bred Holstein cows giving good quantity milk and bred; 1 Registered Holstein bull, Segis strain; 23 head Registered and high grade Jerseys, cows and heifers from the very best blood lines and bred to a Registered Bull.

SALE TO BE HELD AT DR. GEO. P. KING'S PLACE, HARLEM, GA.
FULMER & KING, CONSIGNORS.

"Try It Out Yourself"

says the Good Judge



And you will find how much more satisfaction a little of this Real Tobacco gives you than you ever got from a big chew of the ordinary kind.

The good, rich, real tobacco taste lasts so long you don't need a fresh chew nearly as often. So it costs you less.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

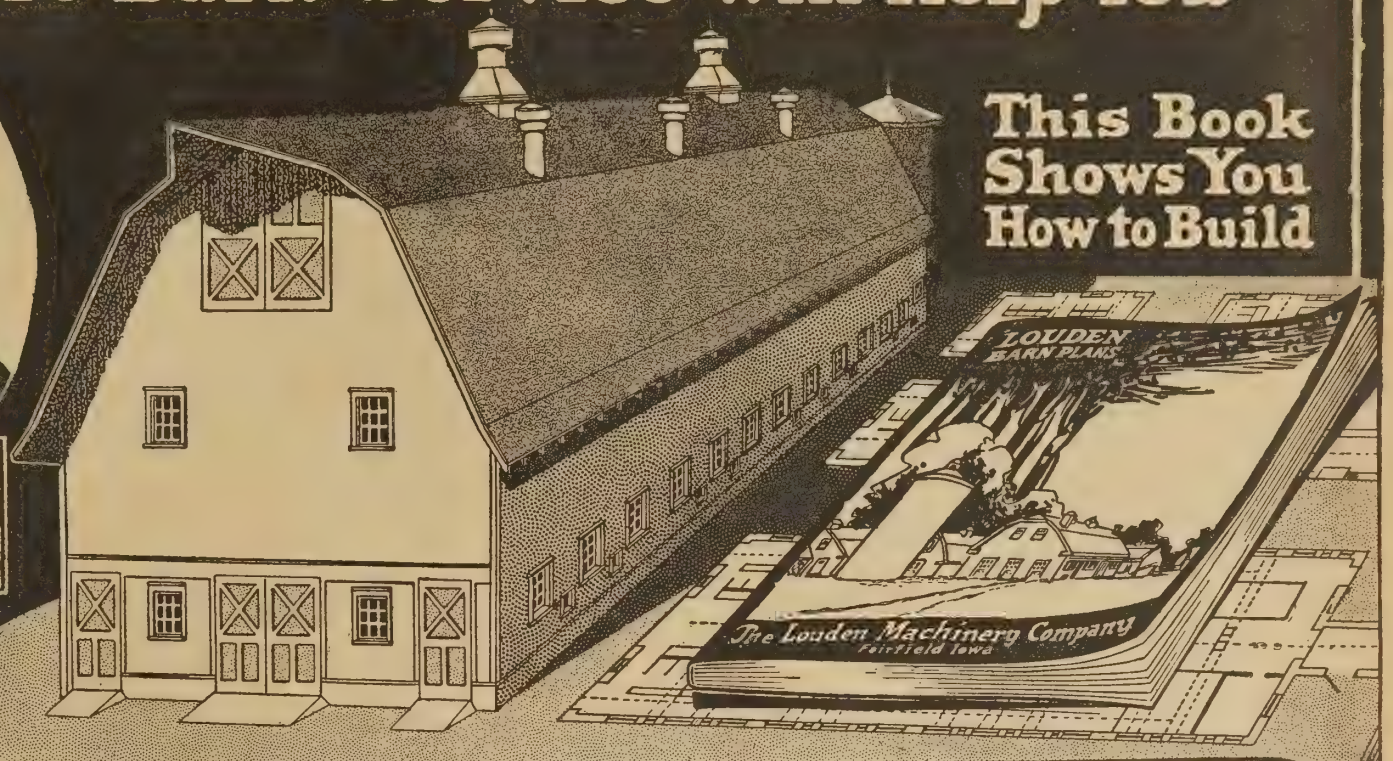
When Writing to Advertisers, Mention Hoard's Dairyman

LOUDEN

Expert Barn Service Will Help You



WM. LOUDEN
Over fifty years' experience in planning and equipping barns for greater comfort, convenience, economy and profit.



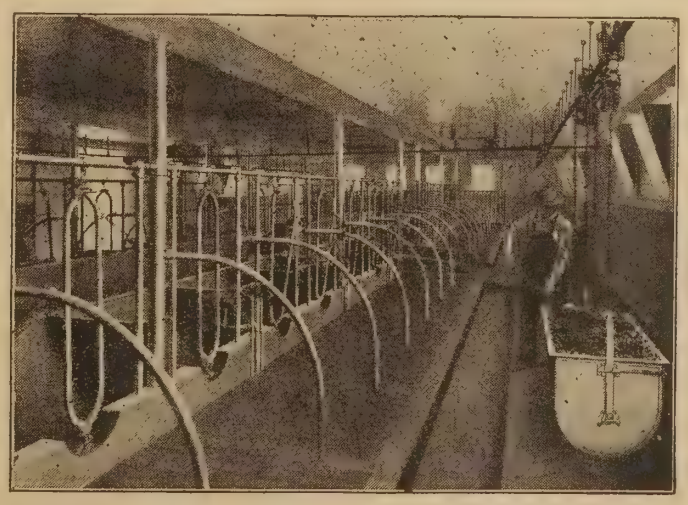
This Book Shows You How to Build

Save Time, Material and Labor in Barn Building

BY CAREFULLY planning your barn building in advance you can keep down the cost. It often prevents 15% to 20% waste in lumber and a considerable loss of time and labor through misunderstandings or changes in plans after construction has started. It insures you the best possible arrangement for convenience in barn work and comfort of live stock, maximum storing and housing capacity for the money you spend, proper regard for light, ventilation, drainage, etc. Louden Expert Barn Designers and Louden Barn Plan Book take care of all these matters for you without cost or obligation on your part. Simply write us what kind of barn you have in mind, number and kind of stock you wish to house, and about when you expect to build. We will send you preliminary blueprints and suggestions to meet your individual requirements, and mail you postpaid the Louden Barn Plan Book. This book is a complete practical guide on barn building. Contains hundreds of detail drawings, also many complete barns of various styles and sizes. And after you have carefully considered the plan of constructing your barn don't overlook the labor-saving equipment that will save you valuable time in doing your daily chores.

Louden Carriers

Barn cleaning and stock feeding require less than half the usual time and labor with Louden Litter and Louden Feed Carriers. One man can really do the work of two or three. Or a boy can do the work just as well as a man. Besides this, you save many a dollar by preventing loss of manure value and waste of feed. Louden Carriers are noted for superior simplicity, safety, strength, easy operation, big capacity and durability. Carriers in daily use for 20 years are still giving good service, with little or no repairs. They can be installed in any barn without expert help. Built in different styles to meet any requirements. The biggest labor saver on any farm.



Louden Water Bowls

There is not an equipment on your farm which brings bigger returns on its cost than you can get from Louden Water Bowls. First of all, it saves all the labor of watering—cows water themselves day or night, whenever they feel the need of it. But even bigger returns come from the increased milk yield of cows. One prominent dairyman writes us that his cows are actually giving 40% more milk since he installed Louden Water Bowls. This shows that many cows really do not get all the water they need for maximum milk yield—especially in winter and after feeding time at night.

Louden Water Bowls are automatic, free from trouble-making attachments—no collar connections, no supporting lever, no set screws; can be lifted off, sterilized and reset in less than a minute. Easily installed in any barn.

Louden Equipment Helps Solve Your Labor Problem

It does in the barn what your modern crop-making machinery does in the field—enables one man to do the work of several men. You can tell Louden Equipment from any other by its plain, smooth, sturdy construction, freedom from sharp corners and trouble-making attachments, its special features of comfort and safety for live stock. Built to fit any barn old or new; easily installed; as profitable in the smallest as in the largest barns.

224-Page Catalog Shows Full Louden Line—Stalls and Stanchions; Litter, Feed and Milk Can Carriers; Bull, Cow, Calf and Hog Pens; Water Bowls, Manger Divisions, Hay Unloading Tools, Power Hoists, Barn and Garage Door Hangers, Cupolas, Ventilators—**"Everything for the Barn."** Sent postpaid; no charge or obligation.

THE LOUDEN MACHINERY COMPANY

1261 Court Street **Fairfield, Iowa**

THE LOUDEN MACHINERY CO.
1261 Court Street, Fairfield, Iowa

Please send, postpaid, without charge or obligation, the books checked below:

☐ Louden Barn Plans ☐ Louden Illustrated Catalog

I expect to build (remodel) a barn about (date).....

.....for.....cows.....horses.

Am interested in:.....Stalls.....Stanchions

.....Carriers.....Water Bowls.....Animal Pens

.....Hay Tools.

Name.....

Post Office.....State.....

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Feeding the Dairy Calf for the Show Ring

At least half of the fun in raising a dairy calf, a pig, a garden, or an acre of corn consists in exhibiting at the fair and other shows. At least, that is the way we have it figured out. It always seems that the job is only half done if the products we raise are not put on exhibit for others to see what we have been doing during the summer months. We have often remarked before that this is one of the best ways to learn how to do a thing better than the other fellow. Because it is here that the experiences of all those engaged in a similar work are brought together to benefit all of us who care to take advantage of them.

If Jimmie Greene carried away the blue ribbon on his calf there must have been a reason for it and you are in a position while you are at the fair or show to find out what Jimmie did to make his calf so much better than yours. Of course, somebody is going to win the prize—it may be you and we hope that it is, but there is always the chance that the other fellow has something better than yours. But this is all a part of the game and it would not be very much fun in exhibiting unless we had a good, strong class to compete with. The more the merrier and we believe that Hoard's Dairyman Juniors feel the same as we do about it. A good exhibitor is a good winner and he is equally a good loser. We have great faith in our Juniors that just because they did not win a prize last year, they have not given up the idea of exhibiting a g a i n t h i s year. Persistance always makes one successful.

But we started to tell you something about fitting your calf for the show ring. Perhaps you have already been doing some of these things. Undoubtedly the older ones have because they have had this experience before. But even for them we trust that there are some things in this story which will be of benefit.

As you stroll about the stock barns on the fair grounds you often wonder why it is that so many fine cattle and calves are brought together at a place of this kind and one who is not deeply interested is inclined to think that these fine animals "just grew that way" and that they always look like this. But this is a mistake, as every experienced man or boy will tell you who has had anything to do with showing stock. A calf needs to be fitted up for the show and he also needs to know good manners. This always means a good deal of work on the part of the exhibitor and only patience will accomplish some of these things.

How to Dress for the Show

Remember the dress that your calf wears into the ring on the day he is judged will depend entirely upon you and we hope that you are doing some of these things right now and perhaps have been doing them all summer.

Every junior dairyman certainly knows that a dairy calf should not be too fat. Because dairy cattle are not naturally fat cattle and a calf that is covered with a layer of fat cannot possibly show off its dairy conformation to advantage and dairy conformation is a big point in the eyes of the judge when he has a ring full of calves to pass on. A dairy calf should be in what we call good, healthy looking condition. To fatten for the show ring is a big mistake in this class of calves. A calf of quality in good condition of flesh always shows off its dairy features better than one that is too fat.

A little oil meal fed each day helps to make the coat sleek and glossy. While this is not necessary, a glossy coat of hair adds to the general appearance of the calf. A good daily brushing with a stiff brush is one of the best things that we know of to clean the hide of a calf and to make the hair lie flat. Note that we said daily brushing. To brush occasionally may help, but it is better to make it a daily habit and I am sure you will be rewarded in a better appearance of your calf. Brushing keeps the skin clean and keeps the oil glands open.

Just before going to the show, say a few days before you expect to take your calf, it will be a good plan to give it a thorough washing with warm, soapy water. You must be careful in doing this that the calf does not take cold. We would suggest that you select a nice warm day when you can do the job outside so that the sun will help to dry him off quickly. Give him a good, thorough scrubbing and be especially careful about removing all manure stains. After washing, dry him as thoroughly as you can by rubbing with a good, clean cloth. After drying it will be a good plan to keep him blanketed. In fact, it is a good plan to keep a fine calf blanketed all during the summer months in order to keep off flies and to keep the hair in good condition. A little bluing in the water will make the white patches on your calf still whiter and we would advise this, especially when the switch of the tail is being washed out. Every calf has a right to go into the show ring with a nice, wavy switch on its tail. It is an easy matter to do this, too. After the switch has been washed and pretty well dried it can be braided tightly and then left in braids even up to the time the calf is to go into the ring, when it can be then unbraided and brushed out. This will certainly add to its appearance.

Some juniors have tried clipping on their calves to improve appearances. This is all right if you know how to do it or if you can get someone to help who does understand the business well. It is a pretty good plan to clip the tail from the switch clear up to the head. It is also a good plan in calf clipping to practice clipping the hair from underneath the belly so that the milk veins will show up better because the judge likes to look for all the possibilities in a dairy calf that go to make a good cow. Whenever clipping is practiced it should be done in such a way that the clipped surface blends very nicely with the unclipped surface so that one can hardly tell where the one leaves off and the other begins. The long hair around the top of the head, especially around the horns and the back of the neck, may also be clipped to good advantage. Clipping is not a difficult matter and with a little experience it is easy to put on a finished appearance.

If your calf has horns these should receive some attention also. All scratches in them should be removed with a little careful scraping done with the edge of a piece of glass. This will remove all of them very nicely. After that a little fine pumice stone mixed with sweet oil may be used to polish them. This can be done by putting the pumice stone on a woolen cloth and rubbing it thoroughly over the horns until they are smooth and shiny.

The fellow who expects to carry off the blue ribbon is going to do all of these things and, of course, if you are going to give him the competition he deserves you will have to do likewise.



DRESSED FOR JUDGING AND PICTURES

Teaching to Lead

Did it ever occur to you juniors that a calf has to be broken to do certain things? Just about the same as we break a colt in order to make a good horse out of him. No calf is fit to go to a show unless he knows how to behave and leading is one of the very important points. A calf that does not lead well is too nervous to show off to advantage and the judge gets disgusted and, of course, you are liable not to stand much of a chance. We hope that your calf leads well right now, but, if he does not, give him some more lessons; patience will work wonders with him.

Then, we would suggest that you use a neatly made halter instead of a rope around the neck. The halter is a part of the calf's dress and it looks much better than a rope around the neck and a calf certainly leads better with a halter than any other way. Be sure that the halter is neat and clean and that it fits the calf's head well. A halter made out of big, coarse straps or rope is too clumsy for a delicate head like a dairy calf has.

Teaching to Stand

A calf that will not stand properly when brought before the judge has not been taught all he should know. In other words, it is a part of your business to teach your calf how to pose when being looked at. He should learn to stand well straightened out with each one of his four legs properly supporting a corner of his body. There is no better way to bring out the conformation of a calf than to teach him to stand properly. Standing on three legs while he partially rests the fourth one is bad, especially when the judge is anywhere near. Now, of course, you cannot expect to teach a calf to lead and how to stand all in one lesson. This will take practice before you are satisfied and it will be interesting for you to compare your calf with those of the other juniors when you have them in the ring together. A good exhibitor considers these points very important and he works persistently and patiently to teach the calf these habits.

Then, there should be a place also for you to stand when your calf is standing in the ring. We think it is better for you to stand at the calf's head and just a little to the right. Then you can take hold of the halter just beneath the lower jaw and in this way you can keep his head held up a little which also helps him to take the proper pose.

While this story was being written, we happened to run across this little poem. It is so good and it seems so applicable to every junior who is going to exhibit that we want you all to read it. I am sure that there is a splendid lesson in it for all of us and the boy or girl who ever won anything or who ever did things worth while is the one referred to in these lines:

Thinking

When you think you're beaten, you are,
  When you think you dare not, you don't.
When you'd like to win, but think you can't
  It is a sure thing that you won't.

When you think that you'll lose, you're lost;
  For out in the world you'll find
Success begins with a man's will—
  It's all in the state of your mind.

When you think you're outclassed you are.
  You have got to think big to rise;
You have to feel sure of yourself
  Before you can win a great prize.

Life's battle does not always go
  To the stronger or faster man;
But soon or late the man who wins
  Is the the one who thinks he can.

Give Him a Chance

No matter how interested we are in our fine dairy herds and swine, the faithful horse who supplies the power on a majority of the farms must come in for his share of consideration demanded by all farm stock. Although the farm tractor is occupying a great deal of attention today, it has not yet put the farm horse out of business. So we argue that from the standpoint of good horses on our farms, we cannot afford to sacrifice the kind of consideration which will develop them into the most efficient animals. And the time to begin to do

STATE FAIR
MILWAUKEE
Aug. 30, 31; Sept. 1, 2, 3, 4
Six Days; Six Nights

50 CENTS DAY OR NIGHT

Automobiles Free

SPECIAL RATES ALL RAILWAYS

BEST IN THE LAND

of Cattle, Horses, Sheep, Swine, Poultry; Dairy, Agricultural, Horticultural, Apiary Products; Women's Work, School Work, and THE YEAR'S ROUND-UP of Badger State Boys' and Girls' Club Activities.

EVERY DAY!
ETHEL DARE
GIRL WITH A SPARTAN HEART, Changes Planes 4,000 Feet From Earth!
—ALSO—
MARVEL OF ALL AGES, THE DAREDEVIL SUPREME
LOCKLEAR
in Plane Changes.
(Watch for Dates)

SIX NIGHTS!
WORLD'S GREATEST SHOW
Presenting the
$20,000 Fireworks Spectacle
"SIEGE OF THE DARDANELLES"
500-Foot Stage, 1,000 People, and 25 STAR CIRCUS AND VAUDEVILLE ACTS on two mammoth stages.

MUSIC EVERYWHERE!
Famous Million Dollar Band, with Six Soloists; Eight Other Bands and Orchestras Day and Night.

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150,000 square feet of exhibits and demonstrations, including all 1921 models.

HARNESS RACING!
MONDAY, WEDNESDAY, THURSDAY, FRIDAY—First Race at 1 P. M.

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TUESDAY AND SATURDAY at 2 P. M.—America's and Europe's greatest dirt track drivers and cars.

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STOCK PAVILION
MONDAY, TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY NIGHTS, at 8 o'clock.

50 ACRES OF TRACTORS AND OTHER FARM MACHINERY.

SPECIAL EXHIBITS
U. S. Government, State Marketing, Wisconsin Department of Agriculture, Household, New Era and a score of other added exhibits.

SPECIAL SHOWS
THE C. T. KENNEDY 10-ACRE EXPOSITION.

THE MUDLESS AND DUSTLESS FAIR.
MONDAY, AUG. 30—All Wisconsin School Children Free.

THE WISCONSIN STATE FAIR "Educates, Inspires, Entertains on Biggest Possible Scale."

Alfalfa Hay
We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.
W. A. FERSON HAY CO.
511 Reliance Bldg., Kansas City, Mo.

this is when they are colts, weaned, and about to go through the first winter.

Every boy on the farm is anxious for the time to come when he can break the colt, and the better the colt the more anxious he becomes. This is quite natural, for everyone enjoys either riding or driving a spirited animal, one of the kind that it really requires a man to drive. On many of the farms there will be colts to winter. What kind of horses they will make has to quite an extent already been determined. If the sire is a pure-bred of some one of the standard draft breeds and the mothers are either pure-breds or good grade draft mares, the chances are that you have the makings of some fine farm animals.

But there remains a very important thing for you to attend to, and the time will soon be at hand when it should be one of your regular chores. That colt will need to be fed generously this winter with the right kind of feed if he is to grow as rapidly as you are expecting him to. This first winter is perhaps the most critical one for him. He should be kept growing, developing muscle and bone, and in order to do this he must get the right kind of feed and plenty of it. Just keep this in mind. There will never come another time during the colt's life when it will be as easy as it will be this winter to get lots of growth. Furthermore, that growth can be secured at less cost, as a general thing, during the first year than at any other time.

Good, clean clover and timothy hay is very palatable to them and is a roughage to promote growth. Alfalfa hay mixed with good timothy hay would also make a very desirable feed. It would probably be much better to feed alfalfa in this way in order to eliminate the possibilities of kidney and bowel disorders which it often causes in horses. Both of these forages furnish a goodly supply of protein. Colts should be given only such amounts as they will eat up readily. Allowing them to gorge themselves is not only expensive but injurious as well. Watch the colt's appetite and regulate his feed accordingly. That will be the best rule you can follow. But in doing this look out for the greedy fellow. He always eats too much.

Of course a good feeder will supply a grain ration as well. If you want something that the colt will relish and that will make a good balanced ration for him, make one out of oats, corn, and bran; 4 parts of oats, 1 part of corn, and 1 part of bran is considered very good. A little oil meal could safely be added to this. A little silage fed occasionally might add variety to the ration, but as a single roughage to be fed continuously for any great length of time should be considered bad practice. Corn ensilage is not a forage for horses. Some one may ask how much of the grain ration should be fed at one time. Anywhere from one-half to one pound of grain per 100 pounds of live weight will give you some idea along this line.

And in addition to all of this there are still some very important things to attend to if you want to make a horse out of your colt this winter. Plenty of good, fresh water and salt are very essential. Both should always be at hand. An animal never should be caused to suffer for the lack of either. Nor is this all. No colt would do well if cooped up in a dirty, poorly ventilated stable. They need plenty of fresh air and don't forget the exercise. Don't be afraid of cold weather. It won't hurt him as long as it is not too stormy. His exercise should be regular, otherwise digestive disorders are liable to set in. Allow them to run out every day, when it is not too stormy or the cold too severe.

And don't forget his daily bath. A daily grooming is a good conditioner. Besides, if you make this a practice, you can teach him some very valuable lessons and stable manners which every horse must learn. And it's easier to do this when he is still young. Look out for lice, too. Colts often become infested with these pests, especially if kept in dirty quarters. And even sometimes with the best of care it happens. If your colt persists in rubbing himself and his hair becomes patchy give him a thorough washing with the proper coal tar disinfectants.

Do everything for his comfort, and remember that you are working with him at the most critical time of his life. If he is stunted through abuse and lack of proper feeding and care, you can just bet your last dollar that when you come to break him you'll not have the horse you might have had. If he is a good draft colt he should weigh from 1,000 to 1,200 lbs. at one year of age.

Junior Letters

Hoard's Dairyman Juniors:—I live on a 160-acre farm. I have one heifer which will freshen this fall. I belong to the junior pig club and have one pig which will weigh 105 pounds. She is about 4 months old. Last year I had a pig and at the end of six months she weighed 210 pounds. I am ten years old I have cut all the wheat and do most all the mowing. We have 100 acres of hay, 10 acres of wheat, 5 acres of barley, and 10 acres of oats. I wish that some of the juniors would write to me. My address is R. F. D. No. 44, Weedsport, N. Y. John H. Corfield.

Hoard's Dairyman Juniors:—All of our cows are freshened now. This year we got fourteen heifers and four bulls. They are all nearly white. This year we were pretty lucky. In my last letter I told you I had sixteen rabbits and one pig, but I sold them all. For my pig I got $30.19 and for my rabbits I got $9.75. With the money I bought some clothes and six guinea pigs. Now I have 29 of them. They are all coming fine and now I bought another pig for five dollars and have ten dollars left.

We are just at cutting our barley now. We will have to stack most of our grain this year because we have our barn just about full of hay.

If any of the juniors want to write to me my address is R. F. D. No. 5, Box 40, Appleton, Wis. Herbert Ziegler.

Hoard's Dairyman Juniors:—We started harvesting four days ago. We have about 135 acres to cut yet. I have two calves about 5 months old. I feed them skimmilk night and morning and they run in the pasture during the day. I paid $25 apiece for them and $5 for feed. We milk six cows and feed the skimmilk to the calves. As the separator does not skim clean the calves get most of the cream. We have a No. 6 separator and I believe that it is too small for the dairy farm. I am eleven years old and will be in the eighth grade next fall.

Nebraska. Wallace Barkhoff.

Hoard's Dairyman Juniors:—I have a garden of my own. The United States Agriculture Seed Department sent some seeds to our school and every child got a package. In each package were beets, lettuce, tomatoes, onions, and sweet corn. I gave mamma the sweet corn. The rest I planted. All the money I make in the garden I put in the bank. I have $2.64 in the bank already.

I hope a lot of juniors write to me.

Helenville, Wis. Stella Norman.

Hoard's Dairyman Juniors:—This is my second letter to the club. I like reading the letters from the juniors. I find many useful things in the paper which help me very much.

It is now haying time around here and we find the crops much lighter than other years, but I guess our hay will run three tons to the acre. The oats are good and I think they will run from two to two and a half tons to the acre. Our mangles are fine and should run from 25 to 27 tons per acre. The corn is good but had quite a few misses which we filled in with sunflowers. We have never tried sunflowers for ensilage before.

I wish there were enough boys around the district interested in farming so we could start a local club. All the boys around seem to be interested in engineering. We have got the goods but not the boys and girls. Our herd sire, Sir Ormsby Colantha Banostine 4th, is a fine animal but we have had no calves from him. We hope to be filling our 34 by 16 ft. silo in a fair time. I have some corn which I intend to show at the fair this year.

I wish some other juniors would write to me and I will answer every letter. Good luck to all.

Ladner, British Columbia. Murray Davie.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

Holstein and Guernsey pure-bred and grades. Write me. If it is 1, 100 or 1,000 head I can please you. H. A. KUHTZ, Waukesha, Wisconsin. 19*

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

High grade Holsteins—40 high grade Holstein cows and heifers at prices that are right. PAUL C. SPRINGELBERG, Stratford, Wisconsin. 3-2

Holstein bull, ready for service. Dam, 15-lb. two-year-old, 28-lb. sire, $150. Two September bulls, $100 each. W. E. RAY, Kewanee, Ill.

5 registered Holstein and 4 registered Guernsey heifers for sale. BURR OAK STOCK FARM, Whitewater, Wis. 4-4

Three hundred high grade and pure-bred Holsteins of all ages. Write for prices. FRICK & HOESLY, New Glarus, Wis. 2-spl

Serviceable Holstein bull for sale. Good 7-day and yearly backing. WALTER AHLERS, Grafton, Wis. 5-2

For Bargains in registered and high grade Holsteins try us. LOVELAND FARM, Holland Ind. 5-3

24 head of high grade Holstein cows from three to six years of age, due to freshen within 60 days. HOMESTEAD DAIRY FARM, Palmyra, Jefferson Co., Wis. 5-2

Registered Holsteins for Sale—Eight young cows, Ormsby, Pontiac and King Segis. Selected stock. Big producers. Priced to sell. LITTLES DAIRY FARM, Kewanee, Ill. 5-2

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 5-6

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

For Sale—Well bred bulls from grandson of the $50,000 bull, King Segis Pontiac Alcartra, and A. R. O. dams. Herd tuberculin tested. Describe your requirements. Pedigree, photo and price on request. ARTHUR C. DAILY, Springfield, Mo. 5-2

For Immediate Sale—250 high grade heavy producing springer cows, and heifers. Cows two to six years old. Heifers eight to sixteen months old. Very reasonable prices. Correspondence solicited. BRAZELTON MURDOCK FARMS CO., Morocco, Ind. 5-2

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

For Sale—50 head of registered Holsteins, 25 cows aged 3 to 7 years, sired by a 26-lb. and bred to a 30-lb. bull. Start to freshen September. Also 25 heifers, 1 to 2 years old. ARTHUR N. BIRKHOLZ, New Buffalo, Mich. 6-2

For Sale—Federally tested, registered Holstein cows, heifers, bred to Prilby King. Dam 32.88. Price $175.00 and up. Cows give 65 to 80 lbs. when fresh. Quit farming. MRS. SOPHIE JOHNSON, New Douglas, Ill.

For Sale—A four-year-old Holstein bull whose dam has a record of 36.9 lbs. butter in seven days, 149-thirty days, 283-sixty days. Sire's dam, College Belle Wayne. Tuberculin tested twice this last year, warranted gentle and all right in every way. Weight about 1800. Priced to sell, $600.00. PETER HISSEM, St. Onge, Lawrence Co., S. D.

For Sale—Registered Holsteins, Guernseys, Jerseys and Ayrshires, both sexes. Some very choice individuals. Bulls of serviceable age. A number of high grade cows and heifers priced to sell. Call on or write. FARM DEPARTMENT, Bank of Colfax, Colfax, Wis. 6-3

$50.00 buys 2-month-old, registered Holstein bull whose sires' three nearest dams average 30 lbs. EDW. E. PAGE, Shell Lake, Wis. 6-2

STOCK FOR SALE

A Rare Opportunity to purchase twenty-five choice young grade Holstein-Friesian cows, averaging better than ten thousand pounds of milk each, annually. All are tuberculin tested, bred to our 34-lb. Advanced Registry junior herd sire and commence freshening September first. Priced at $250.00 each, guaranteed well worth the money. Herd located near Huntley, Ill. Write—or better wire. CHESTER A. HARRIS, Old Colony Building, Chicago, Ill. 6-2

Two Holstein baby bulls, sired by the son of the state record two-year-old for yearly production of butter. Dams are among the best in the herd. $85.00 each. Another youngster from promising heifer, but different sire for $45.00. All one month old. Prices include express, registration and transfer fees and satisfaction guaranteed. QUIGLEY FARMS HOLSTEINS, Winamac, Ind.

For Sale—15 head, very choice, high-grade, good producing, Holstein cows. 1 pure-bred heifer, 1 pure-bred bull; also double unit Empire milking machine nearly new. Going out of business. FRANK DECHANT, Route 6, Waukesha, Wis. 6-3

100 Large, high grade Holstein heifers to freshen in October and November. ADAM DUERST, Monticello, Wisconsin. 6-2

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

For Sale—Several registered Guernsey bulls 7 to 12 months, grandsons of Imp. Clara's Sequel and Langwater Frenchman. Dams 500 to 752 lbs. fat. See display ad page 223. Sale list. HOMER F. RUNDELL, Livingston, Wisconsin. 2*

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write for photos and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

For Sale—Registered Guernsey bulls from six weeks to 2½ years whose dams are doing well in A. R. Also have grade females, some bred to a son of Pencoyd's Golden May Secret. Satisfaction guaranteed. EWING GUERNSEY FARM, H. R. Burg, Mgr., Wausau, Wis. 4-3

For Sale—A few registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wis. 4-3

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Guernsey bull calves for sale. Out Dairymaid's Hero of Fox Valley and A. R. dams, with butterfat up to 622 lbs. ANTON O. BERGE, Valders, Wis. 4-3

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-5

High quality grade Guernsey heifers, 4 to 10 months old. B. McADAM, Mosinee, Wis. 3-4

For Sale—High grade Guernseys. Eight head fresh or heavy springers. Two miles south State Fair Park. Phone West Allis 297W5. D. R. MAY, Route 5, West Allis, Wis. 6-2

For Sale—Full blood Guernsey bull calf dropped July 1. E. J. CZAMANSKE, Randolph, Wis.

Best Bargains registered Guernsey females, heifers preferred. State price, breeding, records, health, MORREYSIDE FARM, Freeport, Ill.

For Sale—Nineteen grade Guernsey heifers, yearling and two-year-olds, nicely marked and colored and practically pure-bred. L. D. PATTERSON ESTATE, Green Lake, Wis. 6-2

Yearling Guernsey Bull. A. R. backing. Write for pedigree. H. O. HINKLEY, Route 2, Rockford, Illinois. 6-3

Guernsey bull calves from A. R. dams with records up to 645 lbs. fat. C. D. GRISWOLD, West Salem, Wisconsin. 6-2

For Sale—High grade Guernsey cows and heifers. J. L. SAWYER, Perham, Minn. 6-2

Nicely marked registered Guernsey bull three months old. Gov. of Chene and Masher Sequel breeding. Write for photo and pedigree. ORCHARD VALLEY STOCK FARM, St. Clairsville, Ohio.

On account being short pasture will sell ten choice grade Guernsey cows three and four years old $125 to $150 each. QUINEILO FARMS, 297 East Water, Milwaukee. 5-2

A Real Bull—Son of 500-lb. two-year-old, record made in pasture, 10 years ago. She milked 45 lbs. daily at 12 years of age. A show bull. Other well bred bulls for sale, some of serviceable age. FRISSDALE FARM, Hopkins, Minn. 5-4

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Jerseys—Carload of high grade Jersey cows and heifers. All tuberculin tested. GEO. AUSMAN, Elk Mound, Wis. 4-4

Registered Jerseys—One cow, two yearling bulls. Most approved breeding. S. G. BANKS, Eldorado Springs, Mo. 5-4

Jerseys for Sale—Fresh cows, springers, heifers, heifer calves, bull ready for service. L. R. KUNEY, Adrian, Mich. 5-2

Jersey bull. A registered yearling. Eminent and Noble of Oakland's breeding. Dam is a good cow. Will send pedigree. JOSIAH BLACK, Powell, O. 6-2

Stock for Sale—Three-year-old registered Jersey bull backed by size, type and production. Grandson of Diamond Nora, No. 204569, record 11550 lbs. milk, 683 lbs. butter in one year. Write for pedigree. Price $225.00. M. V. PETERSON, South Range, Wis.

For Sale—One registered Jersey bull, four years. Eminent and Golden Fern's Lad breeding. Also one registered cow, same breeding, three years old, fresh in October. $150.00. LEWIS A. LONG, Mattoax, Va.

MACHINERY

3 Sturtevant Units No. 55, Fans, Heaters and Air Washers, Sanitary Pipe and Fittings, Milk Heater, 1 Sweetened Condensed Milk Filling Machine. THE CHARLES E. HIRES CO., Philadelphia, Pa.

For Sale—B. L. K. Milker for 26 cows, 2 double-unit tops, 3 pails, latest model, 2½ horse-power engine, all complete in perfect running order for $350.00. It cost new $500.00, and it now sells for $600.00. ROBIN CARR, Fowlerville, Livingston Co., Mich. 6-2

For Sale—Samson Model M. 2-3 plow tractor with extension rims and 20-inch grub-breaker. Has never been used. Address BOX 332, care Hoard's Dairyman.

For Sale— One Dain Hay Press 16x18 with 6 H. P. engine. Price $600.00. One two-unit Sharples Milker, price $150.00. Write SAM MEIKLE, Merrimac, Wis. 6-2

For Sale—Hercules stump puller. Large size and good as new. Have finished all my stumpage. New one costs $200.00, will price mine $100.00 on car. JOHN SWIGART, Toledo, Ohio. 6-2

Moline Tractor for Sale—Model D four-cylinder new a year ago, run less than thirty days. Equipped with two 14-inch plows, extra rims, truck, cleats, etc. Also one 7-foot Moline double disk for tractor, run less than five days. Same outfit new will cost nearly $1900. Selling because I have rented my farm to people who can not buy tractor. Price complete with disk and all extras $1485 F. O. B. here. E. GONZENBACH, Sheboygan Falls, Wis. 6-2

For Sale—Moline Model D tractor complete; plows, truck, starter and lights; slightly used; $1,000. Case four bottom self lift tractor plow, plowed 100 acres, $275. United States tread power, $50. Perfection 250-lb. churn and worker and cream vat, $150. Two double unit Empire Milker and pump used three months, $275. E. A. KNOKE, Shiocton, Wis. 5-2

For Sale at a Bargain—One Fairbanks Morse 4 horse Special Electric kerosene engine. One dynamo. One switchboard. Excellent condition. Reason for selling, installed city light. F. E. FOX, Waukesha, Wis. 5-3

For Sale Cheap—One model B. La Crosse tractor, one 12-horse-power Sta-Rite gasoline engine, with One 1½ horse-power Sta-Rite gasoline engine. 54 feet of rubber belting in good condition. One 5-horse power William Galloway engine. STARCH BROTHERS COMPANY, La Crosse, Wis. 5-2

For Sale—Hinman Milker, 3 single units, 2 extra pails, 1 extra valve chamber. Complete for $50. W. M. STANDLEY, R. 7, Carrollton, Missouri. 5-2

Perfection Milker—One double-unit complete for 20 cows. Brand new in original crates. Price $235.00. F. JULIUS, Stockton, Ill.

engine, perfect order, $2,000. W. H. LUDWIG, Marshfield, Wisconsin. 6-2

20—70 Nichols Shephard Steam tractor threshing

For Sale—One slightly used No. 18 Smalley Ensilage Cutter for less than half price. J. A. MARTINY, Baraboo, Wis. 6-2

STOCK WANTED

Wanted—A load of young dairy cows. B. H. McEACHEN, R. 1, Wayne, Neb.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

July pigs $5.00. Good team, harness, $350. D. SEXTON, Calderwood, Mich. 5-2

For Sale—Pure-bred Duroc Jersey Boars. H. BARTLESON, Medford, Wis.

POULTRY

Ferris Strain White Leghorn hens and pullets. FRUITLAND FARM, Crystal Bay, Minn.

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Choice fox hound pups, ready to break this fall, $10.00 and $15.00 each. GABRIEL W. BOUCHARD, Route 4, Ogdensburg, N. Y.

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

FOXES

Wanted—Red Foxes; state age, sex and price. W. C. WILSON, Stephen Girard Bldg., Philadelphia, Pa. 2-6

BEES

Italian Bees $12.00 colony. Queens $2.00 each. $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity ot do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

SEEDS

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 3*

For Sale—Genuine Grimm alfalfa seed. 63 cents pound. SAM BOBER, Newell, S. Dakota.

Fall wheat and rye. Pedigree stock. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wis. 5-2

For Sale—Michigan Red Rock winter wheat. Pure and clean. Noted for hardiness, large yields, good milking qualities. $3.25 per bushel. Sacks free in orders of ten or more bushels. W. E. BISHOP, Pioneer Farm, Arcadia, Wisconsin. 5-3

Guaranteed Seeds—High germinatinng alfalfa $12.00 bu. Red clover, $25.00; sweet clover, $15.00; timothy, $5.00; rye, $2.25; sugar, $22.00 cwt. Bonds accepted. MEIER SEED CO., Russell, Kans. 6-4

For Sale—Winter Wheat, pedigreed No. 2. Yield 40 bushels per acre. Price $3.00. Bags extra, grain sacks 75 cents, gunny sacks, 10 cents. THEO LEHMANN, Route 1, Watertown, Wis. 6-2

Winter Vetch and Rosen Rye mixed ready for sowing $5.00 bushel, bags extra. Pure Winter Vetch 35c pound. DR. HAINES, Three Rivers, Mich. 6-2

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

For Sale—2 cars clover and timothy, $30. 3 cars oat straw, $15. F. O. B. cars. E. A. KNOKE, Shiocton, Wis. 5-2

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

I know of some exceptional farm bargains in New York State, small and large. Fine buildings, spring water, alfalfa land, good roads. Eighty to hundred twenty per acre. Easy terms. These are unusual bargains. Write me. BOX 256, care Hoard's Dairyman. 26*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

Choice dairy farm of 170 acres near Syracuse, New York. $24,000 equipped. M. VOORHEES, Memphis, New York. 2-5

Real Farm Bargains in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (not Inc.), Medford, Wisconsin. 3-4

Greatest stock and dairy district on earth. You cannot go wrong if you buy your future farm home in Aitkin County, Minnesota. Rapidly becoming America's greatest farming center. Our free information will tell you how to secure one of these farms on a small down payment and easy terms. Write L. B. ARNOLD, Land Agent, 154 Wolvin Bldg., Duluth, Minnesota. 3-f

Join Our South American Colony. Choice land $5.00 per acre. For literature, address BOX 277, Gridley, Calif. 3-4

Over 100 acres fine land, 17 miles macadam roads to City Hall, Philadelphia. 1½ to large manufacturing town of Amber. Modern cow barn, 48 standing. 4 box stalls. Milk room, feed room, cement floors. Large implement and tool house. Large hollow tile slate roofed house (not finished inside.) Macadam roads each side and through farm. Very moderate rent, desirable tenant. Immediate possession. Rent free for one year. FARM, 2024 N. Tenth St., Philadelphia, Pa. 4-3

For Sale—Alfalfa farm, 112 acres, $6,500. For particulars address owner GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 4-f

New York State Dairy Farms—Fine Delaware county dairy farms, all sizes, all prices, fully stocked with choice dairy cows, fully equipped with farm machinery and other personal property; sold on easy terms; by government reports, the greatest dairy county in the greatest dairy state in the Union. Write for catalogue. THE JOHN O. HILLIS FARM AGENCY, Hobart, Delaware County, New York. 4-4

For Sale or Lease—An extra fine stock farm for lease or sale containing seven hundred and fifty acres all workable land. Three big barns and five houses, land extra well watered. Will sell for $100 per acre or lease at 6 per cent interest. All of this land is in grass. I have about two hundred and fifty acres of creek bottom land in this. It is about one and a half miles from the County Seat, Caryville, Tenn., and is thirty-five miles from Knoxville on the Dixie Highway. Can give possession September first. J. G. STERCHI, Knoxville, Tenn. 5-2

Farms for Sale—New York Dairy, General farms. America's greatest bargains. Rich, level, productive soil. Fine buildings. State highways. Low taxes. Fine markets. Fifty to one hundred dollars per acre. Stock, tools, crops included. Western buyers making great profits here. Come immediately. Railroad fare paid purchasers. Wonderful opportunities. Catalog free. BUFFALO FARM EXCHANGE, Buffalo, New York. 6-2

Diversified Dairy Farm, 200 acres. Good land, suitable for tractor. Excellent house, large octagon barn, horse barn. Beautiful location. First class business farm and ideal home. $12,000. FRED W. CARD, Sylvania, Pa.

A Dairy Farm of Real Value—An exceptionally productive dairy farm of four hundred thirty-eight (438) acres, located one mile from Chautauqua, N. Y., known the world over as a summer resort and educational center, is offered for sale at $100 per acre, if sold by November 1st. The farm has never been leased, is carrying at present 97 head of pure-bred Holstein-Friesian animals, is beautifully watered, well located and exceptionally fertile. As a matter of good faith, the owner will pay one-half of the railroad fare of anyone from any place, who upon investigation fails to find that this farm has the local reputation of being at least one of the most fertile productive farms in the section. The owner is a manufacturer in Detroit. He has owned the place nearly twenty years. His reason for selling is to transfer his stock operations from New York to Michigan. Terms can be arranged and a discount will be given for cash. The property is free from all kinds of incumberances. Arrangements can be made to buy a portion of the stock. G. E. WILDER, Gemmer Manufacturing Company, Detroit, Michigan. 5-4

100 acres—6 miles from town, good roads, good 10-room house, good 50x60 barn, two smaller barns, outbuildings, black clay loam tiled, 76 acres under cultivation, 20 acres saw timber, balance pasture. Without help, must sell. $125 per acre. MICHIGAN FARM AGENCY, Box 928, East Lansing, Mich. 24-spl

New York Farm Agency, Westfield, New York, sells farms. Old folks die at about 100. Have to quit. Opportunity for young men. Come East! 10-spl

130 acres level, black clay loam, 2½ miles from county seat, gravel road, large 9-room house, 30x60 gambrel and 54x62 gambrel roof barns, granary, tool shed, and all the necessary outbuildings, all buildings painted and in good condition. Good orchard, good fences, well drained, 100 acres under cultivation, 30 acres pasture and timber. This farm is in a high state cultivation and is in every way a No. 1 farm. Price $135 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 16-spl

Farm Bargains—60 miles Twin Cities. Free list, man. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

100 Acres $3,300 with 8 cows, horse, crops, tools. Big money-maker, prosperous community, all ready business; machine-worked fields, spring-watered pasture, wood, and fruit trees; 12-room house; basement barn, other buildings, fine shade; near R. R. station. High school; immediate buyer gets 8 cows, 4 yearlings, horse, machinery, tools, part growing crops; everything, $3,300, part cash. Details this and another with 22 cows, 3 horses, growing crops, page 34 Strout's Big Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

New York State great farm bargains. The great alfalfa belt wants you at once. Send for my list of farm bargains at once. FRANK J. BASLOE, Herkimer, N. Y.

150-acre, very productive New York dairy farm on paved road for sale by owner for less than insurance on buildings. Address BOX 336, care Hoard's Dairyman. 6-2

Don't forget to send for our new summer and fall land list, showing photographs of a large number of choice farm bargains in the greatest dairy district in America. Central Wisconsin. Write today for this free list and map. GRAHAM'S LAND OFFICE, Marshfield, Wisconsin.

For Sale—85-acre Waukesha Dairy. Price with personal property, $18,000.00. Large and small Milwaukee dairy farms. 120 acres clay loam unimproved land, $17.50 acre. Free farm lists. ZANDER BROS., Milwaukee, Wis.

For Sale—370 acres, more or less, hay and cattle ranch, suitable for dairy, six miles from live city of 15,000 population, 15 acres in cultivation, good five-room house, some out buildings, sure hay crop, no irrigation required. For terms, address E. G. STOLLEY, Route 2, Grand Island, Nebr. 6-2

FARMS FOR SALE

Dairy Farm for Sale—One of the best farms in the town of Brunswick, Rensselaer County, N. Y., 6 miles from Troy on State road. Level as a floor, rich, black, loamy soil, and entirely free from stones. Raised 700 barrels potatoes last year. Present income from milk over $120 00 per week. 135 apple trees, 76 pear trees. Splendid 2 story, 12-room house with spacious lawn and shade trees. 9 outbuildings and fine cottage for tenant. 21 cows, bull 4 horses, 6 pigs, poultry. Auto truck and all tools for farm use, together with all crops, for $18,500.00. Other farms in the beautiful Hudson Valley. HUDSON RIVER VALLEY FARM AGENCY, Box No. 643, Hoosick Falls, N. Y. 6-3

153 acres $20,000.00. ½ mile from Jefferson Highway; ½ mile from station. 100 acres good plow land, balance pasture and hay. Well fenced. Black loam soil, clay subsoil, gently rolling. 8-room house with fine basement. Barn 24x26 with two leantos; has granary, garage, wood house, corn crib, hog house, poultry house, fine well, orchard, good grove around buildings. Well located and very good buy. P. C. RECORDS, Castle Rock, Dakota Co., Minn.

Attractive Tennessee Farms for Sale—As my tobacco business in which I have recently engaged is taking practically all of my time and I have no opportunity to give any supervision to my farms, I have concluded to sell them giving possession this fall or January 1st., 1921. I have one especially nice farm of 550 acres on a macadam road, practically all in grass and fenced with woven wire. Well improved with old colonial brick residence in beautiful yard of maple trees, 6 tenant houses, 2 stock barns, concrete silo, 4 tobacco barns, never failing water supply consisting of two springs and a creek, concrete reservoir and water piped to fields. I have another farm of 450 acres, well improved; one of 250 acres fairly well improved; one of 100 acres with poor improvements; also I have 1,100 acres of timber and grazing land. I would prefer selling only half interest in the 550-acre farm if I could form a partnership with an agreeable man who understands the dairy business and raising hogs and sheep. On account of the long growing season milk can be produced very economically here and the market price is 80 cents per gallon. I would be willing for the partnership to pay him a salary as manager. Write me for full particulars if interested. E. B. TRAHERN, Clarksville, Tennessee.

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

FARMS WANTED

Farm Lands Wanted—Hundreds of Iowans will buy land in other states this year. Many have bought already. Land prices are steadily rising and Iowans intend to purchase before there is any further advance. Why not sell your land to one of these buyers? Not long ago the Stoutenburg Land Company, Butterfield, Minn., sold three farms in a single day by our plan. Send us a complete description of the land you have for sale, the number of acres, its distance from town and school, what improvements it has, if any; how it is divided into fields, your price, terms, etc., and we will tell you, without obligation on your part, how little it would cost to get in touch with these Iowa buyers. At the same time we will send you our free booklet, "Farm Buyers and Where to Find Them." It will open your eyes. Write today, for the fall land buying season is just beginning. THE DES MOINES REGISTER AND TRIBUNE, Dep't. 130, Des Moines, Iowa.

Wanted—A dairy farm, the owner furnishing stock and machinery, 50-50 or pay interest. Handy with everything. No boozer, no smoker. Address BOX 335, care Hoard's Dairyman.

If you wish to dispose of your farm immediately and will accept some city property or country store, hotel, etc., as part payment, write to WALTER MILLER, 320 Brumder Bldg., Milwaukee.

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

Farm for Rent—120-acre farm, all plow land with all equipment. 30 cows, registered or high grades, as preferred. 20 rods from school, 80 rods from cheese factory, 1 mile from church, 4 miles from town. New house and new barn and two silos. Man must be able to make part payment on his half. Will rent on 50-50 basis. ANDREW FRANK, Fox Lake, Wis. 4-4

For Rent—160 in Story County, Iowa, 4½ miles from good town and creamery. Good farm land and improvements. Rents reasonable. Dairyman or stockman preferred. F. HEILEMAN, Owner, 1540 29th Street, Des Moines, Iowa. 6*

DAIRY FOR RENT

Dairy for Rent—Good opportunity for man with small capital. Dairy can be handled separate from farm. Equipment for twenty-five cows. Plenty of silage, beet pulp, beet tops, and alfalfa hay delivered at barn. Within four miles of the Lamar Plant of the Helvetia Milk Condensing Company. A milk route goes by the front gate. For further particulars write L. M. SWEITZER, Secretary of the Prowers County Dairy Breeders' Association, Lamar, Colorado. 5-2

For Rent—Three hundred-acre dairy farm with two brick silos and large buildings near Burlington, Wisconsin. Only a worthy, capable dairyman is wanted on share proposition. Farm is good and has never been rented. H. W. AYERS, Box 72, Honey Creek, Wisconsin. 6-4

PARTNER WANTED

Partner Wanted—1,000 acres good land three miles from town on Pike road. Will sell third to half interest to good man, $5,000 to $10,000. You manage dairy, I manage farm. A. R. WILD, Ft. Deposit, Ala.

Dairy partner wanted—I have 1,000 acres prairie land 3 miles from good town, Pike road. Want man with $5,000 to $10,000 to take third or half interest in farm and dairy. Plenty land to make feed. Nice proposition. BOX 24, Ft. Deposit, Ala.

DAIRIES

Dairies for sale with established trade $1 gallon, can be produced for 25 cents. IDEAL FARM COMPANY, Box 948, Lakeland, Florida. 6-2

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

SILOS

For Sale—Indiana stave silos, 10x20, 12x24. LUCIE KEVIL, Princeton, Ky. 24*

New Saginaw silos, immediate delivery. 12x30; 12x28; 14x30; 10x20. Save your corn crop, get a silo at once. DELWIN UTTER, Lake Beulah, Wis. 6-2

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

LIGHTNING RODS

Lightning rods, exclusive agency and quick sales to live agents selling "Diddie's Universal Rods". Our copper tests 99.96 per cent pure. Write for agency. Prices are right. L. A. DIDDIE CO., Marshfield, Wis. 13-24

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

Still in the Lead—The Perfection or Wasson stanchion improved with or without frame. STANLEY C. SWIFT MFG. COMPANY, Cuba, New York. 22-spl

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Testers Wanted—Experienced men for cow testing association work. Can pay as high as $125 per month and expenses. Write C. S. RHODE, University of Illinois, Urbana, Illinois. 3*

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Herdsman Wanted—Single herdsman at once to take charge of Guernseys. Must have experience and a good calf raiser. ADAMS & SWAIN, Algona, Iowa. 2*

Wanted—A farm manager, first class, thoroughly experienced man. None other need apply. State experience, references and salary expected. Address BOX 289, care Hoard's Dairyman. 3*

Wanted—By September first four dairymen for pure-bred Jersey herd. Can use a man and three boys. Salary $50 per month each with wood, house and garden free. Apply J. G. STERCHI, Knoxville, Tennessee. 5-2

Wanted—Several four time milkers. Pay eighty dollars and keep. Good chance for advancement. GRAHAMHOLM FARMS, Rochester, Minn. 5-2

Wanted—Young man, good milker, to help in dairy. 25 Guernsey cows. Good home to the right man. H. C. HURLEY, Rockville, Maryland. 5-3

Wanted—Experienced farmer and wife for general farm work on a 43-acre farm. Privilege of renting farm if desired. FRANK LEEB, Mt. Marion, N. Y. 5-3

Wanted—Married man to bottle milk, separate, clarify, etc., and assist in taking charge of most up-to-date dairy in Florida. Must know how to make A. R. O. records, understand feeding, and experienced in raising calves. Beautiful bungalow partly furnished, hardwood floors, hot, cold running water, electric light, tiled bath and toilets. Must not be over 45 years of age. Preference given to couple with grown son who can milk. Salary $100 month, and yearly bonus. Railroad fare, one way. Must give references. ORANGEHURST FARMS, Orlando, Fla. 5-4

Wanted—Reliable man to care for small herd of registered Guernseys. Must be good milker. Give experience, references and wages desired. THOS. L. ROSSER, Charlottesville, Va. 5-3

Wanted—Good dry hand milkers for semi-official test cows. Wages, $80 per month. Good chance for advancement for the right kind of men. Address GRAHAMHOLM FARM, Rochester, Minn. 5-2

Wanted—Married man for position as second man on large certified dairy in Bucks Co., Pennsylvania. Must be experienced, farm raised, willing worker, and able to handle men. One with some agricultural training preferred. Good modern dwelling and $30 per week wages. JOSEPH HEACOCK COMPANY, Wyncote, Pennsylvania. 5-2

Wanted—September 1st, a good, clean, wide-awake, single man who is a hustler for barn work in a small registered Jersey herd where Register of Merit work is done. One interested in Jerseys preferred. Modern equipment. Good chance to learn herdsman's work. Permanent position to right man. Long hours. $70 per month. Address R. H. VAN SLAMBROUCK, Crystal Bay, Minn. 5-2

Wanted at once—Single man for herdsman in a Guernsey herd. KUHTZ BROS., Waukesha, Wis. 6-2

Wanted—Young married farmer to run small dairy farm. References. Must be experienced. M. E. COLLINS, 508 S. Dearborn Street, Chicago, Ill. 6-2

Wanted—September 1st a young man to help in barn, using milking machine and to care for milk house. Pure-bred Holsteins. Good wages. J. B. DAVIS, St. Olaf College Dairy Farms, Northfield, Minnesota.

Wanted at once—Two good dry hand milkers and barn men, one to do four-time milking. Both to be first class men looking for a steady position with good pay and advancement. OAK DALE FARMS, Blooming Prairie, Minn. 6-2

Wanted—Middle aged married man to work in small herd of Guernseys. Would consider the profit sharing plan with the right man. A. E. WILCOX, Mauston, Wisconsin. 6-2

Wanted—Man and wife. Man to work on and manage a 300-acre farm. Willing to milk cows, and all other farm work. Wife must be willing to board and room any extra help required on said farm. Will pay the right party good wages, with steady job. If interested write to, or call on THE ELBA CANNING COMPANY, Astico, Wis. 6-3

Wanted—Single herdsman for about 20 cows. Must have some experience in A. R. O. work. State wages expected. Position open Sept. 15, 1920. MORTON FRIEND, Orland, Ind.

Want to Hire Married Man for farm and dairy work on large Guernsey farm. Start September. New house, some furniture, garden, milk, some potatoes and fuel. State wages and experience. Personal application preferred. HOMER RUNDELL, Livingston, Wisconsin. 6-spl

Wanted—Dry hand milker for registered Jersey herd. State salary expected and experience first letter. REYNOLDA FARMS, Reynolda, N. C. 6-3

Wanted—At once, several maids at Wisconsin School for the Blind, Janesville, Wis. J. T. HOOPER, Sup't. 6-3

Wanted—Experienced herdsman who understands feeding and A. R. O. testing for a pure-bred Holstein herd. State wages, age, and experience. Married man without children preferred. Address BOX 334, care Hoard's Dairyman.

Will pay $1,200 per year, board and room, for a good, clean, industrious young man who is willing to work with cows and do all kinds of work connected with an ordinary dairy farm. Hinman Milker used. Commence any time. CHAS. M. FARGO, Doland, S. D. 5-2

Wanted—Testers for Cow Testing Associations in Iowa. $75 00 a month with board, room and transportation furnished. Desire men with dairy farm experience. Special training given for this work at Iowa State College. Apply to C. L. BLACKMAN, Extension Department, Ames, Iowa. 6-3

Wanted—Man for general farm work. Must be good dry milker. State wages. GUERNFALFA FARM, Peebles, Wis. 6-2

HELP WANTED

Wanted—First class foreman at once, understanding farm and dairy work. References required. H. H. DRIGGS, Palmyra, Mich.

Young single man as assistant herdsman. Registered Guernseys doing A. R. work. Modern improvements. Close to good city. Steady work. Give all particulars in first letter. E. S. PERSON, Minot, N. D. 6-4

Wanted—Single man thoroughly experienced in test cow work. Wages $75 per month, room and board and chances of advancement. State age, experience, when available and reference in first letter. HIGHLAND FARM, Bryn Mawr, Pa.

Wanted—A man about 50 years of age, single and willing to batch to take care of my 40-acre place two miles from North Bend, Oregon. For particulars write owner. NILS W. LILJIBLAD, Coquelle, Ore.

Wanted—Steady, reliable, single man for general farm work on modern Guernsey farm. Chance to learn A. R. work. State wages. C. D. GRISWOLD, West Salem, Wis. 6-2

Wanted—Single man for general farm work. Good place to work. State wages and experience. Address BOX 330, care Hoard's Dairyman.

Wanted—Assistant herdsman for small Holstein herd. Man who has worked where A. R. O. work has been done. Good chance for advancement. Give reference, salary expected, and experience in your first letter. ROZETA FARM, Webster, North Dakota.

Wanted—An efficient, thorough and practical farmer. All kinds stock kept and all kinds farm machinery used. W. IRVING HEWITT, M. D., Olean, New York.

Wanted—Barn man for Guernsey herd near Detroit. Must be good milker. Wages $70.00, board and room. Apply to James Johnstone, Supt., PEACEFUL VISTA FARM, Route 3, Redford, Mich. 6-2

Carpenter and General Farm Mechanic, wanted—Rock River Farms has a place for a steady man, married or single, who can do satisfactory work in the following lines or as many of them as possible. Plain carpentry and painting, steam boilers and plumbing, electric motors and wiring, farm machinery, repairing, including tractors and autos. State qualifications, wages expected, and furnish references in first letter. H. W. ALLYN, Byron, Ill. 6-4

Wanted—Single man for milk room and creamery work. State experiences and wages expected. SPRING GROVE FARM, Fort Wayne, Indiana. 6-2

Wanted—Active, reliable man, married or single, for retail milk route and dairy work. State wages expected and give reference in first letter. PINE RUN FARMS, Sharpsville, Pa.

POSITIONS WANTED

Manager, 36 years old, graduate agricultural college, thoroughly experienced in general farming, stock raising, A. R. O. work, soil development, drainage, building construction, handling of men, wants position. No proposition too large. Write BOX 302, care Hoard's Dairyman. 4-3

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work. Salary, $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spl

Working herdsman open for position October 1, married, no children. Experienced in feeding, testing, recording, ordinary veterinary work, calf raising and mechanical milking. Good dry hand milker. Wisconsin or adjoining states preferred. References exchanged. State full particulars first letter. Address BOX 325, care Hoard's Dairyman. 5-2

Farm Manager with practical experience in all branches of farming, dairying, feeding, breeding, pure-bred stock, milk production, commercial handling of highest class milk and dairy products, fruit and poultry. Married, 31 years old, agricultural college graduate, reared on farm. Progressive, good executive and organizer. At present employed as manager of large estate, pure-bred stock and commercial dairy farm. Highest reference as to character, education, training, practical experience, executive and business ability. Only first class proposition considered. Answer fully in first letter. Address BOX 323, care Hoard's Dairyman. 5-2

Position Wanted—Refined lady, 35 years wishes position as caretaker of summer home; cook or housekeeper. Would go West. Address BOX 331, care Hoard's Dairyman.

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 5-2

Position wanted—Single herdsman with exceptional ability as a practical scientific dairy farmer desires position where A. R. work is first considered. Capable to handle farm also previous experience on own farms. Sold to settle estate. Address BOX 338, care Hoard's Dairyman.

Position Wanted as herdsman or manager of first class Holstein farm, Western Pennsylvania or Eastern Ohio, by man with plenty of experience. Open October 1st, 1920. Address BOX 337, care Hoard's Dairyman.

Farm Manager open for position where first class Guernseys are kept. A. R. work and control of diseases a specialty. First class crop and hog man. Energetic, honest, capable of handling a large proposition. Married, college graduate, 31 years of age, successful experience, best references. Address BOX 340, care Hoard's Dairyman.

Farm Manager and high grade herdsman open for position. Scotchman, married, small family, practical farmer in all branches of up-to-date farming. Have made a specialty of growing alfalfa and soiling crops, running of all the latest farm machinery, handling help to best possible advantage. Thoroughly acquainted care and management of pure-bred dairy cattle, fitting and feeding for show and sale ring, and large milk production. Have made large records including one A. R. O. world's record. References. Address BOX 339, care Hoard's Dairyman.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

Handling Help on a Big Dairy Farm

HOARD'S DAIRYMAN:—I have read with much interest Mr. Crooker's interview with the manager of a big dairy farm. Let me state that I am no slave driver and I have never had more trouble than could be expected in keeping help. Life is too short to do nothing else but work, and where men are over-worked they may neglect things that should be done, especially where valuable live stock is on the farm.

It is not stated in Mr. Crooker's article just how large this farm is, but I have seen some of these farms that had the work divided that employed enough men to farm a county. They never accomplished anything either in the breeding of live stock or the raising of crops.

I have had men ask for work who would state that they would work in the barn or would work in the field. I tell them to pass on, for I have been managing a dairy farm for ten years, and I work outside and inside and everywhere else. I would like to know just how the manager of this big dairy farm gets his alfalfa hay in the barn, his grain harvested, and his silos filled. On this farm we employ from six to eight men and it takes all of them to get in the one hundred loads of alfalfa that we haul in every summer. I wouldn't have a man on the farm who thought he was too good to milk a cow or one who would not pitch hay.

I think it is a bad thing for the dairy industry to divide the work. It spoils men. I do not believe that it is possible to have one group of workers, on the same farm, getting up at 5 o'clock and another group getting up at 4 o'clock without a lot of hard feeling. I have seen a lot of these large farms where there are two groups of workers and each always believes that they are the only ones who are doing any work.

Where there are several teamsters they do not have anything to do from five to seven o'clock in the morning, because one man can curry and harness eight or ten horses in two hours. Moreover, the teamsters do not have anything to do on Sunday, which makes the barn workers sore. It has been my experience and observation that where the work is divided all want to be teamsters.

On this farm we start work at five a. m. and quit at six p. m. The men all help milk and they all work outside in the field when necessary. They take turns about getting off on Sunday. I would not have horse men taking life easy every Sunday afternoon while the cowmen worked. That is hardly fair and causes hard feeling.

I believe in giving bonuses to trustworthy men, and want their work to be pleasant.

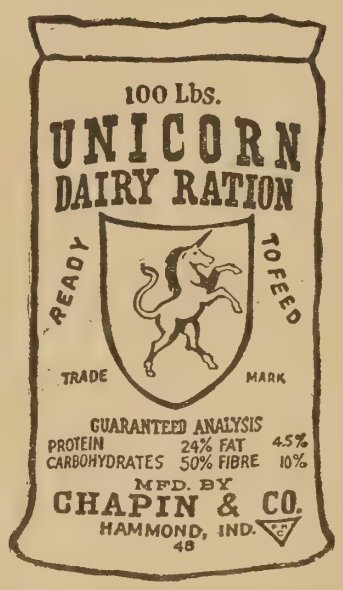
Illinois. FRANK BYERS.

Search for Visitor Cows

It is related by the New York State College of Agriculture that a testing association has been found in that state in which there are no visitor cows. It was desired to demonstrate the value of cow testing association work at the Farmers' Field days held at the State College. A representative sent to the Tioga Association near Ithaca searched for good and poor cows, but was unable to find any one herd with both high and low producers. There were cows in the association with records of more than 400 lbs. of fat, but in these herds there were none with a lower production than 200 lbs. The poor ones had all been sold through the work of the Babcock tester.

Wisconsin has 2,752 cheese factories, 762 creameries, and 67 condenseries.

You Can't Compete With Machinery



"Better Sires—Better Stock"

We will award a money prize of $1,000 to the county that first eliminates its inferior sires.

This prize will be awarded under rules provided by the Bureau of Animal Industry, United States Department of Agriculture.

Detailed information on request.

Mixing feed on the farm is old fashioned, like threshing with a flail.

The modern time and money saving way is to have it done by machinery on a large scale.

In our mills we mix a ton of Unicorn Dairy Ration in one minute at a power cost of a few cents.

Labor is scarce and high priced. You can use yours more profitably on other work.

Unicorn requires no labor. Ready to feed, you get it as you need it. No worry or work of keeping on hand a supply of many different kinds of feed.

Made of the best feeds. Put together in the right way by men who have learned by experience.

Be wise. You can't compete with machinery. Lower your milk production cost by feeding Unicorn.

CHAPIN & COMPANY, Chicago

Cow Waters Herself



with this wonderful new Libbey Automatic Water Bowl. Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

Neighbors Costly Institutions

(Continued from first page.)

fact, it is dollars to doughnuts that you are just this kind yourself and, that we all are, for America is today leading the pace in this brand of keeping-up-with-Lizzie neighbors. But we don't get the pernicious side of such competitive neighbor business in the country as we would if we lived where social splurge and rivalry holds the boards. For instance, the farmer who set the example of buying a car to bring the city to his threshold conferred eternal blessings and happiness on his country kin. They all went and did likewise and now smooth roads and better standards are paramount in the highways and hedges. But the man in town must impress his neighbor from different motives, so he strains every nerve and his pocketbook to buy a Rolls-Royce which shall equal or beat the one across the way, to the consequent injury, too often, of his health and resources. But up in the country we all own average cars and our standards are all about the same. In other words, we have all developed together of late back on the farms, and together we have installed modern conveniences in our homes and together enjoy the good things of life which in the impossible old days were only for those occasional lucky ones, if you could call them that, whom we greet in 1920 as profiteers.

And neighbors started it. We have noted that neighbor who weeded out his scrub herd and substituted improved and costly stock—to be followed on hill and dale by his fellows who observed that these radical methods were good and quite worth imitating. And as this neighbor and that introduced intricate expensive machinery and actually changed his crops to correspond with the paying demand and sent his sons and daughters to agricultural and technical institutions and added broad porches and labor-saving electricity and satisfying additions of all kinds to his old-style farm house, we must surely admit that if such expenditures, on a nation-wide farm scale and of very recent years, are heresy, then let our neighbors of big town and city make the most of them.

Someone has said that if we had no neighbors we could be happy in a house one-half the size of the one we now occupy and with half the things we now consider essential. As far as that goes, we could throw away every standard and improvement which has come to us down the ages—if there were no neighbors to object. We wouldn't be bothered to build better schoolhouses such as the next township boasts, or to keep our roads in the condition for which theirs are famous over in the adjoining county, or to see to it that our particular locality has the name of producing more and better crops to the acre than any other ground. None of these things would be considered worth while or necessary if it weren't for neighbor farms and towns and counties and states. So it is clearly and logically evident that our neighbors are to blame, once and for all, for the prosperity or lack of it which these United States and the world find themselves in today.

Neighbors in the long run are pretty much what we make them, because each and every one of us belong to and make up the breed. The extravagant brick-layer and hod carrier are only complying with and thus multiplying the new standards of their personal little neighbor-circle when they go in not wisely but too well for unimportant adornments and unthrifty ways of ridding themselves of their present unstable earnings. They have but obeyed the standards of pernicious live-for-today neighbors. Such standards we can deplore to a degree, well knowing deep down in our hearts that these same unthinking neighbors of ours are having the one time of their narrow lives in just spending and enjoying the hitherto unattainable.

And when we come down to our own personal cases, and perhaps this holds good for everyone, our neighbors are the ones who make life worth the living and striving, for we have got to live up to them or perish miserably and unrespected in the attempt. It isn't necessary or sensible to try and overawe our little community or personal circle by spending money without rhyme or reason, but we do owe it to the standards set by the substantial ones in our neighborhood to keep up our end and so farm and live that we raise instead of lower the composite whole of our own little section. It it weren't for the good neighbors who live around the next turn and also in Maine and California, we can imagine that American prestige and "pep" would be a figment of some visionist's imagination. Our neighbors here and there have established high standards and it is strictly up to you and me to not only observe them, but to go them one better. Thus we have today our improved and more profitable farms, our pretty, convenient homes, and our altered agricultural standards in general. We owe them all to those neighbors who showed us the desirability and possibility in every one. Back in the country we too have emulated the world in its spendthrift ways, but invariably we have put our funds into lasting and beneficial improvements which never again will be taken from us. Our own progressive neighbors have proved that farming can be both profitable and enjoyable, and we are hastening to follow in their footsteps.

So it is true that neighbors in a way are costly institutions because they induce progress and competition, but the country is going to bow to their universal power awhile longer and so help maintain to the bitter end the best neighborhood traditions. For it pays to be a good neighbor, which means a progressive neighbor today.

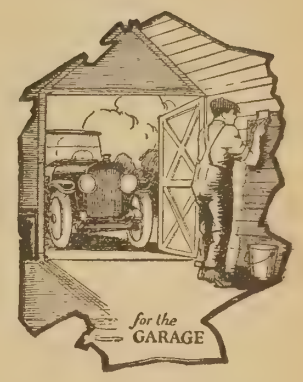
You cannot build a reputation on the things you are going to do.—JAS. J. HILL.

CARBOLA

The Disinfecting White Paint

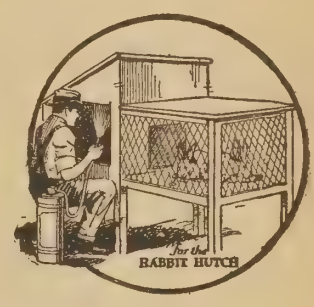


Helps Keep Out Disease, Lice and Mites Gives a Sunny Sweetness to Interiors



An unsanitary building lessens the owner's profits just as an unhealthy body lessens the earning power of a human being. It may take years of hard work to recover the losses caused by a single invasion by contagious disease. A pound of Carbola on the walls of the stable, poultry house, pig pen, or other building is a preventive of disease that is easier to apply than a ton of cure—and costs a few cents where the ton of cure may cost hundreds of dollars. In addition to germ-proof, lice-proof, mite-proof walls and other surfaces, Carbola gives you extra light and sunny-sweet interiors and a general evidence of cleanliness that are worth many times more than the little time it takes to apply this quickly-mixed, smooth-flowing combination of paint and disinfectant. Carbola dries a snow white. The germicide it contains, many times stronger than pure carbolic acid, is a dependable preventive of the start and spread of contagious diseases that affect man or beast. It is non-poisonous and non-caustic and will not harm the smallest chick or stock that licks a painted surface.





Makes It Easier To Do Work That Must Be Done —and makes a better job of it

Whitewashing takes time. Then disinfectant on top of whitewash takes more time. Carbola takes less time than whitewashing alone. You simply stir the Carbola powder in water and in less than five minutes you have a smooth-flowing paint and strong disinfectant both ready to apply in one operation. No straining, waiting or bother. Does not spoil if left standing—once mixed, always ready for use. You put it on with brush or sprayer to wood, brick, stone, cement or other surface, or over whitewash. It gives the surface a smooth, neat coating and goes into every crack and crevice, destroying disease germs, mites, fly eggs, etc.—and stays there to prevent the growth of others.

Carbola does not clog the sprayer as whitewash does. It does not peel or flake. The germicide, strong from the first, grows stronger as the paint dries—does not evaporate. It has no disagreeable odor. A gallon (a pound of the powder) covers 200 square feet.

Use Carbola Instead of Whitewash and Disinfectants

to help save your cows from death by contagious disease and to keep them in the health necessary to get their best production; to help save your pigs from diseases that are so costly and to help them put on weight quicker; to lessen death, sickness and discomfort in your flock and get more grown birds from your chicks and more eggs from healthier and more comfortable hens; to replace dirt and darkness with wholesomeness and light in any building; to save much of the time, labor and expense it means to first whitewash and then disinfect—and to get the better results that Carbola gives.

Used and Endorsed by Leading Agricultural Colleges and Experiment Stations

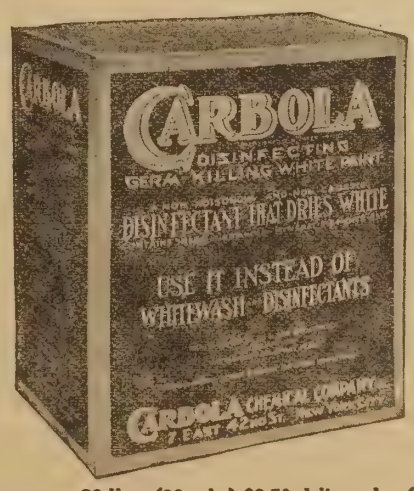




Where to Use It

In stables
poultry houses
cellars
hog pens
garages
kennels
creameries
rabbit hutches
outbuildings
factories
warehouses

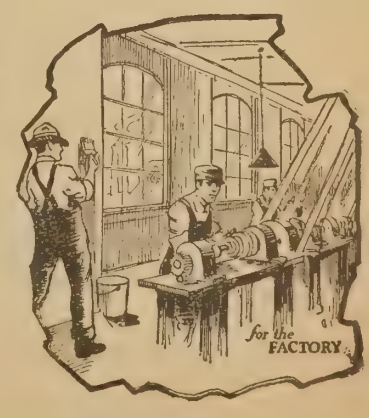
and on tree trunks, fences, etc., and as a lice powder, for which it is unexcelled.



Where to Get It

By ordering Carbola now you will have it when you are ready to use it. Your hardware, seed, drug or paint dealer has Carbola on hand or can get it. If not order direct. Prompt shipment by parcel post or express. Satisfaction guaranteed, or money back.





10 lbs. (10 gals.) $1.25 and postage. 20 lbs. (20 gals.) $2.50 delivered. (50 lbs. 50 gals.) $5.00 delivered
Add 25% for Texas and Rocky Mountain States
Trial package and interesting booklet 30c postpaid
For the convenience of large users Carbola is also packed in barrels holding about 350 lbs. each

CARBOLA CHEMICAL COMPANY, INC.

Dept. H 7 East 42nd Street New York, N. Y

Edward Wagner Guaranty Sale

MONDAY, SEPT. 13, 1920

SALE TO BE HELD AT THE W. VIRGINIA STATE FAIR GROUNDS, WHEELING, WEST VIRGINIA

Having quit my retail milk business and decided to reduce my herd materially, I am offering these great cattle to the highest bidder without reserve.

59 Pure-bred Holsteins 59



THE MILKING HERD OWNED BY EDW. WAGNER, TO BE SOLD. GOOD, CLEAN, STRAIGHT CATTLE, ALL OF THEM.

Many of them bred by me during the past seven years. Many cows in our herd have milked 10,000 to 16,000 lbs. milk in a year on two milkings a day with just ordinary farm care.

We have always used the best bulls we could buy and as a result we are going to offer you the blood of such noted sires as King Pontiac Champion, Pontiac Korndyke, King Segis Pontiac, King of the Pontiacs, Pontiac Aaggie Korndyke, King Lyons, Maplecrest Pontiac Hartog, King Segis De Kol Korndyke, King Segis.

Herd under State and Federal Supervision. Everything sold on a positive guarantee with a 60- to 90-day retest privilege.

Health Individuality Breeding Production

Edward Wagner, Wheeling, West Virginia

Farm at Rayland, Ohio

Under management of Ohio Holstein Association, Howard C. Barker, Field Sec'y, Tiffin, O.

E. D. Humphrey & Son

DISPERSION

WEDNESDAY, SEPT. 8th, 1920

GENEVA, OHIO

On account of ill health the Humphreys are compelled to dispose of their entire herd of

71 Pure-bred Holsteins 71

Here is one of the best Holstein Dairies in North Eastern Ohio. 24 head of those to be sold are cows in milk or heavy springers, 27 two-year-olds due this fall, 12 yearlings and calves, 8 serviceable bulls.

All through this great milking herd you will find the blood of such bulls as:

Pontiac Aaggie Korndyke
Rose Hall Pontiac Pietertje
Friend Hengerveld De Kol Butter Boy
King of the Pontiacs
Pietertje Hengerveld Count De Kol

Every Ohio dairyman with a grade or scrub bull can improve his herd wonderfully with one of these great young bulls.

Herd under State and Federal supervision. Everything guaranteed, and a 60- to 90-day retest privilege.

See next issue but plan to be at this sale

E. D. HUMPHREY & SON, Geneva, Ohio

Sale Under the Management of

Ohio Holstein Ass'n, Howard Barker, Field Sec'y, Tiffin, Ohio

Bulletins of the Week

City Milk Plants: Construction and Arrangement, by Ernest Kelly and Clarence E. Clement. Bulletin 849, U. S. Dept. of Agriculture, Washington, D. C.

Influence of the Tractor on Use of Horses, by L. A. Reynoldson. Farmers' Bulletin 1093, U. S. Dept, of Agr., Washington, D. C.

Food for Young Children, by Caroline L. Hunt. Farmers' Bulletin 717, U. S. Dept. of Agr., Washington, D. C.

Requirements and Cost of Producing Market Milk in Northwestern Indiana, by J. B. Bain and R. J. Posson. Bulletin 858, U. S. Dept. of Agr., Washington, D. C.

Sudan Grass, by H. N. Vinall. Farmers' Bulletin 1126, U. S. Dept. of Agr., Washington, D. C.

Variation of Milk Secretion with Age in Jersey Cattle, by John W. Gowen. Bulletin 286, Maine Experiment Station, Orono, Maine.

Green Clover Worm as a Pest of Soybeans, by F. Sherman and R. W. Leiby. Extension Circular 105, Agricultural Extension Service, Raleigh, North Carolina.

The Raising of Dairy Cattle and The Dairy Bull on the Farm, by P. A. Campbell. Bulletin 19, Extension Service, Connecticut Agricultural College, Storrs, Conn.

Suggestions Regarding Dairying in Northwestern Kansas, by J. B. Fitch and J. J. Bayles. Circular 81, Kansas Experiment Station, Manhattan, Kans.

SWINE

REGISTERED DUROC-JERSEYS

We are offering **For Sale** until **October 1st,** Spring **Duroc Gilts** and **Boars,** a number of Fall gilts and a number of brood sows including sows from **King Orion** and boars and gilts from **Crimson Orion Cherry King 2nd.** No better **Duroc** blood to be obtained. We will book orders now for pigs that will be farrowed in August. Satisfaction guaranteed on our **Durocs.**

EDGEWATER STOCK FARM, Ft. Atkinson, Wis.



Green Valley Cherry King 2nd No. 260435n.

Why Take Chances?

when you can see our DUROCS on your own farm before you pay. Everything in the Duroc line. Write for Catalog and price-list.

We deliver the Hogs before you pay.

GREEN VALLEY STOCK FARM

BOX 6. LOUISVILLE, ILLINOIS

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois



EPOCHAL

Epochal Sale Breaks Three World's Records

The Epochal Berkshire Sale at Martinsville, Indiana, on August 4, 1920, broke

(1) The World's Record for the highest average price for Berkshires at public sale with a new record average of $665.30.

(2) The World's Record for the highest price for a Berkshire boar at public auction with a price on the eleven months old boar, Laurel's Epochal, of $6,500.

(3) The World's Record for the highest price for a Berkshire sow at either public or private sale, on the sow, Epochal's American Mayflower 6th, at $3,900.

It was a notable fact that a large part of the buyers at this sale were breeders or farmers going into Berkshires for the first time. The success of the sale was an indication of the increasing popularity of Berkshires in general and of Epochal Berkhires in particular with the practical feeders and farmers.

These are the hogs you should have to go with your dairy cattle.

Write us for prices and descriptions upon other Epochal Berkshires that you will like.

Martinsville, Ind. Preston, Kan. Axial, Colo.

GOSSARD BREEDING ESTATES

Early to Market—Full Weight



51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.

Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.

Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age, and are uniformly red in color.

Write for our Free booklet "*Duroc-Jersey Hogs Are Prolific and Profitable.*"

The National Duroc-Jersey Record Association. Dept. 300 Peoria, Ill.

The largest swine record association in the world—12,000 members

Tierra Bella Stock Farm

Public Sale of Registered Chester White Hogs

We have reserved 40 choice Chester Whites, including 16 tried sows and fall gilts bred to Jumbo for fall litters, 10 big type fall boars sired by Pay Streaks Monarch, a good son of the Grand Champion Pay Streak, also 14 spring sows and boars sired by these big type boars. Everything will be registered. Write now for catalogue and plan to be our guest at Mauston, Wisconsin. Sale day August 14th.

V. C. TIEDT - - - - - - - - - - MAUSTON, WIS.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Return of Heat Period

I have a two-year-old heifer that was bred Jan. 10, 1920. Since then she has been in heat and would have taken bull. Is there such a thing as a cow coming in heat that is carrying calf?

Linden, Ala. W. Y. L.

It is possible for a period of heat to occur after service at a previous period, although the animal may then have conceived; but such cases are comparatively rare. The heifer in question in all probability has failed to conceive and should be bred when next she is in heat. If she does not then conceive treat her as often advised in these columns under head of "failure to breed".

Vaginitis

I have some cows with some kind of disease. Would like to know what it is and a remedy. The uterus is very badly swollen and white discharge from it. The cows seem all right otherwise. We have recently purchased a new bull. Could this disease have been transmitted to the cows from the bull? We have five cows that have it. Their ages are from 2 to 12 years old. They run on pasture.

Amsterdam, Mo. J. V.

We assume that you mean the vagina and not the uterus (womb). The bull may well have communicated infectious granular vaginitis to the cows and it would therefore be wise to flush out his sheath once daily with lukewarm water containing 30 grains of permanganate of potash to the gallon and also do this before and after each service. Once daily also syringe out the vagina of each cow with a like solution and if it does not prove effectual substitute a quarter per cent mixture of lugol's solution and lukewarm water. This solution gradually may be made stronger, if that is found necessary. Write again later if the trouble should persist.

Mammitis

I have a registered Holstein cow 4 years old, with her second calf now 4 months old. This cow has been giving 5 gallons of milk per day. She has been on pasture and in addition been fed about 6 quarts twice a day of feed composed of 1 part bran, 1 part shorts, and 2 parts cow chow. On Thursday morning she gave her usual 2½ gallons of milk and each milking gave considerable less till on Friday night she gave but a pint. Her teats seem to be sore and she flinches when you try to milk her. For some time her milk has been seemingly thick or ropy and when run through separator would leave a thick, heavy sediment. She has no appetite but will nibble at grass and has also eaten a small amount of grain. Have given her salts and oil.

Sheridan, Arkansas. J. W. M.

If pustules have erupted upon the teats the disease is cowpox and it should soon subside. If that is not the case the udder has become infected in some way or another, possibly by the cow standing in stagnant water, or wading in mud or filth, and mammitis is the result. Twice daily bathe the udder with hot water saturated with boric acid and if the teats are sore immerse them for five minutes in this solution. Then wipe dry and rub in a mixture of equal quantities of carbolized oil, camphorated oil and fluid extract of poke root. Internally give twice daily a tablespoonful each of powdered saltpeter and poke root in soft feed or water and reduce to one such dose a day when the trouble abates. So long as the milk is abnormal strip the udder clean every two hours.

Dimple Queen of Wakpala, Third in Class FF

On February 26, 1920, a three-year-old Guernsey cow, Dimple Queen of Wakpala, was consigned at the Hess-McDonald Dispersion Sale, Pennsylvania, and brought $4000. The purchaser was E. F. Price, New York. On official test in the two and one-half-year-old division, she had produced 9064.2 pounds milk, 508.36 pounds butterfat, in 278 days, and she had been bred to qualify for the double letter class of the Advanced Register. Her credits on the day of the sale were only 122 pounds butterfat behind the standard set by Little Star of Glencairne, the champion cow of the class.

National Board of Farm Organizations to Meet at Columbus, Ohio

The semi-annual conference of the National Board of Farm Organizations will be held at Columbus, Ohio, Sept. 1-3. This was decided at a meeting of the General Board of the National Board of Farm Organizations held at Chicago last week. The farm delegation will meet both presidential candidates, lay before them the condition and needs of agriculture, and from the candidates' lips receive assurances as to the measure of co-operation which may be expected from the next president of the United States. Co-operative marketing legislation, the Federal Farm Loan situation, pending personal credit legislation, packer control, and transportation matters will receive careful consideration. Sectional meeting will be arranged for the grain growers, the live stock interests, and milk producers for intensive work on their marketing problems.

Two Grain Marketing Committees Appointed at Chicago

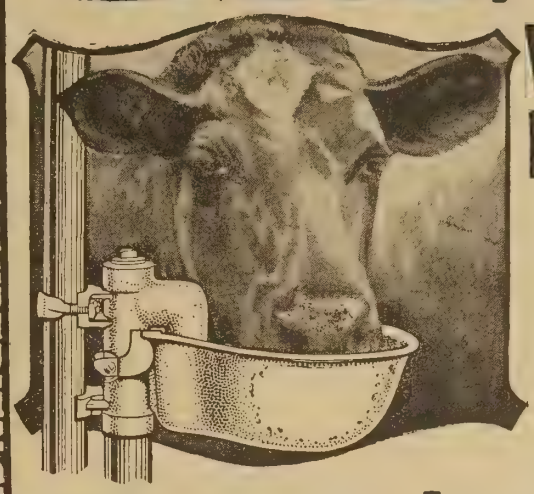
Four representatives of the grain growing interests of the National Board of Farm Organizations and four representatives of the Farmers' National Grain Dealers' Association were appointed at Chicago last week for the purpose of investigating various plans for co-ordination of grain marketing methods.

This action was taken at a conference on Friday night between the National Board of Farm Organizations and the Farmers' National Grain Dealers' Association, in anticipation of the endorsement given the following day by the meeting held under the auspices of the American Farm Bureau Federation to a plan leading to the formation of a national centralized selling agency and price fixing monopoly of wheat growers. In furtherance of the price fixing plan, J. R. Howard, president of the American Farm Bureau Federation, was authorized to appoint a committee of seventeen to investigate and make definite recommendations, the thought being that by 1922 the plan can be put into operation.

The joint committee of eight will function as an independent committee. Approximately four thousand farmers' grain elevators are owned and controlled by the Farmers' National Grain Dealers' Association and the Farmers' Unions and Equity Societies in affiliation with the National Board of Farm Organizations. This number constitutes more than three-fourths of the farmers' grain elevators of the country. While there is a general feeling on the part of the self-help organizations that grain marketing methods should be improved, there is still a justified belief that co-operative machinery built up with pains-taking care must not be set aside with haste and without reasonable assurance that different methods will accomplish better and safer results. Entire willingness, however, to co-operate with the Howard committee of seventeen in considering any practicable and improved method is guaranteed by the joint committee of eight. C. A. LYMAN, Secretary.

DAIRY, HORSE AND HOG BARN EQUIPMENT

DREW



WATER BOWLS

SIMPLEST and most DURABLE of them all

OUR 22 YEARS EXPERIENCE IS AT YOUR DISPOSAL

DREW-THE LINE OF EXCLUSIVE FEATURES

MORE MILK—LESS LABOR

Study the Following DREW Exclusive Features:

1. **Double Gravity Lock** brought to perfection after years of experimenting for the perfect lock.
2. **Reinforced Castings** that prevent breaking. Side of the bowl fits solidly into a deep groove, **making practically a one-piece construction.**
3. **Brass Valve Construction.** Protected from dirt. Never leaks.
4. **Perfectly rounded, smooth surface inside.**
5. Waterflow valve plate that operates under pressure of the cow's mouth. **No prongs or awkward slits to catch cow's tongue.**
6. Water bowl made of heavy iron, painted gray. **Edges rounded, no sharp points.** 9½ inches in diameter and 4 inches deep.
7. **Double Pipe Strength at the bowl**—impossible to bend, break or dislodge.
8. Supply of water connected either from above or below.
9. Easily and quickly installed—any barn. Can be fastened to wooden posts.

Cows like to drink — day and night. The more they drink the more milk they yield. REMEMBER — Drew Bowls are inexpensive to install and are practically indestructible.

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For Complete Information on

Stalls, Stanchions, Litter Carriers — Waterbowls, Bull Pens, Cow Pens — Calf Pens, Hog Pens, Feed Carriers — Bull Staffs, Ventilators, Feed Trucks — Hay Tools, Door Hangers, Etc.

ASPINWALL-DREW COMPANY
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DREW BARN FLOOR PLANS FREE

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DREW CARRIER CO., Waterloo, Wis.
Send the Drew Idea Book 181 without obligation or cost to me. I want to know about.....Stanchions.....Stalls.....Carriers .....Drinking Bowls.....Steel Pens.....Bull Staff.... .Barn Plans for.....New Building .....Remodeling—(date).....
Name.....
P. O.....
R. F. D.....State.....

ABORTION IN CATTLE



CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT. REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heiers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

Dehorning is Cruel



and a bloody job. The easy, quick, humane way to avoid dangerous horns on cattle is to treat calves with

Fleming's Chemical Horn Stop

Apply to calves, 3 to 10 days old and horns never develop. It's a thick paste. Doesn't run or make a bad sore. EASILY APPLIED AND NEVER FAILS. The cost is small — 50 cents a tube — enough for twenty-five calves.

Money refunded if not satisfactory. Order today. Ask for Fleming's Vest Pocket Veterinary Adviser — 192 pages — sent FREE ON REQUEST.

FLEMING BROS., Chemists
255 Union Stock Yards, CHICAGO

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A record book you will use every day. Write for it. Also for Silo Filler Catalog. For speed in silo filling, you want a *Rosenthal.* Extra large throat, cutter head with four knives. Three sizes, self feed with automatic speed control

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America's Pioneer Dog Medicines

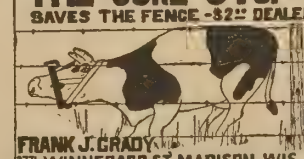
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A Real Job for Agricultural Graduates

(Continued from page 192)

ing with so many different families, each one having its virtues and its faults, the tester learns that people may be widely different and have their own faults, and yet be decidedly worth while. He will find people are better than we think they are, if we only go to the trouble to find out all sides of them.

Whether the agricultural college graduate expects to go back to the farm, to take up extension work or teaching, he cannot do better than to take a year of cow testing. The country needs many cow testers and is willing to pay well for them. Think it over, college men. What are you going to do next year? Here's a big job for you that will do you more good than anything else you can do, and in which you can do a world of good. Talk it over with your dairy instructor.

A Mayor's View of the Breeder

It is rather unusual for a mayor of a large city to have a comprehensive understanding of the requirements of a breeder and of the dairy industry, but at the annual convention of the Holstein-Friesian Association of America held in St. Paul in June, Mayor L. C. Hodgson gave a splendid address and showed that he had given more than passing interest to the problems of the breeder and the relation which the dairy industry bears to the welfare of the nation and what should be done to bring about more satisfactory conditions and larger returns to the dairy farmer. We make the following quotations from his address:

"The cow is the best symbol of our needs today. She is a worker and a producer. She does not regard life as an ornament merely. She does not scorn labor. She does not waste time in useless debate, in agitation. While children starve she doesn't write essays about it, tainted with discontent. She earns her right to tranquility by her willing work. She wants to pay her way. She is creative. She takes the raw material and turns it into that which shall serve the needs of the world. She accepts no favors without making return. She does her day's duty before taking her rest. But she is also the symbol of absolute justice. She demands her rights, and she has the royal power of enforcing her rights. Deal with her unjustly and she measures your penalty to the fraction of a cent. Withhold from her what she requires and she in turn withholds from you the contribution that equally measures your parsimony.

"One thing I think you should do, and that is to discourage the idea that successful breeding is a soft snap and a lazy man's job. Too many folks who read about the fancy prices paid for blooded stock get the idea that all you have to do is to sit with your feet on a mahogany desk and throw dollars at the cat. There is no business on earth demanding for its best success more of intelligence, earnestness, hard work, and unselfish service than yours does.

"The greatest need of America today is the creation of new wealth. But how are we to create it? Agricultural possibilities are not likely to be greatly increased in the immediate future. Mining is largely a local industry. Manufacturing will expand, but its wealth will increase slowly. Because of existing conditions I believe it safe to say that the one field in which there is no limitation to the possibilities of the creation of new wealth is the field of dairy and live stock activities. Under the most enthusiastic development and the expenditure of every possible energy, the dairy industry could not, within a quarter of a century, be boosted to a point where the production would exceed the demand. The field, therefore, is tremendous.

"The essential need in this industry is the development of the thoroughbred, the creation of the milk strain through breeding. This task has hardly been started yet. I feel safe in saying that more than 88 per cent of the milking cows of the country today represent an economic waste. It is hard to estimate with any degree of accuracy because all dairy figures are loosely made as yet; but, speaking approximately, I believe that if every scrub cow in this country were replaced by a pure-bred cow, there would be an increased production of from eight to ten billion dollars a year. This staggering figure brings some realization of the opportunity ahead, and of the need of stimulating the pure-bred game.

"But there is another side to the opportunity. The world needs food; milk is the best of all foods, the most essential. Take away from the world everything that originates with the cow, and a bill of fare would be so thin that men who love joyful existence would take rough-on-rats.

"The war has left the world impoverished for food. America must feed the world as never before. Whatever increases the food supply is a boon to mankind. Milk is not only the best food, but it is the cheapest. Charge for milk on the basis of its food value as compared with meat, and it will cost thirty-five cents a quart. Yet, as a writer recently pointed out, folks never complain if an automobile is sold at 100 per cent profit, but kick if milk is sold at five per cent profit. One-fourth of the children of America never have milk, and this means that we stand a terrible chance of a generation of weaklings, marked with the streaks of starvation.

"As you deliberate on how to encourage your industry and increase your production, you are making, in a sense, decisions on the fate of mankind; you are touching the hopes and aspirations of the world; dealing in the lives of children; outlining new possibilities for the homes of America; and planning a future for this nation built upon happiness and wholesomeness.

"No system devised will be without fault. I feel convinced that there is greater danger in too great restriction than in too little. After all the safest limitations in any business are the limitations of freedom. They are the limitations which permit the play of individual genius and initiative; which release the energies of the builder and the thinker; which fitly recognize the sacredness of difference between man and man; and under which men have the choice of using the method most native to their talent and inclination. Our rules and systems should be liberal and so devised as to guarantee chiefly that every established standard shall be just what it pretends to be; that every record stands for just what it is; that the achievement of animal and breeder be above misconception and open to the scrutiny of the world."

Before you junk or trade in an old machine, look it over carefully. At present prices, perhaps the parts you can use for repairs on your new machine will be worth more than the entire old machine itself will bring.

A little care, a little thought, and a little extra work, and America's forests may be made self-perpetuating; but they must have more than stumps to start with.

MERIDALE JERSEYS

After thirty-one years of constructive breeding, the opportunity is offered to the thoughtful breeder to secure, at buyers' prices, representatives of the blood lines which have made Meridale famous.

ANNUAL SALE

September 17, 1920

The offering includes a Gold Medal Daughter of The Imported Jap 75265; daughters of all the herd bulls at Meridale Farms; including a choice lot of Register of Merit cows, all young; and a remarkably fine string of young females just imported for this occasion.

Here is Correct type, Robust Health, Heavy Production—and above all, Prepotency!

FOR CATALOGUE ADDRESS

Tom Dempsey, Sale Manager, Westerville, Ohio

— OR —

AYER & McKINNEY

MERIDALE FARMS, Meridale, New York



"FOR SALE—TWO YOUNG BULLS"

They will be shown at the Wisconsin State Fair. Sired by Trial's Noble of Oakland 129364 and Eminent Rosette's Lad 149228. From R. of M. dams. If in need of a good bull, don't overlook this chance.

W. M. KNIGHT, OAK GROVE JERSEY FARM, Eagle, Waukesha Co., Wisconsin.

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Cedar Crest Farms

JERSEYS

We have a few young cows and heifers for sale. Write for particulars.

J. K. Dering, Lake Villa, Ill.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Hillcrest Jersey

Bull calf, 6 mos. Sire—Figgis Wingold. Dam—on R. of M. cow sired by grandson of Golden Fern's Lad. For particulars and price write
ROLLIE VANDERVORT, TOMAH, WIS.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th o: Hood Farm. Dam, Mona's Jacoba, record 806 lbs. buttert Granddaughter Jacoba Irene, young stock; St. Lamberf breeding for sale. **R. C. Green & Son, Albion, Wis.**

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON, - Edgerton, Wisconsin

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.

Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.

Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.

Price, $150 f. o. b. cars our station.

Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an AYRSHIRE BULL at the head of your herd
No class of cow is in as great a demand to day as a GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an AYRSHIRE BULL at the head of your herd





"Ayrshires of Quality"

Kit Auchenbrain

Jr. 4-yr.-old record 14,452 lbs. milk, 656 lbs. fat.

Champion of Breed for 30 days with 2019 lbs. milk.

Her bull calf, Kit's Surrel, by Surrel for sale.

WEYMOUTH FARMS,
North Weymouth, Mass.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {Rena's Champion No. 11816, 17 A. R. daughters incl. Henderson's Dairy Gem, Addington Queen 3d No. 29558, Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

For Sale Cheap

Ravinia Peter Pan 2nd, 2-year-old. Direct descendant of Beuchan Peter Pan, high class show bull. Write

Walter Dakin, 343 So. Dearborn Street, Chicago.

ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.

Ayrshire Bull For Sale

READY FOR SERVICE

Sire, a brother of Otterkill Roseleaf, $2,550 at National Sale. Dam, a Silver Medal Winner; both grandams in A. R.; great grandam 5 A. R. records. Traces 11 times to A. R. sires, 12 to dams. 2 sisters of dam under R. of M. test ahead of champions, another in second place.

Sears & Howell, Blooming Grove, N. Y.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Dairying Thirty Years Ago

Notes from the Issue of Hoard's Dairyman for August 29th, 1890

"What are men thinking about when they talk about the 'depressed condition of dairying' when August butter is worth 22 cents and July cheese is worth over 8 cents per pound. There is no better farming done, as a regular business than that, in all this country.

"The man who makes a spasmodic attempt to accomplish a given object and loses his head because he does not quite succeed, or sees lions in the way that he did not expect to meet, will "never set the river afire".

O. Moffet of Iowa had the following to say concerning "Breeding for Sex":

"When I embarked in a Jersey dairy, and realized the advantage of raising a larger per cent of females, and having heard that the formula was to serve the cow in the early stage of the heat and have the bull wrought up to a high state of excitement, I worked on this program as faithfully as I could. And what was the result of my first year's experience? Why, of twelve calves, nine were bulls. From this I became disgusted, voted the science of the thing a humbug, and for the next season I went in on the let-her-rip system. And, strange as it may seem, of sixteen calves, but one was a male. Then for the next year, from the same bull, I had about twice as many heifers. Then I changed bulls, and for the next several years I was so fortunate as to have about twice as many females as males. And, curiously enough, again I now have another bull who for the first season has produced so far nothing but females."

A woman correspondent wrote to "impress upon the 'powers that be' the vital importance of appointing "really good judges upon the different breeds of cattle for the fall exhibitions in 1890". She said: "I do not think any one realizes the dissatisfaction, discomfort, and misery that must be suffered, not only by exhibitors, but by all the officers connected with the exhibition when judges are appointed who are manifestly unfit for the position; and sometimes the best breeders are deterred from exhibiting because they do not wish their cattle to be judged by men who are partly, or wholly, incompetent. I, as a sufferer, can speak from experience."

The following were the dairy markets for August 25th:

ELGIN, Ill., Aug. 25—Market, 23½ @24. Butter. Call board sales, 105 tubs at 24c; 197 tubs at 23½. Floor sales, 50 tubs at 23½c; 217 tubs at 24c. Aug. 18, 1890, butter sold at 22½c. Aug. 25, 1889, butter sold at 19c; Aug. 27, 1888, sold at 22¼c; Aug. 29, 1887, sold at 23@25c.

FOND DU LAC, Wis., Aug. 25—The offerings on the Fond du Lac Dairy board today were 1,000 Cheddars and 1,500 boxes flats, and buyers paid 7¾@8c for Cheddars; 8½@ 9c for flats.

An extra file and one or two whetstones are mighty handy to have around when the tools get dull.



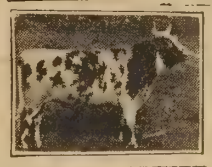
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan

Sons of
Ringmaster's Brae Burn Diplomat
For Sale

GEORGE F. WHITE, WESTFORD, MASS.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Brae Burn Farm

Cavalier's Model Champion

1st at National 1919

Heads Our Herd



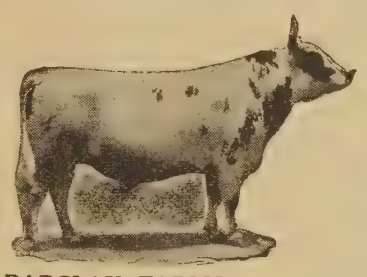
L. W. NEWTON, ASHBURNHAM, MASS.

MIDDLESEX MEADOWS FARM

SOUTH LINCOLN, MASS.

AYRSHIRES

A. Henry Higginson



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

When writing advertisers please mention Hoard's Dairyman.

Fifteen Teams in Junior Judging Contests at National

As the closing day for entries for state teams of boys and girls for junior judging contests rolls around, entries from fifteen states are filed and three or four other states are asking for a few days' grace as they need more time to make arrangements to send a team before making entry.

Teams are entered so far from the following states: Delaware, Idaho, Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Ohio, Pennsylvania, and South Dakota.

The Dairy Show management has made hotel reservations for forty-five boys and girls who will be guests of the show, at the Y. M. C. A. Hotel and the Y. W. C. A. Hotel, respectively, and if any of the parents or friends of the boys or girls are coming along, reservations can be made for them. These hotels are as comfortable as any in town, so far as comforts go, and some of the luxuries may be found at both. They are both scrupulously clean, central of location, and handy for elevated and surface cars to the show buildings. The boys and girls will be looked after in every respect.

The boys and girls fortunate enough to be sent to this show's contests will derive a benefit that will be life-lasting, and will get inspiration that will be bound to have an influence in the shaping of a successful career. The men of vision in the several states who are making it possible that these boys and girls can participate in this event, and the parents and relatives of the children can all well afford to come to the show to see just what it means to the dairy industry, and perhaps get as much out of it as the young people.

The show dates are October 7th to 16th, and the big day for the boys and girls is Friday, October 8th. Sunday, October 10th, they will see some of Chicago's big industries, and hear men of national standing speak on religious and agricultural topics.—NATIONAL DAIRY SHOW.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

RED POLLED

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls, also heifers and young bulls by them. Don't forget the date. Send for catalog.

Jean Du Luth Farms, Duluth, Minnesota.

BROWN SWISS

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows — profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

15,540.9 lbs. Milk
613.60 lbs. Fat

Is the average official production of his two nearest dams. This Brown Swiss bull is 16 months old and ready for service.
Two other fine yearlings and several younger bulls. Entire herd FEDERALLY ACCREDITED. Write for pedigree and prices.

WALHALLA FARMS, Middleburgh, N. Y.

Pure-bred Brown Swiss

cattle for sale, consisting of

5 cows, 4 years old. 3 yearling heifers.
1 1-month-old heifer. 2 6-months-old bulls.
1 9-month-old bull. 1 1-year-old bull.

Will sell reasonable at a quick sale.

GEO. SCHUNK, R. R. 1, STANLEY, WIS.

GUERNSEYS

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137
Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

Your Opportunity

to obtain the blood that breeds on, sons of

Langwater Raritan

the only GUERNSEY BULL that has a full sister (Langwater Nancy) with 1000-lb. fat record.

Send for sale list.

Herdlea Stock Farms, - New Hope, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

SECOND

Wisconsin State Sale

— OF —

Guernseys

October Thirteenth

Ninteen Hundred and Twenty

MADISON, WIS.

Stock Pavilion

Timonium Pure-bred Live Stock Exchange

Will Hold a Sale September 23 at Timonium, Md., at 11 A. M.

The Guernsey Breeders of Maryland will meet at the Hotel Emerson, Baltimore, Maryland, at 7 p. m., September 22nd. Dutch Treat Supper. Every Guernsey Breeder welcome.

There will be offered about 45 high class attractively bred females and four young bulls.

The females include, a ½ sister to the record price cow of the breed by the thrice winner at the National Dairy Show, Ladysmith's Cherub, a splendid daughter of King of Chilmark.

A daughter of Lanerna's Ultra May King out o an unusually high class May Rose cow, consigned by Burnside.

One of the best daughters of May King's Vrangue of Ingleside. Five daughters of Uncle Jim. One a Mary Jane and the ninth generation bred on Gerar. Another a Cora.

Four daughters of Rutila's Patient King.

Three daughters of Irene's King of the May.

A daughter of Meadowlea (brother in blood to Langwater Stars and Stripes and Dolly Dimple's May King of Langwater).

ALL animals offered are real producers of the Right Type.

We KNOW what the Guernsey Public wants and our first sale must be a Success. For catalogues write

Louis McL. Merryman, Cockeysville, Md.



Economy in Production ← GUERNSEYS → Quality of Products



Guernseys live long and useful lives. Let us tell you about some of the Guernseys that have produced profitably after passing their twentieth year.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H 77, PETERBORO, N. H.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.
Federal Tuberculosis Free Accredite' Herd.
Mountain Bros., Carrier 485, Des Moines, Ia.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow
Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.
C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)
Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.
SPRINGFIELD CENTER, NEW YORK.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd. **August Ziesing, Deerfield, Ill.**

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.
Folly Farm, - Libertyville, Ill.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.
Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)
Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.
Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $800. Write for particulars.
Meadowland Farms, Litchfield, Conn.

Shuttlewick Farms

Offer
A two-yr.-old Guernsey Bull
Daphne's Crusader of Shuttlewick
No. 53595

A grandson of Don Diavolo of Linda Vista, No. 23565, who sold for $10,000, the then top price for a Guernsey bull. His fourteen nearest sires are in the Advanced Registry and his ten nearest tested dams averaged 725.12 pounds of butterfat. He traces once to Imp. Golden Secret, four times to Imp. King of the May, three times to Imp. Hayes Rosie and three times to Dolly Bloom. Address **Myron A. Wick, 232 East 131st St., Cleveland, Ohio.**

The Mixter Farm

325 GUERNSEYS 325
Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.
HARDWICK, MASSACHUSETTS.

Hillswold Farm

Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right and animals guaranteed to suit. **W. A. Cloues, Mgr**

Guernsey Bulls

May Rose on both sides. Dams in A.R. or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are gh grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.
TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).
BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.
A. R. HOARD, - Fort Atkinson, Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.
Charles L. Hill & Son, - Rosendale, Wis.

CITY HOME FARM GUERNSEYS

Fine registered Guernsey bulls of serviceable age and younger of most fashionable breeding. Priced right. Can also spare a few fine females.
F. W. MEYER BARRON, WIS.

MAPLE HILL FARMS

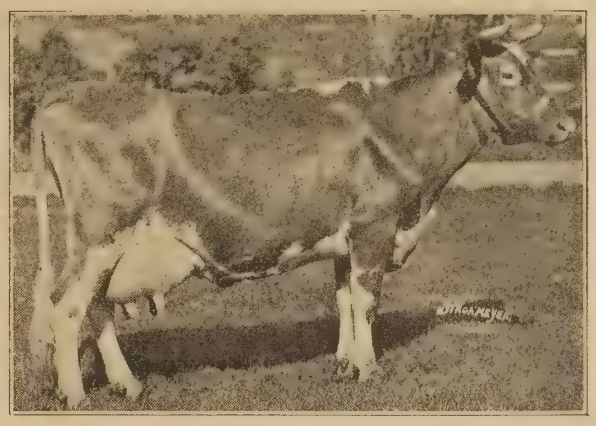
May Rose bulls for sale from 2 to 16 months old with A. R. backing.
Fruit Bros., - Waukesha, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.
B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"
We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.
Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.
C. W. BARRON, Prop. **(Address) W. S. KERR, Manager.**

Do You Want A Bull Calf Sired by Anton's King Confidence?

His dam, Ma Chere Confidence 55851, A. R. 5727, has a record in Class C, of 764.65 lbs. of butterfat in one year.



Anton's King Confidence 43517

At the present time, we are offering several very desirable young animals that will be ready for service this fall. They are all out of A. R. dams or two-year-olds, that are now on test.

The strong May Rose breeding on the sire's side (A. K. C. traces five times to May Rose 2nd) combined with Starlight's Excelsior and Yeksa traces on the dam's side make these young bulls representative of the best blood in Guernsey circles.

Their conformation is of the very best—straight tops, long, deep barrels, and good width, all linked firmly with refinement and dairy temperament. Write for complete information.

HOARD'S DAIRYMAN FARM, FORT ATKINSON, WIS.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.
Wern Farm, Waukesha, Wis.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.
Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.
RALPH TRATT, WHITEWATER, WIS.



Sequel's Glenwood of Linwood 41767

Sire, Imp. Clara's Sequel 29414, sire of 30 A. R. daughters averaging 500 lbs. fat. Dam, Ideal of Alfalfa Farms 40750. She has three A. R. records: 452 lbs. class G, 740 lbs. class A, 690 lbs. class AA.
I am offering the following bulls by the above sire. Their dams have large records and are sired by Langwater Frenchman, Langwater Frederick, and Governor of the Chene:
Eugene of Linwood 7 months, dam 752 lbs. class AA class leader
Edgar of Linwood 11 months, dam 540 lbs. class B
Edward of Linwood 11 months, dam 421 lbs. class G
Emery of Linwood 11 months, dam 514 lbs. class A
Edwin of Linwood 10 months, dam approximately 590 lbs. fat class FF
Elmer of Linwood 8 months, dam 435 lbs. class G
Ernest of Linwood 8 months, dam 566 lbs. class B
Sale List **Homer F. Rundell, Livingston, Wis.**

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.
Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Alsike Clover

The increasingly frequent failure of red clover has resulted in increased use of alsike clover, and on a great many farms in the Ohio Valley and lake region the farmers now use a mixture of red and alsike where formerly they used only red clover. This is done in order to insure a stand of some sort, the alsike making a stand upon those areas in the valley which had become more or less sour or run down. Besides having a wide use as a mixture with red clover on sour or run down land, alsike is the crop par excellence for low, wet ground. In southern Indiana along the Patokah river bottoms there are fields which have made three cuttings in the same season in which the seed was sown. while usually alsike makes only one cutting. On rich, low land, it grows rapidly and continuously. In the south the use of alsike is recommended for all low lands. The fact that alsike clover will endure growing in water for long periods was shown experimentally by the department when it grew pots of alsike clover submerged to about 3 inches above the edge of the pot for an entire year. The clover in these pots grew more thriftily and made a larger mass of growth than the clover in the check pots.

During the past year some very interesting experiments have been made in New Jersey on the use of alsike clover as a winter cover crop. The seed was sown in August alongside of plots of crimson clover and hairy vetch. This spring it was found that the alsike clover was the only crop having a complete stand.

There is some reason to believe that important strains of alsike clover are to be found in northern Europe, and this field will occupy the attention of this office as soon as funds are available.—C. V. Piper and A. J. Pieters, United States Department of Agriculture.

HOLSTEINS

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.072. Sire of calf *Sir Ona Clothilde De Kol No. 241466*. His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

5-10 WELL BRED HEIFERS
SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.
ANDREW FRANK, FOX LAKE, WIS.

King Waldrof Pietje Echo
Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.
Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month,** Feb.4-5; Apr.1-2; June3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*
Address The Purebred Live Stock Sales Company.

I Want a Heifer
Pure-bred Holstein

2 years or less, backed by type and production.
John P. Algie, - Como, Montana

Buffalo Creek Farm
Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.
H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.
WOODLAWN FARM, STERLING, ILL.

Grandson of King Segis Pontiac
Ready For Heavy Service

We have for sale a 2-year-old grandson of King Segis Pontiac from one of our best "all the year" A. R. O. cows. He is a splendid individual, well marked and very well grown. Priced to sell. Also have a few bull calves. Write today.
PINEHURST FARMS, ROCKFORD, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.
A. F. Randolph, Prop., CANTON, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.
Long Distance Phone 389.
DUETT ROBINSON, R. 3, Capron Ill.



LISLE FARMS CO., Lisle, Illinois
BREEDERS OF HOLSTEIN CATTLE
2 WORLD / 4 STATE } RECORD COWS IN OUR HERD
Holstein Bull Calves For Sale
Combining Type, Size, Constitution and Production.
Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.
His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.
His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.
The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.
ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

Lord Netherland Rag Apple
Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.
We have his first sons for sale.
LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

Facts in BLACK & WHITE

Value of a Purebred Holstein Bull

Do you realize in what a short time you can transform the character of your herd by the use of a purebred Holstein bull?

Each well chosen sire should give at least 50 per cent of his character to the next generation so that the direct descendants of the fourth generation retain only a little over six per cent of the original blood and nearly 94 per cent is of your own choosing. No man has any excuse for milking unprofitable cows when he can easily get into the all-yea milking class of Holsteins.

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.
84 Cows With Yearly Records — 65 Cows Now On Yearly Test

BUY A BULL



That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.

W. J. Gillett & Sons, Rosendale, Wis.

Who Pays The Price?

All stockmen have losses. Usually they come unexpectedly. That's why live stock insurance is desirable. It protects your invested capital. It reimburses you for loss.

We protect your investment at a cost less than the interest rate on the money you would use to replace a loss. When you lose an animal we pay you the money to replace it. WE PAY THE PRICE.

Insure In A Home Company, Owned by Wisconsin Stockmen

WISCONSIN LIVE STOCK INSURANCE COMPANY

Bank of Wisconsin Building, Madison **"Not a Mutual Company"**

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEINS AND GUERNSEYS

Why not buy your cattle from a reliable firm established in the cattle and dairy business for twenty-five years? We can fill your order for any number, pure-bred or high grade, any age desired from four weeks up. Give us your mail order to insure satisfaction.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Bulls—Ready for Service

Sired by a son of former world record cow and out of A. R. O. daughters of Homestead Jr. De Kol 2d.

Their sire is a grandson of King Segis De Kol Korndyke out of Finderne Pontiac Netherland. a world record jr. 2-year-old, 28.26 lbs. butter in 7 days, 10.72 lbs. in 30 days, (31 lbs. at full age on three quarters). These youngsters are priced to sell,—$200 to $500. Write

Wm. Millar, Jr., R. 2, Menominee, Wis.

1000---HERD---1000
Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association.
A. F. Gafke, Secretary, Jefferson, Wis.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed t have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

2500 Healthy Holsteins 2500
Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.

Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.

S. T. JONES, - R. 8, Watertown, Wis.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

HORICON BELLE HOLSTEINS

Herd headed by Pabst Korndyke Baldwin, a son of Korndyke Segis Johanna and from a 32-lb. granddaughter of King Pontiac Champion. Five females in my herd average 24.12 lbs. butter as 2-yr.-olds.

E. F. KUEHN, - - HORICON, WIS.

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. CHRIS. INDERMUEHLE, R.1, Juneau, Wis.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

Check Or Bond Buys Dandy Bull Calf

Born June 20, 1920. His dam and sire's dam average over 30 lbs. butter and 657 lbs. milk. Dam and grandam have good yearly records. Rich in Pontiac Korndyke and King Segis blood. Dark in color. Cut price. **Chic Dairy Farm, - - Juneau, Wis.**

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - - Burnett, Wisconsin.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY

WISCONSIN

Send for list of 40 bulls in service in Waukesha County whose dams have records of over 30 lbs. of butter in 7 days or 1000 lbs. of butter in 365 days.

When in the market for Holstein Cattle for foundation stock, grades or pure-breds, buy them in Waukesha County. If you want a bull, reasonably priced, send for list.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin Office 254 Broadway

Tuberculin tested herds—State and Federal.

Individuality Short and long time production records.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

HOLSTEIN BULLS AND HEIFERS ! !

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

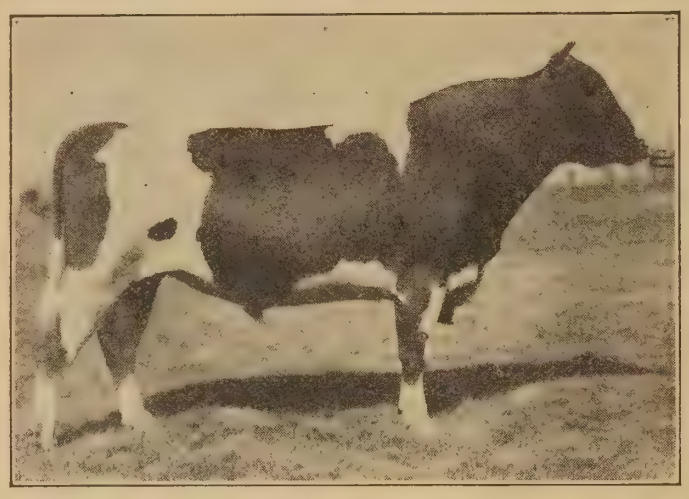
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Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

Just the Sire For Some Small Breeder



LINCOLN KAREN ORMSBY
Born February 2, 1916

He is an excellent individual, straight as an arrow and full of style. He is a full brother to Miss Karen Ormsby Mercedes, a two-year-old heifer that sold in the last Minnesota State Sale for $2,025. She is now making great yearly tests. He is a three-fourths brother to Ruby Karen Mercedes, the State Champion junior four-year-old with 35 lbs. butter in 7 days.

HIS SIRE

is SIR PIETERTJE ORMSBY MERCEDES 22D, one of the leading sons of SIR PIETERTJE ORMSBY MERCEDES, the sire of more 1,000-lb. cows than any other sire in the world. The dam of "22D" is Riverview Fytje De Kol Ormsby, the first 1,000-lb. cow in Minnesota. In a year she made 1,070 lbs. butter from over 26,000 lbs. milk. She is by the 30-lb. sire, Duchess Korndyke De Kol.

HIS DAM

is JOHNSTON LINCOLN KAREN, 28.08 lbs. butter in 7 days and 110.31 lbs. in 30 days. She is the dam of Ruby Karen Mercedes, the state champion 4-year-old of Minnesota with 35 lbs. butter in 7 days. She is sired by King Karen, a son of Alma Prince Jewel. Her dam is by Alma Prince Jewel and from San Toy, a 25-lb. cow.

PRICE $1000

He is guaranteed sound in every way and to be an active server. Will sell subject to 60 to 90 days retest. Very gentle.

E. C. SCHROEDER FARMS,

Moorhead *(A Federal Accredited Herd)* **Minnesota.**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

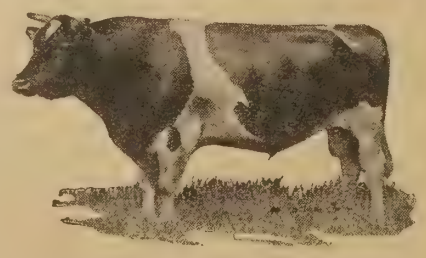
Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

If You Went Into a Grocery Store

and laid the price of a dried up loaf of bread on the counter you would expect to get a dried up loaf of bread. Yet, a fellow came here the other day and laid down the price of a dried up bull. We haven't any dried up bulls for sale so he went home without one. If you want a good bull calf, any age, better write for the circular today.

FLECKS FARMS, Faribault, Minn.

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams. For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm

William Schmidt, Prop. St. Peter, Minn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - E. GRAND FORKS, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

2 Choice Bulls for Sale

No. 1. Born Dec. 19, 1919, good individual, good length, and a straight top line, three-fifths white. Dam, A. R. O. 18.10 lbs. butter as a senior yearling, milk 400 lbs., and daughter of 35.68-lb. bull, King Colantha Lyons. Sire, King Korndyke Gem, whose dam's A. R. O. record is 32.74 as a 3-year-old. Price $225. No. 2. Born January 9, 1920. A good, growthy fellow, heavy body, about three-fifths white. Dam, A. R. O. 22.50, milk 520 lbs. Sire, King Colantha Lyons, a 35.68-lb. bull. Price $225. Pedigree and photo on request. An accredited herd.

MICHAEL SEBERGER SCHERERVILLE, IND.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peidora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **O. I. Reamer, North Liberty, Ind.**

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

TOYON FARM ASSOCIATION

Mills Building San Francisco

AMERICA'S ONLY HERD OWNING EXCLUSIVELY TWO SONS OF SIR PIETERTJE ORMSBY MERCEDES

SIR PIETERTJE ORMSBY MERCEDES 43d
Dam's record 1250.35 lbs.

SIR PIETERTJE ORMSBY CANARY
Dam's record, 3½ yrs. - 862.88 lbs.
Dam's dam's record - 1009.87 lbs.

SIR AAGGIE MEAD
His 5 nearest dams average 1177 lbs.

350 HEALTHY HOLSTEINS—UNDER FEDERAL SUPERVISION

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH

WHEATFIELD FARMS

A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.

Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS

J. C. Dold, Owner. R. F. D. No. 14, LA SALLE, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Carload A. R. O. Cows

In calf to double 30-lb. son of King Segis Pontiac Alcartra. Freshen fall and winter. Handsome young bulls nearly ready for service. Sire's nearest dams average over 30 lbs. Federal accredited herd.

H. J. KARPINSKI - R. 7, OSWEGO, N. Y.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Sky'ark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Cattle For Sale

EFS

Two Carloads of Young, High Grade, Springing Holstein Cows. Priced right for immediate sale.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra.*

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

Here's Your Chance to Get a Choice Bull

From a sire whose 4 nearest dams averaged 29 lbs.

❖ Born November 1916 Black and white ❖ Born February 1917 Black and White ❖ Born May 1917 Black and White ❖

3 Choice Bargains

L. H. HUNTER, RANDOLPH, MINN.

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

FISK

Red-Top Tires for Small Cars

WE have specialized in a tire for small cars—The Fisk Red-Top. It is pre-eminently a tire designed for hard service under all conditions.

Its success is due primarily to two things: extra size and extra strength.

For size, compare it with any other tire on the market. As an instance, you will find the Fisk Red-Top 30x3½ is larger than the so-called standardized oversize tires.

To get the extra strength an extra ply of fabric is built into the Fisk Red-Top. The tread is also extra heavy. This means both side walls and tread stand up under the most severe usage.

In every section of the country small car owners are getting from Red-Top Tires greater mileage, greater ease in riding and with the least attention of any tire that is made.

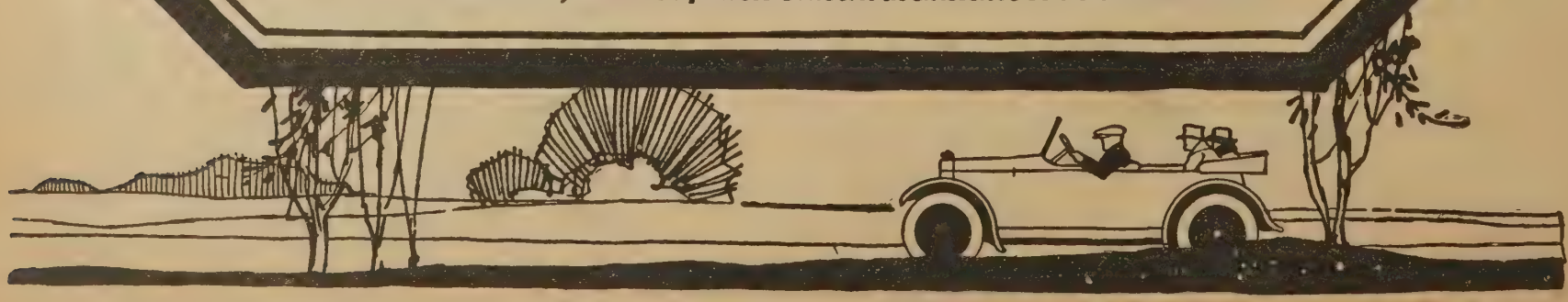
The Fisk Red-Top Tire in its present construction was put on the market early in 1918. It was not offered to our trade until we felt sure that our facilities for production would be equal to the demand—yet the demand was so great that for fifteen months after we were unable to catch up with orders.

With our present greatly enlarged equipment, however, we are now ready to supply Fisk Red-Tops promptly. You will find wonderful satisfaction in this tire especially designed for your small car.

Next time—BUY FISK
from your dealer



Like all Fisk Tires, Fisk Red-Tops are backed by the Fisk Ideal, "to be the best concern in the world to work for, and the squarest concern in existence to do business with."



COLLEGE OF AGRIC
20 JUL 20
URBANA ILL

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., SEPTEMBER 3, 1920. | Number 7

USE MORE MILK

J. C. McDOWELL

AT the close of the great World War, Paderewski sadly remarked that in all Poland there were no children under seven years of age. Why? How could that be? Had the cruel Central Powers murdered all the little Polish children? No, not directly. The children were not killed by bullets but according to the physicians they died of undernourishment. In other words, they slowly starved to death for lack of proper food, and the food they needed most was milk.

Paderewski was speaking of war-time conditions and Poland is far, far away, but how about our own children in this great, glorious land of America, this land of untold weatlh, this land of the free and home of the brave? Certainly our children get enough to eat and of the right kind. Do they? Don't be too sure. Facts are stubborn things and here they are:

The Office of Information of the United States Department of Agriculture says that one-fifth or 20 per cent of all the school children in the United States are undernourished, not from a lack of food, but from a lack of the right kind of food. In studying this subject, home demonstration agents have weighed and measured thousands of children. Of the 85 boys weighed at the Windsor fair in Connecticut, 43 were under weight and of the 92 girls weighed, 55 were under weight. On weighing and measuring 400 children in one Missouri County it was found that 50 per cent of those between the age of 5 and 10 were under weight, and that 90 per cent of the girls between the ages of 10 and 18 were under weight. In New York City a decrease of 25 per cent in milk consumption for 1917 and 1918, as compared with 1914, was accompanied by an increase of 16 per cent in undernourished children.

Yet milk, even at the present prices, is the cheapest of all animal products. An acre of land will produce more food in the form of milk, a ton of hay or a bushel of grain will produce more food in the form of milk, and a dollar will buy more food in the form of milk, than in the form of any other animal product, and children that have an abundance of pure, rich, fresh, whole milk are never undernourished.

Why don't people use more milk? Certainly not because it lacks food value, because as a food it ranks high. Not because it is high priced because, relatively, milk is never high in price. Not because it is scarce, because milk supplies can readily be increased to meet any demand. No, the true reason why this excellent food is used so sparingly is because milk is underadvertised. Automobile manufacturers advertise autos, milliners advertise hats, and grocers let it be known that they are out after business.

About the time a certain breakfast food was placed on the market, a professor in the Ohio State University saw a street car advertisement that told of the wonderful food value of this breakfast food, of its ready preparation for the table, and its palatability and deliciousness were set forth in glowing terms. The written advertisement was accompanied by a beautiful picture in attractive colors. The professor at once had a desire to try the new dish. He did so, but did not care much for it. The next day he saw the advertisement again, and again he tried the breakfast food. Soon he learned to like it. One day he gave some of it to his dog. The dog wouldn't touch it and never did learn to like it. In telling the story afterward, the professor remarked that the difference between him and the dog was that he could read and the dog couldn't. It pays to advertise.



FOR GROWTH AND HEALTH EAT MILK

Milk is not merely a pleasing drink; it is nourishing food. It is rich in body-building substances, such as protein, lime, and phosphorus, and it is rich in energy-producing substances, such as sugars and fats. The newborn calf has wabbly legs. Milk puts lime into its bones, protein into its blood and muscles, and the fats and sugars warm its body and give it strength to run and play. After drinking milk for a few days, the calf ceases to be a wabbly calf and become a strong, healthy, graceful, beautiful animal, the kind that delights the eye of the owner and adds much to the pleasures and profits of dairying.

At no price at which milk is ordinarily sold, is it nearly as expensive as other animal foods of recognized value. In digestible protein, one quart of milk is equal to:

7 ounces of sirloin steak, 6 ounces of round steak, 4.3 eggs, or 6.8 ounces of fowl.

In the production of energy, one quart of milk is equal to:

11.3 ounces of sirloin steak, 14.9 ounces of round steak, 9 eggs, or 14.5 ounces of fowl.

On an average whole milk contains about 4 per cent butterfat, 2.6 per cent casein, 0.7 per cent albumen, 5 per cent sugar, 0.7 per cent ash, and 87 per cent water. Altogether, whole milk contains about 13 per cent solids and all of the solids are highly digestible. Though milk is a liquid, it contains a lower percentage of water than the edible portions of many fruits and vegetables. It contains a lower percentage of water than the edible portion of strawberries, cranberries, peaches, lemons, water melons, asparagus, string beans, cabbage, celery, cucumbers, or lettuce. While foods cannot be compared wholly on the basis of their nutritive elements, milk is the one food devised by nature for the growth and development of the young. A quart of milk a day is a fair allowance for the growing child.

What shall I say of dairy substitutes? Perhaps it would be best to leave my thoughts unexpressed, but this much I will say, that as for me and my family we are using, and while I am able to earn a living wage we will continue to use pure, fresh, wholesome, genuine dairy products.

Last year the people of the United States used 3.5 lbs. of cheese per capita. In Denmark the people use 3½ times as much. Last year the people of the United States used 14.4 lbs. of butter per capita. In Australia they used almost twice as much. Each day the people of the United States use one pint of whole milk per capita. In Sweden and Denmark they use 1½ times as much. The people of the United States should use more dairy products.

You can run almost as far, you can climb almost as high, you can work almost as long on a quart of milk as on a pound of beef. For body building, milk and meat are nearly equal dollar for dollar at present prices, but for energy, strength, and power to do work one dollar spent for milk brings greater returns than two dollars spent for meat.

The dairy farmer should get a fair price for milk, cream, butter, cheese, for every product of the dairy; but he should get it through legitimate advertising and not through strikes. He should get it through greater consumption and not through under production. He should increase his income through bigger and better sales but he should not add to his income by unfair prices.

Let us consider the guarantee of 10 per cent plus the cost of production. If it encourages high production costs, that plan gets us nowhere. On the other hand, we have the opportunity and the moral right to get our 10 per cent plus through economical production, and through the efficient marketing of a high-grade product. Let us teach the true food value of milk, make the people want it, make them feel that they must have it, and they will pay the price that will make production possible. Let us co-operate, not in restraint of trade but to facilitate trade. Let our motto be co-operation, not coercion. Such a plan is fair to producer and consumer alike, and it is good business.

Milk campaigns, conducted in many

(Continued on page 260)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
EDITORS
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C. L. BURLINGHAM

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Live Stock Advertising - JOHN G. POYNTON
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H. B. GURLER - - - - Mississippi
C. P. GOODRICH - - - - Wisconsin
H. H. LYON - - - - - New York
DR. E. V. MCCOLLUM Johns Hopkins University
PROF. C. H. ECKLES - Minn. Exp. Station

Subscription Rates

Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Miss Jessie Plays

I've just come out for a minute to sit on the
porch an' rest,
Away from th' singin' and dancin'—a sort of
an awkward guest.
It's a wonderful night for a party—th' farm's
in a silver sea,
Th' moon peeks around from th' silo an'
winkin' a bit at me.
A moon that was meant for courtin'—a moon
that is big and round,
And out in th' wheat field yonder there's nev-
er a breath er sound.

Then—all of a sudden, her playin'—her hands
on th' shiny keys,
A hush from th' Bay Creek fellers, keyed low,
like a summer breeze
And out on th' still air, softly—th' song that
she used t' sing,
I can't recollect what she called it—th' name of
th' purty thing,
But I turn an' I watch those fingers; th' fig-
ure against th' light
Th' sway of th' girlish body, and hair that th'
lamp makes bright.

And, oh, but I feel so clumsy—so far from
my dreams come true.
Miss Jessie, an' me—it's funny—it's best that
she never knew.
I wait till it's almost over, then start fer th'
path an' town,
When, quick as th' sweep of th' moonlight,
comes a swish of a party gown
And, there she is, smilin' at me—an' me with
my eyes a-swim,
While someone is sayin', soft like: "I'm wait-
in' for you, Jim."

"Any trout in the stream on your place, sir?"

"Mebbe—can't tell till you try."

"Do you mind if I fish a while?"

"Go as far as you like, but the last chap from the city that did it there, left so many of his patent lures and hooks and flies along the bank, that I was afraid to let the cows out to pasture until we cleaned 'em up."

Dairying Thirty Years Ago

Notes From the Issue of Hoard's Dairyman for September 5, 1890

An English correspondent had complained of the quality of butter found in England and, apropos the exportation of butter from this country, the following editorial statement was made:

"What we need is to have an ocean refrigerator steamer load, or more, every week depart from our shores of that which is not over a week old when it starts, and made in the highest and best style of the art. If we could get it started right, and in reliable hands, it would do us more good than a world's fair to advertise our goods."

The issues of 1890 were so filled with articles from the leading dairymen of this country that the editor was moved to the following "declaration":

"We may be pardoned for taking just a little pride in the fact that so much of our reading space is occupied by our strong correspondents. Very little of the matter in type this week was ever in type before, in other papers. It is a fact, and we are humbly thankful for it, that the best dairy thought of America seeks expression through these columns. Another thing that we are more proud of, if possible, is that the humblest dairyman and dairy woman seeking light about the practical things he or she has to use and handle every day, come with the same freedom of the loftiest and most learned, and seem to know and feel that they will be as welcome and that we will do the best we know for them, as quickly as we would for the scholarly kings and queens among mankind. Anything that we know about the business, from the cow to the cash she earns, is all on the same true democratic platform,—is all as simple, and all as intricate or as grand, as any part of it, and it, together with all our correspondents tell of dairy truth, is the common property of the Dairyman family. One of the big vital truths of this life is that we can't help others to grow without helping ourselves in the same direction. The truth we part with is always out on big interest that insures to ourselves."

James C. Stone of Kansas wrote in favor of fall dropped calves: "When a man rears calves in the summer time they are very often neglected. Twice a day they are called up, and as a rule get a supply of sour milk. I would prefer them raised through the winter; they can be protected from the sun and from the flies, and be ready to eat grass when the summer comes. I would have the cow begin her working season from October onward."

The Wisconsin State Fair for 1890 was advertised. Extra inducements of $3,591 were offered in special premiums. A one hundred dollar top buggy was given for the best single loaf of fruit cake. Railroad companies offered excursion rates of one fare for round trip. Freight charges were made for only one way, except with race horses. Among the "special attractions" were listed bicycle races, balloon races, and chariot races. The "phenomenal family" was advertised to be present and to comprise of 15 children, six pairs of twins and one pair of triplets. One walking race was listed for draft horses and a special premium was given for a race in which horses were to be driven by ladies.

He was milking, and while he lifted his eyes elsewhere, a grasshopper jumped into the pail.

When he saw the commotion in the milk, he exclaimed: "Well, by gum! If here ain't one of them darned germs!"—The Country Gentleman.





A New

De Laval

Cream Separator

Quickly pays for itself in these times of high butterfat prices and scarcity of labor. It does so doubly quick if your present separator is too small, half-worn-out, or you have none at all.

The De Laval Separator skims cleaner, is easier to turn and wash, and lasts longer—that is why there are more De Lavals in use than all other makes combined.

The De Laval is the World's Standard Separator.

A De Laval purchased now will pay for itself before Spring.

See the nearest De Laval local agent at once, or write the nearest De Laval office below for any information desired.

The De Laval Separator Co.

165 Broadway, NEW YORK
29 East Madison Street, CHICAGO
61 Beale Street, SAN FRANCISCO

50,000 Branches and Local Agencies the World Over



DAIRY BUILDINGS AND COWS GRAZING ON GRAIN PASTURE IN WINTER



MILK HOUSE AND DELIVERY WAGONS

A BROTHERHOOD OF DAIRYMEN

M. E. BEMIS, ARIZONA

TWENTY-ONE years ago Joseph Geare, Sr., brought his family to the Salt River Valley. The family consisted of his wife and seven sons. With that vision which sometimes is given to the pioneer, he felt that there was here in this fertile valley a wonderful future. He frequently told his sons that some day Phoenix would be a big city. Then it was only a little village of 5,544.

He went out on what is now North Central Avenue, something over two miles from the village, away out in the country then. He purchased about 130 acres of land that was in sagebrush and mesquite. Little by little he cleared this off with the help of his sons who were all small then, the youngest only a baby. Shortly after he had cleared a small amount and commenced farming he began to gather a few cows and made butter which he peddled from house to house in the village.

Today, one of the few things that the Geare Brothers have to regret is that their father could not live to see the realization of his dreams. However, he lived to make a beginning. He lived to get his boys educated and started off right. He lived to inculcate in them a respect for good, honest toil, and by teaching and example he was able to make dairymen of five of his seven sons.

Little by little the dairy grew. Ever watchful of modern improvements and ever ready to make use of any new methods, the dairy grew not only in number of cows but in standard of excellence. For fifteen years this has been one of the leading retail milk dairies of the valley. Today it is the only dairy furnishing the city of Phoenix with Grade A milk. Keeping pace with the growth of the city and the demands for better milk, they have kept up with the city in advance methods and are even perhaps a little ahead in some respects, although the city has gained in population more than 160% in the last ten years.

At the present time they still retain the home place with the exception of five acres and are leasing about 135 acres in addition. They are milking 110 to 125 high grade Holstein cows. These cows are exceptionally good stock. So far they have not paid very much attention to registered stock, although they have a few head. They have kept registered bulls constantly, and have now two from A. R. O. Holstein-Friesian dams. One of these carries 25 per cent of the blood of Duchess Skylark Ormsby and 25 per cent of the blood of Johanna Rue. Their policy has been to raise the heifer calves of the very best cows and to buy good cows, culling whenever a poor cow develops. It is a rare thing to find a herd of cows that show the individuality and the type that are shown by the cows in the Geare Bros. herd.

After the death of the father it became apparent to the brothers that in order to carry on the work and develop the dairy it would be necessary to divide up the responsibilities. Two of the older brothers had left home and were in business for themselves, the five younger brothers, at the earnest behest of the mother, decided to form a partnership and the work was divided up, so that each might have a share of the supervision of important details. James, the eldest of the five, was assigned the general superintendency of the dairy. This includes the barns, cows, and the milk house. John became foreman of the farm; at present he is dividing his time somewhat, giving part of it to the assistance of James in the dairy work and Thomas has taken over certain work on the farm, such as superintending the plowing and putting up the hay, filling silos, etc. The younger brother, Edward, has been in school and during the past year has been in the College of Agriculture at Tucson and will probably return to complete the course. To Hubert Geare fell the task of the general superintendency of all operations, keeping the books and acting as purchasing agent and, in general, looking after all financial details.

It might be said in passing, that several of the brothers were in the service and it seemed at one time as though the entire dairy would have to be abandoned owing to the impossibility of giving the different divisions the care they had in the past. Since the return of the brothers the work has again been divided up, as I have just indicated.

At the present time they employ four milkers, three drivers, four regular ranch hands, and from five to ten at irregular times.

The general policy of the herd management is to pasture to some extent in the winter. Grain is used largely for winter pasture, this is supplemented with silage. There is a battery of three 110-ton silos. The pasture and the silage fed during the winter is supplemented with chopped alfalfa hay. This is fed in a self-feeder, cafeteria style. In the summer green alfalfa is fed very largely. At present it takes about two acres a day, sometimes a little less, sometimes a little more, to feed the herd, according to the condition of the alfalfa at the time of cutting. Occasionally this proves a little too much so that there is always a little that is cured for hay, which makes enough to keep the horses supplied.

The cows are kept during the day in a shaded corral about one-fourth mile from the main barns. Water is supplied in a large concrete tank. This water comes from the cooler in the milk house. Here there are racks for feeding the green alfalfa and they are also fed the chopped hay in the winter. They are stabled only at milking time. At the present time the hours of milking are two o'clock in the afternoon and three o'clock in the morning. After each cow is milked the milk is carried at once to the milk house, which is separated from the barn only by a concrete walk 15 feet long. The milker does not enter the milk room, only an outside room of the milk house. The milk then goes at once to the cooler where it is cooled by a combined cold water and brine cooler to a temperature of 40 degrees. They have their own refrigerating plant and cooling room, which is kept always at a temperature of 40 degrees. During the summer season it is necessary to operate the refrigerating plant fifteen to eighteen hours daily. They are fortunate in being able to run this machine by electrical power. They also operate the separator, which provides the cream for the retail trade, by electrical power, a special dynamo for the separator being provided.

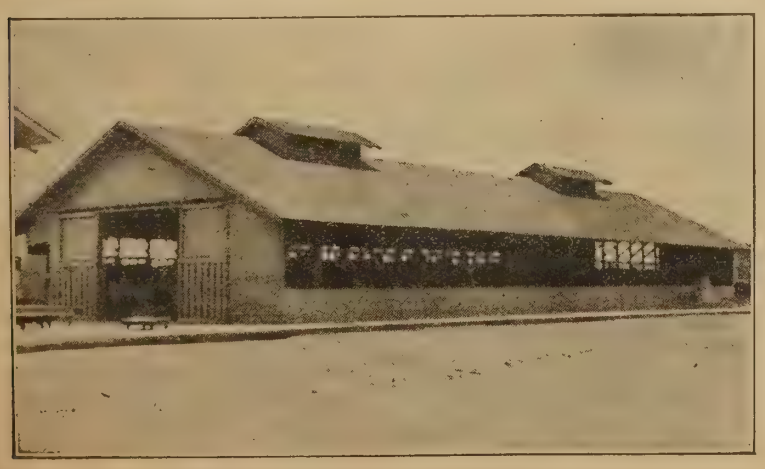
All milk returned by the drivers is immediately warmed to the required temperature and separated; the cream being sold to one of the city creameries for buttermaking. A part of the morning's milk is skimmed for cream for the retail trade.

They have a milking barn with a cement floor and cement mangers. The silage and whatever mill feed that is fed is given the cows at milking time in the mangers. The barn is very carefully scrubbed twice daily so that it is scrupulously clean and free from all odors. No manure is allowed to accumulate around the barns, this being hauled away and spread on the land where it will do some good and will not be a menace to sanitary conditions.

Of course it is needless to say that all the modern appliances such as steam bottle washers, steam sterilizers, sanitary milk stools and buckets are part of the equipment of this up-to-date dairy farm.

The general farm procedure has been such as to increase the productivity. At the present time there are about 50 acres of the home place in alfalfa, 50 acres in long staple cotton, and about 30 acres in corn. This was land which was in grain last winter. The time for planting corn in the Salt River Valley is in July. A part of the

(Continued on page 260)

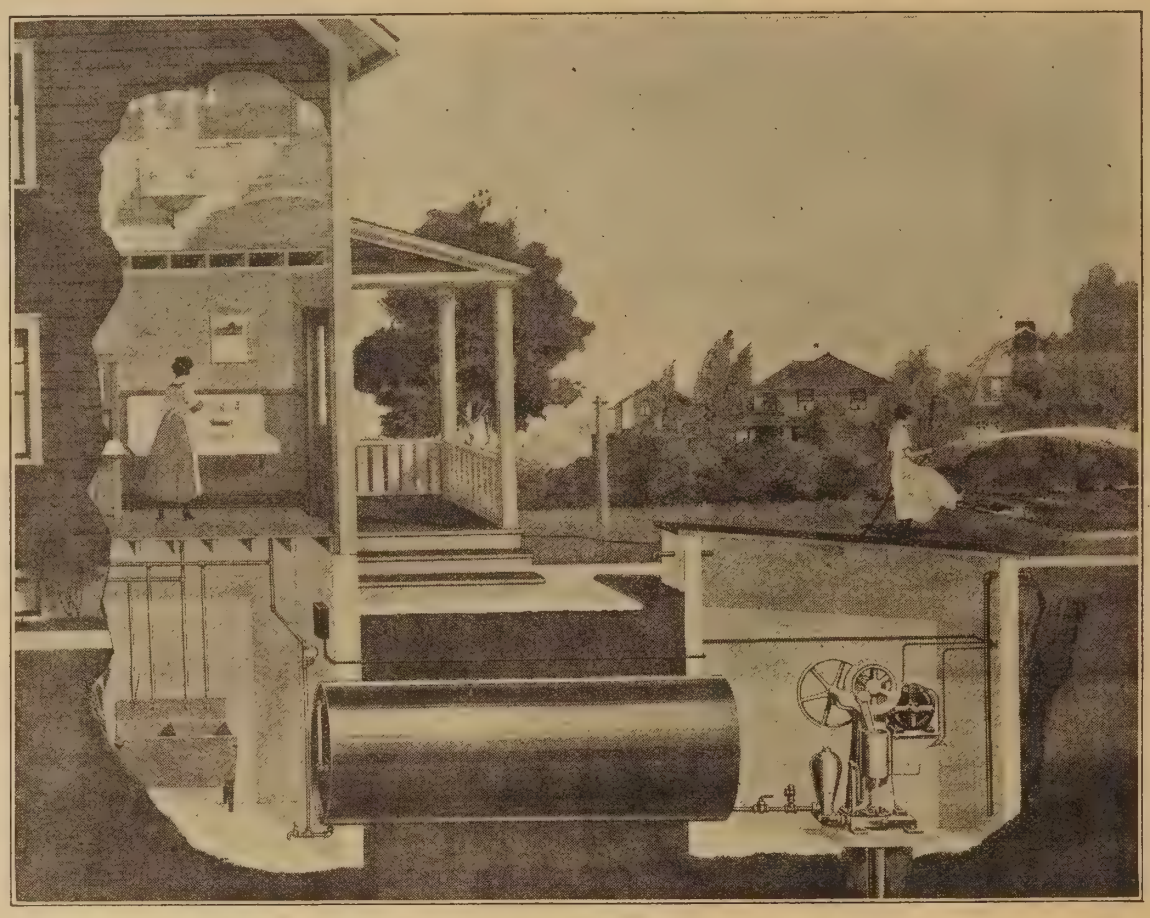


DAIRY BARN USED FOR MILKING ONLY



THE BATTERY OF SILOS

Is a Farm Water System a Good Investment



A Discussion of the Various Types of Water Supply Systems and Their Adaptability—A. G. Tyler, University of Minnesota

THE successful man, whether he be a farmer, business man, contractor, or engaged in any other line, is the man who carefully examines every proposition before he invests his money.

In order to be a paying proposition every investment should return each year to the investor certain things which may be money, additional comforts, added conveniences, good health, or other valuable considerations. Whenever a purchase is contemplated, regardless of whether it be an automobile or a rattle for the baby, it should eventually pay for itself or else it is not a good investment.

A water system for the farm is no exception and the investigation should be just as thorough as though the money such a system will cost was to be invested in bonds or business.

Before starting our investigation let us understand what we mean by a water system and pick, if we can, an average set of conditions. A water system may be defined as an arrangement of pumps, pipes, tanks, etc., which makes running water always available where most wanted.

As to conditions: A recent investigation in the state of Minnesota has shown that the average family consists of 5.89 persons. This family has a well which is about 90 feet from the house and has a depth of 35½ feet down to water. About one-half have rain water cisterns while the other half use well water for all purposes. Suppose then we take a set of conditions similar to these and see how they work out. Family of 6, well 90 feet from house and 35 feet deep, well water used exclusively. The water consumption per day depends almost entirely upon the ease with which it is obtained and disposed of. For instance, cities and towns provided with water works and sewerage systems frequently show a per capita consumption of 100 gallons per day while desert travelers have to be content with a gallon or less. Under the conditions stated above, the average daily consumption would probably be about 8 gallons per person or 48 gallons for all. Water weighs 8⅓ lbs. per gallon and the average water pail holds about 10 quarts or 2½ gallons. It is practically impossible to carry 10 quarts of water in a ten-quart pail so the average pailful would probably be about 2 gallons. This will require 24 trips to and from the well each day. Each pailful of water will weigh approximately 17 lbs.; then 17 lbs. multiplied by 24 (trips per day) will amount to 408 lbs. of water to be pumped and carried every day (summer and winter). This will amount in the course of a year to about 75 tons.

Another way of looking at this proposition is the amount of time consumed. Each trip will probably take at least five minutes, then 24 (trips per day) times 5 minutes equals 24 times 5 divided by 60, gives 2 hours per day. Father and brother will probably take two pails when they carry water so we will divide the time by two, that is, allow one hour per day for pumping and carrying water. One hour a day for 365 days equals the nice little item of 36½ ten-hour days spent in carrying water. Reducing this to a money value, assuming that one dollar a day is fair compensation, we have $36.50 a year as the cost of getting water from the well to the house. Now $36.50 is the interest on $608.33 for one year at 6%.

Still another way of looking at the proposition is the distance traveled. Since the well is 90 feet from the house it means 180 feet per trip or at least 2,160 feet per day. Then 2,160 times 365 divided by 5,280 equals 149.3 or nearly 150 miles per year. How much would you charge your neighbor if he asked you to walk 75 miles through snow and on icy paths with two empty pails, then walk back again through the boiling sun with two pails of water? Isn't this exactly what you or some member of your family does every year? It is also a fact which escapes most people that the women folks on the farm carry a large proportion of the water.

So far nothing has been said about the water needs of the stock. It is a fact which is seldom thoroughly realized that milk contains about 87% water. If a cow gives ten quarts of milk twice a day she must take into her body at least 20x87% or 17.4 quarts of water each day for milk alone. Besides this, she must have a certain amount of water to maintain her health. Now, if there is a lack of water or if the water is ice cold, the cow is not going to drink as much as she should which will result in a decreased milk supply. This decrease may under certain conditions amount to as much as 10 lbs. per day or even more from each cow. Not to exaggerate, suppose we assume a loss of 2½ lbs. a day per cow, then for 10 cows, the loss will be 25 lbs. per day. At the rate of $3.00 per hundred weight this loss will amount to 75c a day. Figuring the average winter as 90 days, this loss will amount to 90 times 75c or $67.50 a year, which may be considered as the interest on $1,125 for one year at 6%.

The modern bath room is possible only when running water is available. It is rather difficult to place a value on the conveniences of a bath room but it is a fact that a person once accustomed to these things will never willingly go without them.

From a sanitary standpoint water is an absolute necessity. All types of sewage systems are dependent on water for their operation, whether they be septic tanks, regular sewers, or chemical closets. It is an established fact that typhoid fever is more prevalent in rural districts than in cities or towns that have sewerage systems. Typhoid is a water born disease and by far the largest number of cases are caused by drinking polluted water. Well water may be polluted in many ways, one of which is by seepage from an open privy vault. To avoid conditions like this a sewage system may be installed providing running water is available. It is extremely probable that no case of typhoid fever or similar disease ever costs less than $100 and $100 will go a long way toward the cost of a water system.

These few instances seem to show that, as an investment, a water system is a good thing. Furthermore, they seem to indicate that, purely as a business proposition, it is advisable to borrow the money if necessary to pay for a water system, since the saving made will much more than pay the interest and depreciation on the investment.

The question as to which of the many available systems is the best may now be taken up. In the first place there is no such thing as a best system for the one that might prove very satisfactory under one set of conditions would fail utterly under another. The ideal system is of course the one which will deliver fresh cold water in any reasonable quantity whereever you want it and whenever you want it. In general, the easiest to install, the most economical to operate, the most reliable and the cheapest system is the best system.

If the country is rolling and a high spring is available the water may be piped directly to the house. If there is a swift stream near, hydraulic rams may be employed to good advantage. If the water has to be pumped from a well, windmills, electric motors, or gasoline engines may pump direct or through the medium of compressed air.

All systems of whatever kind depend upon a certain amount of pressure which may be due to gravity or may be produced by artificial means.

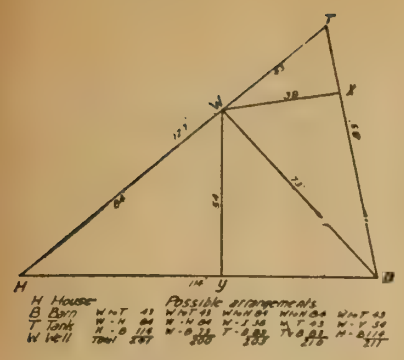
Elevated Tanks

Elevated tanks of wood and steel are frequently used and give very good results in some respects. The pressure is practically constant and the danger of interruption through accidents to the pump is comparatively slight as the tank generally has a capacity large enough to last for at least a day or two. In flat country these tanks are built on wooden or steel towers of sufficient height to produce the desired pressure. It is well to remember that every foot of height will produce a pressure of 43-100 lbs. The most serious objection to such tanks is that the water is warm in summer and is apt to freeze in winter. They are also fairly expensive to install and maintain.

Concrete Tanks

If there is a hill conveniently near a concrete tank may be buried somewhere on its slope at a point higher than the highest fixture in the house and be used for storage purposes. If properly built and covered there is no danger of leaks at any time and the water is warmer in winter and cooler in summer. Or if there is a knoll a little higher than the first floor of the house, the tank may be built on top of the ground and banked up so as to prevent freezing in winter. If the last method is adopted the tank may be covered with sawdust or other insulating material. Another method is to use comparatively thin reinforced concrete slabs and then cover the whole with earth. The latter method has many good points, not the least of which is permanence.

With any type of enclosed tank it



The possibility of saving pipe and trench digging is shown in the above arrangement with well midway between the tank and the house.

is well to remember that an air vent must be installed somewhere so that air can get into and out of the tank. A quarter inch pipe rising a few inches above the ground and then bent over will do very nicely. Concrete tanks of this kind do not need to be reinforced as the pressure of the earth will counteract the liquid pressure inside. Good materials and good workmanship are the best guarantees of a good job. A little hydrated lime may be added to the concrete to make it water proof but this is not necessary as a cement and water wash will answer all purposes. An overflow should be provided and a hole in the bottom for draining the tank is very convenient at times.

Other points which should be noted in connection with tanks of this sort





CONCRETE STORAGE TANK PROTECTED FROM HEAT AND FROST
Above shows the installation where hill is available and below where the rise is not sufficient to let tank into the ground.

are: don't build the tank on soft ground, if built on filled ground be sure that the earth is thoroughly settled; the tank bottom should slope slightly toward the outlet so as to provide for complete drainage if necessary. There is a more or less prevalent idea that a tank of this sort must have two pipes connecting it with the well and the house, one delivering the water to the tank and the other delivering it to the house from the tank. An arrangement of this sort is practically never necessary and is seldom advisable. The matter of expense alone should be enough to prevent such an arrangement. The relative location of the house, hill, barn, and well will, to a certain extent, govern the course of the pipes. This will be particularly true if one can forsee future buildings. A little thought and study will sometimes save the cost of a good many feet of pipe and of the trench to put it in. The accompanying small drawings show two different settings with four possible arrangements of piping in each. The same result is accomplished in each case, that is, running water in house and barn but with considerable difference in cost for pipe and trench.

One of the most common mistakes made by the average person is the installation of pipes which are too small for the work they have to do. The inside of ordinary wrought iron pipe is comparatively rough and when water runs or is forced through such a pipe considerable friction is developed. For instance, suppose the water from a spring flowing 5 gallons per minute is conducted through 1,000 feet of ¾-inch pipe, a head of 100 feet or a pressure of 43 lbs. per square inch will be necessary to maintain the flow. A 1½-inch pipe under the same conditions would require a head of only 4 feet or a pressure of less than 2 lbs. The capacity of pipes varies as the square of the diameter, that is, a 2-inch pipe will deliver four times as much water as a one-inch pipe. The additional cost of the larger pipe does not, in most cases, amount to very much. It may be laid in the same size trench and with the same labor. The amount of time saved in waiting for a given dish or tank to fill will quickly pay for the extra pipe cost. Galvanized pipe is much more desirable for underground work than the ordinary black pipe.

The size of the tank will of course depend entirely upon the water consumption. Suppose, for example, we want to take care of the needs of the average family as previously mentioned. The first point to remember is that the daily consumption will jump surprisingly when the water no longer has to be carried in pails. If a bath room is installed each person will use not far from 50 gallons a day or 300 gallons in all. If the stock is to be watered from this tank it will have to be made still larger. Suppose, for instance, there are 4 horses, 10 head of cattle, 8 hogs, and 15 sheep. Allowing 10 gallons per horse, 12 gallons per cow, 2 gallons per hog, 1½ gallons per sheep, 200 gallons additional will be needed. In addition to this some allowance should be made for possible leaks, sprinkling and other contingencies not readily forseen, say 100 gallons in all. This brings the total daily requirements up to 600 gallons. It is very desirable that the tank be large enough to hold not less than two days' supply or 1,200 gallons. There are 7½ gallons in a cubic foot, thus if we divide 1,200 by 7½ gallons we get the number of cubic feet in the tank, or in this case 160. A tank having the inside dimensions of 3½ feet x 6 ft. x 8 ft. will hold this quantity of water and allow an inch or so of space between the cover and the surface of the water. It is a good idea to remember that the cheapest tank to build is the one whose dimensions are as nearly equal as may be; for instance, a tank 6x6x6 feet holds the same as a tank 2x9x12 feet but the latter will require considerable more labor and material to build. In spite of the fact that a cubical tank is cheaper to build, a comparatively shallow rectangular tank is frequently cheaper in the long run. For instance, if the tank is a deep one it will require deep trenches to and from it; again, if it is wide, thicker concrete slabs will be needed for the cover.

Attic Tanks

A tank of some sort, generally galvanized iron, may be located in the attic of the house and be reasonably free from danger of freezing, but leaks in such tanks or overflows are apt to cause unpleasant consequences. Few houses are built with framework heavy enough to carry such tanks unless the necessity has been forseen and provision made for it. Water tanks located in the house should be well made and should always be provided with a drip pan and drain to take care of the sweat or condensation. Circular tanks are better than rectangular ones, they are more self supporting.

Steel Pressure Tanks

Still another method is to place a steel tank in the basement or bury it in some place and pump water and air into it. This water is later forced out by means of the compressed air. These tanks must be water and air tight and should be so at a pressure at least twice as great as the pressure to be used. If the tank is put in the ground it should have one or more coats of some good asphalt paint to prevent rust. To guard against the danger of freezing, the tank should be placed against the frost line and the pipes leading to and from it should be well insulated. A wooden box packed with straw or sawdust will serve the purpose very nicely.

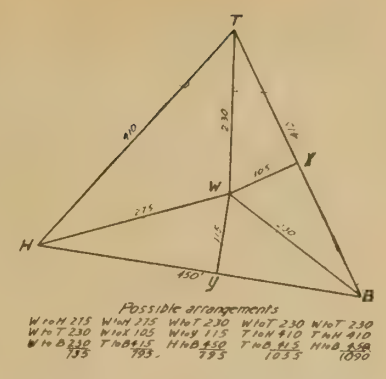
There are quite a number of different methods of pumping water in more or less common use. Some of which are: Hand force pumps, hydraulic rams, hydro-pneumatic systems, air lifts, and pneumatic pumps. The power may be provided in several ways; for instance, hand power, windmill, gravity (as in hydraulic rams), steam, gasoline, or hot air engines and electric or water motors.

Hand Force Pumps

Hand force pumps are generally used when the amount of water to be pumped is so small that the cost of a more elaborate water system does not seem to be warranted. When it is desired to have cistern water on tap a tank is installed in the attic and is kept full by a small hand force pump. The same is true where a range boiler is installed and a limited amount of water used. The good features about hand force pumps are that they are comparatively cheap and easy to install and can be operated by anyone having sufficient strength. They are easily kept in repair and are not complicated. The main disadvantage is that they require a certain amount of hard work which comes with clock-like regularity.

Windmills

A windmill is a device for converting the energy in moving air into first rotating

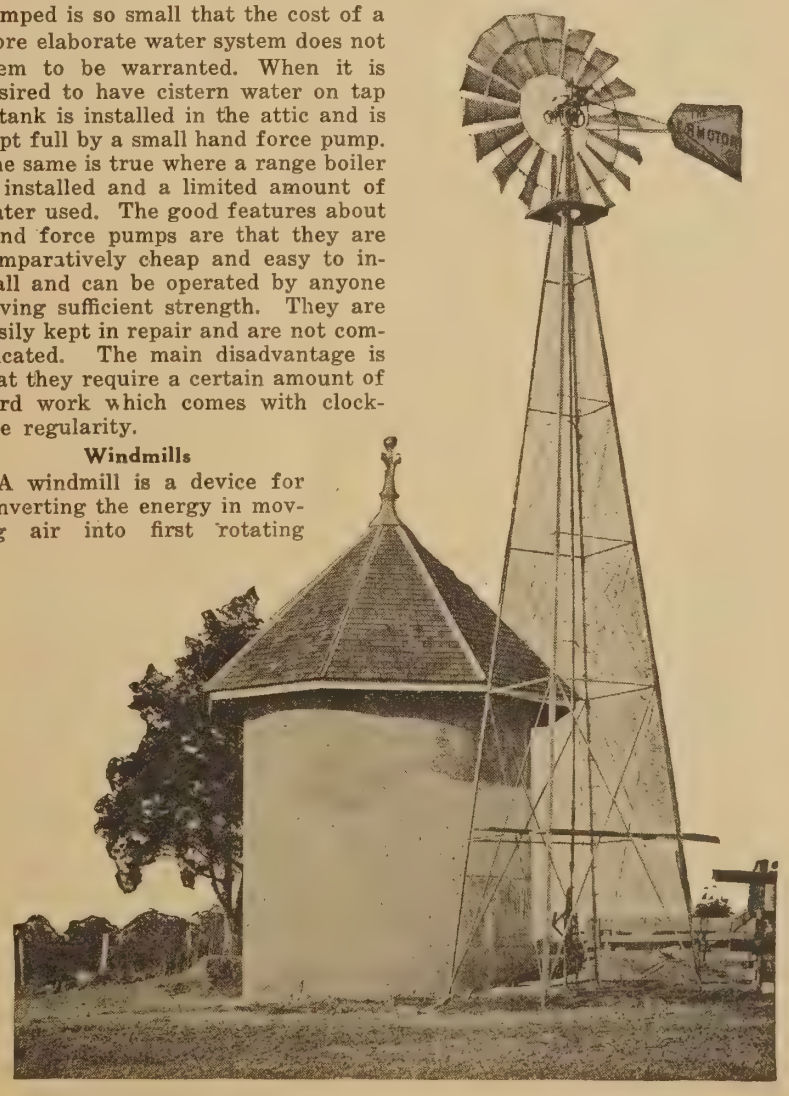


Another arrangement where the well is in the center of a triangle with the tank, house, and barn at the corners of triangle.

motion and then into reciprocating motion, which may be and is connected directly to the well pump. This pump may be and generally is of the force type. An elevated tank of some sort, sometimes built in the mill tower, is used for obtaining the desired pressure. As with water systems in general, there is no best windmill. Some are high speed and others low speed. Some are designed to operate in a very slight breeze and others require quite a blow. Some are designed for deep wells and heavy duty and others for shallow wells and light duty. Before installing a windmill the particular conditions prevailing should be gone over and the mill installed which most nearly meets them all. After a windmill is in place the cost of operation is practically nothing. They form a very good and cheap means of power and are particularly adaptable to situations that require intermittent service. Such a situation is generally found in connection with the farm water supply. The one thing to remember is that since the wind cannot be controlled there should be a sufficiently large water storage capacity to care for the farm requirements for a certain length of time.

Windmills are best located on high

(Continued on page 244)



CONCRETE WATER STORAGE TANK AND WINDMILL ON THE FARM OF GEORGE RYAN, INDIANA

Rye for Winter Cover Crops

CLARENCE M. BAKER, OHIO

COVER crops perform two distinct functions in the soil—they prevent the loss of plant food through leaching by winter rains and thaws and they also are valuable in increasing the organic content of the soil. From a practical standpoint the farmer may never know how much plant food is leached from the soil during the fall and winter; he may never realize how much valuable plant food is taken out of the soil when the ground is bare, but he can easily see the advantage of a growing cover crop and know that when it is turned under more humus will be provided.

Some interesting data are presented by the Cornell Experiment Station, in which records were made from concrete tanks filled with soil, the soil forming plots upon which cropping experiments were conducted. A crop of wheat growing in one tank as compared with un-cropped soil in another tank, resulted in a saving of 48 lbs. of nitrogen per acre during the 7-months' period. In actual practice very little land is allowed to go this long without a crop, but it gives an idea of a serious loss from leaching.

It has been generally advocated that the stubble from crops grown in rotation will generally keep up the organic matter of the soil. In some sections this statement is truer than others. Where there is plenty of limestone in the soil and clover is grown frequently in a 3-year rotation, for instance, there is much more chance for the organic content of the soil to be increased; but in longer rotations where timothy is included—a crop which leaves but little stubble—and where the corn is ensiled, there, of course, is little crop residue to form organic matter. In these cases it is necessary to provide for cover crops, and in short it might be stated that the farmer who provides for liberal cover crops may forget about preventing leaching by the introduction of any new methods to increase soil humus.

Fortunately we do not need to experiment long, or be forced to select certain crops for cover crop work. It may be simmered down to one point and that is that rye is quite dependable for this work. To carry it a little further—a mixture of rye and vetch has been found satisfactory under Ohio conditions—the vetch forming a leguminous crop which is beneficial to the soil, of course, while the rye is quite satisfactory to form a heavy covering.

Rye thrives exceedingly well under many conditions, even under adverse circumstances. It can be seeded late—even after the corn is harvested and without much soil preparation, it will grow quickly and in our experience it can be depended upon to furnish in addition to its cover crop value excellent pasture for hogs or young cattle. Pigs will eat rye during the winter months, while in the spring it is, of course, the first green crop that attains any size for early pasturing. It may be pastured just as soon as the ground is solid enough in the spring to allow live stock in the fields and unless it is grazed heavily it will still produce a ton or a ton and a half of green material to be turned under for the next crop. Rye as a cover crop, we believe, has greatest advantage where corn follows corn in the rotation; but it is quite adaptable to plow under for any other crop.

In some sections rye has an advantage as a cover crop in that if it is not producing an even stand—timothy sometimes makes a good stand, but never produces sufficient material or attains a good growth by the time it is necessary to plow the land in the spring. Hairy vetch is the richest of all the common legumes in nitrogen and when it can be introduced in the soil, it will increase the nitrogen content accordingly.

For seeding rye, it is generally best to wait until the corn is cut, or the last cultivation of the corn may be made with a one-horse drill, in which the rye is sown at this time. However, it is generally easier to harvest the corn and then put in the rye with the combination of a tractor drawn disc and drill. This disc disposes of the cornstalks effectively and prepares a better seed bed for the rye than simply drilling alone. The matter of fertilization should not be neglected, for rye will respond wonderfully to an application of commercial fertilizers, or 200 to 300 lbs. of acid phosphate per acre. If manure is spread on the ground in the winter, turned under it will quickly produce a good cash crop and it is often more satisfactory than wheat as a grain crop. Rye, under Ohio conditions, usually yields more than wheat and as a rule brings a price somewhat equal to an acre of wheat. It is excellent as a nurse crop for young grasses and the grain is valuable for swine when ground. If there is any danger of losing the wheat crop, rye will easily substitute as a grain crop.

Where vetch is adaptable, a mixture of the two, makes a little better cover crop than rye alone. A good mixture per acre is 60 lbs. of rye and 20 to 30 lbs. of hairy vetch. In this connection it will be well to mention that if other crops are not satisfactory—the clovers frequently failing or never the growth of rye will prevent it from flooding or washing off, while the fertility of the manure is held in the soil quite available for other crops when it is turned under.



RYE IN COVER CROP EXPERIMENTS AT THE OHIO EXPERIMENT STATION. NOTE THE HEAVY GROWTH THAT WAS MADE BEFORE WINTER SET IN



A TIMOTHY CROP PLOT AT THE OHIO EXPERIMENT STATION. THE GROWTH WAS NOT SATISFACTORY

Kansas Holsteins Make Tour

A collective exhibit of animals which will be shown at numerous western fairs and expositions is the commendable means taken by the Holstein-Friesian Association of Kansas to further the state's dairy and breed interests. Twenty-four of the best Holsteins in Kansas constitute the exhibit. The animals were selected from the herds owned by members of the association by Professor J. B. Fitch of the Kansas State Agricultural College. Every show ring class at the fairs where this exhibit is shown will have at least one Kansas entry.

The exhibit was shipped from Topeka, August 12, making its first stop at the Missouri State Fair, Sedalia. Other fairs and shows at which the animals will be exhibited will include the Iowa State Fair, Nebraska State Fair, both the Kansas Free Fair and State Fair, the Dairy Cattle Congress at Waterloo, Iowa, and the National Dairy Show. The exhibit is in charge of C. J. Huggins of the dairy department of the state agricultural college; and Frank Chestnut.

Following are the Kansas breeders whose animals appear in the exhibit: W. R. Stubbs, George B. Appleman, B. R. Cosney, United States Disciplinary Barracks, C. W. McCoy, J. P. Mast, J. B. Carpenter, W. H. Mott, and the Kansas State Agricultural College.

Kansas. FRANK M. CHASE.



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There are no hidden or unreachable parts. All parts can be taken out, scalded and washed *clean.* This Non-Spill Pail protects the health of your family and actually saves money for you. It is an investment, not a luxury.

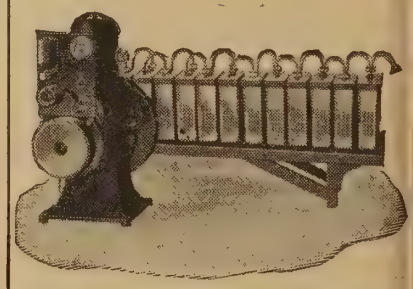
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A ¾ k.w. generator directly connected with a 2 H. P. air cooled motor. Capacity 45 20-watt lamps. Willard storage battery. Dealers wanted. Write for particulars.

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"Kant-Suk" Calf Weaner

LIGHT—strong—humane! Cannot possibly injure cow or calf. Being made with a hinge-joint, it swings out of the way when calf eats or drinks, but **absolutely prevents sucking.** Extremely easy to put in place. Endorsed by dairymen everywhere.





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Sent Prepaid: Calf size 45c; Cow size 60c
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568 W. Randolph St., Chicago, Ill.

Vive La France Sets High Mark for Persistency

Former Jersey Breed Champion Misses Year's Record by a Fraction, but Passes Persistency Record of all Other Cows

Vive La France sets a new record for persistency for all breeds by producing 15,271.8 pounds milk, 1,039.29 pounds fat in her fourth official year's test. In her four tests she has produced a total of 3,596.85 pounds fat, which exceeds the first four made by Tilly Alcartra by 577 pounds fat, and those made by Sophie 19th of Hood Farm by 843 pounds. With four yearly records averaging 900 pounds fat Vive La France has outdistanced these two leading contenders for persistency honors by a wide margin. Her four records to date are:

Lbs. milk	Lbs. fat	Age Yrs.	Mos.
9,210.4	633.29	2	
12,744.8	892.63	3	2
14,925.7	1031.64	4	7
15,271.8	1039.29	5	11
52,152.7	3596.85		

It was on completing her second record that Vive La France first became a prominent character in the Jersey world, as her record of 892 pounds fat was a new high record for a junior three-year-old Jersey. Her next record won her two championships as the senior four-year-old breed champion and also as world's champion Jersey, which honor she held for almost a year. Vive's latest record comes within eight-tenths of a pound of regaining for her the Jersey world's championship which is now held by Plain Mary, with 1,040.08 pounds fat to her credit.

It was not until she had been on test for seven months that the possibility of making a world's record by Vive was considered. There is little doubt about her ability to beat this record had she been accorded, during the entire year, the treatment prospective record-breakers receive, and had she not been exhibited at the Pacific International Exposition last November where she won.

During the year twenty-six supervisions of Vive La France's test were made. Twenty-two supervisors, coming from four states, made these tests.

In making new production records, Vive La France has not been neglecting her duty as a reproducer. She has carried a calf an average of 194 days during each of her four records and will have had five calves before reaching the age of seven years.

Pickard Brothers of Oregon are the breeders and owners of Vive La France. She is a daughter of the Gold Medal Bull, Golden Glow's Chief, the sire of forty R. of M. daughters, whose ten best daughters average 738 pounds fat. Her dam is Sugar-in-the-Barrel and, although never officially tested, she was a very heavy producer. Including Vive La France, Sugar-in-the-Barrel has four daughters in the R. of M., two of them being full sisters to Vive.

One of the daughters of Golden Glow's Chief is Old Man's Darling 2nd, the junior four-year-old Jersey champion with a record of 14,631 pounds milk, 983.6 pounds fat. Vive was bred to her son, Darling's Gallant Boy, and the result of this mating will undoubtedly be a valuable addition to the Pickard herd, which now numbers about forty head of females.

Vive La France's last test is her first as a mature cow and what future records may be forthcoming time only will tell. But if past performances may be taken as a criterion every other bovine striving for long-distance honors had better do a little bit better than they heretofore have been doing, or Vive La France will hold all the honors for herself.

AMERICAN JERSEY CATTLE CLUB.



VIVE LA FRANCE, NEW LONG DISTANCE CHAMPION COW

Rhode Island Ayrshire Breeders' Field Day

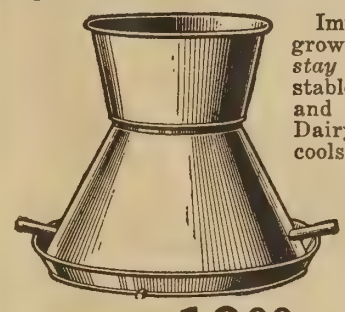
Over one hundred breeders and friends took part in the first field day of the Rhode Island Ayrshire Club held at Lippitt Farm, Rhode Island, on Thursday, August 5, 1920, as the guest of R. L. Knight, owner of Lippitt Farm.

The visitors inspected the Ayrshire herd and were then royally entertained at noon to a regular Rhode Island clam bake. After the bake, the visitors were given an opportunity to pass on the merits of the cattle from a judging standpoint. The herd was in splendid show shape expecting to leave on the show circuit within a few days following this outing. A meeting presided over by President Geo. Pettee was held on the lawn. Among the prominent speakers were Dr. Howard Edwards of the Rhode Island College; J. J. Dunn, secretary of state board of agriculture; Dr. E. A. Crossman of Bureau of Animal Industry; J. G. Galvin of the New England Homestead; F. C. Warner, Southern District Manager of the New England Milk Producers' Association, and Dr. T. E. Maloney, veterinarian and sanitary milk expert for the city of Fall River.

Vermont. J. G. WATSON.

There was once a brindle named "Bossie"
Who boasted a pedigree flossy,
But she wouldn't produce
Enough lacteal juice,
So now this cow's grave is quite mossy.
—Oak Grove Monthly.

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What We Found Out

The Quaker Oats Co. Gentlemen—I must say to you frankly that in my letter to you concerning feeding of Holstein-Friesian cows on my Arden Farms. I overlooked the most important factor, which I wished to bring out. I do not believe in a high protein ration. After the experience I have had, it is my judgment that breeders do not place enough importance upon the maintenance part of the ration of a cow. To secure a maximum yearly production means that a cow must be kept in good physical condition, nothing must be done to tear down the structure. It is my judgment that too much protein is injurious. There is good chance for argument as to just how much protein a cow should have, but I do not wish to engage in a discussion of the fine points, but I believe that a small amount of protein is better than too much, if one expects to have cows go on year after year and maintain their good health and produce their maximum of butter and milk. We mix most of our feed ourselves with the exception of SCHUMACHER FEED and BIG "Q" DAIRY RATION, with which we have been very successful. Yours very sincerely,
ARDEN FARMS, St. Paul, Minn. (Signed) J. M. HACKNEY

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Wherever SCHUMACHER FEED and BIG "Q" DAIRY RATION are used you will find a herd that produces to the satisfaction of the owner. Holsteins—Jerseys—Guernseys—cows of every breed alike testify to the value of these result-producing feeds. 36 of the World's Champion Dairy Cows have made their wonderful records with the aid of these feeds.

Fed in combination they make an ideal ration—one which you can readily regulate as to amount of protein and carbohydrate content to suit the needs of each individual cow. Their palatability, high digestibility, variety and bulk, induce cows to eat *heartily* and produce *heavily*. With SCHUMACHER FEED as the maintenance part and BIG "Q" as the protein part, you have a ration that will give you maximum long time milk production and ideal health conditions in your herd. A few weeks trial will convince you. Order from your dealer. If he can't supply you, be sure to write us.

100 Lbs SCHUMACHER FEED

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Sweet Clover Is Earning Its Way

R. KENNEY, Kansas College of Agriculture

TOO many farmers have started to grow sweet clover without realizing the necessity of handling the crop correctly if they are to be satisfied with results. We do not handle sheep as we do cattle and there are certain problems peculiar to sheep husbandry that are not known in handling cattle. There is as great a difference in the proper handling of sweet clover as compared with alfalfa. Many have tried sweet clover for a year or two and have given it up. Failure to appreciate certain peculiarities of the crop before planting it has caused this dissatisfaction. This has in some localities held back the popularity which sweet clover merits when rightly handled.

This quick growing legume is gradually increasing in acreage in Kansas, Nebraska, and similar localities where cattle are pastured on the rolling uplands of native grass and cultivated crops are grown on the creek and river bottom portions of the same farms. In all such localities alfalfa is greatly in demand as a hay crop. All available land that can easily be made to grow alfalfa is seeded to that crop. There remain many fields of irregular size and shape that present difficulties of many kinds for the alfalfa grower, yet he wants more hay, more pasture, more cash crop, and his fertility is decreasing from constant cropping. It is such conditions that sweet clover, for the time being, seems best adapted to fit. Five of the counties with the largest acreage of alfalfa to their credit in Kansas, are also the counties with the largest acreage of sweet clover in that state.



MOWING A SWEET CLOVER CROP IN SEPTEMBER

In addition to its use on cultivated lands, sweet clover has a distinct value in the native pasture section, on the eastern border of the plains, that is possessed by no other plant that has been tried there. Many level hill tops and wide level areas between lime rock outcrops in the pastures were broken out years ago, planted to corn or kafir for a few years and are now growing up in weeds every year. Row crops do not pay, native grass will not come back, but sweet clover broadcasted in early spring will grow there fine. Nothing else except weeds will grow and a ten- or twenty-acre patch of this sort furnishes weed seeds that blow for miles over the grass land that might otherwise be more easily kept free from weeds.

There are many thin, native pastures where sweet clover may be broadcasted on the unprepared ground in late winter and the land made to produce a large amount of feed. Experience has shown that frequently a good stand is obtained in this manner the first season. On the other hand a good stand may not be obtained for a year or two and seed must be scattered each year until the crop will reseed itself. The owner of such thin pasture must consider that he has the poorest possible seed bed in which to start such a crop, in most cases, and he must exercise a little perseverance. It is remarkable that even repeated efforts are able to secure a stand under such conditions. Once established it will continue for years provided it be pastured so that it will be able to reseed each year.

With the ripening of a sweet clover seed crop in August, some growers have suddenly found that a crop on good soil is too rank and coarse to be readily handled with the ordinary grain binder. The branches are bent and rubbed so much that most of the seed shatters off. If the owner of such a crop had realized last spring that this would happen he could have prevented much of this loss by mowing when it was a foot or so high and leaving the mowed stuff lay on the ground. He might also have pastured the crop until the middle of June with either hogs, cattle, horses, or sheep. The seed crop would then have been of a suitable size to handle with a binder. With boxes beneath to catch shattered seed, none will be lost and a profitable cash crop is harvested successfully.

Sweet clover pasture is a profitable crop. In 1919 the Dairy and Agronomy Departments of the Kansas Experiment Station at Manhattan pastured 3.8 acres of sweet clover completely off. On May 7 six large Holstein cows were turned in and kept there continuously for 40 days. As the season then became very dry and the sweet clover made a slow growth three cows were removed at the end of that time. On August 5 one cow was returned. From this time to October 1, when the experiment was discontinued, four cows were kept on the pasture. While on pasture they remained there day and night.

The only feed they received aside from this pasture was a grain ration composed of corn chop, bran, and oil meal, fed in the proportion of one pound of grain to each four pounds of milk produced per day. The total amount of milk produced was 19,393 pounds containing 680.5 pounds of butterfat. The cows consumed 4,602 pounds of grain. Figuring the milk produced at 20c per gallon and the grain fed $50 a ton, one acre of pasture produced $88.46 worth of milk. On the butterfat basis, with butterfat at 40c per pound, one acre pro-

duced $40.85 of fat exclusive of the skimmilk.

The total number of days of pasture obtained by all cows in the lot amounted to 618 days, an average of 154.5 days for four cows. At this rate the pasture of 3.8 acres kept four cows for approximately five months, or one acre of sweet clover pasture kept one cow for five months. During the time the cows were on the pasture, no trouble was experienced with bloat. Weather conditions were not always favorable. On thirteen days during this experiment it rained either part of the day or the entire day. The average weights of the cows before turning on the pasture was 1,284 pounds and at the close of the work they weighed 1,304 pounds.

The least exasperating of all troubles in growing sweet clover is a failure to get a stand. We simply take it as a bit of hard luck and resolve to try again, wondering meanwhile what was wrong. Such failures are, more often, we think, the result of our own carelessness.

A lot of sweet clover seed that is apparently as fine as can be produced may contain 98 per cent of hard seeds. These have seed coats that will not absorb water. They are worthless for planting unless run through a scarifying machine which grinds and cracks the impervious layer. The high percentage of such seed in what was sown has caused many of the failures. A few years ago it was believed that these seeds were cracked by a winter's freezing and thawing and that most of them would grow.

Experiments at the Kansas Agricultural College on several lots of sweet clover containing a high per cent of such hard seeds have shown that the winter's freezing and thawing have no such effect. Part of this seed was buried in the surface layer of soil in an open field all winter and there were as many hard seeds left in the spring as there were in the fall. Part of the seed was soaked in moist blotters and frozen and thawed 60 times in sluccession. Not a single seed was made capable of growing. The ground in an open field does not freeze and thaw nearly so often as this in an average winter. It must be remembered that if one pound of the 15 or 20 usually sown is not hard seed but is capable of growing, the 200,000 seeds in one pound when spread over an acre will give about five seeds to the square foot. This is enough to give the good stands obtained by men who say their experience is that winter freezing makes more seed grow. These facts must not be taken as an argument against winter and early spring seeding.

Seed threshed in an ordinary clover or alfalfa huller is subjected to more or less scarifying in the machine, and careful tests show that more of such seed will grow than of seed threshed in a grain thresher. A Kansas farmer with 18 years' experience in growing and harvesting seed states that in his opinion machine threshed seed that germinates promptly above 55 per cent is better than the average. This must be considered in sowing seed from sections that do not have hullers. Hand threshed or flailed seed frequently may germinate less than 15 per cent and a poor stand is apt to result.

The beginner in growing sweet clover should plan to use the first summer's crop, from spring seeding, for hay. The second year's growth is too coarse for the best quality of hay and there is too much danger of killing the stand by mowing it. When cutting hay from the first season's growth only one cutting should be made in the season. This should be about frost time in the fall, if one wishes a maximum hay crop and desires at the same time to grow as strong roots as possible for the next year's start. From 1 to 3 tons of hay is a normal yield. Such fall cut hay will usually be as leafy and fine stemmed as a first cutting of alfalfa hay. Mid-September usually is a good season for curing and it can be cut close to the ground for the crown for next year's growth is then already formed about an inch below the surface. Of course a fair stubble is desirable for a winter cover but the live portion of the plant is protected by a soil cover as well.

Although many men are successful in mowing two crops of hay during the second year's growth, this is the most dangerous operation in handling the crop. The beginner almost invariably kills it then. Some men have mowed as high as 10 or 12 inches and still it died. No one can say what is the safe height of stubble for the thickness of stand and vigor of plants vary greatly. For these reasons it is safest to pasture off the second year's growth entirely or else pasture until about the middle of June and then let the crop grow up for seed. A 2-foot or higher growth may be pastured down successfully with a full stand remaining, while mowing the same growth would in many cases kill 95 per cent of it. A profitable season's return on the land can be obtained by pasturing into June, and the seed crop then is clear profit.

When the average man thinks of harvesting a sweet clover seed crop, he pictures a field of coarse heavy stuff 6 to 8 feet high. Such a growth is ruinous to the machine used to cut it. Furthermore there is so much seed shattered in handling it that a ten-bushel crop may materialize into two bushels when finally threshed and sacked. Such a crop, unless an accidental pick up, is the result of poor judgment and very unprofitable management.

The crop that comes on after spring pasturing will be short enough to be readily harvested with the grain binder. It is fine stemmed. The fine stems are full of seed from top to bottom and will as readily give a maximum yield as will the unpastured crop. This fine stemmed crop is handled easily and is a far more desirable method of producing seed. Even with it one can easily lose most of the seed unless a shallow box is slung beneath the end of the platform canvas, and another beneath the packers and bundle carrier to catch such seed as shatters. These boxes must be emptied frequently for in many cases they carry three-fourths of the seed crop.

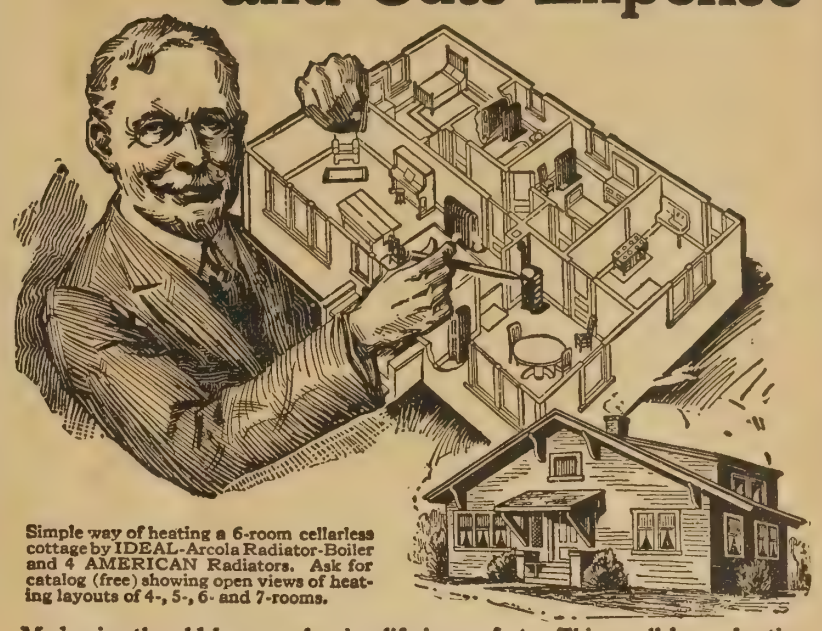
Nevada Bull Associations

Dairy farmers in the Virgin River Valley in Nevada purchased a considerable number of pure-bred Holstein cows and heifers at a dispersal sale two years ago. Realizing the need of breeding these animals to pure-bred sires, farmers have cast about for an economical means of handling bulls. There has now been formed the Clark Holstein County Bull Association consisting at present of three blocks with a pure-bred sire in each. All these are from high producing families and it is expected that a noticeable improvement will be brought about in the production of the herds in this locality through this bull club.

Nevada. E. M. DOBBS.

Sings a nameless poet: The old hen sat in a leafless tree and said, "Nobody cares for me. My food is what I find about, I hunt for it till I'm frazzled out. My owner says I do not play, and that I ought to sing and lay. I wish he had to sit out here and live on pickin's all the year. I'll bet a half a cent, by jing, he wouldn't lay from now till spring."

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	" 3-B	" " " " 200 " " "	212
	" 4-B	" " " " 250 " " "	251
	" 5-B	" " " " 300 " " "	290
For Hard Coal	No. 1-A	Size IDEAL-Arcola with 135 sq. ft. of Radiation	$163
	" 2-A	" " " " 200 " " "	206
	" 3-A	" " " " 265 " " "	251
	" 4-A	" " " " 330 " " "	299
	" 5-A	" " " " 400 " " "	349

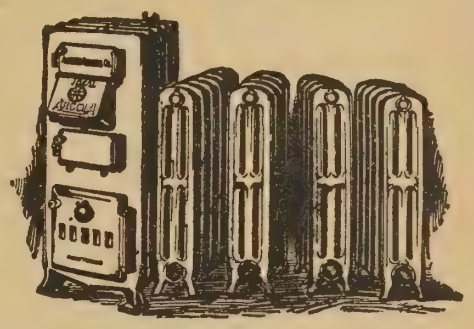
Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, of St. Louis.

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The color with the golden shade

CONTENTS

Use More Milk - - - - - - 229
The Dairy Optimist - - - - - 230
Dairying Thirty Years Ago - - - 230
A Brotherhood of Dairymen - - - 231
Is a Farm Water System a Good Investment? - - - - - - - - 232
Rye for Winter Crops - - - - 234
Kansas Holsteins Make Tour - - - 234
Vive La France Sets High Mark for Persistency - - - - - - - 235
Rhode Island Ayrshire Breeders' Field Day 235
Sweet Clover is Earning Its Way - - 236
Nevada Bull Associations - - - - 237
Butter Standards - - - - - - 238
Sale Announcements - - - - 238
Coming Events - - - - - 238
Don't Be a Quitter - - - - - 238
Washington, D. C., Weekly News - - 239
$6,640 for Guernseys in Southern Fair Circuit - - - - - - - - 239
Opposite Sides of Counter - - - 240
Ensile Corn Earlier - - - - - - 240
Cost of Production - - - - - - 240
Cheese Federation - - - - - - 240
Farmers Profit by Co-operation - - 240
Wild Parsnips Poisonous - - - - 241
Solution for Teat Cups - - - - - 241
Straightening Silo - - - - - - 241
Salt for Hay and Silage - - - - - 241
Price of Fat in Cream - - - - - 241
Plowing Under Straw - - - - - 241
Concrete Silo Not Round - - - - 241
Whitewash Recipes - - - - - - 241
The Dairy Cattle Congress—What It Offers to Breeders - - - - - - - 242
Condensed Milk Market Weaker - - 242
A Summer Dairy Show in Oregon - 243
Waukesha County Holstein Breeders Meet 243
Modern Farm Houses - - - - - 243
kets - - - - - - - - - 246
National Grange Notes - - - - - 247
Seed Importation Act - - - - - 247
Iowa Holstein Calf Clubs - - - - 247
Care and Use of Milking Machines - - 250
Tying Corn Shocks - - - - - 250
Confidence - - - - - - - 250
Separator Loses $2.20 Per Day - - - 252
Southwest Jersey Cattle Breeders' Association Appoints Fieldman - - - 252
Cow Testing Association - - - - 254
Sauk County Jersey Meeting - - - 255
A Junior Fair in Pictures - - - - 256
Junior Stock Exposition - - - - 257
Junior Letters - - - - - - - 257
Approach of Milling Months Lessen Feed Demand - - - - - 258
Jersey Cattle Notes - - - - - 258
Dairy Cattle Congress Judging Contest - 260
Skagit County Fairy - - - - - 263
A Word from Georgia - - - - 263
Inventions and Appliances of Interest to Agriculture - - - - - - 264
Manufactured Dairy Products for 1919 as Reported by the U. S. Bureau of Mar-
Why Build a Silo? - - - - - - 266
Hog Cholera Serum - - - - - - 266
New York Dairy News - - - - - 267
Foot Rot - - - - - - - - 267
Dairy Cattle Congress - - - - 270

Coming Events

Minnesota State Fair, Hamline, Minn., September 4—11. T. H. Canfield, Secretary.
Michigan State Fair, Detroit, Mich., September 3—12. G. W. Dickinson, Secretary.
Indiana State Fair, Indianapolis, Ind., September 6—11. C. F Kennedy, Secretary.
Nebraska State Fair, Lincoln, Nebr., September 5—10. E. R. Danielson, Secretary.
New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.
Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.
Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.
Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.
Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.
Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.
Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.
National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.
Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.
Louisiana State Fair, Shreveport, Louisiana, October 28 to November 7. W. R. Hirsch, Secretary.

Butter Standards

HOARD'S DAIRYMAN:—The setting of a suitable standard for butter is not simple. Sixteen per cent moisture say some, eighty per cent butterfat declare others. That the moisture content is the more easily determined and apparatus for its measurements have become as numerous as practical, is a common argument in favor of 16 per cent moisture standard. On the other hand, since butterfat is that part of the butter which gives it value, it is logical to reason that any butter standard should be based on percentage of butterfat. But is the matter so easily adjusted? Is it so simple?

There are several viewpoints which should be borne in mind when a set standard is considered. These are:

1. The consuming public.
2. The producer.
3. The manufacturer.
4. Those interested in the maintenance of an equitable standard, i. e., the internal revenue department at present.
5. The standards of the world, in particular those countries where we compete with our surplus butter.

Naturally the consumer wants just as much for his money as he can obtain. Could he get butter containing 100 per cent butterfat, he would have the greatest value for his money. While the casein might have a greater food value, that is not what he buys. He buys food value, 'tis true, but it is not calories he is buying. It is a relish for his bread or hot biscuit, a stimulating, appetite producing, flavoring substance; a lubricant, a something no other fat can give him. Then, again, he may like no salt or he may desire several degrees of saltiness. In the matter of water, he does not want to pay for water, yet water he must have. Without water, or with a water content less than 12 per cent, he is not liable to get that waxy, spreadable butter he wants. A water content between 12 and 15 per cent would satisfy him. Twelve would be better than sixteen. He'd get more for his money.

Generally speaking the American public has been educated to want a relatively high salt content, three or four per cent, so that for all practical purposes the consumer's pound of butter would analyze about as follows:

Salted		Unsalted	
Butterfat	84%	Butterfat	87%
Casein	1%	Casein	1%
Water	12%	Water	12%
Salt	3%		

The casein content is quite variable (the more so in recent years). By increasing the casein content the consumer would get more food value for his money, but not the food he sets out to purchase. One per cent is about the minimum since the presence of casein has a decided influence on the flavor of butter.

It may readily be seen that should the above standard be enforced both as to fat and moisture standard the consumer would get better value for his money. But would he? It is the writer's opinion he would profit very little, if any, since it would add to the cost of production by just that additional butterfat required, and the consumer would pay just that much more for the pound.

The producer, on the other hand, may believe that the more butter he can make from a pound of butterfat the better he is served. He believes, as a patron of co-operative or other creamery, that if a large overrun is obtained he will, without question, get more for his butterfat. His idea, if he be familiar with the facts of manufacture, would be that butter should have the following composition:

Salted		Unsalted	
Water	15.9%	Water	15.9%
Salt	4.5%	Casein	2.5%
Casein	2.5%	Butterfat	81.6%
Butterfat	77.1%		

With such a composition of salted butter the overrun would be nearly 30 per cent. Such an overrun would take care of all the incidental and other expenses of manufacture. Then look what would be paid for his butterfat. But would he? Not exactly! He would increase the supply of butter when compared with the consumer's standard, and he would get proportionately less. The deduction that can be drawn is that it is not butter that gives the value to butter but the "supply" and "demand" for the "butterfat", its most valuable constituent. Hence, so far as consumer and producer are concerned, the butterfat is the true measure of values and a common ground in the making of any standard. As a matter of fact, while both consumer and producer should be considered, their standards could be varied a good deal without injury to either, but a variable standard is out of the question.

With the manufacturer it is distinctly different. He is confronted with modern tools in a modern way. What he wants is a standard which will be workable. "Can I conform to such a standard, and make the best possible quality of butter, in texture and flavor?" is the question that he faces. Further, he wants a basis of equitable and fair competition. It is this last need which has kept this question alive.

The ruling of the Internal Revenue Department is that butter containing 16 per cent or over of moisture is adulterated, and the manufacturer of such butter must pay a fine and take out a costly license whether he wants to or not. This ruling has become a source of annoyance to honest manufacturers. Some judges have ruled to the contrary, giving a decided uncertainty to the manufacturer which only a fixed standard will remedy. But the chief difficulty is that such a ruling does not, because it is based on water content, meet the other and I believe the greater need, a *basis of equitable and fair competition.* Now, one manufacturer may have a legal overrun of thirty per cent or over, while another more careful of quality and the reputation of butter in respect to other fat competition may get ten per cent less. Such a condition is intolerable and detrimental to true advance in butter manufacture.

As sixteen per cent moisture is the most suitable from the standard of moisture because it forces, for safety's sake, the manufacturer of butter between 14 and 15 per cent moisture, so the butterfat standard should give an equal margin of safety. The writer's conception of the best butter is a composition about as follows:

Salted		Saltless	
Water	15.5 %	Water	15.5 %
Salt	3.75%	Salt	0.0%
Casein	.75%	Casein	.75%
Butterfat	80.0%	Butterfat	84.0%

To allow a margin of safety a standard for salted butter of 80 per cent butterfat and 16 per cent water would be advisable. Under such a standard an overrun of 25 per cent could not be exceeded. Moisture could be determined in the usual way. Only when overrun exceeds 25 per cent need a test for butterfat be taken as a check on the accuracy of test of cream samples. But chief of all, emphasis would then be placed on quality alone and not quality and quantity as is now the case. Such a stimulus would be given to quality as has not been given in the last two decades, surely an end worth striving for.

But what about the enforcement of such a standard. Certainly it should not be in the hands of the Internal Revenue Department. But whoever has it in charge will have a relatively easy matter in proving a case. All it would be necessary to do besides an analysis of suspected churnings would be an examination of the books of suspected companies where an overrun exceeding 25 would be sufficient corroborative evidence to warrant action. There would be no legal quibbles as to what is "normal" and "abnormal" butter. Penalties should be quite different, though equally effective as a means of maintaining the standard. A certain definiteness, long needed, would be obtained and quality with accompanying increased demand and higher prices would prevail.

Minnesota. JOHN BOWER.

Don't Be a Quitter

It's the way a man sticks to a thing that marks him as a success or failure. Many a fellow has won out at the eleventh hour just because he would not let go. Don't be a quitter.—Farrington.

Sale Announcements

Sept. 6—Holsteins. Dispersal of F. C. Brinton, Jr., Herd of Registered Holsteins at West Chester, Pa.
Sept. 8—Holsteins. E. D. Humphrey & Son, Geneva, Ohio.
Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Evansville, Wis., B. T. Green, Manager.
Sept. 10—Holsteins. Westham Dispersal Sale, Richmond, Virginia.
Sept. 13—Holsteins. Edward Wagner, Wheeling, West Virginia.
Sept. 13-14—Holseins. Dispersal Dr. R., Ivey, Glen F. Reed, and Dr. S. P. Scherer herds, Fishers, Indiana.
Sept. 18—Guernseys. New York State Geurnsey Sale, Albany, N. Y., L. F. Herrick, Sale Mgr., Worcester, Mass.
Sept. 21—Guernseys. Langwater Farms, North Easton, Mass. L. F. Herrick, Sale Manager, Worcester, Mass.
Sept. 25—Holsteins. John Stotzer herd, Suffield, Ohio.
Sept. 29—Ayrshires. Ayrshire Dispersion of C. H. Peverill of Waterloo, Ia., at Dairy Cattle Congress, Waterloo, Ia. Amos Burhans, Sale Mgr.
Oct. 1-2—Holsteins. Vermont Breeders' Sale at Rutland, Vermont.
October 1-2—Holsteins. Dairy Center Sale at Northfield, Minnesota. Minnesota Holstein Breeders' Association, Sale Managers.
October 5—Guernseys. Blue Earth County Breeders. Mankato, Minn. Dr. M. B. Wood, Mankato, Minnesota, Sale Manager.
Oct. 5—Holsteins. Hall Bros., South Denver Station, Denver, Colo.
October 6—Guernseys. Guernsey Breeders' Association of Northern Minnesota and Northern Wisconsin, Tristate Fair Grounds, Superior, Wisconsin. E. P. Gibson, Sale Manager, Duluth, Minnesota.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

Washington, August 23—Dr. W. C. Fowler, health officer of the District of Columbia, who has assumed the role of arbitrator in the Washington milk price situation, is out this week with a second appeal to the Maryland-Virginia Milk Producers' Federation, not to put any increase into effect September 1. Two weeks ago he made a similar appeal. This followed his broadside attack on the farmers for throwing milk on the ground, to keep up prices, which he later on withdrew and publicly stated was not substantiated by the facts. The basis of the recent appeals, which are couched in different language than his first announcements, is that he learns that there is no shortage of milk and because of this there can be no reason for a price advance at this time. The reason for the present supply of milk is an unusually wet season, so that pastures and soiling crops are in unusually good condition. Thus far no reply has been returned to the letters, and Manager McLaughlin of the Producers' Association is busy sawing wood and securing the remaining signatures needed to put the new sale contract into effect here. It is hard to understand the reason for the continued activity of Dr. Fowler in this matter, as he admits in a letter over his own signature that he has no facts on the cost of milk production here. Further than this he is an official appointed by the district commissioners, who in turn are appointed by the President and confirmed by the Senate—that is, not responsible to the people of the district but to Congress for their activities. It would seem then that there should be here one place at least in which the farmers might expect fair treatment, instead of continued agitation in favor of the consumer as against the producer.

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The bulletin issued this week by the Secretary of the National Dairy Union, stating that there was to be issued in the near future a bulletin dealing with the various government publications which make plain the recent discoveries relative to the vitamines and their vital influence on the value of butter and other dairy products in the diet, and those government publications in which these discoveries are "forgotten", has aroused some interest in the various departments. The National Dairy Union bulletin just issued uses quotations from a Wisconsin Station Bulletin to make plain the recent scientific developments in this subject, and by inference it would seem that perhaps similar vigorous and emphatic statements could not be found in any recent government publications. In reference to this it should be said that there has been a great rush of Department of Agriculture publications recently, and difficulty in getting paper and congestion in the editorial and printing offices have delayed some very good bulletins of special dairy interest which will soon be issued. But aside from this there are other government departments besides the Department of Agriculture which issue literature dealing with food topics. Some of these have been telling the whole facts about the value of butter and dairy products, and some seem to have been misinformed. The National Dairy Union representative here promises some statements on this in the near future.

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"Peanut milk" is one of the newer milk substitutes which is coming to attention. This substance is an emulsion of peanut oil and peanut cake, and is said by investigators and laboratory workers who have succeeded in preparing this emulsion in a palatable and stable state, to be a substitute for the real cow's milk, both in looks and composition, carrying a higher percentage of ash and fairly equal percentages of protein and fat. The question of vitamines has not been made the subject of any statements as yet in this connection—once more the vital element seems to be forgotten. Investigators at McGill University are responsible for the recent publications in reference to this product.

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The advertised convention of the Institute of Independent Margarine Manufacturers was held at Chicago, instead of at the Hotel Traymore, Atlantic City, as announced. According to published reports, a high class program of papers and discussions on trade subjects was given. The Dyer Bill, H. R. 13593, one of the two bills pending in Congress to remove the color tax, was up for some discussion, Myrick D. Harding of Armour & Co. was one of the principal speakers, giving an address on the method of handling the animal fats used in oleomargarine manufactur

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The U. S. Bureau of Markets reports butter market conditions improved with steadier prices and upward tendencies, held down only by the presence in storage of large quantities of the recent Danish shipments which are offered freely with every price increase which promises a profit. The Bureau also reports offers of Australian and New Zealand stock on the Pacific Coast for delivery late in September, and at prices below current offerings. Production is holding up remarkably well, owing probably to generally wet and cool weather. Cheese prices are low. Cold storage movement is normal but the stocks are far below the stocks held last year at this time.

$6,640 Dollars for Guernseys in Southern Fair Circuit

An extremely important step for the introduction and expansion of the Guernsey breed has been taken by several fairs in the South. Six thousand six hundred forty dollars will be offered in a circuit beginning with the Tennessee State Fair, and ending with the South Carolina State Fair. The Maryland State Fair and the Virginia State Fair will offer an additional $2300. County fairs in South Carolina offer premiums which in previous years have brought Guernsey exhibits rivaling those in leading Guernsey states.

The American Guernsey Cattle Club is supporting these fairs by giving $200 of the premiums offered in the Tri-State Fair, the Southeastern Fair, and the South Carolina State Fair. The Southeastern Guernsey Breeders' Association, which was born at the time of the Southeastern Fair in 1919, will offer through the American Guernsey Cattle Club $300 of the premium money at the Southeastern Fair and $200 of the premium money at the South Carolina State Fair. In addition they will give 25 per cent of the premium money at the Alabama State Fair and the Mississippi-Alabama Fair.

The Alabama State Fair and the Mississippi-Alabama Fair have never before offered a classification for Guernsey cattle. In 1919 the Tri-State Fair offered $800 in Guernseys, the Southeastern Fair offered $600, and the South Carolina State Fair offered $450.

Admittedly the South is today one of the most fertile fields for Guernsey expansion. Carload after carload of Guernseys are shipped from the North into Southern states from Texas to Maryland, and the desire for stock has only increased. Records of transfers indicate that during the period from May 1, 1919, to May 1, 1920, almost 400 registered Guernsey bulls were purchased by breeders living in the eleven states of the extreme South.

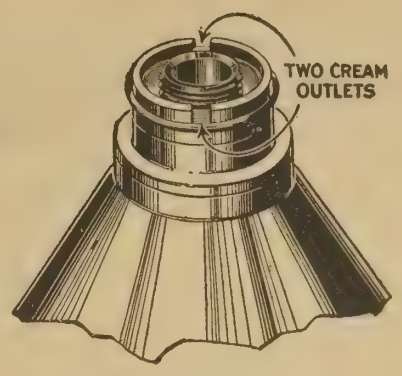
AMERICAN GUERNSEY CATTLE CLUB.

Be systematic—the thought, the plan, the energy, the success of your day is measured in value by your application of each—of system—GEORGE MATTHEW ADAMS.

He that rises again quickly and continues the race is as if he had never fallen.—MOLINEUX.

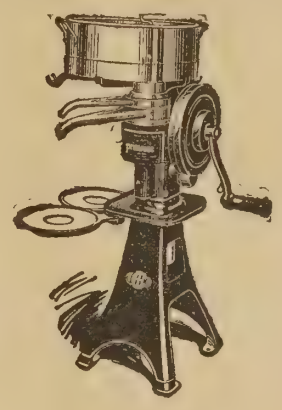
Mistakes are opportunities for learning.—EMERSON.

No Cream Screw in the Primrose



Adjusting the cream screw in a cream separator is like trying to regulate a fine watch—a mighty delicate piece of business. A slight turn of a cream screw results in a great difference in the density of the cream because it works on the small volume of cream.

The **Primrose Separator** has no cream screw. The richness of the cream is controlled by a screw in the skimmilk outlet. And because the volume of the skimmilk is eight times greater than the average volume of cream, the cream density regulation of the Primrose is proportionately easier to make than the cream-screw adjustment. Two wide open cream outlets, unobstructed by a cream screw, permit a free flow of cream from the **Primrose.**



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CHICAGO OF AMERICA (INCORPORATED) U S A

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EDITORIAL COMMENT



FOR the first six months of 1920, the United States Bureau of Markets reports a total production of 345,111,726 lbs. butter, 101,054,628 lbs. cheese, and 1,326,943,495 lbs. condensed milk. For concerns reporting for both 1919 and 1920, this represents a decrease of six per cent in butter production, a decrease of one per cent in cheese production, and an increase of 54 per cent in condensed milk production. If these three products are totaled on the basis of their whole milk equivalent, the production of these three dairy products show an increase of six per cent for the first six months of this year as compared with the same period last year.

OPPOSITE SIDES OF COUNTER

Milo D. Campbell, president of the National Milk Producers' Association, has the faculty of expressing himself cogently and uniquely. In discussing the subject of farmers and labor working together in a political party he said: "It has been asked whether there were likelihood of a working or political alliance of farmers and labor. The problem is not easy to answer. Their sympathies are alike, but their position is upon opposite sides of the counter. One is buying, the other selling. Their common interest would be in shortening the distance between them. The farmer would profit with high priced food and low priced labor while the laboring man would profit with low priced food and high priced labor."

There is opportunity to get the farmers' products into the hands of the laborer more directly and with less expense. Improvement in our marketing, in other words, is highly desirable and possible. This is the common ground upon which the laborer and farmer may meet and work effectively for bringing about an improved marketing system. The farmer, however, will never have a deep interest in cheap foods and short hours for labor, while the laboring man will never be interested in high prices for foods and in shortening the farmer's work day. There will always be this difference between these two groups of citizens and the best that can be done for each is to permit the law of supply and demand to operate and to prevent any person or groups of persons from defeating its natural operation. If this is done, the price of foods and the price of labor will establish themselves in about the proper relation.

ENSILE CORN EARLIER

We believe there has been a tendency among a number of dairy farmers to ensile their corn at too ripe a stage. In our observation of the contents of a number of silos, we have noticed moldy spots and the silage had the appearance of being too dry and the kernels of the corn too hard. This condition of the silage indicated to us that the corn had been ensiled when it was too ripe. If a large quantity of water had been used during the ensiling process, the silage would have been of better quality, but we doubt whether the cows eating it would have received the same nutriment from it as they would from silage ensiled from corn not so far advanced in maturity. It should be borne in mind that when kernels of corn become too hard and there is not enough moisture in the stalks of the corn to thoroughly moisten the kernels, quite a large per cent of the grain passes through the animal undigested. Losses by improper fermentation follow and mold develops.

We believe that farmers who have found mold in their silage and whole kernels of corn in the droppings of the cows will find it advantageous to ensile their corn when the most advanced ears are well dented and the least developed are in the boiling stage. To wait until every ear is dented means that the corn is practically ripe. We do not believe that from the time the corn is at the proper stage for ensiling to the time when it is ripe, ready for the shock, the nourishment taken from the soil is equal to the losses due to improper fermentation, lack of palatability, and lower digestibility.

COST OF PRODUCTION

More interest is shown at the present time in the cost of producing various farm products than at any period that we can recall. The shortage of labor and its high cost, the advancement in farm lands and commodities of all kinds has caused the farmer to consider seriously better methods of farming and the cost of producing his products.

There are certain combinations of farming which work well together and it is quite frequently desirable to raise some crop which may not in itself return a reasonable profit, but its effect upon the land, its availability as a feed or a ready market makes it advisable to grow such a crop. Barley might be considered such a crop. We use it at the rate of three pecks per acre for seeding fields to alfalfa. We find the grain a good feed for both hogs and cattle and the straw is good bedding.

In planning the crops of the farm, various factors must be taken into consideration—the effect they will have upon the land, how well they work into the system of rotation, the labor, the various uses to which the crop may be devoted, its by-products, etc. No one, without detailed study, can plan the best system of cropping for a farm, but it is highly desirable that the United States Department of Agriculture secure information giving the cost of producing various kinds of crops. This information will assist every farmer in planning his farm operations.

Efficient farmers should eliminate low paying farm products as much as possible and they cannot do this intelligently unless they have an understanding of the cost of producing various kinds of crops. The United States Department of Agriculture has found that an acre of hay on an average farm costs the labor of one man and one horse for a ten-hour day to cut, cure, and harvest it; oats, wheat, and barley 1½ days of man labor and 3 of horse; corn for the silo 3 man days and 5½ days for the horse; onions, sold in bunches, require about 93 days of man work and 10 days for the horse. A dairy cow takes 18 days of man time each year and 2 days of horse time.

Such information as this not only permits the farmer to plan his cropping system so that it will yield him the largest returns, but it will also assist him to do his work with the minimum amount of labor, and under present conditions this is important. These facts also direct the attention of the farmer to his own activities and lead him to study his own operations more effectively.

CHEESE FEDERATION

The Wisconsin Cheese Producers' Federation, which was organized at Plymouth in 1914, under the leadership of Mr. Henry Krumrey, is attempting to further this form of organization among the cheese sections of Wisconsin. The purpose of the Wisconsin Cheese Producers' Federation is to cure and market the cheese for the factories that are its members.

It has always seemed desirable to us that the farmer should do something besides preparing his products for market; that he should attempt to market them to the best advantage. If he permits individuals and corporations to set the prices of his products and to handle them, and makes no preparation for storage and selling his products, he is not likely to get full market price for them. During the season of highest production of cheese, the market price is likely to decline and this has given the speculator an opportunity to buy cheese and store it. In many instances he makes large profits.

There is no reason why the farmer should not arrange for curing and selling his cheese. It is not healthy for a great industry, like the cheese industry of Wisconsin, to have it controlled by men who do not produce it. The farmer is about the only manufacturer who permits the other fellow to control the selling of his products.

The Wisconsin Farm Bureau Federation is interesting itself in a plan which will further the activities of the Wisconsin Cheese Producers' Federation, as it sees the necessity of developing ways and means for the producers to cure and to sell their cheese. The Wisconsin Cheese Producers' Federation at Plymouth was organized in 1914 and handled that year over six million pounds of cheese valued at $877,501. In 1919, it handled over fourteen million pounds of cheese valued at $4,318,956.91. It has had substantial growth and it has paid the farmers who are members of the federation the Plymouth Board price for cheese and, in addition, it has built a warehouse and storage which is worth $70,000. Forty-two thousand dollars has been paid out in dividends and deferred payments and more than $38,000 remains in the treasury, making in all $150,000. This is no small sum accruing to the members of the federation through their co-operative efforts, but to us it is not the largest factor to be considered in the forming of these federations.

It seems to us that it is only good business on the part of the farmers that they should put forth effort to prepare their products for market and that they should be prepared to sell them to the firms which offer the best market. There is no reason why the packers or any other set of men should have the organization for handling the dairy farmer's products and leave the farmer helpless in this part of his business. The packers prepare their products and deliver them to agencies which will distribute them to the consumer. If it is logical, right, and profitable for them to conduct their business in this manner, why isn't it showing business sagacity on the part of the farmers to follow this example?

FARMERS PROFIT BY CO-OPERATION

No one who has given the matter any consideration doubts the value of farmers co-operating in preparing and marketing their products. The farmer cannot expect to work individually against organized effort. He must of necessity adopt the same business methods in the conduct of his work as are adopted by other enterprises.

Co-operation is not something to be picked up and used, to be adopted. It must be acquired by education, by experience. It is unfortunate at the present time that co-operation is so little understood, but we hope that through the directing influence of the farm bureau and the county agent farmers can be taught how to co-operate, and obtain the advantages that come if it is done intelligently and upon the right basis.

To co-operate for the purpose of monopolizing any particular farm product or to force the price beyond market value is to court failure. Co-operation should be backed with the desire to prepare the farmer's products for market in the most economical way, to grade the products, brand them if necessary, and to try to have them pass from their hands into the hands of the consumer as directly and economically as possible. When co-operative agencies are well established, the speculation in food products can be reduced to a minimum, which will be of an advantage to both the producer and consumer. In the handling of food products every agency which does not contribute some service should be eliminated.

The United States Department of Agriculture estimates that the co-operative movement among farmers saved its members last year about $5,434,000. County agricultural agents acting in co-operation with farm bureaus, state colleges of agriculture, and the United States Department of Agriculture are given the credit for much of this co-operative progress. It is not the work of the farm bureaus or the county agents or the Department of Agriculture to be the active forces in directing these co-operative organizations, but rather to assist the farmers of the community to organize upon the proper basis and to determine the form of local

organizations desirable and to secure expert assistance when needed. Farm co-operative organizations have failed because men have not been chosen who are well informed in the various lines of work. A person may be well informed upon the ways and means of handling the soil and the selection of crops in order that an increased production may be obtained, but would have little or no conception of marketing these products. To be successful in co-operation, it is necessary for those in charge of the organization to thoroughly understand the principles which govern business, how co-operative organizations are formed, and that it is necessary to choose experts well informed in the subjects which they are to handle.

It is not enough for the farmer to have a desire to co-operate with his neighbor, although this is essential, but this desire must be accompanied by an understanding of the forces necessary to operate co-operative business successfully and profitably.

Wild Parsnips Poisonous

I write to inquire if wild parsnips are dangerous for sheep. I find they eat them without hesitation, but am informed they are dangerous in the early spring.

Watertown, N. Y. E. R. B.

Wild parsnip is a weed believed to have escaped from cultivation. It is quite common about gardens and old dwellings in some districts. Its appearance is similar to that of the cultivated variety. The root is poisonous, however, and should be exterminated. Apply a small handful of salt to the root after the top is cut in hot, dry weather. It will not long survive close cultivation. We do not know that wild parsnip is more poisonous to sheep than to other animals, but we would take every precaution to see that the weed is cleaned out of a pasture.

Solution for Teat Cups

Will you inform me what is the best solution for immersing the teat cups and tubes of a milking machine, between milkings?

Bridgehampton, N. Y. H. F. H.

A very satisfactory solution for cleansing teat cups and rubber tubing on milking machines can be made from chloride of lime.

In making up a solution, add the contents of a 12-ounce can of chloride of lime to one gallon of water. From this stock solution add one pint to 30 gallons of water in which immerse the teat cups and tubes. Twice each week add one pint from the stock solution, as the solution weakens rather rapidly. The addition of salt to make a strong brine keeps the solution from freezing in winter, but does not increase the value of the solution as a cleanser.

At the South Dakota Experiment Station, where they have been very successful with milking machines, a cleansing solution is made by adding one and one-half pounds of hydrated or powdered lime to 100 pounds of water.

Straightening Silo

My silo leans badly, it is 14x30 feet 2-piece staves of Oregon fir. Can I straighten it up without taking it down? It has a roof on it. Not only does it lean but the staves seem to have something of a twist.

Auburndale, Wis. H. M. J.

It is frequently a very difficult matter to straighten up a silo that has been blown to one side or that has settled out of place. This holds particularly true if it has been permitted to stand in this condition for a considerable length of time and the staves themselves have become warped and twisted. We have known of cases where a cable has been attached to the top of the silo and by the use of pulleys or a capstan they have been raised to a perpendicular and then restayed with guy wires. Another method is to use long timbers placed under the leaning side and by use of common jacks the silo is pushed back to a perpendicular.

If this method fails to accomplish the purpose or if, as is likely in some cases, the staves separate and cannot be drawn together with the hoops, then it will be necessary to take down the silo and rebuild it after replacing the staves that are most badly warped and twisted. If there are only a few open cracks in the silo, these can be temporarily fixed by covering them with heavy roofing paper which will keep out the air and last for a considerable length of time.

This difficulty has been met by many owners of stave silos. It would be a valuable contribution to our general knowledge if readers having had experience would write us.

Salt for Hay and Silage

I have frequently heard discussions on the use of salt in preparing silage, shredded stover and hay. I have never seen it used, and wish to ask if it is ever used to any extent, and with what results. What effect will the salt have upon the fermentation of silage?

Kirkwood, Mo. J. R. R.

The use of salt in preserving silage, shredded stover, and hay has been discussed a great deal and there are some men who feel that it is a desirable practice. It is not in universal use, however, and we doubt whether it has any great efficiency. Indeed, it is our opinion that if sufficient salt were used to really do the work it is supposed to do, the feed would be oversupplied with salt and detrimental to the stock.

Where corn is properly ensiled, it does not need any preservative agent and the same may be said of shredded stover and hay. The only occasion where salt might be used would be to increase the palatability of inferior feed. This, we believe, can be better accomplished by the addition of diluted molasses at the time of feeding. Unless the salt was in considerable quantity, it would have practically no effect upon the silage fermentation.

Price of Fat in Cream

Will you inform me as to the following: How much butterfat in one gallon of 22 per cent cream? How much will be received per pound fat for 22 per cent cream at $1.32 per gallon? How much will be received per pound fat for each additional 5c per gallon?

Mosinee, Wis. B. McA.

A gallon of cream containing 22 per cent butterfat weighs 8.4278 pounds and contains 1.854 pounds of butterfat. When such cream is sold for $1.32 per gallon, 71.2c is received per pound for fat. For each five cents more received per gallon for such cream, the price per pound of fat is increased 2.69c. For example, a price of $1.37 per gallon gives a return of 73.897c per pound for fat, while a price of $1.42 gives a return of 76.594c.

Plowing Under Straw

Kindly let us know the fertilizing value of a ton of oat or barley straw. Does it contain more plant food than barnyard manure? When is the best time to spread this straw, right after threshing or is it better to let it decay? Would there be any difficulty in plowing it under? We use an ordinary walking plow.

Norway, Mich. A. F.

A ton of mixed barnyard manure will contain about the same amount of fertilizing constituents as will a ton of oat or barley straw. However, the fertility elements in the manure are more readily available and will show, in general, better results.

Unless the amount of straw on hand is very largely in excess of needs, we would prefer to make use of liberal quantities of it for bedding as it will handle easier in this manner and it will also help to make the fertilizing elements in the straw more readily available for plant growth. However, straw may be spread right after threshing and this is preferable to allowing it to stay in the stack and rot down. When allowed to decay in the stack too large a part of the fertility and humus value of the straw is lost. If the straw is spread on stubble, it will plow under very well, if it is allowed to weather down. This holds particularly true if allowed to stand over winter.

Indeed, there may be a decided advantage in spreading straw lightly over clover or alfalfa fields as well as winter grain. This will help to give protection against the alternate freezing and thawing which does damage to these crops. If spread on hay land it might be desirable to rake up the straw in the spring, but a considerable portion of it will have been broken up and have become incorporated in the soil. The rest may be either used for bedding or spread on the fields or put in the barnyards for the cows to tramp.

Concrete Silo Not Round

Last summer I built a concrete silo. We started it round, 14 feet in diameter. We built it 45 feet high and used steel forms 2½ feet wide. The wall was 7 inches thick. When we got up about 10 feet high, our forms began to bend in on two sides and out on the other two sides so when up about 22 feet the dimensions were 13 feet,3 inches one way and 14 feet, 9 inches the other way. From there on we slowly got it more round again. We filled it last fall with corn just ripe enough for the silo. Filled it in ten hours, packed it well while filling. Three weeks later, it had settled about 10 feet. In opening up for feeding we found it spoiled a little on top, and on the sides it stayed moldy until within about 15 feet from the bottom. The mold was from 2 inches to 1 foot thick. I have a concrete silo on my other farm of the same dimensions, but after feeding down about 2 feet we have no moldy ensilage on the sides. The walls are straight on that silo.

The question is, does the crooked wall of this new silo have anything to do with the spoiling of the ensilage? If so, in what way can the inside be straightened or would it be cheaper to tear it down and rebuild?

Waupun, Wis. J. G.

This seems rather unusual and uncalled for even though the silo is not regular in shape due to the trouble which was had with the forms while building. I presume it is possible that the narrowing of the silo where the walls took on an elliptical outline might have prevented uniform settlement of the silage. That, however, is not indicated from the statements made. There must have been some other condition not clearly brought out in the inquiry.

However, to bring the interior of the silo to truly cylindrical form would probably not be difficult. It would be cheaper to put a shell of monolithic concrete from bottom to top inside on the basis of the uniform diameter of 13 feet.

Preparatory to doing this the interior wall surface should be washed down thoroughly and preferably roughened by nicking it all over with a stone pick, in this way exposing a large area of clean surface to assist bond between old and new concrete. Being on the inside of the silo no reinforcement would be needed for this inner shell, if the concrete were placed at correct consistency, which should be what is described by the word "quaky" or "jellylike". A 1:2:3 mixture should be used and the coarse aggregate should not exceed 1 inch in coarsest dimension.

Illinois. H. Colin Campbell.

Whitewash Recipes

We wish you would send us a recipe for making a good barn whitewash.

Marshfield, Mo. P. C.

The following whitewash formulas have been suggested:

1. Take a half bushel of unslaked lime and slake it with boiling water, covering during the process to keep in steam. Strain the liquid through a fine sieve or strainer, and add to it a peck of salt previously dissolved in warm water, 3 lbs. of ground rice boiled to a thin paste and stirred in while hot, one-half pound of Spanish whiting and 1 pound of clean glue previously dissolved by soaking in cold water, and then hang over a slow fire in a small pot hung in a larger one filled with water. Add 5 gallons of hot water to the mixture, stir well; let it stand a few days covered from dirt. It should be applied hot, for which purpose it can be kept in a kettle or a portable furnace. Coloring matter may be added as desired. When a less durable whitewash will answer, the above may be modified by leaving out the whiting and glue and omitting the boiling. It need not be applied hot and may be applied with a spray pump.

2. Slake 25 lbs. fresh lime in sufficient water to make a paste, sprinkle in 15 lbs. of flowers of sulphur, add 30 gallons of water, and boil for an hour. Then add enough water to make 50 gallons and apply with a spray pump, using a Bordeaux nozzle. This is in some favor as a disinfectant.

3. Take 20 lbs. of unslaked lime, 3 lbs. of common salt, and 1 lb. of alum. Slake the lime with boiling water until of the consistency of thin cream. To increase the antiseptic properties of the wash, add one-half pint of crude carbolic acid to each bucketful.

4. To half a bucketful of unslacked lime add two handfuls of common salt, and soft soap at the rate of 1 lb. to 15 gallons of the wash. Slake slowly, stirring all the time. This quantity makes two bucketfuls of very adhesive wash, which is not affected by rain.

5. Slake lime with water, and add sufficient skimmilk to bring it to the consistency of thin cream. To each gallon add 1 oz. of salt and 2 ozs. of brown sugar dissolved in water. The germicidal value of Nos. 4 and 5 may be increased by adding one-fourth pound of chloride of lime to every 30 gallons of wash.

6. Slake quick lime with enough water to make a thick paste. While it is slaking add a pint of melted lard or other grease and a cupful of salt to a bushel of lime. Add enough water to bring the solution to the consistency of thin cream and strain through a piece of burlap. For chicken house or barn where milk is not made it is advisable to add four ounces of some coal tar disinfectant to every gallon of the mixture.



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S-W Fly Spray protects cattle and horses from flies. Apply with spray or sponge.

P-31

The Dairy Cattle Congress—What It Offers to Breeders

The coming of the dairy show season again brings the breeder of dairy cattle face to face with the problem as to whether to plan on exhibiting his herd. This decision must be made by answering two questions; one, whether the exhibition of a show herd will return, through the winning of premium money, advertising, and acquaintanceship, sufficient to warrant taking out such a herd; the other, "What do I owe to those institutions which are being fostered and carried on for the express purpose of advertising this greatest of all classes of live stock which I am engaged in breeding and which is so fundamentally essential to the welfare of the nation."

The 1920 Dairy Cattle Congress to be held again at Waterloo, Iowa, September 21—October 3, will be one of the greatest dairy shows and conventions ever staged. The Dairy Cattle Congress holds a prominent position in that part of the country which must be the greatest field for the future development of the dairy industry. It is in this section that the farmers have the great asset of a rich, highly productive soil. The radical rise in farm values during the past two years has brought the farmers in this section face to face with a different situation in making their investment a paying one and the dairy cow is considered the solution of this problem.

Today in the seven states, counting Iowa and the six surrounding her, we have approximately 5,000,000 cows kept for milk purposes by approximately 500,000 farmers, a very small percentage of which have ever made any attempt toward the development of breeding of either a pure-bred or a high grade herd of any one of the great dairy breeds. Here in the center of this section, which without a doubt furnishes the future demand for registered cattle of the different dairy breeds, is situated the Dairy Cattle Congress. It is at this show that these thousands of present and future dairymen assemble for further inspiration and to get a fair comparison of the different breeds.

There are many advantages to be received from showing in addition to advertising. One learns by comparison. In reading our dairy and breed journals the breeders learn of many of the great herds whose cattle are in strong demand. It is only by meeting these breeders and seeing their herds that the new breeder can make certain of the accepted and most popular type of his preferred breed. The possibility which such a show as the Dairy Cattle Congress offers of coming in contact with one's fellow breeders is of too great importance to be overlooked. It is in meeting other breeders that you catch the inspiration which has made possible the greatest achievements along lines of breeding and development. It is this personal contact with men interested in the same subject that has made possible the rapid advances in the development of the dairy breeds of cattle.

The Dairy Cattle Congress has been each year increasing its premiums until with the 1920 increase it totals approximately $12,000 for dairy breeds of cattle alone. This is a premium list greater than has ever been offered west of the Mississippi by any show of its kind and should command the most loyal support on the part of the breeders. This premium list is divided so as to make it absolutely fair and impartial for the big and small breeder alike. The purpose of the Dairy Cattle Congress is to foster and develop new breeders. The plans for the 1920 show, with the loyal support the breeders of the country have each year given, should combine to make it the greatest event of its kind in the Central West.

E. S. ESTEL, Secretary.

Condensed Milk Market Weaker

Prices paid producers for raw milk continued to advance during July with an average increase amounting to 18 cents per hundredweight. In New England, Middle Atlantic, and South Atlantic sections prices as high as $3.44 to $3.76 per hundredweight were paid for milk testing 3.5 per cent butterfat, while in other sections prices ranged as low as $2.45 to $2.50 per hundredweight. Production has declined to some extent on account of the flush of the season nearing an end.

Total stocks and unsold stocks of condensed milk in the hands of manufacturers continued to show accumulations July 1, largely due to the slow movement and inability of manufacturers to dispose of their bulk goods. An outstanding feature during June was the large increase of unfilled orders, largely on account of the fact that manufacturers had oversold themselves on low-cost goods and were not willing to fill orders with their present stocks, which have cost them more than prices named in contracts which they now hold. Comparing market conditions July 1, 1920, with July 1, 1919, total stocks and unfilled orders in the hands of manufacturers had increased 27.24 and 838.26 per cent, respectively, while unsold stocks decreased 39.32 per cent.

The evaporated milk situation, from a standpoint of stocks, was not most satisfactory to manufacturers. Total stocks in the hands of manufacturers were increased 4,038,307 pounds July 1, 1920, while accumulations of unsold stocks amounted to nearly 30,000,000 pounds and unfilled orders had decreased approximately 23,000,000 pounds. Comparing the situation a year ago, total stocks July 1, 1920, were 51.99 per cent more than last year and unfilled orders were 52.19 per cent less.

Export business is reported quiet, with only a few inquiries and a little "Eastern relief" business to some of the European countries. Firms with regular export business were practically the only ones moving goods out of this country. Exports during June of condensed milk, which amounted to 27,723,269 lbs., were nearly 5,000,000 pounds less than May, and England, Cuba, and Germany received the largest part of these shipments. Exports of evaporated milk during June exceeded those of May by 3,384,281 pounds, with considerable quantities going to the Straits Settlement, Philippine Islands, and British India.

Trading in condensed and evaporated milk is reported inactive, and in some respects the market may be considered weaker. Asking prices for well-known brands of condensed milk have been maintained at $10.50, but some unadvertised brands are selling as low as $9.75 by dealers who are compelled to make a quick turnover. The weakest feature of the market has been the marked decline of prices made in sweetened condensed bulk goods. Because of accumulations dealers are moving stocks at 14½ to 15½ cents per pound and some lots are reported sold as low as 13½ cents. Evaporated milk is selling mostly at $6.50 to $7, with some unadvertised brands sold down to $6. This price, however, does not allow for much profit and is near the cost of production.

Men are born to succeed not to fail.
—THOREAU.

A Summer Dairy Show in Oregon

HOARD'S DAIRYMAN:—A dairy cattle show was held in Marshfield, Oregon, on July 3, 4, and 5 in connection with a patriotic celebration extending over the three days. It was the first cattle show ever held there and attracted much attention from visitors to the city.

There were over sixty cattle on exhibition, mostly Jerseys and Holsteins, and the quality was exceptionally fine. Some of the prize winners will be exhibited at the state fair in Salem and at the Pacific International at Portland.

The grand champion Jersey bull was St. Mawes Tisha Waltz owned by Finley Shroeder. The grand champion Holstein was Matador Segis Walker 6th owned by L. J. Simpson. This bull was a prize winner at the National Dairy Show at Columbus. In his present form as a senior three-year-old he weighs about 2,300 pounds.

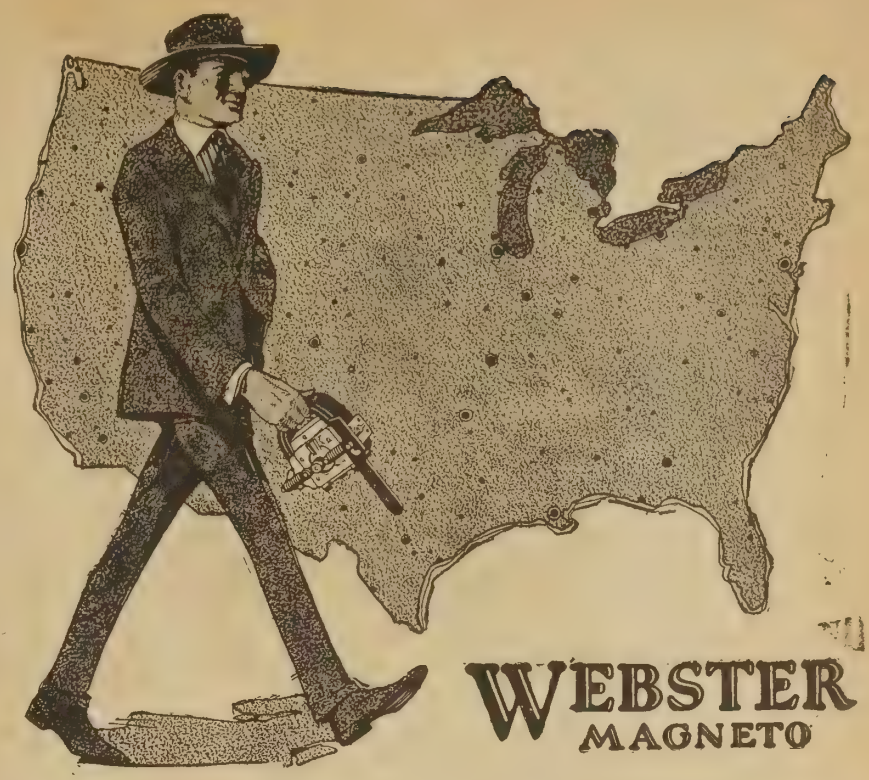
An interesting feature of the show was a judging contest by a group of boys under the leadership of E. R. Peterson, county leader of boys' and girls' clubs. A parade of the prize winning animals on the last day of the show was an eye opener to the many people, as few had any idea there were so many good cattle in the country. The show was held under the auspices of the Chamber of Commerce and it is planned to make it an annual event. Marshfield is on Coos Bay and in the center of one of the finest dairy sections on the Pacific coast. Dairying is its leading industry and the interest in registered cattle is increasing. Several carloads of Jerseys have been brought in and a recently organized county Holstein breeders' association is planning on bringing in one or two car loads of Holsteins. C. C. Farr, county agent, and J. L. Smith, bank agriculturist, have been authorized to select the animals and make the purchase. It is expected these cattle will arrive before the opening of the county fair in September.

E. B. FITTS.

Oregon College of Agriculture.



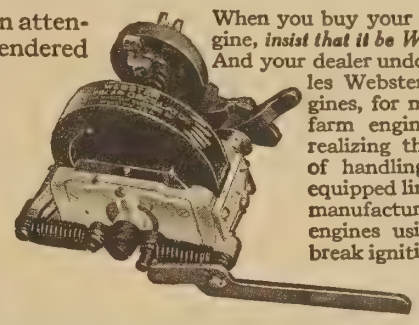
PORTION OF THE LIVE STOCK PARADE AT THE MARSHFIELD, OREGON, SUMMER DAIRY SHOW. THE BULL IN THE LEAD IS MATADOR SEGIS WALKER 6TH, GRAND CHAMPION OF THE SHOW



Service Men and Stations Dot the Country — —

WEBSTER interest in Webster magnetos never ceases. Long after the manufacturer has sold his engines to the dealer, long after your dealer has supplied you. *Webster service men and Service Stations are still "on the job".*

Partly through the keen attention and helpful aid rendered by these men and the 46 Webster Service Stations, the 600,000 Webster Magnetos now in use are daily doing their part in adding to the Webster reputation for *continuous, dependable ignition service—always—under all conditions.*



When you buy your next farm engine, *insist that it be Webster-equipped.* And your dealer undoubtedly handles Webster-equipped engines, for more and more farm engine dealers are realizing the advisability of handling a Webster-equipped line. 85% of the manufacturers of farm engines using make-and-break ignition now supply the Webster as standard equipment.

WEBSTER ELECTRIC COMPANY
RACINE, WISCONSIN, U. S. A.

Waukesha County Holstein Breeders Meet

Aitken Brothers, owners of one of Wisconsin's foremost breeding establishments, were hosts at the recent summer meeting of the Waukesha County Holstein Breeders' Association. Meadow Lane Farm, because of its location, modern equipment, and good Holsteins, proved an ideal place for such a meeting. Before the day was done there was not one of the four or five hundred people present but would have voted Aitken Brothers and Fred Klussendorf, the farm manager, ideal hosts.

The meeting was called for 10:30 a. m. and the remainder of the forenoon given over to a boys' judging contest, Professor R. S. Hulce of the State University and County Agent J. E. Stallard in charge. Fifteen boys lined up for the contest. Before the actual judging was commenced Professor Hulce gave a short demonstration, using for purposes of illustration Aitken Brothers' Cande De Kol Westview, a former state fair winner. Four cows from the Meadow Lane herd made up the class to be judged and when the cards were finally turned in Harold Carr stood first, winning the pure-bred bull calf offered by Aitken Brothers. Second, third, and fourth places were won by Elmer McCarthy, B. Peacock, Jr., and Stewart Howell, respectively.

After dinner the program opened with a short address by J. L. Thomas, field secretary for the Wisconsin Dairy Council. Mr. Thomas explained the purpose of the Council and the very great need which exists for the advertising of dairy products in order to develop the potential market that exists for them. He spoke at some length upon the food value of these products and the present low consumption per capita.

Mrs. Nellie Kedzie Jones, of the Home Economics Department of the State University, gave an excellent address on the farm home and the home agents that are now doing a work among the women similar in many respects to that of the county agents among the farmers. She outlined the work of these agents in home improvement, and appealed to the men present for better homes and home conveniences on their farms.

S. E. Taylor of the Griffith Motion Picture Corporation was the one speaker of the day who was not closely connected with farm or dairy work. Mr. Taylor is, however, allied with one of the greatest industries of this country and during the course of his talk showed what advertising had done for that industry and what it could do for the dairy business and the dairy farmer. Proper advertising would not only result in a better market and better prices, but in better homes and more contented workers in the business. It would indirectly help to popularize dairy farming.

The State Holstein Association was represented by L. L. Oldham, secretary, who briefly outlined the work the association is doing and plans to do in the future. He suggested community testing to the county association as one means of increasing the number of offically tested cows in the county. He also urged the importance of selecting and using good farm names. This costs but little and may be of a very considerable advertising value.

Modern Farm Houses

HOARD'S DAIRYMAN:—A hundred years ago machinery helped but little on the farm. Men drudged from early morn till late at night and accomplished little as measured by the standards of today. A hundred years ago the men were busy, more than busy, in the fields and women did the chores. In that day farm women were skillful with the spinning wheel, the knitting needles, and the loom. They fed the pigs; they husked the corn; they milked the cows. They fed the calves; they raked the hay; they churned the butter. Those were the days of quilting parties, husking bees, and milkmaids. Yes, and they were days of drudgery. The stories of those days sound well in rhyme, but they were not so pleasing in reality. Since then the world, even the farm world, has greatly changed.

Machinery came and milkmaids disappeared. Machinery came and women left the fields. Machinery came and with it lightened labor on the farm and in the barn; but machinery has done little for farm women in the home. Machinery and modern equipment could do as much for women as for men, and at much less expense.

The furnace, refrigerator, kitchen cabinet, fireless cooker, vacuum cleaner, power washing machine, mangle, electric lights, and running water in kitchen and bathroom would lighten women's work as much as all the various kinds of machinery and equipment have lightened the outdoor work upon the farm.

Farmers, let me tell you something. You owe it to your wives and daughters to get them all these things. City women have such comforts and conveniences, and they cost about as much within the city as upon the farm. For installation the cost is comparatively light and the upkeep is not high. It costs you more to purchase and support your auto than to fully equip your home.

A salaried man said to his brother, who lives on a large, rich farm: "I have a modern house; you have an auto. I have what most appeals to me. You have what most appeals to you."

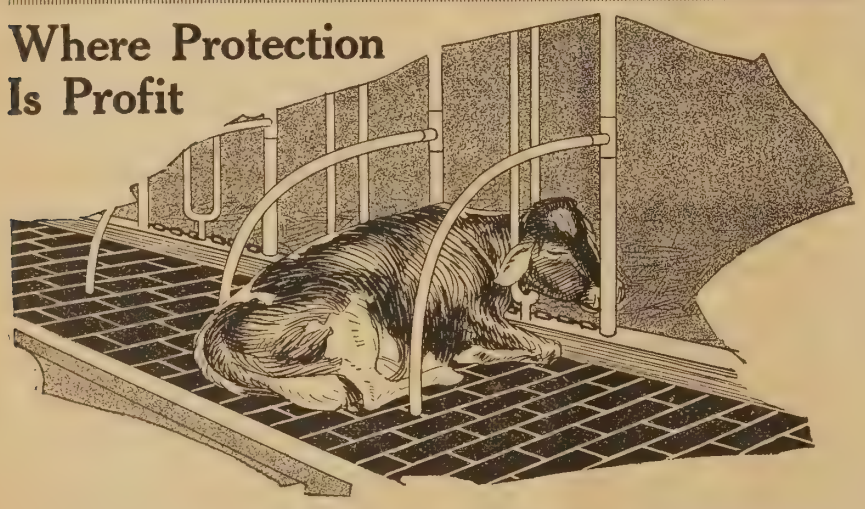
For a moment the farmer seemed lost in thought. Then he said: "I, too, will have a modern house."

He will. The movement is started. It will grow. That day is not far distant when every wide-awake, up-to-date, progressive farmer will be dissatisfied until he fully equips his home.

J. C. MCDOWELL.



Where Protection Is Profit



TAKE a good look at this picture, a frequent and natural position of the cow in her stall. Notice the udder—right down on the floor.

Whether this is safe or dangerous depends entirely upon the floor. If it is cold and hard, it is almost certain that the udder will be chilled, resulting at least in lowered milk production and very probably in inflammation and garget. That is the risk you take every time your cow lies down, especially in winter. Bedding is little protection, for bedding frequently gets pushed aside.

There is only one *sure* protection—a floor of Circle A Cork Brick, because cork brick are non-conductors of heat and are always warm—winter or summer. Bedding or no bedding, the udder does not chill on a cork brick floor. It is humanity to the cow and good business for you to insure against disease and interrupted milk production with Circle A Cork Brick—*the warm stall floor.*

You will be interested in the 28-page book, "Better Stall Floors", which contains information that will be valuable to you in your business. Write for a copy — there is no charge for it.

Armstrong Cork & Insulation Company 112 Twenty-fourth Street, PITTSBURGH, PA.

All genuine Armstrong Cork Brick bear the Circle A trade-mark

Circle A Cork Brick FOR ALL STALL FLOORS

Is a Farm Water System a Good Investment?

(Continued from page 232)

ground where the wind can get at them from all quarters. The tower should be high enough so that the wheel is well above adjacent buildings and trees. It is not absolutely necessary that the windmill be placed directly over the well but such a location is to be preferred. If the well is on low ground the difficulty may be overcome by building the tower a little higher. Windmills may now be had that are equipped with various automatic devices such that they require a minimum of attention. They are automatically started and stopped as the water in the storage tank lowers or rises above certain points. They are automatically oiled and require only to have the oil reservoirs filled at infrequent intervals. Windmills may be used with practically any kind of pump but ordinarily they are connected to what is known as the double action force pump.

Hydraulic Rams

The hydraulic ram may be defined as a device which utilizes the kinetic energy of water or, in other words, the energy of falling water to raise a part of itself to a point higher than the supply. A ram consists of essentially five parts; a drive pipe, a delivery pipe, an air chamber, and two valves, a clack valve (so-called from the noise it makes), and a foot valve. A third valve called a sniffing valve is sometimes employed. In operation the ram is located somewhere below the source of supply in such a way that the drive pipe connecting the ram with the supply is about 50 feet long. The head or vertical distance of the supply above the ram may be anything over 18 inches, but it is not advisable to use a fall of more than 15 feet with the ordinary ram.

If it is necessary to have a drive pipe longer than 50 feet a standpipe or other means of equalizing the head and reducing pipe friction should be employed. This stand-pipe should be placed about 50 feet from the ram and any head desired can be obtained by locating an overflow at the required height. The delivery pipe is generally about half as big in diameter as the drive pipe. That is, if the drive pipe is two inches the delivery pipe will be about 1 inch. Both the drive and delivery pipes should be as straight as possible and have as few elbows as the conditions will permit. The joints must be absolutely tight if the ram is to work at its best. The air chamber is used in rams to absorb the shock caused by the sudden stopping of the moving column of water in the drive pipe, and also to cause the delivery to be steady instead of intermittent. If the source of supply happens to be a body of comparatively still water there will be very little air in the water. The result will be that in time the air in the air chamber will be absorbed by the water and the ram will stop. If the source of supply is a rapid stream there will be considerable air in the water and the last mentioned trouble will not take place.

Some rams are equipped with what is called a sniffing valve. This is a small valve located on the upper side of the ram body in such a way that at each pulsation of the ram a small amount of air is drawn in and added to the supply in the air chamber, which is in this way kept at the proper amount. If the air chamber becomes full of water the only thing to do is to drain the ram and let the air back in where it belongs. The valve in between the air chamber and the ram body (in certain makes of rams) is simply a check valve of some sort, either of the ball or flap variety.

The most important single feature about hydraulic rams is the escape or clack valve. This is ordinarily a cast iron disk held in place by a vertical rod or valve stem in such a way that when the water starts flowing through the drive pipe it escapes around this clack valve. When the current becomes strong enough this valve is forced up onto its seat stopping the current of water very suddenly. The momentum of the moving body of water in the drive pipe causes the check valve to open and a certain amount of water is forced into the air chamber until the pressure is equal on both sides of the check valve. When the check valve drops back in place the air expands and forces a part of the water in the air chamber out through the delivery pipe. In the meantime the pressure in the body of the ram has been reduced first by escape of some of the contained water and second by the backward surge which takes place at every pulsation. When the pressure is low enough the clack valve drops back into its first position and the process is repeated at the rate of about 40 or 50 beats per minute depending on the head. The clack valve is about the only part that wears and in consequence is sometimes made of bronze or other metal that will wear better than cast iron. In other rams the valve seat or valve or both are covered with rubber to prevent the usual noise which is associated with the working of hydraulic rams.

When the conditions are such that they can be used, hydraulic rams are probably the cheapest and most satisfactory way of pumping water. Except in the larger sizes the quantity of water delivered is not great but it is very constant. A stream of water no larger than a lead pencil will fill a fairly large tank in the course of twenty-four hours. The amount of water that will be delivered by a ram depends on size of ram, amount of head, and height to which water is to be raised. The horizontal length of pipes has some bearing on the amount of water delivered but usually this distance is not great enough to cause any particular trouble.

The amount of water that will be delivered by any ram may be closely estimated by the following rule: One-seventh of all the water flowing to the ram may be delivered to a height equal to 5 times the head. For instance, assuming that 21 gallons of water are flowing to the ram each minute from a height of 10 feet then 3 gallons can be delivered to a height of 50 feet each minute. This rule of course is not absolutely true in all cases but it is close enough for practical purposes.

Hydraulic rams require very little attention and will work under conditions that would discourage almost any other kind of a pump. The first cost is small, repair bills are small and infrequent, and there is no operating expense. Two distinct types of hydraulic rams are on the market, the single acting and the double acting. The single acting ram delivers a part of the driving water while the double acting ram may use creek water for power and deliver spring water to the house or elsewhere. In any case the water must be higher than the ram, that is, the ram will not act as a suction pump.

Steam and Steam Engines

The requirements of a farm water system are such that steam and steam engines are not particularly adaptable. In the first place they require constant attention and an outfit which will cost considerably more than any but the large systems will warrant. If, however, there is an engine and boiler being used for some other purposes such as running a mill or creamery for instance, the steam may be used to operate a direct acting steam pump or power may be taken from the engine to operate a pump jack. In

other words, it is practically never advisable to install a steam pumping outfit for the average farm water supply system, but if the power is available by all means use it.

Gasoline Engines

Gasoline engines are used quite extensively for pumping where there is considerable water required. They are better suited to conditions where there is a comparatively large storage tank so that the engine may be run continuously for a time and then stand idle until the storage tank is empty. Such engines are usually belted directly to a pump jack or to a small centrifugal pump, if conditions will permit of its use, or to some sort of a suction or deep well pump as may be required. Such engines are subject to the same criticism as steam engines, that is, they require more or less attention and are not entirely automatic. They may be so installed that the engine will be stopped when the water in the tank reaches a certain height but it is rather difficult to automatically start them when the water gets low. Gasoline engines, especially those with a water jacket, must be kept where they will not freeze or else the water jacket must be drained when the engines stand for some time during cold weather.

Hot Air Engines

Hot air engines were formerly used to some extent for pumping water but their use is now limited. They are generally used in connection with a pump jack. Such engines have the same objectionable features as steam and gasoline engines and the additional ones of being rather large and unwieldy for the required power and not very efficient in the use of fuel.

Electric Motors

Where electric power is available, either from a power line or from an individual plant, an electric motor is one of the best means available at present for operating a farm water system. They may be placed in practically any location so long as they are kept out of the wet. It is a comparatively simple matter to install them in such a way that they will act automatically when the pressure reaches certain high or low points. No power is consumed except when the pump is in actual operation. They may be belted or otherwise connected to a pump jack, a reciprocating double or single acting pump, or to a centrifugal pump. They may be used also to operate an air compressor when some sort of an air lift or pneumatic pump is employed. The electric motor is probably the best and cheapest device for operating a small water system that has yet been evolved, regardless of whether the power is obtained from outside sources or is generated on the farm.

Water Motors

Water motors are used to some extent where water under pressure is available. For instance, well water under pressure may be made to operate a water motor which in turn will pump soft water to an overhead tank. Where only a limited amount of water is to be pumped such an arrangement is perfectly satisfactory, but if a large quantity of water is wanted it will generally prove to be cheaper to install a separate system.

Hydro-Pneumatic Systems

The word hydro-pneumatic means literally, water-air, so that such systems are really water-air systems. Regardless of the kind of power used and the various details of construction and operation the basic principle is the same in all such systems, that is, both water and air are forced into an air tight tank. The air naturally rises to the top of the tank and becomes compressed as more water and air are pumped in. The delivery line from the pump may enter the tank in any place either above or below the water line but the discharge from the tank must always be taken from below the water line. When a faucet is opened anywhere on the discharge line the air in the tank expands and forces water out of the opening. In most of the systems the pressure is automatically regulated so that the only thing necessary is to see that the tank contains the proper amount of air.

Most of the pumps used in connection with these systems have some sort of an air valve which automatically draws in a certain amount of air at each stroke. When this is the case a slight adjustment of this air valve from time to time is all that is necessary to maintain the proper proportions of air and water. The question might naturally come up as to why it is necessary to continually pump air when only water is drawn from the tank. The explanation is that when air and water are in contact under pressure a certain amount of air is absorbed by the water. The best illustration of this is the fact that the water in all streams and lakes contains air. If it did not, the fish in these streams and lakes would promptly die of suffocation. It is well to remember that even in the open there is a pressure of nearly 15 lbs. per square inch on the water and every other existing thing at sea level.

Lift

So far nothing has been said about the water supply, it has simply been assumed that it was within easy reach. If, however, the water has to be taken from a deep well another very important factor enters which must be taken care of, namely, the lift. For instance, if the water level in a well is 40 feet below the ground surface it is obvious that it will be impossible to handle it with the ordinary so-called suction pump located at the top of the well. Under the best possible conditions water cannot be raised more than 34 feet by this means. At this altitude (about 1,000 feet above sea level) very few concerns will guarantee that their pumps will operate successfully when the lift exceeds 22 feet. Because of this fact it becomes necessary to either lower the pump to within 22 feet of the water level or to bring the water up to within 22 feet of the pump. An electrically operated pump may be lowered in a dug well or in an excavation around a driven or bored well with comparatively little trouble if the water level is not too far down, say not more than 30 feet below the ground level. It is seldom advisable to attempt to raise the water up to where a "suction" pump can handle it since two separate and distinct pumping outfits will be required. As a general thing it will prove more satisfactory to install some sort of a deep well pump. These outfits may be had in several different forms, some one of which can be made to fit almost any given set of conditions.

Pneumatic Pump

In drilled wells where the casing is four inches in inside diameter or over, a pneumatic pump may be used to good advantage. Pumps of this type will lift water well over a hundred feet. The actual pump parts are enclosed in a metal cylinder which is lowered into the well until it is ten or fifteen feet below the water level. These pumps are operated by compressed air and may be made entirely automatic. The air compressor and tank may be housed in any convenient place even out of doors if desired, without danger of freezing, since the tank contains air only. With the pneumatic system, as many pumps

(Continued on page 248)

No More Wet, Tired, Sore Feet— If You Wear "Steel-Leathers"

The Light, Comfortable, Work-Shoe



Save $20 to $30 Shoe Money

Try Them 10 Days FREE

2 to 3 Years' Wear in Every Pair

Every time you buy a pair of ordinary, all-leather work-shoes, you are paying 3 to 6 times as much as you should, for the wear you get—throwing away $20 to $30. With prices way up and quality way down, that's truer today than ever. You can actually **SAVE $20 TO $30** of shoe money if you'll learn for yourself what more than a million men like yourself have learned to their comfort, health and profit.

Outwear 3 to 6 Pair Leather Shoes

When we say that one pair of "Steel-Leathers" outwears 3 to 6 pairs of ordinary all-leather work-shoes, we mean exactly what we say—aren't exaggerating one bit—simply giving you the plain facts as thousands of "Steel-Leather" wearers during the last 15 years have given them to us—just as any one of them would tell you himself if you asked him. We say "Steel-Leathers" are the most wonderful work-shoes ever made because they **LAST 2 to 3 YEARS.** Thousands of our customers claim even more for them. Here's what J. M. Lester of Louisiana says: **"I AM STILL WEARING A PAIR OF 'STEEL-LEATHERS' THAT I BOUGHT OF YOU 4 YEARS AGO."** Thousands of others have written us that they simply can't wear out their "Steel-Leathers." Compare their experience with your own experience with all-leather work-shoes —then make up your mind to stop wasting your shoe money and **ACCEPT OUR WONDERFUL FREE TRIAL OFFER.**

Light—Springy—Comfortable

Don't think because the soles are of steel that "Steel-Leathers" are heavy and uncomfortable. **THEY ACTUALLY WEIGH LESS THAN MOST LEATHER WORK-SHOES AND ARE MORE COMFORTABLE.** Require no breaking in—never chafe or pinch. Remember these are not our claims but the statements of thousands of wearers who were doubtful just as you perhaps are. But they investigated just as we are asking you to investigate and try them **without risking one penny.**



N. M. Ruthstein
President

Here's what W. S. Pease of Alabama says: **"I WISH EVERY MAN WHO LIKES A GOOD COMFORTABLE WORK-SHOE MIGHT HAVE A PAIR OF YOUR 'STEEL-LEATHERS'."** Thousands of others say the same and wouldn't go back to all leather work-shoes. "Steel-Leathers" look and fit better than the best shoes made. Uppers are of the highest grade soft leather, tough as rawhide, soles of thin, special processed steel, shaped over foot-form lasts so as to fit any foot. Cushioned inside with thick, soft hair felt-insole so foot can not touch steel sole. **"STEEL LEATHERS" MUST MAKE GOOD ON YOUR FEET OR YOU DON'T KEEP THEM.**

STEEL SOLE SHOE CO.
N. M. RUTHSTEIN, Pres.
Dept. 52, RACINE, WIS.

Absolutely Waterproof. Save Your Feet and Health

"Steel-Leathers" are the only shoes that stay water tight forever. Wear them any time, anywhere; winter or summer, for ordinary use or for rough work, in the mud, slush, snow, rain; in the field, in the barnyard—makes no difference—**FEET ARE ALWAYS DRY**—and a dry foot means a warm foot in winter—a cool foot in summer. Won't sweat, swell or "parboil" your feet, as rubbers or rubber boots do. They put an end to wet, sore, tired feet. Prevent colds, sore throat, pneumonia, rheumatism, lumbago, sciatica, chilblains, swollen joints and hundreds of dollars in doctor's bills. The steel soles support the arches so the longest day in roughest going or weather, becomes a pleasure. Sanitary too—can be cleaned of all foot or barn-yard odors. Simply wash out inside—dry and they are again sweet and fresh as new.

Economical

"Steel-Leathers" not only out-wear 3 to 6 pairs of all leather shoes, saving you from $20 to $30 in shoe money, but **COST LESS.** Besides this, they make unnecessary the buying of rubbers or rubber boots. They never become run down at the heels. Never become hard or twisted out of shape. Think what this means in the morning after a "yesterday" tramping through the wet. **Require no repairs;** 50 rivets for 40 cents will keep them in good shape for years. Stand up under hardest use in sand, gravel, sharp rocks. Hedge thorns or nails won't tear or snag them and hurt your foot. Can you say half as much for the work-shoes you wear?

Try Them FREE

If "Steel-Leathers" are all we claim for them, you want a pair—need them—and need them every day, and **WE'RE WILLING TO PROVE TO YOU THAT THEY ARE ALL AND MORE THAN WE HAVE CLAIMED.** We are willing to make "Steel-Leathers" prove it to you in your home—**on your feet.** Don't spend another cent for shoes until you get our **FREE BOOK.** It gives you full information as to sizes and styles—tells in detail how they are made. Send postal or use coupon but don't delay—do it today.

SEND POSTAL OR THIS COUPON

STEEL SOLE SHOE CO., N. M. Ruthstein, Pres.

Dear Sirs:—Please send me, postpaid, your free book, "The Sole of Steel" and full particulars, of your **FREE TEN-DAY TRY-ON OFFER** without cost, risk or obligation to me.

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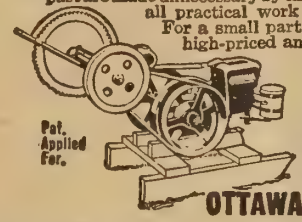
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A Newly Invented SAW RIG

WILL saw your winter's wood in a few hours and then you can make money sawing for others. Many users say they make upwards of $11.00 a day cutting wood for neighbors. Expensive cumbersome rigs used in the past are made unnecessary by the Ottawa Saw Rig. Does all practical work any other saw rig can. For a small part of the cost of one of these high-priced and obsolete rigs you can now own the

LOW INTRODUCTORY OFFER



Pat. Applied For.

OTTAWA SAW RIG

Strictly a one man outfit. Easy to operate, light to move, simple to handle. Powerful 4-cycle motor that drives any belt machinery when not sawing. It will pay for itself in cash in two weeks, just cutting wood for neighbors. **30 Days' Trial; 10 Year Guarantee.** Let the Ottawa work a month for you to prove our claims. Write for FREE BOOK TODAY.

OTTAWA MANUFACTURING COMPANY 334 Main Street, OTTAWA, KANSAS.





Manufactured Dairy Products for 1919 as Reported by the U. S. Bureau of Markets

Table I—Butter, Cheese, Ice Cream, Milk Sugar, and Sterilized Milk

State	Butter		Cheese									Ice cream	Milk sugar	Sterilized milk
	Creamery	Whey	American Whole milk	American Part and full skim	Swiss	Brick and Munster	Limburger	Cottage, Pot, Bakers'	Cream and Neufchatel	Italian	All other			
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Gals.	Lbs.	Lbs.
Connecticut	929,551	9						421,450	87		24	1,978,696		
Maine	1,140,850							3,980				768,329		
Massachusetts	2,849,270	16,365	3,813					48,270	53	102,526	283	3,769,986		
New Hampshire	397,198		8,200					84,142	29,670	100,200	120,773	198,054		
Rhode Island	65,392							2,962		4,294		1,000,559		
Vermont	10,676,538	11,172	2,960,177	403,635				850,265	104,745	81,282	31,730	163,454	214,535	
New Jersey	178,796	758	446,000	33,225				639,120	13	88,230	288,727	5,302,808		1,824
New York	13,715,704	575,948	46,510,079	4,098,760	1,528,704	1,495,984	4,262,218	12,413,642	3,074,807	1,574,047	6,310,853	12,436,807	1,868,002	1,588,327
Pennsylvania	12,445,578	99,425	2,927,445	772,834	813,041	5,750	14,100	6,182,069	611,027	907,011	256,613	19,720,681	737,185	
Delaware	253,286							15,625	996	80,116	119,125	117,924		
Dist. of Columbia	5,375	1,184						300				2,964,075		
Florida	16,755											489,011		
Georgia	5,802											1,449,051		
Maryland	315,307		42,588	195,338				83,950				3,371,389		11,729
North Carolina	829,286		228,213	407				498	145			663,757		
South Carolina	26,580			348								492,181		
Virginia	1,597,340	450	59,991					506				2,201,816		
West Virginia	328,160		55,569	181				19,787				1,621,135		
Illinois	44,621,358	26,926	2,538,496	595,940	947,526	753,226	338,069	1,884,991	434,410	70,476	616,728	10,854,523	238,329	9,796
Indiana	44,658,534	245,274	70,242	68,243	12,336	8,966		159,213		20,815	4,628	5,047,353	336	
Michigan	45,206,770	10,223	5,188,322	53,364	1,300	170,306	27,693	1,212,390	503,391	378,979	1,367,130	5,747,747	170,550	
Ohio	60,573,159	25,138	962,983	180,038	3,030,357	72,118	1,302	2,391,835	294,410	1,116	4,512	9,801,133	280,763	
Wisconsin	85,054,334	4,506,357	201,836,217	6,043,938	14,328,204	35,743,916	3,172,392	2,635,390	402,530	562,975	1,391,180	4,081,304		2,264,484
Iowa	87,914,633	1,678	858,930	29,212		25,504	8,752	256,568	9,538	21,079	1,360	3,762,717		8,640
Kansas	35,642,291	177,203	25,498					18,537				1,798,036		
Minnesota	130,785,598	7,756	8,998,078	378,836		368,558		393,847	21,278			3,520,566		132,874
Missouri	38,411,403	6,617	302,219	2,764				650,278				4,318,519		
Nebraska	60,467,056		39,343					159,132				2,409,990		
North Dakota	14,696,566	19,147						65				439,168		
South Dakota	17,478,570		31,669	459				393	24,220			976,755		
Alabama	696,215											1,080,545		
Arkansas	363,384							380				731,822		
Kentucky	5,321,193	493						26,306				836,967		
Louisiana	46,409		1,100					50				751,418		
Mississippi	2,476,787											497,147		
Oklahoma	10,481,270		1,419			6,131		9,350				1,696,327		
Tennessee	3,735,157		51,033					1,116				1,595,138		
Texas	8,288,644		720	4,500				25,652	12,383			3,956,971		
Idaho	4,514,263		2,577,616			4,812						253,777		
Montana	5,389,032		268,548	3,250		46,600		12,539				611,305		
Oregon	14,431,827	1,160	8,347,930	11,116	1,610	47,610	5,694	182,965	46,981		4,365	1,136,852		
Washington	18,486,591	31,325	1,145,184	41,173	10	3,009		158,659		51,983	15,895	1,762,228		49,046
Wyoming	1,139,556		1,612,356					5,363				121,776		
Arizona	1,000,118		314,871	148,846				7,784				229,075		
California	61,795,295	8,801	5,661,089	723,414	938,694		6,742	576,131	68,727	345,474	1,196,162	4,434,556	3,105,959	353,993
Colorado	13,144,464	8,417	160,670	312,842		23,442	6,865	46,324		555	3,322	1,285,605	221	
Nevada	1,725,494							110				70,089		
New Mexico	5,673											41,332		
Utah	3,796,394		906,977	7,628				31,833				496,028		
Grand total	868,124,806	5,782,326	295,143,585	14,110,291	21,601,782	38,775,932	7,843,827	31,613,767	5,639,461	4,391,158	11,733,410	133,056,482	6,615,874	4,420,713

Table II—Condensed and Evaporated Milk, Dried Casein, and Powdered Milk

State	Condensed		Evaporated						Dried casein			Dried or powdered milk		
	Whole milk	Skimmilk	Whole milk	Skimmilk	Modified with foreign fat	Buttermilk	Malted milk	Total evaporated, condensed and malted	Skimmilk	Buttermilk	Cream	Whole milk	Skimmilk	Buttermilk
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Connecticut	11,599		8,942	6,018	3,276			29,835	8,614	2,834				
Maine	6,894,304							6,894,304	1,142,777					
Massachusetts	233,540	402,634	1,579,069					2,215,243	369,912					
New Hampshire		7,377	68,955					76,332	49,999					
Rhode Island			211					211						
Vermont	24,944,629	6,696,839	6,383,944	971,656				38,997,068	414,837					
New Jersey	5,030,785	1,279,605	2,090,545	2,170,209			10	10,571,154	84,107					
New York	333,315,782	2,696,545	102,115,487	5,413,065	880,000		86,202	444,507,081	2,497,639	349,336	487,261	3,871,551	16,026,290	
Pennsylvania	47,205,653	17,272,743	97,317,209	20,102,221	859,028	14,996		182,771,850	1,307,301	17,642		1,897,728	3,732,227	
Delaware									134,241					
Dist. of Columbia														
Florida	400		37,529	38,209			150	76,288						225
Georgia														
Maryland	32,207	1,195,449	5,230,178	2,653,360				9,111,194			24,377	734,062	306	
North Carolina														
South Carolina														
Virginia	41,008	856,515	1,716,350	2,607,841				5,221,714		2,200				
West Virginia		32,394	11,070	356,658				400,122						
Illinois	67,527,669	7,250,012	108,407,433	5,765,182	14,527	1,799,853	3,272,474	194,037,150	951,881		94,720	110,573	559,152	
Indiana	2,212,139	4,238,523	16,458,853	753,151	6,660	2,039,477		25,708,803						403,324
Michigan	51,040,589	10,578,021	126,150,978	10,882,041	643,006	2,133,919	158,278	201,586,832				2,120,421	4,804,854	60,000
Ohio	6,003,242	11,214,703	95,128,511	11,096,276	31,839	3,267,118	248	126,741,937	391,470	8,677			335,924	
Wisconsin	55,303,196	4,791,990	392,994,588	4,124,668	39,027,424	198,849	13,437,360	509,878,075	250,334	83,724	832	125,429	4,307,144	18,851
Iowa			6,288,267	365,130		2,959,772		9,613,169	120	19,250				
Kansas	748,747	1,211,790	17,614,727	259,142		1,259,359		21,093,765		24,114			130,414	502,384
Minnesota	9,903	75,907	1,917,416	356,895		1,157,927		2,518,048	461,761				548,201	1,679,319
Missouri			39,831			2,711,794		2,751,625		28,325			92,816	
Nebraska			2,725,759	345,511		2,533,106		5,604,376					216,433	2,614,124
North Dakota						1,407,600		1,407,600						
South Dakota						795,450		795,450		8,414				
Alabama		130,304		999,000				1,129,304						
Arkansas												182,472	12,000	
Kentucky														
Louisiana														
Mississippi														
Oklahoma														
Tennessee			960					960						
Texas	2,739	1,826	1,200	5,379	420			12,064		260			2,480	
Idaho			11,093,091					11,093,091	21,098					
Montana														
Oregon	222,603	744,539	32,980,092					33,947,234						
Washington	263,766	397,280	126,747,272	2,074,208	23,529,041			153,011,567	2,210				397,360	600
Wyoming														
Arizona	11,628	3,980	15,621,693	726,376				16,363,677		46,920				
California	9,116,213	1,657,774	65,269,749	2,592,604		445,076		79,081,416	5,596,192	24,509			3,558,819	
Colorado			16,903,909			1,557,955	481,165	18,943,029	750				221,002	
Nevada														
New Mexico														
Utah	1,265,071	108,127	19,106,241					20,479,439						
Grand total	611,437,412	72,844,877	1,272,010,059	74,665,300	64,995,221	24,282,251	17,435,887	2,137,671,007	13,685,243	722,151	607,190	9,042,236	34,945,416	5,278,827

National Grange Notes

Washington, August 15—Committees have been named for the work of the 54th annual session of The National Grange which is to be held at Boston, Mass., November 10, 1920. The chairman of the more important committees are the following State Masters: Agriculture, John A. McSparran, Pennsylvania; Co-operation, L. J. Taber, Ohio; Education, C. E. Spence, Oregon; Foreign Relations, G. W. Dixon, South Dakota; Forestry and Conservation, Herman Ihde, Wisconsin; Highways, W. H. Havens, New Jersey; Home Economics, Mrs. Cora E. Ketcham, Michigan; Insurance, William Bouck, Washington; Peace, Mrs. Pearl Stillwell, Wyoming; Postal Improvement, John Morris, Colorado; Pure Foods, S. B. Steere, Rhode Island; Taxation, T. C. Atkeson, West Virginia; Transportation, C. C. Raine, Missouri.

⚜

The Washington office of The National Grange is in receipt of advices from the Canadian Dominion government to the effect that that government has relinquished all control over the 1920 wheat crop. This information will set at rest a variety of statements which have been made as to the guaranteed price which Canadian wheat growers were to receive this season.

⚜

Daniel Willard, recognized spokesman for the railroad executives, in a statement before the Senate Committee on Reconstruction and Production, holding sessions in New York City on August 13, said that the railroads of the United States will soon be in position to provide for themselves and ask no help from outside agencies. In this statement, and in the progress which the railroads have made to work themselves out from under serious labor troubles and freight congestion, during the past three months, is found the full justification for the position to which the Grange has steadfastly adhered. This position was and is, that the railroads should be returned to their owners under conditions which offer the freest possible exercise of individual and competitive initiative and energy, such as marked the phenomenal development of the railroads in the past, subject only to such regulation as fully protects the public interest.

⚜

Secretary of Agriculture Meredith has acted promptly and forcefully in the matter of commission rates charged by Chicago Live Stock Commission men in handling cars containing cattle from more than one owner. After a hearing he characterized the rates as "unjust, unreasonable, discriminatory, and unfair." By his ruling he has established a schedule, fixing a basis of charges which are not prohibitive. The appeal to the secretary was under provisions of the Food Control Act still in effect, and was brought by the American Society of Equity.

⚜

The repeal of the "excess profits tax" advocated in high political circles just at this time, directs attention to taxation matters. It is understood in Washington that the House Ways and Means committee will take up a revision of tax and revenue laws as soon as Congress meets in December. While political leaders seem to agree that the excess profits tax should be repealed, it is interesting to note that wherever Grange action is taken and reported to the Washington office, the Granges are found to be almost unanimously opposed to such repeal. This is a subject which will receive careful attention at the coming session of The National Grange. It is urged that subordinate Granges make a careful study of the subject, analyzing the effect of the excess profits tax and the proposed substitutes, as applied to the business of the farm, and by resolutions and discussions formulate their opinions, and communicate them to the press, to State Masters, and to the Washington Representative. A. M. LOOMIS, Secretary.



Upstairs Downstairs and in

My LADY'S *Chamber*

STAIRCASES in which beauty is the first consideration, for the bedrooms built-in dressing tables that are a part of the house itself, mantels that carry out the architectural type of the house—these are items of Curtis Woodwork. Like the doors we build, and the china closets, the windows, the wall paneling, the cupboards, the bookcases, and all the interior woodwork which, built into a home, make it livable and lovable, they are all part of the Curtis plan to place beautiful homes within the reach of all who would build.

For over fifty years Curtis Woodwork has been known as good woodwork—honest craftsmanship. But we began to see our business as something more than a mill making a good product. We believed we could help America toward a happier type of architectural expression.

With the cooperation of Trowbridge and Ackerman, New York architects, we are able to offer home-builders portfolios of Better Built Homes, in four different architectural types—Colonial, English, Western, and Southern. Each portfolio contains illustrations of exteriors, interiors, and floor plans, with complete descriptions of 32 homes. These houses range from 3-room cottages to 8-room homes. Curtis Woodwork and built-in furniture for these homes was designed by the same architects that designed the houses, to insure harmony of expression.

The designs and sizes of Curtis Woodwork being standardized, the lowered cost of production has brought the price of beautiful woodwork lower than it has ever been before.

Curtis Woodwork is sold through lumber dealers. Curtis dealers have the complete catalog to show. They can obtain free for prospective builders our portfolios of "Better Built Homes." Specify whether you want Volume VI (32 homes of 3, 4, and 5 rooms); Volume VII (32 homes of 6, 7, and 8 rooms), or Volume VIII (32 houses suitable for farm use).

If there is no Curtis dealer in your town, send 25 cents with the coupon checked for the portfolio you want. (50 cents if in Canada.)



Pendroy, C-532
A charming 5-room house of Western expression, with the same plan as the Colonial house shown here.

CURTIS SERVICE BUREAU, 5058-6058 So. Second St., Clinton, Iowa

Manufacturing and Distributing Plants at

Oklahoma City, Okla. Detroit, Mich. Lincoln, Neb. Sioux City, Iowa
Wausau, Wis. Topeka, Kan. Chicago, Ill. Clinton, Iowa
Minneapolis, Minn. Dayton, Ohio

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The makers of CURTIS *Woodwork guarantee complete satisfaction to its users*

"We're not satisfied unless you are."



Bradley, C-530
This is the Colonial expression of the same plan as Pendroy, C-532.

1866 CURTIS WOODWORK

"The Permanent Furniture for Your Home"

CURTIS SERVICE BUREAU
5058-6058 So. Second Street, Clinton, Iowa

Enclosed find.... ....cents in stamps for which please send me
Portfolio of Better Built Homes, Vol. VI (3, 4, 5 room houses) 25c;
Portfolio of Better Built Homes, Vol. VII (6, 7, 8 room houses) 25c;
Portfolio of Better Built Homes, Vol. VIII (houses for farm use) 25c.
(Please check the one you wish)

Name.....

Street or R. F. D.....

Town..... State.....

Seed Importation Act

Previous to the enactment of the Seed Importation Act, the United States furnished a ready market for low grade forage plant seeds of such poor quality on account of the presence of weed seeds, dirt, chaff, and dead seeds that they were of no agricultural value.

While the present Act prevents this class of seeds being imported and sold in this country, no good seed is kept out, as the importer may reclean in bond seeds which do not comply with the Act when imported, the refuse and screenings being disposed of under direction of the Department of Agriculture.

While the greatest value of this legislation is that few lots of low grade seed are offered for entry, its practical importance has been particularly evident during the past season of high prices.

In the ten months prior to April 30, 1920, sixty-four and one-half million pounds of forage plant seeds, subject to the Seed Importation Act, were permitted entry into the United States. During the same period, four and one-half million pounds were prohibited entry, being either adulterated or unfit for seeding purposes within the meaning of the Seed Importation Act. Of these four and one-half million pounds prohibited entry, three million pounds were recleaned and later permitted entry, one-half million pounds destroyed or exported, and one million pounds are still undisposed of.—By E. B. BROWN, U. S. Department of Agriculture.

Iowa Holstein Calf Clubs

During the past year three new calf clubs have been organized in Iowa with pure-bred Holstein heifers. Early in June the Kossuth County Holstein Breeders' Association organized the first club. Twenty-four pure-bred heifers were distributed. The calves will be shown at the Kossuth County Fair this fall.

The second new club of the year was formed in Fayette County. A second club in this county has been organized with about sixteen heifers. These heifers, in addition to those in the first Fayette County Club, will be exhibited at the county fair. In Dyersville and Dubuque County thirteen Holstein heifers have been distributed in the club.

Iowa. J. P. EVES.

ESSEX MOTORS DETROIT USA

See How Essex Proved Economy

A Nation-Wide Demonstration No Motorist Can Overlook

Connecticut —With 12 cars over Mohawk Trail and Hoosick Mountains and 12 over a coast route—many owner driven—216 miles average distance per car, 18.7 miles per gallon were shown. One car with 35,000 miles service averaged 21.2 miles per gallon.

Nebraska—A Hastings, Neb., woman drove her Essex from Lincoln to Hastings, 109 miles, averaging 28 miles per gallon.

California—Four women drove from Los Angeles to San Francisco and return averaging 22.3 miles per gallon. A San Francisco Essex made the round trip, 846 miles, in 33 hours with 23 miles per gallon. Hood and radiator sealed.

San Antonio, Tex.—In a 166 mile run to Austin and return, Essex averaged 25.5 miles per gallon.

Sacramento, Calif. —Defeated 19 entries and took Tallac Cup for highest gasoline, oil and water mileage in Sacramento Dealers reliability run.

Baltimore, Md.—Essex sedan, on original tires with 15,000 miles service, traveled 221 miles over Maryland hills, averaging 23 miles per gallon.

Florida—On a measured gallon an Essex covered 23 miles and without change or adjustment of any kind showed speed of 68 miles per hour.

49 Cars Average 18.9 Miles Per Gallon—Records cover every kind of test at a speed of from 5 to 72 miles per hour.

Los Angeles, Calif.—To San Francisco over 828 mile route of steep grades and frequently far from water supplies Essex which had previously gone 28,000 miles and under U. S. Marine observation made trip sealed in high gear with sealed hood and sealed radiator. Average 22.8 miles per. gal. gasoline.

Also Broke World's Dirt Track Record—1261 Miles

Made at Dallas, Texas, by a Car That Had Already Gone 12,000 Miles

From the mere standpoint of gasoline mileage, Essex in its nation-wide tests showed a performance worthy of cars which possess that advantage as their principal quality.

Records were kept on 49 cars. They averaged 18.9 miles to the gallon.

But bear in mind this was not done by taking advantage of every device possible to increase gasoline mileage. Under conditions of that sort, Essex showed as high as 37 miles to the gallon. However men don't drive that way. How obviously unfair it would be, therefore, to offer such carefully economized fuel mileage tests as typical of all Essex cars.

In the Essex tests, conditions and performances adverse to gasoline economy obtained.

These cars were being driven at speeds from 5 to 72 miles per hour. They were reeling off thousands of miles over all sorts of roads in inter-city runs that set new time marks. They were making new hill-climb, acceleration and endurance records.

Many were owner cars—owner driven. Women piloted some.

Some of the Essex cars used had already traveled upwards of 30,000 to 35,000 miles.

So you must not view Essex economy merely by its gasoline consumption. You must also consider its endurance and reliability.

If there were nothing more striking about the Essex than its gasoline mileage, it would be a worthy subject of our advertising. But important and impressive as that fact is, does not its other qualities take first rank in your consideration?

Essex Motors, Detroit, U. S. A.

(216)

ESSEX MOTOR CARS WATCH the ESSEX ESSEX MOTOR CARS

Is a Farm Water System a Good Investment?

(Continued from page 245)

as are necessary may be operated from one air chamber and with one air compressor. For instance, there may be a pump in the well or spring, another one in a stream or lake, and a third one in the cistern. There is also on the market a shallow water pneumatic pump which will work in as little as eight inches of water. This is an important factor when the supply is taken from a shallow spring or creek. Very little water is stored and consequently there is very little water to get warm or stale. The pump starts automatically when a faucet is opened and stops when the faucet is closed. The makers of these pumps claim that the operating cost is considerably lower than in other types and that there are practically no moving parts to wear out.

The Air Lift

The air lift is particularly adapted to deep wells where a comparatively large and constant supply of water is required. These conditions are not found on the majority of farms and consequently comparatively few air lifts are seen. With this apparatus the distance from the lowest water level to the bottom of the well should be at least as great as the vertical distance from the water level to the point of delivery. In operation, two pipes are lowered into a drilled well, the smaller one being the air pipe and the larger one the water pipe. The air pipe enters the water pipe as near the bottom as may be. The water pipe is open at its lower end so that the water level is the same inside as out. When air is admitted to the bottom of the water pipe it rises in the shape of bubbles, each bubble carrying a certain amount of water up with it. The air lift may be used in practically any kind of water and the presence of considerable sand or other foreign material will not affect its operation.

Water Suitable for Drinking Purposes

Pure water is a chemical compound of two gases, hydrogen and oxygen, in the proportions of two parts of hydrogen to one part of oxygen. Water is never found pure in nature, that is, there is always at least a trace of some element or elements in it. These foreign elements, compounds, or whatever they may be, may make the water more palatable than when it is absolutely pure or they may make it unfit for human consumption. For instance, distilled water, which is as nearly pure as we can make it, tastes "flat" just as food tastes "flat" when the seasoning is left out. If the water contains such things as calcium (lime), iron, salt, etc., in solution it is said to be "hard", "mineral", "salty", etc., and may or may not be fit to drink. Water may have a very offensive odor or taste or both and still be fit to drink or it may be perfectly odorless, tasteles, colorless, etc., and be very dangerous to health if taken internally.

Water falls from the clouds where it has been held in the form of vapor. It is to all intents and purposes distilled water and consequently pure. As it falls to the earth it gathers some impurities from the smoke and dust which are nearly always present in the air. The peculiar "flat" taste previously mentioned may be noted in rain water. If the water falls to the ground it is apt to come in contact with decayed organic matter and become polluted, as we call it. If it sinks into porous soil the chances are that the majority of the harmful ingredients such as germs, bacteria, etc., will be rubbed off by contact with the soil, that is, the water is filtered. If the earth formation happens to be mostly of rock such as limestone, for instance, there may be and generally are cracks or fissures which will allow the water to flow for long distances under ground without being filtered. The result is that water at any one place may have entered the earth's crust at some point miles away and that point may be near a slaughter house, barnyard, swamp, or even a place where human waste material has been dumped.

Since we cannot trace the course of water underground we can never be absolutely sure that any particular water is wholesome but we do have every reason to believe that unless we take certain precautions the water is very apt to be unwholesome. Some of these precautions are as follows:

Do not drink water from lakes or streams unless you know beyond doubt that it is fit to drink.

Do not drink water from shallow wells if there is any other available. Such water is very apt to be surface water and as such it is very apt to be contaminated.

If you are using water from a dug well see that the well has a good tight concrete cover, one that will keep out filth and vermin of all kinds.

Don't think that water is good because it is cold, clear, and sparkling for it may be loaded with typhoid or other disease germs.

Water may be slightly muddy, alkaline, or mineral and still be fit to drink.

Don't locate your well in such a way that rain water will drain toward it from the barnyard or outbuildings.

Remember that, generally speaking, the best water is that which has traveled the longest distance through the filtering material. Such water is most often found in the sand or gravel which lies below a stratum of rock or clay.

If there is any doubt about the purity of your drinking water have an analysis made of it. The state board of health is prepared to make such an analysis at a purely nominal cost. Until such doubt is removed all drinking water should be boiled.

To emphasize the importance of a tight well or spring cover let it be stated here that practically all of the cases of well water pollution that have been investigated have been found to be due to foreign matter getting into the well or spring from the top.

Do not believe the milking machine agent who says his machine only needs to be cleaned twice a week. Every milking machine to be sanitary must be washed each day. This does not take long, and there is no more reason for not washing your milking machine than there is your milk pails or strainer.—F. C. M. P. A. Bulletin.



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"The use of a truck on Goodyear Cord Tires has increased my land value by bringing my farm closer to town. Power machines, assisted by this pneumatic-tired truck, offset my labor shortage. The Goodyear Cords on my truck have traveled about 10,000 miles to date. Solids can't go into the soft fields; pneumatics go through easily —haul 450 crates to 40 by team. Hard to sell a second-hand truck on solids here."—Glenmore Green, Farmer, Fort Valley, Georgia

EXTENSIVE rural experience, like that related above, has confirmed the tendency of farm land prices to increase when Goodyear Cord Tires are used to cover long or difficult hauling routes.

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These virtues frequently enable short cuts to market, bring more markets within easy-hauling range and pave the way for the safe, punctual transit of perishables and shrinkables.

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Detailed information, concerning the manifold advantages of pneumatic-tired trucks and general farm motorization, will be sent on request by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR
CORD TIRES

Care and Use of Milking Machines

E. M. L. BLANCHER, NEW YORK

MANY dairymen are finding it advisable or necessary to install milking machines, as farm labor is so difficult to secure. There are now several satisfactory types of machines to be had. The kind chosen will depend somewhat on the individual needs of the dairyman.

The New York State Experiment Station at Geneva has made an exhaustive test of various machines and has published a bulletin on the details of the care and use of various machines. The experts doing this work have worked with many dairymen who use the machines and who are working for low count bacteria tests in their milk.

They find that one man will trip on one detail of care of the machine, while another will stumble on some other detail. When users find the particular points they must pay attention to with their own machine it is possible to get as big bonuses for low count bacteria tests as hand milking will produce, or very nearly.

The farmer who expects to get good results from the use of the machines must arrange to have a plentiful and handy supply of water, both cold and hot. This may, of course, be brought from the house. But it will be much more businesslike and satisfactory if a sterilizing outfit with boiler is arranged in a milk house near the barn. This will be practically necessary if low count bacteria tests are desired. Some purchasers of such milk place a sterilizing plant on the farm free if used at least three to six months. But for the smaller dairy, where the owner has to furnish all equipment, there are several simple heaters or boilers, which the state experiment station will advise as to home construction and operation. One can be arranged at little expense to the owner.

It is essential that each unit of any type of machine be flushed out thoroughly at once after its use on the last cow and before the engine is shut down, drawing at least a pail of cold water through each unit and its tubes. This applies to each and every milking. Some careful users find it advisable to also use a pailful of comfortably hot water after the cold water each milking.

The tubes and teat cups are then immersed in a sterilizing solution in a big stone jar until time to use again, when each unit is to be flushed out again with cold water before using.

But every third day, or oftener if it seems necessary, a thorough washing with hot, soapy water will be necessary. For this operation three big pails of water will be necessary to be renewed a few times if there are a number of units. The first should be cold, the second as hot as the hand can bear, with a liberal amount of a good soapy powder, and the third a little hotter, but not boiling, nor so hot as to injure the rubber.

This operation is necessary because even the best types of machines have joints and the inner surfaces have pores which are bound to fill with grease which hot, soapy water, frequently applied, will remove. An important principle in cleaning all milk utensils is that the first cleaning be done with cold water to remove all loose milk which heat would coagulate and fix firmly to the surfaces. Bacteria thrive in grease, in moist places, and warmth greatly assists in their growth. Therefore, cleanliness and dryness are desirable.

Before immersing the teat cups and tubes in the solution between milkings and before the washing operation, all outside loose material, like straw, manure, or other dirt should be removed. This material will spoil the strength of most of the sterilizing solutions used for soaking the tubes between milkings, and surely we want none in wash water to be drawn into tubes.

Put the teat cups in the pail of cold water first and let the machine draw this through into the pail; then with the hot, soapy water, drawing that all through and then in the hot, clear water. Empty the metal receiving pail each time, rinsing this around with a brush, or this may be scalded by itself later. It should always be turned bottom side up on a rack, not on a plain surface which would exclude the air, as it must drain and dry. The head or pail top is to be cleansed with a brush, scalded, and at once tipped over a rack to drain and dry, as thorough drying kills bacteria. The same treatment should be applied to all cans which come from the station.

Clean all the units in like manner. Then put the rubber parts into a sterilizing solution where bacteria will not develop. If you have clean running water not above 58 degrees Fahrenheit the tubes may be attached to taps and the cold water allowed to run through them instead of immersing them in a solution. Many dairymen use this method through cold weather and then adopt the solution in May, as the weather and the water warm up. Keep the tubes on the tap until the next milking, letting the waste water run into a receiver for use in watering stock, etc. This is really the simplest way, as no flushing is necessary before using.

When running the second and third pails of hot water through the machine souse the tubes and units up and down so as to allow both air and water to surge through the tubes. The contractions and expansions caused by this will aid in releasing the milk, grease, and bacteria from the small pores in the rubber.

If a solution is used a big stone crock, at least a 25-gallon size, is necessary. A smaller container will double the tubes up too sharply and all the air will not be forced out and replaced by solution, thus encouraging bacterial growth. This one item, if disregarded, can cause a lot of trouble.

If the pulsater type is used it is well to remove the stop cocks so that the milk passages in the pail top can dry, being careful not to get water on the piston springs, or in the air passages. In the pipe line type of machine, the suction trap should be cleaned frequently, also the stanchion hose occasionally, say once in from a week to three weeks. Good milk can perhaps be produced for a time if this is omitted, but no bonuses. And in time serious trouble will result, as a green slime accumulates in the trap.

The teat cups and tubes should be cleaned thoroughly with a brush and hot, soapy water once a week. It is better when the joints are separated for this cleaning to polish and dry the metal parts. These joints should be cleaned often enough so that there is no noticeable deposits in them. After this cleaning, all air lines and passages must be dried before putting together, in the inflation type of machine. In other types rubber parts may be soaked for a time in a strong sterilizing solution, before assembling.

If care is used and washings are thorough and frequent a simple salt solution is often satisfactory, strong enough so that salt is always to be seen in crystals in the bottom of the jar. A strong hypochlorite solution may be used, using only good choride of lime to make it. The package must not be oozing moisture, inside or out, nor should it be lumpy or caked, as such old goods are worthless. In opening chloride of lime always tilt the can away from the face and body to prevent injury in case there is an explosion or burst of gas.

The stock solution of hypochlorite is made of a 12-oz. can of good chloride of lime dissolved in a gallon crock of water. First rub the lime to a paste with a little water and gradually add more and stir well. Then a pint of this clear solution (don't use the sediment in the bottom) to 25 gallons of the strong brine solution mentioned, added every week or every two weeks, in cool weather, twice a week in warm weather, will greatly increase its efficiency.

This solution can be used as long as it keeps fresh and sweet, a few days or many weeks, depending on the care of the user in keeping things clean.

There are reasons for all the procedures mentioned, as the experiment station has proven, and it is better to be careful and thorough than to lose many dollars in rejected milk.



FOUR OF THE FIVE SIRES PURCHASED FOR USE IN THE JERSEY BULL ASSOCIATION OF DEARBORN COUNTY, INDIANA

All are grandsons of the gold medal sire, Spermfield Owl, and were secured from Moose Hill Farm, Massachusetts. Spermfield Owl's Temisia, whose record is 15,000 lbs. milk, 875 lbs. fat, is grandam of two and great grandam of two. The average production of the three dams whose records are completed is over 500 lbs. fat.

These four bulls, with a fifth similarly bred, will be used on a total of 257 cows owned among 60 members of the association. By interchanging sires each two years it is hoped that uniform high producing Jersey herds may be built up in the community.

Tying Corn Shocks

HOARD'S DAIRYMAN:—The handling of corn shocks seems like a commonplace thing to talk about but the number of them that one sees going down after a few weeks is pretty big on our farms. I am unable to make a satisfactory shock myself always but I do not have much of this work to do. Today I worked with a farmer who has from 40 to 60 acres to cut and shock each year and I am going to tell you just how he goes at the job.

This is for fodder cut with a corn binder and tied in bundles of course. He takes three bundles and stands them in the shape of a tripod. Two handfuls of stalk tops from one bundle in the tripod are put around the top of the other two and tied. That makes the horse or saddle for the rest of the shock. Then a layer of bundles is put up fairly straight and solid around this tripod. Then this is tied with a stalk. Then the shock is finished and tied with binder twine for the winter keeping.

When tying, this farmer takes a half inch rope about 20 feet long and with two men each goes on opposite sides of a shock, crosses the rope and then pulls up tight. This is where many of us have quit but then the two cross the rope again and go back to the first side and pull the top tighter than ever. It is easy to do with a double hold. Then the shock is tied by one while the other holds the rope. A ball of twine is sometimes tied to the shocker's belt with a string and then there is no looking for the twine ball.

Tie close to the top and tie tight. Then if the shocks are to stand long go around the field a few weeks later and cut the strings and tie again. There is slack to use after this time and no string is carried at all.

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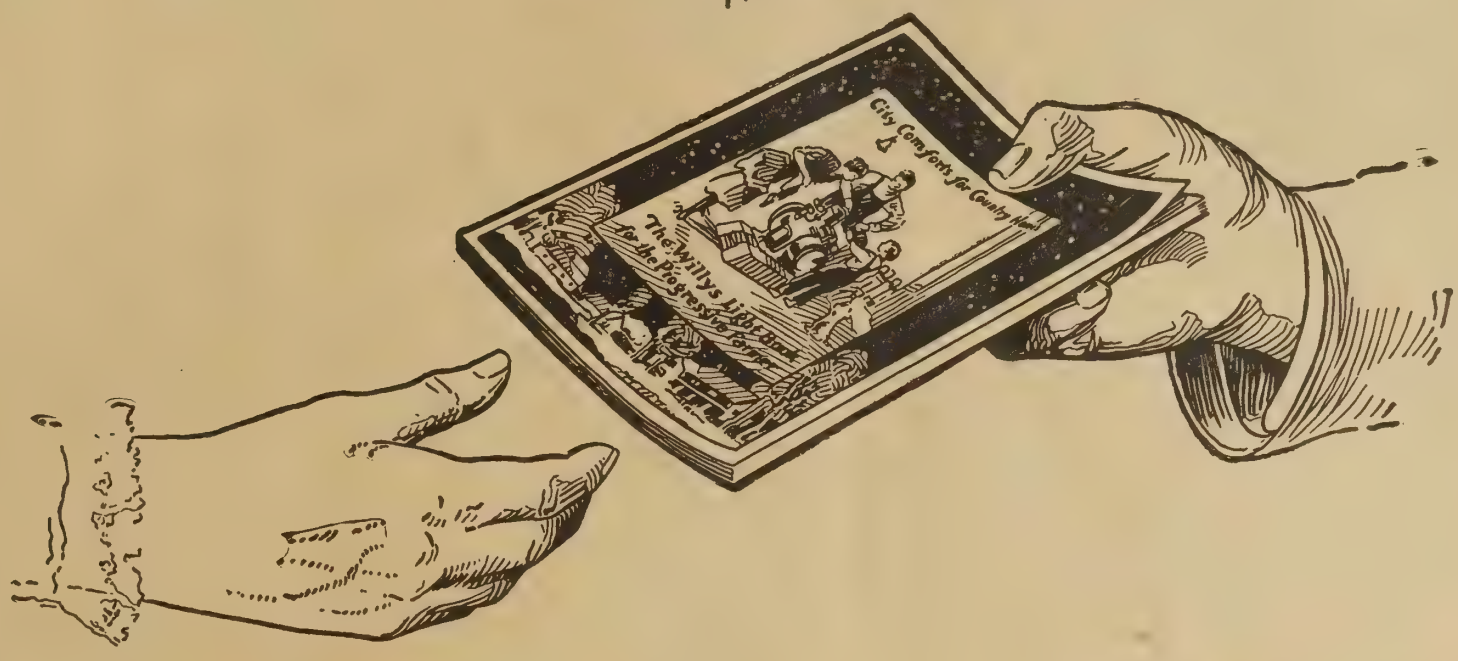
If others can do such wonderful things, why can't I?

He can who thinks he can.

—ORISON SWETT MARDEN.

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¶ It has no sharp edges or square corners to chafe or injure the cow; no cracks or recesses to become clogged with soured feed; made of smooth tubular steel, with all joints closely fitted.

¶ You'll find it a pleasure to work in a barn equipped with Porter Stanchions. The ease and speed with which the cows can be tied and released will soon save the cost of the stanchions. You can snap them shut as rapidly as you can walk down the stall row, and open them nearly as fast.

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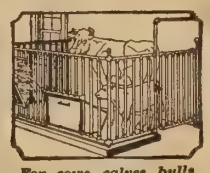
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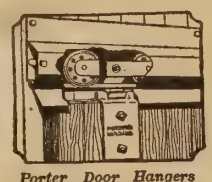
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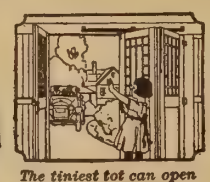
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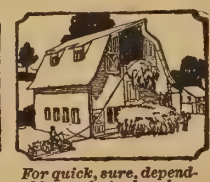
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Bolting only 3 parts together completes a **permanent** stall of smooth, strong steel tubing. No dangerous corners. No cumbersome castings. Easily kept clean. CLAY 2-Way Stanchion is instantly closed or opened **both ways** with **one hand.** Adjustable to any size cow or heifer. No sure-stops needed. Cow-proof lock. Users say CLAY Equipment quickly pays for itself. **Reasonably Priced.** Fully guaranteed. **Sold on 30 days' trial.**

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Separator Loses $2.20 Per Day

C. P. Chrysler, tester in the Leon Valley testing association in Wisconsin gives the following clear illustration of the heavy losses which may be sustained through inefficient separating.

Last spring one dairyman who rents his farm said he was disappointed at the showing made by his herd at the local creamery where the butterfat average was 170 lbs. per cow per year. He was satisfied there was something wrong and suggested that the man that tests cows stop there on his next trip. This I did as soon as I was assured of a year's membership.

After milking the first evening a visit to the milk room revealed an improperly placed pulley and a speed test showed the separator making 36 revolutions per minute where the requirement was 48.

Believing that the skimmilk bottle would not be equal to its task the following morning the charge was drawn in a regular 10 per cent bottle which after the last whirl the dividers struck off at .9 of one per cent, a loss of $2.20 per day on a herd of 26 cows. The renter said the separator was run with the same pulleys the previous year and no doubt the total loss of butterfat on this farm has amounted to over $400 per annum.

A total of 15 leaky separators have been found during the ten months since October 1. The tests of these machines ranged from .06 to 2.2 per cent. Of course in a case like the latter instance, it was very plain that this particular machine was doing inefficient service from the presence of cream on the skimmilk. But because the owner could not locate the trouble he continued using it for several days until the tester came.

In another instance some foreign matter lodged in the cream screw partly obstructing the flow of cream. The owner remarked that he was not getting as much cream as usual but continued separating. A sample of the skimmilk this time showed that the owner had paid $2.65 in one day for neglecting to clean the separator that morning.

The most common causes of inefficient separators are:

1. Worn or cracked discs. 2. Wobbling bowls. 3. Low speed. 4. Parts unsoldered. 5. Dirty machines.

Southwest Jersey Cattle Breeders' Association Appoints Fieldman

Indications of increased activity on the part of the Southwest Jersey Cattle Breeders' Association is shown through the appointment of Mr. F. W. Atkeson as fieldman for that association. The new fieldman, who also assumes the duties of Secretary and Treasurer of the Association, is a real live-wire booster, whose enthusiasm for the Jersey knows no bounds.

Mr. Atkeson gained considerable of his Jersey experience in working with several of Missouri's leading herds. He also spent some of his time with herds in Wisconsin. He studied at the University of Missouri and graduated from there in 1918. Following his graduation he accepted a position as instructor in dairy husbandry at the Kansas State Agricultural College, where he had charge of all official testing in the state.

It was while connected with the Kansas Agricultural College that he was elected as Secretary of the Kansas Jersey Cattle Club, and it was largely through his efforts that that club has been so successful during the past year. The Kansas Club was one of the first of the local Jersey associations to publish a monthly bulletin. Mr. Atkeson was the editor of this publication, and he now intends issuing a similar bulletin through his new position as fieldman.

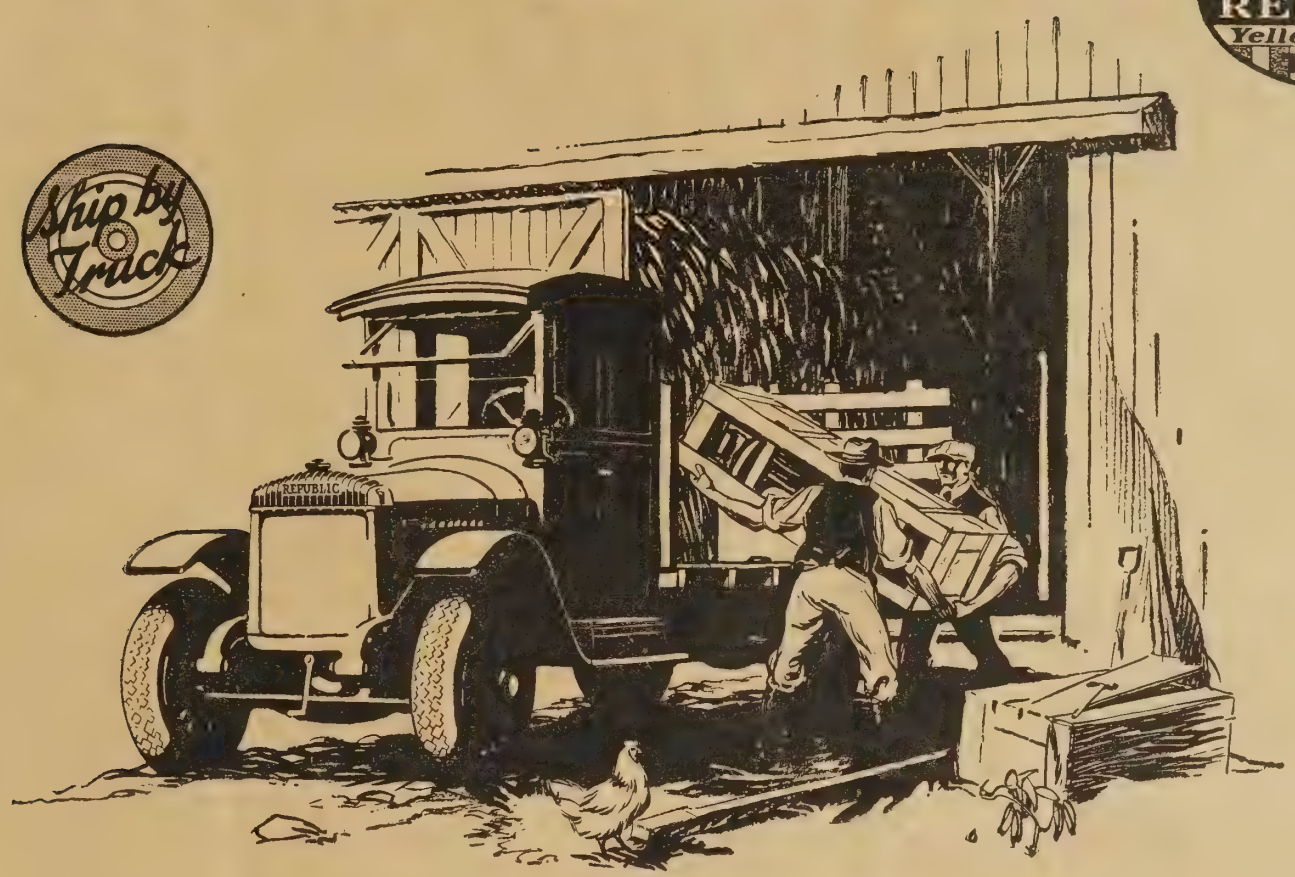
Mr. Atkeson is now located at Kansas City, Missouri, where he maintains an office at Twenty-third and Washington streets.—AMERICAN JERSEY CATTLE CLUB.



F. W. ATKESON

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When it gets to be this time of year most of us kind of like to put off things until next Spring. If you do that with your painting, it's going to cost you more to paint, just as sure as corn grows on a cob. Cost more, because you will have to use *more* paint; and because paint itself may then be costing more.

If you can't get the time this Fall to do your painting, then be wise enough to buy the paint at once, that you will need for next Spring.

And while you are thinking of paint, drop us a postal for a valuable piece of advice called—"Figure Your Paint Costs with a Brush—Not a Pencil." It will show you how to save money on both your paint and your painting.

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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ind.	Porter County	A. W. Snyder	July	392	36	76	Dan Haxton
"	Porter County	A. W. Snyder	June	395	56	89	Dan Haxton
Ky.	Nelson County	L. E. Cutler	July	235	2	43	J. A. Rodman
Minn.	Northfield	Harold Marshall	"		20	63	H. Bue
"	Faribault	B. F. Fullerton	"	270	17	67	A. Meillier
Ohio	Barnesville	B. E. Patten	"	221	29	70	McCartney & Wilson
Wis.	Empire	V. M. Anderson	"	503	66	71	S. MacNamara
"	West Bend	Martin Lange	"	380	17	56	F. L. Sailer
"	Racine & Kenosha	T. N. Boyer	"	417	21	64	H. Nelson
Pa.	West Branch	F. J. Holt	"			54	H. L. Shuman
"	Wyalusing	Glen Ruland	"	389	13	61	J. Howard
"	Rome	B. F. Beebe	"	372	14	53	R. J. Taylor
"	Indiana County	Norman Barkley	"		18	46	West. State Hos.
Kans.	Bourbon County	T. A. Trull	"	404	4	61	Frask & Richards
N. H.	Monadnock	M. W. Smalley	"	119	26	86	W. S. Hadley
Wis.	Whitewater	A. F. Probst	"	481	22	64	Dee Glidden
Colo.	Douglas County	H. S. Sherman	"	468	23	69	J. McInroy
Iowa	Tri-County	Ralph Houser	"	276	16	53	F. Barnes
Wis.	Wood Co. No. 2	Clarel Stowe	"	565	25	62	H. Stecker
Colo.	Arkansas Valley	R. Reed	"	298	21	76	A. B. S. Co.
Ore.	Coquille—Myrtle Pt.	R. S. Trigg	June	838		93	Adam Guthardt
"	Nestucca	Helen Miller	"	601	214	73	Merle Holman
"	Smith—Umpqua	Eva Blackwell	"	392	200	91	Noah Black
"	Rogue River	J. B. Bichan	"	260	39	67	I. A. Merriman
"	Coos Bay	Walter Reimann	"	538	180	76	Mr. Coleman
"	Bandon	Geo. Rheim	"	842	309	85	C. D. Jarman
"	Coquille—Myrtle Pt. No. 2	E. Furnish	"	833	352	84	E. M. Beckham

Association Notes

Porter County, Indiana:—A few of the farmers are feeding silage and grain and their herds have shown an increase in production. Preparations for fairs are under way. Feed prices in July were: Ground corn, $56 per ton; bran, $60; corn and cob meal, $50; ground oats, $42; cottonseed meal, $78; oil meal, $82; alfalfa hay, $32; clover hay, $32; corn silage, $8; Unicorn, $68; gluten, $72. Milk sold for $3.20 per cwt. Sour cream sold for 53c and sweet cream for 70c.

Nelson County, Kentucky:—July was the first month for this association and consequently not much could be done during that time. The work showed, however, that the dairymen in this county are very anxious to make good progress. Milk production has been somewhat curtailed of late, owing to the dried pastures and the high prices of feeds. Bran, hominy meal, and cottonseed meal have been selling for $74 to $80 per ton.

Scandinavia, Wisconsin:—S. A. Simonson owns the high herd for the year ending July 31, 1920. This herd averaged 8,947 lbs. milk containing 334.6 lbs. butterfat. The profit above feed cost was $127.46. K. B. Knutson & Son own the second highest herd with an average production of 6,271 lbs. milk containing 321.9 lbs. fat and a profit above feed cost of $134.09. The next three herds were those of L. O. Berg, O. L. Bestul, and O. A. Twetan, producing an average of 314.4 lbs., 307.9 lbs., and 301.6 lbs. fat respectively. The high cow for the year was a pure-bred Guernsey owned by Carl T. Knutson, which produced 456.9 lbs. butterfat in 7,660 lbs. milk.

Empire, Wisconsin:—Present price of butterfat prohibits economical feeding of grain. Silage and alfalfa hay are being used, however, with profit. Several cows were sold to the butcher and more pure-breds purchased. There is only one grade bull in the association and we are "after his hide". The condensery paid 75c per pound for fat, the creamery paid 65c, and the cheese factory 58c. Milk retails for 12 to 17c per quart, butter for 60c per pound, and cheese for 22c per pound. Bran is rated at $60 per ton; middlings, $65; oil meal, $90; corn meal, $80.

West Bend, Wisconsin:—One barn was equipped with new iron stanchions in July. Several members have opened their silos again on account of shortage of pasture. One member ensiled green alfalfa and dry cornstalks early in the spring and is finding it of profit to him now. July market milk sold for $2.80 per cwt. The creamery paid 68c per pound for fat, and the cheese factory paid 62c. Milk retails for 12c per quart and cheese for 24c per pound. Pasture is rated at $3.50; clover hay, $35 per ton; alfalfa, $40; silage, $7.

Racine and Kenosha, Wisconsin:—Of the 29 members in the association, 21 are using pure-bred sires, 18 are using milking machines, and there are 32 silos. Owing to flies and short pasture the cows are not producing well at present, but members are confident of an increase in production very soon. Milk testing 3.5% sells for $3.30 per cwt. and 4c per point above. Feed prices are: Bran, $58 per ton; oil meal, $68; Unicorn, $82; ground oats, $66; mixed clover, $28; alfalfa, $32.

West Branch, Pennsylvania:—The members of this association are becoming interested in scientific feeding and are planning to buy several carloads of high protein feeds so as to make up their own balanced rations and feed according to production. Better quarters are also being considered. One of the members recently fitted out his entire barn with modern stable equipment. The Accredited Herd plan for the eradication of tuberculosis is also being discussed.

Rome, Pennsylvania:—July market milk testing 3% sold for $2.95 per cwt. The creamery paid 56½c per pound for fat. Milk retails for 10c per quart and butter for 60c per pound. Hay is bought for $20 per ton; soiling crop and silage, $6; corn stover, $8; pasture, $3 per cow per month; corn meal, $4.10 per cwt.; gluten, $3.75; cottonseed meal, $4.15; linseed meal, $3.95; wheat bran, $3.25.

Bourbon County, Kansas:—In the 27 herds tested in this association, 22 use registered bulls. Five members are using high grade Holstein bulls, but are replacing with pure-breds. In July, market milk testing 3.5% to 4% sold for $2.80 per cwt. The condensery paid 80c per pound for fat and the creamery paid 55c per pound. Milk retails for 15c per quart, butter for 50c per pound, and cheese for 40c per pound. Feed prices are: Alfalfa, $30 per ton; bran, $2.50 per cwt.; corn chop, $3.50; oil meal, $5; cottonseed meal, $4; oats, $2.

Monadnock, New Hampshire:—During July 28 cows from five herds were on semi-official tests. Three profitable

and three unprofitable cows were sold. The 103 cows tested averaged 652 lbs. milk containing 31.8 lbs. fat, a product worth $34.10 from a total feed cost of $6.06, leaving a profit of $28.04 per head above feed cost for the month. It cost on an average of 93c per cwt. to produce milk, 19c per pound to make butterfat, with $5.63 return for each dollar expended for feed. Feed prices are: Bran, $66 per ton; gluten feed, $80; cottonseed meal, $78; oil meal, $77; ground oats, $82; corn meal, $73; brown middlings, $72; Stock Feed, $78; Larro feed, $84; hay, $25.

Whitewater, Wisconsin:—Milk testing 3.5% sold for $3.20 per cwt. in July, 4c being paid for each point above. The condensery paid 91c per pound for fat and the creamery paid 80c. Milk retails for 14c per quart, butter for 65c per pound, and cheese for 30c per pound. Hay sold at $36 per ton; bran, $45; oil meal, $66; corn and cob meal, $55; gluten, $67.

Arkansas Valley, Colorado:—A milking machine has been installed at the Lingle and Maxwell Ranch at McClave. There are a number of silos being built. One member sold his herd at $132 per head. Another member has purchased ten head of good milk stock. There are a number of men who are desirous of putting herds on their farms if they can get good men to take charge. A dairy breeders' organization was formed July 26th. The creamery paid $3.05 per cwt. for milk. Alfalfa is rated at $15 per ton; silage, $8; bran, $2.10 per cwt.; cottonseed meal, $3.25; shorts, $2.60; oats, $2.15; barley, $1.85; maize, $1.95.

Douglas County, Colorado:—Six unprofitable cows were sold in July. Eighteen pure-bred Shorthorns were purchased and six Shorthorn cows were sold. The creamery paid 75c to 85c per pound for fat and milk retailed for 10c to 13c per quart. Feeds are rated as follows: Alfalfa, $18 to $25 per ton; bran, $2.75 to $3.30 per cwt.; cottonseed meal, $4.85 to $6; linseed meal, $4.85 to $6; oats, $4 to $4.40; barley, $4.20 to $4.65; chop, $4.

Tri-County, Iowa:—With the exception of a few herds that were fed silage during hot weather, the cows of this association averaged a 50% decrease in milk production. The best herd average was that of the herd of Wm. Edwards, 23.4 lbs. milk daily, with an average test of 4.34% fat per head. These cows received 20 lbs. silage, 3 lbs. Schumacher, and 1 lb. oil meal daily besides pasturage.

Wood County No. 2, Wisconsin:—The production of milk has shown quite a decided decrease, but the average test is somewhat higher than last month. Several unprofitable cows have been disposed of and some good cows and heifers have changed hands within the association, as well as a few pure-bred sires. Very desirable prices have been obtained on the principal concentrates, and it is the plan of this association to hold a picnic in connection with the McMillan—Marshfield Association for the purpose of ordering feed, as well as having an appropriate program.

Coquille—Myrtle Point, Oregon:—Five unprofitable cows were discarded. The Jersey Breeders' Association held an auction sale. Dairymen of this section received 52c for sweet cream. Twenty-five cows produced over 55 lbs. of butterfat during June.

Nestucca, Oregon:—Ten unprofitable cows were sold for beef. Four cows were purchased. Dairymen of this section received 67 to 70c per pound from the cheese factory for butterfat. Local feed prices are: millrun, $65 per ton; barley, $100; oil meal, $105. Twenty-nine cows produced over 55 lbs. of butterfat during June.

Smith—Umpqua, Oregon:—Twenty-two cows produced over 60 lbs. of fat during June, and 24 heifers in 14 different herds produced over 35 lbs. fat in the same month. During May the dairymen received 57c per pound for fat from the creamery.

Rogue River, Oregon:—Local feed prices are: Oats, $74.50 per ton; millrun, $55; barley, $77.60; cocoanut meal, $64. Dairymen received $3.60 per cwt. for milk and 56 to 58c for sweet cream and 51 to 53c for sour cream during June.

Coos Bay, Oregon:—The cheese factory paid 64c per pound for fat, and city trade paid 70c per pound for fat and 15c each per cwt. milk. Milk sold in lumber camp for 32c per gallon. Sweet cream sold for 54c. Feed prices are: Pasture, $2 for tillable land; untillable and hill, $1; green feed, 1½c per pound. Twenty-five cows produced over 55 lbs. fat during June.

Brandon, Oregon:—Nineteen cows were sold for beef during June. Two pure-bred Guernsey heifers have arrived from the Isle of Guernsey. Two fine pure-bred Jerseys have also been purchased. There are now 38 farmers being benefited by this association. Dairymen of this section received $3 per cwt. for milk, the required test being 4% and 5c being paid for each point over. The condensery paid $3 per cwt. for butterfat in milk. The creamery paid 51 to 54c per pound for fat. Nineteen cows produced over 60 lbs. fat.

Coquille—Myrtle Point No. 2, Oregon:—Several unprofitable cows were sold in June. Two separators were found defective in skimming. A number of registered Jerseys, heifers and cows, were bought by the members of this association during the month. Twenty-eight cows produced over 60 lbs. butterfat.

Sauk County Jersey Meeting

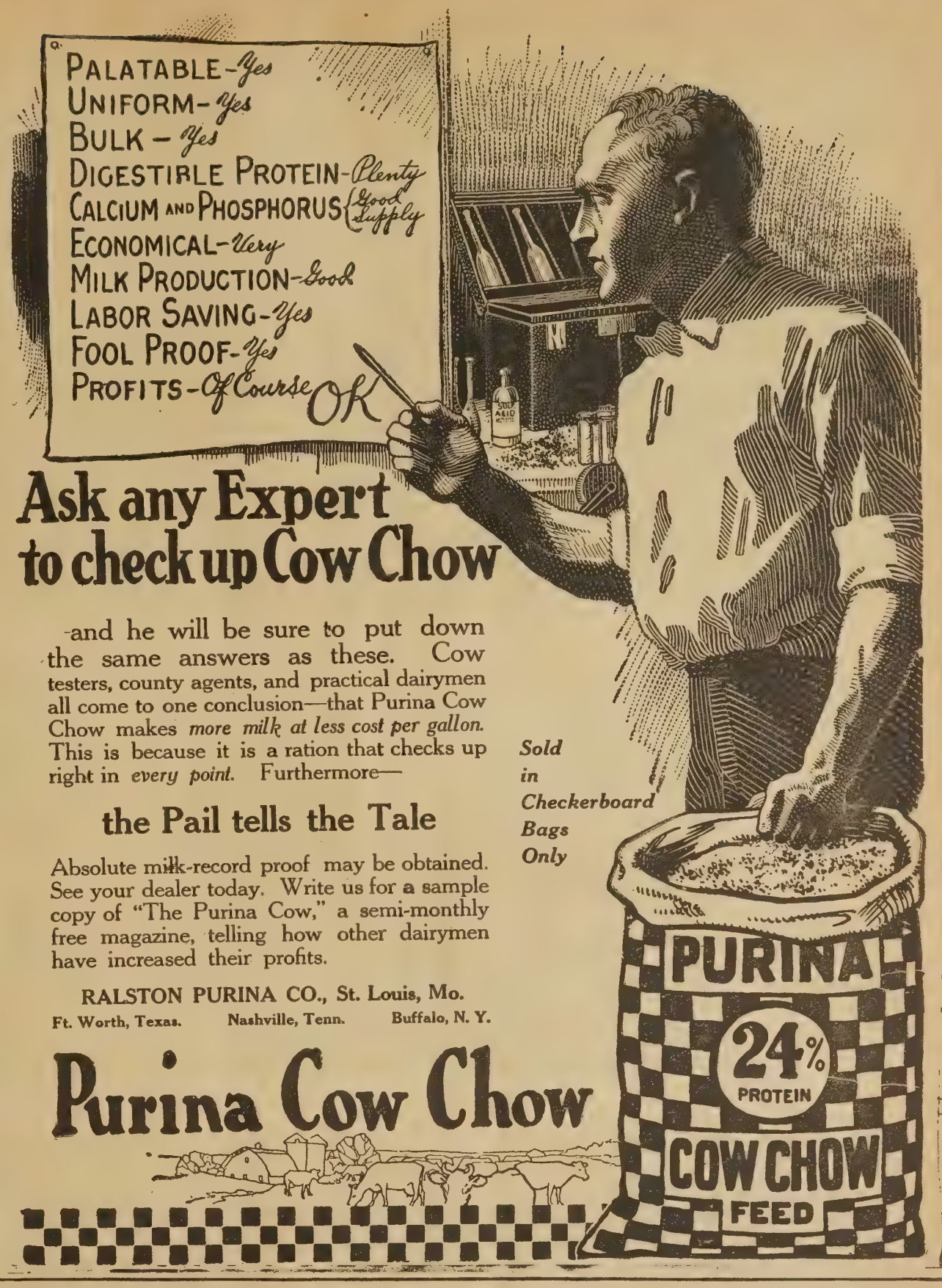
The Sauk County (Wisconsin) Jersey Breeders' Association set a new record for getting together when it held its third annual picnic Tuesday, August 3, on the farm of its secretary, Dr. W. L. Bible. The excellent herd of Dr. Bible was inspected by the party. The members of the association together with their families and neighbors declared it a holiday and improved the opportunity to renew acquaintance and further the interest of the Jersey breed. The attendance was near 600.

The meeting was called to order by President Ed. A. McGilvia, who called upon Hon. W. L. Houser, president of the Wisconsin Live Stock Breeders' Association, to speak on the live stock interests of Wisconsin. He dealt particularly with the importance of making farm life attractive to the younger folks, thereby keeping them interested to the degree that the allurement of the city will not rob the farm of the excellent boys and girls who are so vitally needed in this important work. The speaker emphasized the fact that no better medium for this offered itself than that of organized clubs. The next number was an address by W. H. Clark, who spoke on the Jersey interests of Wisconsin and dealt with the feeding and breeding and care of Jerseys.

Wisconsin. JERSEY BREEDER.

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FRED PETERSON, A JUNIOR WHO WON A JUDGING CONTEST



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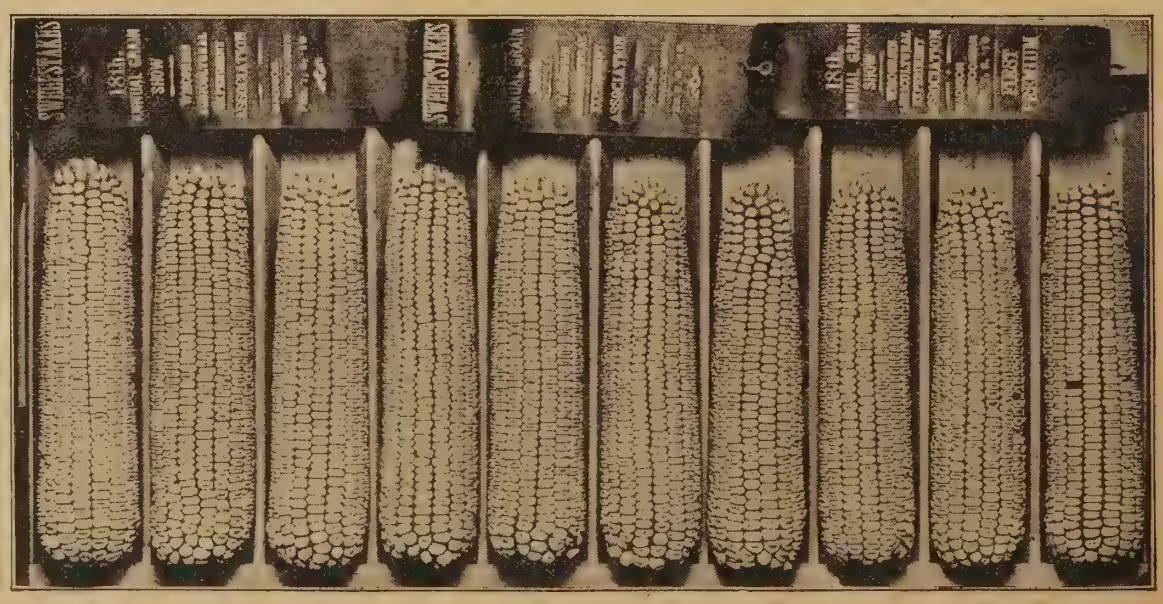
FATHER AND MOTHER ARE INTERESTED, TOO



THE JUDGE'S DECISION—THREE PROUD WINNERS



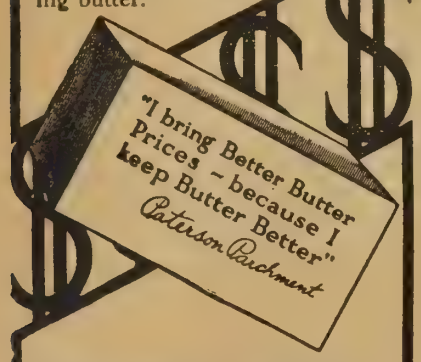
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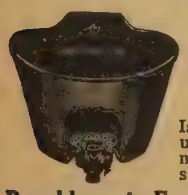
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Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

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Every Farmer needs them. Double Clevis for 2-3-4-5 or 6 horses on wagons or farm machinery. All singletrees and eveners always swing clear. All horses pull equal. Just the thing when driving a slow, tired or lazy horse. Easier pulling. Easier driving. At dealers or from the factory.

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Junior Stock Exposition

"Boys and girls who stick to the farms are going to have their inning. Some of the biggest factors in promoting the live stock industry of the state are the endeavors which are being made to interest boys and girls in farming, to teach them the dignity, the importance, the opportunities, and the methods of agriculture." In this way Walter L. Houser, president of the Wisconsin Live Stock Breeders' Association, expresses the spirit of live stock interests of the state that are lining up behind the Junior Live Stock Exposition to be held October 18-22 at Madison. Backed by a committee composed of representatives of state and national breed associations, this year's exposition promises to overshadow last year's show, the standards of which are indicated by the fact that the grand champion at the exposition stood second only to the grand champion at the International Stock Show in Chicago.

More than $4,000 in prizes will be awarded in addition to a number of special awards which are being offered by farmer organizations, commercial enterprises, and other groups and individuals. Five classes of live stock, including baby beeves, dairy calves, colts, pigs, and lambs fed and fitted by Wisconsin boys and girls between the ages of 10 and 18 will be judged by stock men of state wide reputation.

Junior Letters

Hoard's Dairyman Juniors:—Hello! I suppose you don't think I am a junior any more but you bet I am. My brother and I are renting a farm on shares. We raise corn and barley and oats. We each have a bicycle. I paid $22 for mine and my brother paid $30 for his. One evening my overall caught in the chain and I tipped on the hard road. The bicyle fell on top of me and the seat struck me right on my hip. I could hardly walk for a day.

I graduated from the eighth grade this year and we had graduation exercises at the county court house, where they had moving pictures.

I wish some of the juniors would write to me. I will be only too glad to answer any letters I receive. My address is R. 1, Hayward, Minn. James G. Hansen.

Hoard's Dairyman Juniors:—I have Single Comb Brown Leghorn chickens. There are 16 roosters and 19 pullets. We have 17 head of cattle and 3 horses. I feed my chickens sour milk in the morning and cracked corn and wheat with it. And then corn and wheat for dinner and supper and quite often try bran mash. My mother lets all of her chickens have dry bran mash all the time. They have free access to it but she doesn't feed much whole grain. We are making hay at present. The crops in this locality are looking very good considering the late spring. Winter grains are already cut; some folks have stacked theirs, some are even threshing.

Reedsburg, Wis. Marguerite E. Hahn.

Hoard's Dairyman Juniors:—Hello, juniors. I am a new member. I have been wanting to be a junior. I hope this letter will not reach Mr. Wastebasket.

Last year I had a pig given to me by my father. My two brothers joined a corn club so my father said he would give me the pig. When it was born it was a very small pig. At first father thought he would kill it. But it thrived good and so it was given to me. It was fed ground barley and whey. When it was time to be sold it weighed 153 pounds. The money received for it was $29.45. But I agreed to give my father the $4.45 for the feed so that left me $25 and I had helped my neighbors make hay and there I received one dollar and I bought six War Savings Stamps with it. All together I have eleven War Saving Stamps.

Wisconsin. Theodore Lehmann, Jr.

Hoard's Dairyman Juniors:—My pure-bred heifer is fine. She is of the Walker family. Is bred to our herd sire who is of the Ormsby family and expect to get a good calf.

We have moved from where we used to live. We have a four-year lease on the corrals and barns of an old dairy place. It is fallen down pretty much and we have had to build up a lot. We have no silo but are going to build one pretty soon. We could not do without one with our test cows.

I have 22 rabbits now. We certainly have had some good Sunday dinners off of them. One doe got loose when 6 weeks old and ran wild 6 months. She is now the biggest and best doe I have. I feed concentrates in the morning, bread and milk to the young ones, carrots or something to the others at noon, and good alfalfa hay at night. I have not had very good luck. I have lost 14 in two years.

We have a pure-bred heifer which we were offered $1,500 for but refused. She is 10 months old. She weighs about 825 lbs. We are going to show her at the fairs.

I would like to know how much the average bull calf averages at 5 or 6 months in weight. We have two at 5 and 6 months old that weigh 625 lbs. each.

I will close with good luck to the juniors.
California. Cecil Stalder.

Hoard's Dairyman Juniors:—I live on a farm of 80 acres. We have two horses, eight head of cattle, five cows, two calves, and one bull, all registered. We have about 100 buff Leghorn hens and about 45 chickens. We had bad luck this year, as the rats have got a good many. I have 20 chickens myself. I am very proud of them. There is to be a plowing match to be held tomorrow. Also a tractor demonstration of all kinds of tractors. There have been several severe storms lately. I wish some of the juniors would write me. My address is Oakland City, Ind. Charles Farmer.

Hoard's Dairyman Juniors:—I have been trying my luck raising chickens. I started with 50 eggs this spring. They were from full blooded Regal White Wyandottes. I only hatched 29 chicks but some died in the shell and some eggs got broke. I fed them a prepared chick feed until they were about 5 or 6 weeks old; then I fed them a home-made mash in the morning and scratch grains at noon and night. They had free range. I just lost 4, two of which died with the gaps and one was missing and the other was snapped by our dog. I am going to sell my cockerels and keep my pullets. I also have some rabbits. My doe has 8 young ones which are about 7 weeks old. They are weaned now. I am expecting another litter soon.

We have one dog; his name is Buster.

If any juniors want to write me my address is R. 2, Equality, Ill.
Robert Blackman.

Hoard's Dairyman Juniors:—We live on a farm of 157 acres and have eight horses, eleven cows, and two calves. We have 20 hogs and pigs. One sow and one shoat are mine and my brothers and sisters. They are Durocs. I had some Ancona chickens but a weasel killed them all one night.

I also have a truck patch with corn, potatoes, peanuts, onions, sweet potatoes, beans, and cabbage and melons. We have about twenty-five acres of hay which is partly made, 34 acres of corn, and 24 acres of oats. We cut the wheat that was on the place but it wasn't much good.

I milk two cows and like to milk. Our cows' names are Brindle, Guernsey, Nig, White, Boss, Bess, Polly, Kate, Black, Pink, and Nancy. Our horses are Tops, which is 25 years old, Molly, Nannie, Bell, Minn, Nell, Prince and May.

My address is R. 1, Smithville, Ohio.
Leslie Switzer.

Hoard's Dairyman Juniors:—I have been reading the junior letters and find them very interesting. I like to read the letters of Jimmy Greene and Bob Ramsay.

I passed the sixth grade this year with one of the highest averages in the township. I live on a 160-acre farm in Columbia County. We are engaged in the dairy business. We have two Holsteins, one Durham, one Jersey, and one Guernsey, all full bloods.

Catawissa, Pa. Wm. Luther Wilson Bitter.

Hoard's Dairyman Juniors:—I received the watch fob, coat lapel button, and the dairy farm boys' creed. I am very much pleased with them. I like to read the junior department in the Hoard's Dairyman, also the junior letters of which some are very interesting. I also like the stories of Jimmy Greene and Bob Ramsay.

We have sixteen milk cows of which I milk 4 to 6 cows night and morning. We also have 4 heifers, one bull, and a calf. All of the cows are grade Guernseys, also the heifers and the calf. The bull is a pure-bred Guernsey. The calf is a week and a half old.

I am very much interested in poultry and have seven White Leghorn chicks of my own about six weeks old. My father's flock consists of 31 hens and also about sixty young chicks from 7 to 2 weeks old.

We live on a 68-acre farm one and three-fourths miles north of the city of Oconomowoc of Waukesha County in the state of Wisconsin. Our farm has a lake shore of about six feet on Lac Labelle lake. We have a large marsh and two springs on our farm. This year we had the barn, silo, and chicken house whitewashed. We have an orchard of about fifteen trees. This year we planted twelve more apple trees in our orchard.

We get about 200 lbs. of milk and we take it to the condensery. We have electricity in our house and barn. We are going to concrete our cow stable and put in modern stanchions.

I am twelve years old. I finished the common rural school work in the school my father did. My brother and I sent illustrated note books to the Waukesha Dairy Show. My brother sent a cattle notebook and won first prize. I sent a poultry notebook and won fourth prize. They were judged as to the best put up notebook.

I wish good luck to the juniors and wish some would write to me. My address is R. 3, Oconomowoc, Wis.
Gerald Spaulding.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

Approach of Milling Months Lessens Feed Demand

Conditions Forecast Plentiful Supplies of Feedstuffs During Fall and Winter

The more active demand for mill feeds during the week ending August 14, largely because of the desire of the market to anticipate its requirements before the freight rate increase becomes effective, had the effect of advancing the price only to the extent of the additional freight. The tendency of other feeds, apparently not needed at this time, was lower and as milling will be in full swing next month, the trade, according to reports from various sections, is still maintaining a "watchful waiting" policy.

Pasturage conditions with few exceptions are reported as ideal and because of the continued light consumption and prevailing conditions an abundance of feeding stuffs is generally expected this fall and winter.

Feed "to arrive" is obtainable at a considerable discount under spot prices prevailing in most of the markets.

Prices in General Decline

Wheat mill feeds.—Prices in most markets declined. Prices for feeds to be forwarded before August 26 were steadier but no interest was shown in future shipment stuff. Spot prices are unchanged to $2 lower on bran. Supplies are fairly good and heavy offerings are expected shortly because of increased output of flour mills. The demand—which was better during the early part of the week than it has been for some time, especially for red dog and flour middlings—dwindled to practically nothing during the last few days.

Cottonseed meal.—The demand remains poor. Forty-one per cent meal was offered at $64.50 per ton delivered Philadelphia by jobbers in eastern territory. Prevailing price on old-crop meal in southern markets is lower than last week. Large stocks are reported as still in the hands of dealers and a few mills. Volume of business is small. Hulls are practically off the market. Texas offers 43 per cent meal for September shipment at around $55 f. o. b. Texas common points. Middle-western markets report a fair inquiry for transit meal. Chicago and middle-western markets report conditions as dull and that mixed car-lot shippers reduced prices.

Gluten Feed Demand Normal

Gluten feed.—Present demand for gluten feed is about normal. The larger manufacturers report that little difficulty is experienced in securing cars for making shipment. The Cincinnati market reports a good inquiry for gluten feeds by dairy interests. The price as quoted by the largest manufacturers is unchanged from last week. The movement is good.

Hominy feed.—The price of hominy feed advanced slightly on account of the strength in cash corn. The demand was spotted and mostly for immediate shipment with guaranty that goods will be in transit before the advance in freight rates. As with other feeds sold on this condition, shippers guarantee to assume additional freight charges if shipping is delayed. Southern markets report stocks as light while middle-western and eastern markets have adequate supplies on hand.

Alfalfa meal.—Northwestern and middle-western markets report liberal offerings from Idaho and Washington alfalfa meal mills. Because of the slow demand for mixed feeds, feed mixers are not buying so heavily as usual at this time of the year. Colorado mills quote No. 1 meal at $35 delivered Kansas City. Stocks are fair and the movement good.

Linseed meal.—Several markets report quotations from $2 to $2.50 per ton lower than last week. There was a fair inquiry for prompt shipment but as the majority of buyers seem to expect lower prices, inquiries for later shipment did not result in many sales. Stocks are good and the demand has shown considerable abatement. Mills report the car situation as fair and improving.

Rye Middlings Weak

Other feeds.—Rye middlings display a weak tendency on heavier receipts, and sales in the Richmond, Va., section were reported as low at $56 per ton. Copra cake is in good supply in Pacific Coast markets and is quoted on a basis around $40. Beet pulp stocks are rather light. Imported material is offered around $57 f. o. b. New York sacked for October delivery. Irish dried brewers grains due New York are quoted at $58. None of the markets report a shortage of feeds and supplies appear adequate to meet the demand.—U. S. Bureau of Markets.

Jersey Cattle Notes

For week ending Aug. 20:

Number of animals registered: Bulls, 253; cows, 570; total, 823. Number of transfers recorded: Bulls, 240; cows, 631; total, 871.

MARKETS

CHICAGO, Aug. 27—Butter—Creamery, extras, 55½c; standards, 53c; dairy, firsts, 49c; seconds, 44@47c.

Eggs—Ordinary, 45c; firsts, 48c.

Cheese—Twins, 23½c; Young Americas, 25½c.

MILWAUKEE, Aug. 27—Butter, creamery, tubs, 56c; prints, 57c; extra firsts, 54@55c; first, 51@52c; No. 1 packing stock, 34@35c; No. 2 do, 20@30c.

Eggs—Fresh firsts, recandled for city trade, 47@48c; current receipts, 45@46c; checks, 30@33c; dirties, 34@35c.

Cheese—Twins, 24½@25c; Daisies, 25@25½c; Longhorns, 26@26½c; fancy Brick, 25@26c; Limburger, new, 1 lb., 27c; Limburger, new, 2 lbs., 26c.

NEW YORK, Aug. 27—Cheese—Quiet; state milk, common to specials, 20@28¼c; skims, common to specials, 5@17½c.

Butter—Quiet; receipts, 6,711 pkgs.; creamery, extras, 53¾@57c; state dairy, tubs, 46@57c; imitation creamery, prints, nominal.

Eggs—Firmer; receipts, 10,965 cases; nearby white fancy, 71@73c; nearby mixed fancy, 47@65c; fresh firsts, 53@61c.

Sons of a 37-Lb. Ormsby Bull

whose dam, full sister, three-fourths sister and maternal sister have all held state records. Herd under Federal supervision.

BLUEBELL FARM. RICEVILLE, IOWA.

Guernseys At Auction

Second Annual Consignment Sale

Guernsey Breeders' Ass'n of Northern Minnesota and Northern Wisconsin

Tri-State Fair Grounds, Superior, Wisconsin

Wednesday, October 6, 1920

A QUALITY SALE A GUARANTY SALE

Auctioneers: Johnson, Benjamin, McGuire

For catalogue write to

E. P. Gibson, Sales Mgr., 310 Court House, Duluth, Minnesota

E. D. Humphrey & Son

DISPERSION

WEDNESDAY, SEPT. 8th, 1920

GENEVA, OHIO

On account of ill health the Humphreys are compelled to dispose of their entire herd of

71 Pure-bred Holsteins 71

Here is one of the best Holstein Dairies in North Eastern Ohio. 24 head of those to be sold are cows in milk or heavy springers, 27 two-year-olds due this fall, 12 yearlings and calves, 8 serviceable bulls.

All through this great milking herd you will find the blood of such bulls as:

Pontiac Aaggie Korndyke
Rose Hall Pontiac Pietertje
Friend Hengerveld De Kol Butter Boy
King of the Pontiacs
Pietertje Hengerveld Count De Kol

Every Ohio dairyman with a grade or scrub bull can improve his herd wonderfully with one of these great young bulls.

Herd under State and Federal supervision. Everything guaranteed, and a 60- to 90-day retest privilege.

See next issue but plan to be at this sale

E. D. HUMPHREY & SON, Geneva, Ohio

Sale Under the Management of

Ohio Holstein Ass'n, Howard Barker, Field Sec'y, Tiffin, Ohio

Edward Wagner Guaranty Sale

MONDAY, SEPT. 13, 1920

SALE TO BE HELD AT THE W. VIRGINIA STATE FAIR GROUNDS, WHEELING, WEST VIRGINIA

Having quit my retail milk business and decided to reduce my herd materially, I am offering these great cattle to the highest bidder without reserve.

59 Pure-bred Holsteins 59



A FEW OF THE GOOD HEIFERS TO BE SOLD

Many of them bred by me during the past seven years. Many cows in our herd have milked 10,000 to 16,000 lbs. milk in a year on two milkings a day with just ordinary farm care.

We have always used the best bulls we could buy and as a result we are going to offer you the blood of such noted sires as King Pontiac Champion, Pontiac Korndyke, King Segis Pontiac, King of the Pontiacs, Pontiac Aaggie Korndyke, King Lyons, Maplecrest Pontiac Hartog, King Segis De Kol Korndyke, King Segis.

Herd under State and Federal Supervision. Everything sold on a positive guarantee with a 60- to 90-day retest privilege.

Health Individuality Breeding Production

Edward Wagner, Wheeling, West Virginia

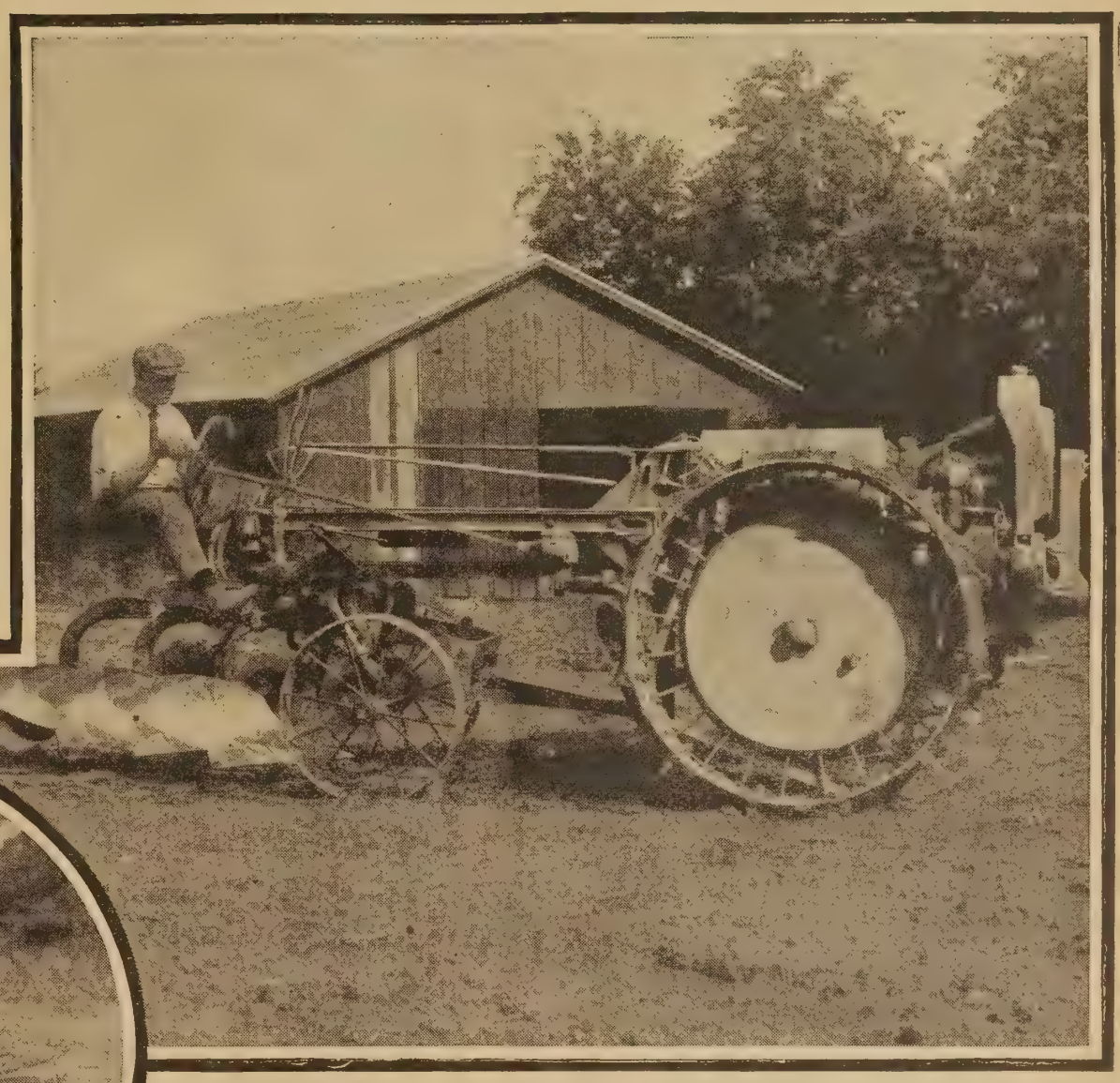
Farm at Rayland, Ohio

Under management of Ohio Holstein Association, Howard C. Barker, Field Sec'y, Tiffin, O.

MOLINE

The Universal Tractor

3-2 Plow Capacity





It is the correct farm power unit, doing all belt and field work, *including cultivation,* with one man.

Engineering and manufacturing development of the Moline Tractor and Moline Tractor Plows enable us to announce a 3-2 Plow for use with the Moline Tractor.

3 plows for ordinary conditions which prevail in most sections of the country.

2 plows for extreme conditions and unfavorable seasons.

An average saving of 4.7 horses per farm, and a total average saving of $1,408.16 per year, is reported by yearly Moline tractor performance records received from owners to date. We will be glad to give anyone interested the opportunity to personally inspect these records.

The Moline is unique in the tractor field—made so by our patent protection.

If desired you can use the "drag behind" or horse drawn implements you now have with the Moline Tractor the same as with other types of tractors.

See Your Moline Dealer or Write Our Nearest Branch at:

Moline	Dallas	Poughkeepsie	Indianapolis	Portland	Denver	Minneapolis	Des Moines
Atlanta	Oklahoma City	Baltimore	Stockton	Salt Lake City	Kansas City	Jackson, Mich.	Bloomington, Ill.
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MOLINE PLOW COMPANY, MOLINE, ILLINOIS

No Guess Work About the Plant Food Value of Straw





Chemical analysis is the most positive way known to determine the elements that make up any substance—only by this method has it been possible to know the plant food contained in straw—guess work is eliminated entirely.

STRAW contains the essential elements necessary to produce big crops. Chemical analysis shows that straw contains approximately 10 lbs. of nitrogen, 12 to 16 lbs. of potash and from 6 to 7 lbs. of phosphoric acid. In plant food value, straw equals an average ton of barnyard manure — you can't afford to waste it.

Start this year to spread your surplus straw, and turn it under so that its valuable plant food elements can be released. It will result in bigger crops and bigger profits.

It is neither a hard job nor does it require extra help to spread straw with the

JOHN DEERE SPREADER
With Straw Spreading Attachment

Both manure and straw can be spread perfectly with this machine. One man can put on the straw spreading attachment, load the spreader and spread the straw as heavy or light as desired with no extra help.

The operation is simple — set the feed lever, throw the machine in gear, and drive the horses—no forking required—the feed is automatic.

In 30 minutes time one man can take off the attachment preparatory to manure spreading.

Bear this in mind, the John Deere as a manure spreader has advantages you can not get in the ordinary spreader because the beater is mounted on the axle, a patented feature.

Its box is low down—extremely easy to load, and the drive wheels are high—a distinct advantage. Its beater is on the axle together with the beater drive and main working parts —they can't get out of line to cause binding, heavy draft and breakage.

Another thing, the John Deere is the simplest spreader built—this is one of the important reasons why it gives longer service, costs less to keep in repair, and gives greater satisfaction.

You can't invest in a farm implement that will pay for itself more quickly than a John Deere Spreader with straw spreading attachment. See your John Deere dealer at once about this equipment.

This Free Booklet Will Interest You

It tells all about spreading manure and straw, written by Dr. W. E. Taylor, a practical farmer who has spent years in experimenting. He tells you facts that may be worth many dollars to you. The booklet also fully illustrates and describes the John Deere Manure Spreader and straw spreading attachment. To get this book, drop a card to John Deere, Moline, Illinois and ask for **Booklet SS-714.**

JOHN DEERE
JOHN DEERE MOLINE, ILL.

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

"You Save Money"
says the Good Judge



And get more genuine chewing satisfaction, when you use this class of tobacco.

This is because the full, rich, real tobacco taste lasts so long, you don't need a fresh chew nearly as often.

And a small chew gives more real satisfaction than a big chew of the ordinary kind ever did.

Any man who uses the Real Tobacco Chew will tell you that.

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When Writing to Advertisers, Mention Hoard's Dairyman

A Brotherhood of Dairymen

(Continued from page 231)

rented land is in alfalfa and Sudan grass, largely for hay. The cotton, as one would have a right to expect on land which had been built up by dairy cows and careful management, is as good as any I have seen in the Salt River Valley. Quite a large proportion of the alfalfa on the home place is new-seeded, that is, seeded last fall. This is being cut over at present, (the latter part of June) the third time for this season. One of the men on the place is a middle aged man who has worked on the farm for many years, a man of careful judgment. He tells me that each cutting would have a tonnage of a ton and one-half if made into hay. Some of this, of course, has been made into hay as it is impossible to so regulate the cutting as to always have an area just right to cut. Consequently when it is getting ahead of the cows it is necessary to catch up by cutting a considerable amount and putting it in hay, getting over the field quickly so as to begin on another field which is just coming on.

The experience of the Geare Brothers is somewhat rare. They are among a very few who have persistently and consistently followed the dairy industry through the various vicissitudes and changes incident to dairy farming in a new country. They have been only moderately lured away by the attraction of cotton farming. Throughout the Valley there are many dairy farms that have been converted into cotton farms by the tempting prices of the long staple cotton, but so far the boys are holding to their early teachings and to an inherited love for the dairy cow. The cotton they are growing is a side issue. The number of dairy cows has not been cut down in consequence; for better methods, the silo and careful management, have resulted in increased crop production which permits the growing of the cotton as a side line. I would not be surprised if they make a bale or more of cotton to the acre but I shall not expect them to abandon the dairy and put all their land in cotton, even though there were a promise of a bale or more to the acre for the entire farm.

I do not know that they have grown rich in the dairy business but they have made many improvements and if they had made no money aside from the enhanced value of the land they would have done well.

Twenty years ago I suppose the elder Geare bought the land for less than $50 an acre. The village of Phoenix was then nearly two miles away. Little by little the city line has been extended until now it is less than one-half mile away and building lots in the district next to them are selling for $900 each. Possibly the day is not far distant when they will be crowded out by the approaching city limits, but until the growing demands of the city require it, I predict that they will keep on making money on this $1,000-an-acre land in the same careful way, a way made possible by the division of the responsibilities.

Use More Milk

(Continued from first page.)

states, have resulted in an increased consumption of milk and milk products. In most cities where a complete campaign was put on the consumption of milk has been increased from 10 to 20 per cent. Such campaigns can help dairymen by encouraging the greater use of milk. They can help creameries and cheese factories by increasing the demand for milk products. They can help city milk plants by advertising the remarkable food value of milk and cream. Best of all, they can exert a tremendous influence toward furnishing mothers, babies, and little children an abundant supply of the most nourishing food in all this world, pure, fresh, whole milk.

Dairy Cattle Congress Judging Contest

The third annual Collegiate Dairy Judging Contest held in connection with the Dairy Cattle Congress promises to be much larger than the previous contests. Due to the fact that it is held under a different system than the other contests it holds a unique position. The cattle are judged by one man and the oral reasons are heard and graded by him.

This year the management is fortunate in securing Professor J. A. McLean of the University of British Columbia as judge. He is thoroughly competent and an experienced judge of dairy cattle.

The greatest and most vital power in influencing life is personality. It is greater than law, instruction or example.—Lyman Abbott.



"Here's Where I Learned How to Make My Cows Produce"

That has been the beginning of larger milk profits for thousands of dairymen—the day they learned about Larro and the Larro "more milk" guarantee. There is no chance or uncertainty when you are feeding Larro—because the Larro guarantee reproduced below means just what it says, you get more milk or you get your money back.

A Balanced Feed—Based Upon a Knowledge of the Cow

That's why you get more milk — because Larro isn't a one-sided ration but a nutritious, balanced feed. Larro comes to you as a scientific mixture of just these ingredients—cottonseed meal, corn gluten feed, linseed oil meal, dried beet pulp, standard wheat bran, standard wheat middlings and a little salt—all compounded upon a definite knowledge of the needs of the cow.

This "More Milk" Guarantee Has Stood Back of Larro for Seven Years

This is the same guarantee of more milk which has stood back of Larro for seven years. To the man who is not yet a Larro user it is an absolute promise of better results from his cows—to the veteran Larro user it is a double assurance that Larro today is the same as it was in the beginning—that its quality will never be changed.

If your local dealer does not carry Larro get in touch with us at once.

DEALERS: Ask for Proposition

The Larrowe Milling Company, 213 Larrowe Building, Detroit, U.S.A.

Larro-feed

THE READY RATION FOR DAIRY COWS



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

Registered Holstein heifers 6 months and older. One bull 17 months, 21-lb. dam, 30-lb. sire. W. R. GATES, Fort Atkinson, Wis. 19*

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

High Grade Holsteins and Guernseys, springers and heifers. High grade heifer calves, 6 weeks old, delivered at your station $30. Quality guaranteed. HODGE BROS., Whitewater, Wisconsin. 26-8

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

Waukesha County high grade Holstein and Guernsey calves, $25.00 crated. FERNWOOD PLACE, Waukesha, Wis. 8*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

5 registered Holstein and 4 registered Guernsey heifers for sale. BURR OAK STOCK FARM, Whitewater, Wis. 4-4

For Bargains in registered and high grade Holsteins try us. LOVELAND FARM, Holland Ind. 5-3

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 5-6

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated. C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

For Sale—50 head of registered Holsteins, 25 cows aged 3 to 7 years, sired by a 26-lb. and bred to a 30-lb. bull. Start to freshen September. Also 25 heifers, 1 to 2 years old. ARTHUR N. BIRKHOLZ, New Buffalo, Mich. 6-2

For Sale—Registered Holsteins, Guernseys, Jerseys and Ayrshires, both sexes. Some very choice individuals. Bulls of serviceable age. A number of high grade cows and heifers priced to sell. Call on or write. FARM DEPARTMENT, Bank of Colfax, Colfax, Wis. 6-3

$50.00 buys 2-month-old, registered Holstein bull whose sires' three nearest dams average 30 lbs. EDW. E. PAGE, Shell Lake, Wis. 6-2

A Rare Opportunity to purchase twenty-five choice young grade Holstein-Friesian cows, averaging better than ten thousand pounds of milk each, annually. All are tuberculin tested, bred to our 34-lb. Advanced Registry junior herd sire and commence freshening September first. Priced at $250.00 each, guaranteed well worth the money. Herd located near Huntley, Ill. Write—or better wire. CHESTER A. HARRIS, Old Colony Building, Chicago, Ill. 6-2

100 Large, high grade Holstein heifers to freshen in October and November. ADAM DUERST, Monticello, Wisconsin. 6-2

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

For Sale—One registered Holstein cow due to freshen in October. Perfect individual and a real show cow. Also several choice heifers of various ages. J. M. McFARLAND, Watertown, Wis. 7-2

See my calves before you pay for them. I offer extra choice high grade Holstein heifer calves at $25.00. Registered bull calves $40.00. C. O. D. Safe delivery and satisfaction guaranteed. J. M. McFARLAND, Watertown, Wis. 7-2

For Sale—Registered Holstein-Friesians. Young cows and heifers bred to freshen in middle winter and fresh cows and heavy springers for $200.00 each. By selling bunch can add some open heifers for $125.00 and $150.00 each to make a heavier load. Some A. R. O. FRANK STAFFEN, Route 3, Howard City, Mich.

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

Registered Holstein bull calf; two months old. Sired by a twenty-one-pound grandson of King Korndyke Pontiac Lass, the ten thousand dollar son of K. P. Pontiac Lass. GEORGE L. BURRELL, Route 1, Pevely, Missouri.

Holstein bull, Ormsby, 2 years old. Excellent individuality and backing. $250 for quick sale. C. J. WILL, Waukesha, Wis. 7-3

For Sale—15 head, very choice, high-grade, good producing, Holstein cows. Nearly all fresh, a few springers. 1 pure-bred heifer, 1 pure-bred bull; also double unit Empire milking machine nearly new. Going out of business. FRANK DECHANT, Route 6, Waukesha, Wis. 6-3

For Sale—Advanced Registry Guernsey cow, with bull calf at side, either or both. G. D. FELLOWS, Algoma, Wisconsin. 7-2

STOCK FOR SALE

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

For Sale—Several registered Guernsey bulls 7 to 12 months, grandsons of Imp. Clara's Sequel and Langwater Frenchman. Dams 500 to 752 lbs. fat. See display ad page 223. Sale list. HOMER F. RUNDELL, Livingston, Wisconsin. 2*

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write for photos and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

For Sale—High grade Guernseys. Eight head fresh or heavy springers. Two miles south State Fair Park. Phone West Allis 297W5. D. R. MAY, Route 5, West Allis, Wis. 6-2

For Sale—Nineteen grade Guernsey heifers, yearling and two-year-olds, nicely marked and colored and practically pure-bred. L. D. PATTERSON ESTATE, Green Lake, Wis. 6-2

Yearling Guernsey Bull. A. R. backing. Write for pedigree. H. O. HINKLEY, Route 2, Rockford, Illinois. 6-3

Guernsey bull calves from A. R. dams with records up to 645 lbs. fat. C. D. GRISWOLD, West Salem, Wisconsin. 6-2

For Sale—High grade Guernsey cows and heifers. J. L. SAWYER, Perham, Minn. 6-2

A Real Bull—Son of 500-lb. two-year-old, record made in pasture, 10 years ago. She milked 45 lbs. daily at 12 years of age. A show bull. Other well bred bulls for sale, some of serviceable age. FRISSDALE FARM, Hopkins, Minn. 5-4

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Jerseys—Carload of high grade Jersey cows and heifers. All tuberculin tested. GEO. AUSMAN, Elk Mound, Wis. 4-4

Registered Jerseys—One cow, two yearling bulls. Most approved breeding. S. G. BANKS, Eldorado Springs, Mo. 5-4

Jersey bull. A registered yearling. Eminent and Noble of Oakland's breeding. Dam is a good cow. Will send pedigree. JOSIAH BLACK, Powell, O. 6-2

For Sale—Jersey bulls, choicest breeding, prize winning stock. Register of Merit stock. Accredited herd. Prices according to age and quality. S. CURRIE, Alden Dairy, Park River, N. D.

Jersey high-grade heifer calves $35, highest herd in Testing Association. Sire, First North Dakota, Wisconsin. G. B. NEWCOME, Pewaukee, Wis. 7*

For Sale—Complete dairy equipment; including 44 head of pure-bred registered Jersey cattle. Milk is retailing at 25c per quart. Located near Tulsa, Oklahoma, the best market in the world for dairy products. Will sell any animal, or all of them. Address: J. M. SPRINGER, Box 11, Tulsa, Okla. 7-3

STOCK WANTED

Wanted—Pure-bred Guernsey bull, age ten months, from tuberculin tested, abortion-free herd. Will buy immediately the one priced for $150.00 with best type sire, dam and Advanced Registry records. FRANK PIPER, Madison, Wis.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

SWINE

For Sale—Eight-week-old pigs at a reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 26-8

For Sale—Some Duroc spring boars. Sired by the world's greatest boars and out of the largest and best sows in the state. Several by Pathfinder that sure are killers. BRIAN L. RUNDELL, Livingston, Wis. 5-spl

Hampshires. Registered stock, either sex, all ages. State fair winners. GLEN EYRIE FARM, Delavan, Wis. 7-5

For Sale—Big type Poland Chinas. Three choice spring boars, sired by Big Bob Mastodan. His sire was world's champion. H. T. EVANS, Eau Claire, Michigan. 7-2

For Sale—Large pure-bred Chester Whites. Mature sows or young stock. ED. ROBERTS, West Bend, Wisconsin.

For Sale—Duroc Jersey boars, 18 weeks old, long bodied, dark red, fine individuals, sired by Jack Orion's King. $25.00 each. F. H. SARGENT, Hammond, Wisconsin.

HORSES

For Sale—Registered black Percheron mare coming four. Beautiful individual, sound and gentle. CITY LIMITS FARM, Watertown, Wis. 7-2

For Sale—Fine, black, yearling stallion. Registered Percheron. ARTHUR ROBERTS, West Bend, Wisconsin.

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

New Zealand Reds—For food, fur, pleasure or profit. Every family should have a trio at least to reduce the H. C. L. Two to three months old $5.00 pair, $7.00 trio. Add $1.00 pair for each month older. All thoroughbreds. Fuller's Rabbitry, Fort Atkinson, Wis. 7-4

GOATS

Sell or trade for Holsteins. Registered Toggenburg Buck, two milking Saanen Nannies, three Kids. PAUL KAHN, 903 Westfall Ave., San Antonio, Tex.

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

FOXES

Wanted—Red Foxes; state age, sex and price. W. C. WILSON, Stephen Girard Bldg., Philadelphia, Pa. 2-6

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

MACHINERY

For Sale— One Dain Hay Press 16x18 with 6 H. P. engine. Price $600.00. One two-unit Sharples Milker, price $150.00. Write SAM MEIKLE, Merrimac, Wis. 6-2

For Sale—Hercules stump puller. Large size and good as new. Have finished all my stumpage. New one costs $200.00, will price mine $100.00 on car. JOHN SWIGART, Toledo, Ohio. 6-2

Moline Tractor for Sale—Model D four-cylinder new a year ago, run less than thirty days. Equipped with two 14-inch plows, extra rims, truck, cleats, etc. Also one 7-foot Moline double disk for tractor, run less than five days. Same outfit new will cost nearly $1900. Selling because I have rented my farm to people who can not buy tractor. Price complete with disk and all extras $1485 F. O. B. here. E. GONZENBACH, Sheboygan Falls, Wis. 6-2

For Sale at a Bargain—One Fairbanks Morse 4 horse Special Electric kerosene engine. One dynamo. One switchboard. Excellent condition. Reason for selling, installed city light. F. E. FOX, Waukesha, Wis. 5-3

For Sale—One slightly used No. 18 Smalley Ensilage Cutter for less than half price. J. A. MARTINY, Baraboo, Wis. 6-2

20—70 Nichols Shephard Steam tractor threshing engine, perfect order, $2,000. W. H. LUDWIG, Marshfield, Wisconsin. 6-3

For Sale—Empire Milking Machine, two single units, complete pipe line, vacuum tank and pump. Price to quick buyer $200.00. A bargain. Good reason for selling. H. M. SPAHR, Woodsboro, Maryland. 7-3

For Sale—Oliver No. 7 Tractor plow. Plowed 25 acres. FRANK YOUNG, Alabaster, Mich.

Perfection Milker—Brand new, two double-unit outfit complete, with No. 1 pump, tank, gauge, stall cocks for 20 cows. In original crates. Address WM. VOS DER SUMP, Dalton, Wis.

For Sale Cheap—One Model B La Crosse tractor. One 12-horse-power Sta-Rite Gasoline Engine, with friction clutch pulley and magneto on steel truck. One 1½-horse-power Sta-Rite Gasoline Engine. 54 feet of rubber belting, in good condition. One 5-horse-power. William Galloway engine. STARCH BROTHERS COMPANY, La Crosse, Wisconsin. 7-2

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Agents—Mason sold 18 sprayers and auto-washers one Saturday; profits $2.50 each; square deal. Particulars free. RUSLER COMPANY, Johnstown, Ohio. 25-spl

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

Farm for Rent—120-acre farm, all plow land with all equipment. 30 cows, registered or high grades, as preferred. 20 rods from school, 80 rods from cheese factory, 1 mile from church, 4 miles from town. New house and new barn and two silos. Man must be able to make part payment on his half. Will rent on 50-50 basis. ANDREW FRANK, Fox Lake, Wis. 4-4

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich.

DAIRY FOR RENT

For Rent—Three hundred-acre dairy farm with two brick silos and large buildings near Burlington, Wisconsin. Only a worthy, capable dairyman is wanted on share proposition. Farm is good and has never been rented. H. W. AYERS, Box 72, Honey Creek, Wisconsin. 6-4

PARTNER WANTED

Dairy Partner Wanted—1,000 acres good land, 3 miles from town, pike road. Will sell third to half interest to good man for $5,000 to $10,000. You manage dairy, I run farm. BOX 24, Fort Deposit, Alabama. 7-3

DAIRIES

Dairies for sale with established trade $1 gallon, can be produced for 25 cents. IDEAL FARM COMPANY, Box 948, Lakeland, Florida. 6-2

Colorado Springs dairy for sale—We have for sale a large and thriving dairy business which includes 30 acres of ground, milking barn for 50 cows, dairy building with complete equipment for pasteurizing and handling the milk. Doing about $70,000 business annually. Located on the edge of the city. Owner wishes to sell on account of old age. We have a bargain price for quick sale and can make liberal terms. THOS. L. SPRINGER, Room 58, 1st Nat'l Bank Bldg., Colorado Springs, Colorado.

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Free Wisconsin bulletins, soil, climate, crops, IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

For Sale—Alfalfa farm, 112 acres, $6,500. For particulars address owner GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 4-4

New York State Dairy Farms—Fine Delaware county dairy farms, all sizes, all prices, fully stocked with choice dairy cows, fully equipped with farm machinery and other personal property; sold on easy terms; by government reports, the greatest dairy county in the greatest dairy state in the Union. Write for catalogue. THE JOHN O. HILLIS FARM AGENCY, Hobart, Delaware County, New York. 4-4

Farms for Sale—New York Dairy, General farms. America's greatest bargains. Rich, level, productive soil. Fine buildings. State highways. Low taxes. Fine markets. Fifty to one hundred dollars per acre. Stock, tools, crops included. Western buyers making great profits here. Come immediately. Railroad fare paid purchasers. Wonderful opportunities. Catalog free. BUFFALO FARM EXCHANGE, Buffalo, New York. 6-2

A Dairy Farm of Real Value—An exceptionally productive dairy farm of four hundred thirty-eight (438) acres, located one mile from Chautauqua, N. Y., known the world over as a summer resort and educational center, is offered for sale at $100 per acre, if sold by November 1st. The farm has never been leased, is carrying at present 97 head of pure-bred Holstein-Friesian animals, is beautifully watered, well located and exceptionally fertile. As a matter of good faith, the owner will pay one-half of the railroad fare of anyone from any place, who upon investigation fails to find that this farm has the local reputation of being at least one of the most fertile productive farms in the section. The owner is a manufacturer in Detroit. He has owned the place nearly twenty years. His reason for selling is to transfer his stock operations from New York to Michigan. Terms can be arranged and a discount will be given for cash. The property is free from all kinds of incumberances. Arrangements can be made to buy a portion of the stock. G. E. WILDER, Gemmer Manufacturing Company, Detroit, Michigan. 5-4

150-acre, very productive New York dairy farm on paved road for sale by owner for less than insurance on buildings. Address BOX 336, care Hoard's Dairyman. 6-2

For Sale—370 acres, more or less, hay and cattle ranch, suitable for dairy, six miles from live city of 15,000 population, 15 acres in cultivation, good five-room house, some out buildings, sure hay crop, no irrigation required. For terms, address E. G. STOLLEY, Route 2, Grand Island, Nebr. 6-2

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

160-acre rich clay loam. No waste land. Barn 36x110. Good house, etc., 80 acres plowed. Located Taylor County, near Medford and Stetsonville. Also have extra fine 80 located on pretty lake; 40 acres under plow; fair buildings; ⅛ mile to school. Will sell to worthy man on small payment. Write WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin. 5-spl

Free map and list land bargains near Twin Cities. BAKER S-76, St. Croix Falls, Wisconsin. 6-spl

Would you like fine farm near city markets, among western people; good soil, for cost of buildings? Write NEW YORK FARM AGENCY, Westfield, N. Y. 11-spl

Buy Farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and service. Offices throughout the state. Write the CENTRAL OFFICE at Oneida, N. Y., for a brief list and state your requirements. 8-spl

Administrator's Sale—Fine farm of 275 acres for sale to close estate. Located just five miles from Barre, Vermont, the Granite Center of the world. An excellent market. Good roads, good buildings lighted by electricity, two telephones, house steam heated, hard wood floors, barns in excellent condition and painted, stable room for sixty head; milking machine operated by electricity; tillage land in best of condition and operated by tractors. Good pastures, well fenced; sugar place of 1,300 trees. $9,000.00 worth of hard and soft wood, timber and pulp wood. Never failing water at house and barn. Address: MRS. I. W. BATES, East Barre, Vt., or MR. E. R. DAVIS, Administrator, Barre, Vt. 7-2

102 acres. ½ mile to creamery, high school and banks. City water, electricity, live stock, crops, machinery. Price $6,000, $2,500 cash. Many other farms. Excellent markets, within 50 miles of nine million people. N. KRAUTWURST, Annandale, N. J.

214-acre Farm with horses, 22 cows, tools, crops in great dairy section, splendid prosperous farms; machine-worked fields, 30-cow spring-watered pasture, quantity wood and timber, 400 sugar maples, variety fruit; 2-story house, furnace, water in kitchen, maple shade, magnificent view; 82-ft. basement barn, garage, ice house, other buildings, all excellent condition; owner unable to care for it, includes to quick buyer 3 horses, 22 Holstein cows, all machinery, part household furniture, part growing crops; only $4,000 cash required, balance easy terms. Details this and 375-acre farm with 30 cattle and all equipment page 24 Strout's Big Illustrated Catalog Farm Bargains, 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

400-acre grain and dairy farm, one-half pasture, remainder cultivation, large shade, orchard, big improvements, rich dairy proposition, write for full particulars. THE MANSFIELD LAND & LOAN CO., Ottawa, Kans. 7-2

273 acres, improved Alabama farm for sale by owner. Located in Dallas county, 16 miles north of Selma, 1½ miles from R. R. station. For description and price write I. W. FRAZIER, Jones, Ala.

It will pay you to send for our new free summer and fall land list, showing photographs of a large number of choice farm bargains in the greatest dairy district in America. Central Wisconsin. Write today. GRAHAM'S LAND OFFICE, Marshfield, Wisconsin.

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

Notice to prospective Purchasers of land in Noxubee County, Mississippi, and adjoining counties in Alabama. I offer my services to prospective purchasers of lands in Noxubee, and adjoining counties. I know these lands and will give my best judgment as to real values of same and their adaptability for the use for which they are to be purchased. My terms are reasonable, and will be given on application. If employed by you I shall represent your interest. As to my honesty and ability I refer to either bank in Macon, Miss., or any county officer of Noxubee County. J. R. SPARKMAN, Cooksville, Mississippi. 7-2

Farms in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (Not Inc.) Medford, Wis. 7-4

FARMS FOR SALE

Owing to other business I offer for sale farm of about 225 acres situated six miles from Ithaca, N. Y., and the New York State Agricultural College on macadam road. This farm has three good houses, fine modern cow barn with stanchions for 30 head, horse barn, calf barn, tool barn, two silos, hog house and hen house. 30 acres of woods and pasture, balance all workable with tractor. Three acres of Winter Wheat which will turn about 40 bushels to the acre. There are 36 acres of oats for harvest, 20 acres of barley, 25 acres of corn, 5 acres of buckwheat, 1½ acres of potatoes, and 100 bearing apple trees. All can be purchased for $22,500.00 if taken at once. Stock and tools may be purchased at a corresponding low price if desired. This is a bargain as the value of the crops alone will bring at least one quarter of the price asked. The buildings can not be produced today for the price. This is a business proposition and one that will turn immediate gross income of at least $10,000 a year. This property can be divided into three farms with full equipment of buildings. If you are interested come at once as you can see what the farm will produce while the grain is standing. Farm is located in village with good schools, churches, and stores. Is well watered and running water into the large house and could be put into the other houses at a very nominal charge. R. E. TREMAN, care Treman King & Co., Ithaca, New York. 7-3

For Sale—240 acres of the best land in Wisconsin. All level plow land, black soil with clay subsoil, every foot corn land. In Southwestern Wisconsin. 25 years time at 5 per cent. Address BOX 341, care Hoard's Dairyman. 7-2

For Sale—208 acres, dairy and grain farm near Rochester, N. Y. Nine-room house, barn, 50 cattle, milk gathered daily, silo, water. Price $100.00 acre. E. L. EASTON, Barnard, N. Y.

For Sale—New York state dairy farms in New York city milk zone. Good soil. 3 per cent milk, $3.65; 4 per cent milk, $4.05. Lists. C. E. KESEBERG, Sheboygan, Wisconsin.

Are you looking for good farm land? We are offering real bargains in Aitkin County, "The County of Land Opportunity". This big railroad wants new settlers and for that reason can offer you a real bargain in a farm for a small down payment and on easy terms. Write today and we will send you free information on how to get one of these farms. L. B. ARNOLD, Land Agent, Rock Island Railroad, 154 Wolvin Bldg., Duluth, Minn. 7-4

For Sale—Guernsey farm, 197 acres. Accredited herd, registered cattle, few grades. Equipment included. M. Y. UMHOLTZ, Route 6, Niles, Michigan.

SILOS

New Saginaw silos, immediate delivery. 12x30; 12x28; 14x30; 10x20. Save your corn crop, get a silo at once. DELWIN UTTER, Lake Beulah, Wis. 6-2



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Single herdsman for pure-bred Guernsey herd on Wisconsin farm. All modern facilities. Splendid opportunity for right party. Reply with references. ALFRED MORAWETZ, care The Morawetz Company, Milwaukee, Wis. 26*

Testers Wanted—Experienced men for cow testing association work. Can pay as high as $125 per month and expenses. Write C. S. RHODE, University of Illinois, Urbana, Illinois. 3*

Wanted—Single men to work and feed cows on short and long time tests. Good wages paid to men of ability. Can also use a few regular barn men at from $65 to $70 per month with board. Must be good dry hand milkers. Steady employment and chances for advancement. State age and experience in first letter. WINTERTHUR FARMS, Winterthur, Del. Federal Accredited herd, 340 head. 25*

Wanted—A farm manager, first class, thoroughly experienced man. None other need apply. State experience, references and salary expected. Address BOX 289, care Hoard's Dairyman. 3*

Wanted—Young man, good milker, to help in dairy. 25 Guernsey cows. Good home to the right man. H. C. HURLEY, Rockville, Maryland. 5-3

Wanted—Experienced farmer and wife for general farm work on a 43-acre farm. Privilege of renting farm if desired. FRANK LEEB, Mt. Marion, N. Y. 5-3

Wanted—Married man to bottle milk, separate, clarify, etc., and assist in taking charge of most up-to-date dairy in Florida. Must know how to make A. R. O. records, understand feeding, and experienced in raising calves. Beautiful bungalow partly furnished, hardwood floors, hot, cold running water, electric light, tiled bath and toilets. Must not be over 45 years of age. Preference given to couple with grown son who can milk. Salary $100 month, and yearly bonus. Railroad fare, one way. Must give references. ORANGEHURST FARMS, Orlando, Fla. 5-4

Wanted—Reliable man to care for small herd of registered Guernseys. Must be good milker. Give experience, references and wages desired. THOS. L. ROSSER, Charlottesville, Va. 5-3

Wanted at once—Single man for herdsman in a Guernsey herd. KUHTZ BROS., Waukesha, Wis. 6-2

Wanted—Young married farmer to run small dairy farm. References. Must be experienced. M. E. COLLINS, 508 S. Dearborn Street, Chicago, Ill. 6-2

Wanted at once—Two good dry hand milkers and barn men, one to do four-time milking. Both to be first class men looking for a steady position with good pay and advancement. OAK DALE FARMS, Blooming Prairie, Minn. 6-2

Wanted—Middle aged married man to work in small herd of Guernseys. Would consider the profit sharing plan with the right man. A. E. WILCOX, Mauston, Wisconsin. 6-2

Wanted—Dry hand milker for registered Jersey herd. State salary expected and experience first letter. REYNOLDA FARMS, Reynolda, N. C. 6-3

Wanted—At once, several maids at Wisconsin School for the Blind, Janesville, Wis. J. T. HOOPER, Sup't. 6-3

Wanted—Testers for Cow Testing Associations in Iowa. $75.00 a month with board, room and transportation furnished. Desire men with dairy farm experience. Special training given for this work at Iowa State College. Apply to C. L. BLACKMAN, Extension Department, Ames, Iowa. 6-3

Wanted—Man for general farm work. Must be good dry milker. State wages. GUERNFALFA FARM, Peebles, Wis. 6-2

Young single man as assistant herdsman. Registered Guernseys doing A. R. work. Modern improvements. Close to good city. Steady work. Give all particulars in first letter. E. S. PERSON, Minot, N. D. 6-4

Wanted—Steady, reliable, single man for general farm work on modern Guernsey farm. Chance to learn A. R. work. State wages. C. D. GRISWOLD, West Salem, Wis. 6-2

Wanted—Barn man for Guernsey herd near Detroit. Must be good milker. Wages $70.00, board and room. Apply to James Johnstone, Supt., PEACEFUL VISTA FARM, Route 3, Redford, Mich. 6-2

Carpenter and General Farm Mechanic, wanted—Rock River Farms has a place for a steady man, married or single, who can do satisfactory work in the following lines or as many of them as possible. Plain carpentry and painting, steam boilers and plumbing, electric motors and wiring, farm machinery, repairing, including tractors and autos. State qualifications, wages expected, and furnish references in first letter. H. W. ALLYN, Byron, Ill. 6-4

Wanted—A man, experienced in making A. R. O. records, to take charge of our testing cows. UNION COLLEGE, College View, Nebr. 7-3

SEEDS

For Sale—Michigan Red Rock winter wheat. Pure and clean. Noted for hardiness, large yields, good milking qualities. $3.25 per bushel. Sacks free in orders of ten or more bushels. W. E. BISHOP, Pioneer Farm, Arcadia, Wisconsin. 5-3

For Sale—Winter Wheat, pedigreed No. 2. Yield 40 bushels per acre. Price $3.00. Bags extra, grain sacks 75 cents, gunny sacks, 10 cents. THEO LEHMANN, Route 1, Watertown, Wis. 6-2

Winter Vetch and Rosen Rye mixed ready for sowing $5.00 bushel, bags extra. Pure Winter Vetch 35c pound. DR. HAINES, Three Rivers, Mich. 6-2

Wisconsin Pedigree Rye, Rosen Rye, and Pedigree Winter Wheat. Highest yielding strains grown. NOYES RAESSLER, Beloit, Wis. 7-3

Guaranteed Seeds—High germinating alfalfa $12.00 bu.; red clover, $25.00; sweet clover, $15.00; timothy, $5.00; rye, $2.25; sugar, $18.00 cwt. Bonds accepted. MEIER SEED COMPANY, Russell, Kansas. 7-3

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

For Sale Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices.

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

FEED BAGS

We pay 14c for beet pulp bags. Proportionate prices for other sizes. Better write for price list now. LARIMER BAG COMPANY, Washington, D. C. 19-spl

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

HELP WANTED

Wanted—Single man for milk room and creamery work. State experiences and wages expected. SPRING GROVE FARM, Fort Wayne, Indiana. 6-2

Wanted—Experienced milker for test cows, Holsteins. Will pay $100 per month and $180 bonus at end of one year for single man to milk eight cows four times a day and care for same. BURR FARM, Route 2, Los Angeles, Calif. 7-2

Colorado Wants—Experienced cow testers and Advanced Registry men. State experience, references and salary. Three positions. Good salary. Address H. B. McCLUSKEY, Fieldman, State Dairy Commission, Fort Collins, Colo.

Wanted—Married man for general farm work on dairy and grain farm. Steady position. Good house. State wages and experience. C. O. McCHESNEY, West Chicago, Ill.

Wanted—Competent, reliable married man to take charge small Holstein herd. Experienced in A. R. O. work and raising pure-bred calves. A good home and good wages. State experience. H. E. DICKINSON, Oconomowoc, Wis. 7-2

Wanted—Married man for dairy barn work, one who has some help in family for milking preferred. Write stating wages and help you have. Mechanical milker used. RUSSELL MOORE, Doylestown, Wis.

Wanted—A capable married man to work on farm. Must be a good milker. Wife willing to board two extra men. Good wages. KAYEWOOD HERD, E. J. KELLEY, Manager, Walworth, Wis. 7-2

Wanted—Herdsman, married or single, for herd 100 registered Holsteins, one who can get results from cows and help. Give references and wages expected. Address BOX 346, care Hoard's Dairyman. 7-2

Wanted at once—Single man to care for herd of thirty Holsteins, pure-bred and grades. Modern barn, electric lights, milking machine, etc. Mention full particulars and wages in first letter. CLOVERCREST FARM, Amboy, Minn.

Wanted—Married man for dairy farm. Fifteen cows to milk, registered Holstein. Fine new buildings. State experience, age, weight and wages expected. JOHN PULS, Hartford, Wisconsin.

Herdsman Wanted to take charge of herd of 80 head Holstein cattle, milking 50 cows. Will have three assistants, day off every week, wages $65.00 per month with board, room and laundry. STATE SANATORIUM, Minnesota.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 6-2

Position Wanted as farm manager or superintendent of pure-bred stock farm by practical and scientific farmer in live stock breeding and feeding; college graduate; A-1 calf raiser; capable of managing men, producing certified milk, caring for and operating modern farm machinery; lifetime experience as farmer. Had charge of Government dairy and experimental work during war; married, no children; thirty-three years old; honest and industrious, with no bad habits. Best references as to ability and character. LOGAN J. RIDINGS, Augusta, Illinois.

Wanted—By a man 53 years old, steady work on a small grain or dairy farm located in the Middle West, in prairie section. I want a clean home with church privileges. Will do moderate amount of work for moderate wages. Would work next year on shares. Am single, American, Protestant. Do not use tobacco. Thirty days trial. Life experience. JUDSON EARL, Canton, Ill.

Expert farm manager, open for position October 1, who will put your farm on a paying basis. University training, wide, successful experience. Only a big proposition considered. Write BOX 344, care Hoard's Dairyman. 7-2

Position wanted by married man as farm manager. Life experience in the stock and dairy business. Scotch. Prefer farm where tractor is used. Salary $2,000 and privileges. Address BOX 342, care Hoard's Dairyman.

Wanted—Position as farm manager where big results are expected. Wide experience, University education. F. B. HYATT, 27 N. Butler, Madison, Wis. 7-3

Experienced farm hand wants position in Wisconsin or somewhere in that vicinity. First-class worker. Want a good job. References. Address BOX 343, care Hoard's Dairyman.

Wanted—By single, middle-aged man, position on sanitary dairy farm. Good dry hand milker. Life experience with general farm and dairy work. State wages you want to pay. Only place with tolerable living and working conditions considered. NELS NELSON, 64 West 10 St., St. Paul, Minn.

Wanted—Position as manager of large dairy. Thoroughly experienced in general farming, stock raising, Advanced Registry work and general care and feeding of pure-bred cattle. Agricultural college graduate. 31 years of age. Life experience in farm work. Married. Address BOX 347, care Hoard's Dairyman. 7-2

Position wanted by experienced dairyman. Butter making, pasteurizing, separating, testing, care of boiler and dairy machinery. Address BOX 345, care Hoard's Dairyman.

Skagit County Fair

HOARD'S DAIRYMAN:—Due largely to the increase in the number of Guernseys and Jerseys on exhibition, the dairy cattle show at the Skagit County Fair at Lynden, Wash., August 9 to 12, was of twice its usual size and of considerably greater merit. There were 120 head in the show, 44 Holsteins, 34 Jerseys, 27 Guernseys, and 15 Ayrshires. W. T. McDonald, live stock commissioner of British Columbia, who placed the awards, said that it was by far the best exhibit in the three years he has judged there. Thomas G. Lockhart, a Holstein breeder and one of the exhibitors, was superintendent of the cattle department and largely responsible for the big increase in the exhibits. After last fall's fair, which was held early in October, he induced the directors to move the date up to August in order to avoid the cold and rainy weather, succeeded in having the prizes doubled, both in number and amount, and put in considerable time this summer doing personal work among breeders of all kinds of dairy animals.

There were five exhibitors of Guernseys, J. M. Pratt, Vander Griend Brothers, J. M. Miller, Johnson Brothers, and A. J. Sinnes. The aged bull class in which Vander Griend Brothers' four-year-old Sir Golden Prince was placed first and was later made champion of the breed, was one of the most interesting of the entire show. The Vander Griend Brothers won five out of nine firsts, as well as champion bull and female, the latter on their two-year-old Muriel of Chicona.

There were four exhibitors of Jerseys, H. Coy, Peter Meenderinck, H. Ruley, and F. G. Partington. The two-year-old bull, Campanille's Mohican, owned by Mr. Coy, which had no competition in his class, defeated the aged bull owned by Mr. Meenderinck in the championship class, and was made champion of the breed and grand champion of the dairy show, by Judge McDonald, winning a silver cup offered by the Carnation Milk Products Company, Mr. Meenderinck's four-year-old May's Pride of Lynden was made champion female.

Competition was keener among the Holstein breeders, of whom there were more than 12, including R. E. Waugh, Van Woerden & Acheson, Youngquist Brothers, T. G. Lockhart & Sons, and Galacher & Sons. Peter Omdal, one of the younger breeders and a new exhibitor, showed four head and won, in addition to the minor prizes, first prize in the aged cow class on Allie Hengerveld, 12-year-old, the championship of the breed and grand championship of the show, with the Carnation company's silver cup for females. Youngquist Brothers' La Conner Pontiac Segis easily won first in the aged bull class, but was defeated for champion by Lockhart & Sons' Ondinus Newman Cornucopia, a well grown two-year-old.

A. H. Carvosso of Belingham showed all but one of the 15 Ayrshires on the grounds and won all the prizes except second on senior yearling bull.

Washington. G. N. ANGELL.

A Word from Georgia

HOARD'S DAIRYMAN:—Quite often when we are in town, we hear some fellow running down the dairy business in this section. They say the climate is too hot and the feed is not of the quality to produce milk to perfection. And they have forty-one complaints of things that is, and things that ain't, to make dairying a bad proposition. But don't you listen to them guys. They ain't so everlasting wise. Visit their farms and do a little fishin' and find out what their methods are. That's what I did with Mr. Parr, and I came home feeling mighty good.

He'd bought a bunch of high bred cows, also some blooded Poland sows and he let them rough it in the woods. He did not feed them any grain, expected them to live on pasture, in the main. Once a week he gave the cows a little salt. They weren't doing any better than any scrub, "And there," said he, "is just the rub. It's surely not my fault. I like the cow that can get around and make her way on what she's found. I don't like this pampered stock, you see. You take a piney woods rooter sow. She'll always raise more pigs somehow. These Polands must be held down by their pedigree."

His calves were runted. His pigs were stunted, though all were pedigreed. Their hair was rough. Their bones showed through to let you know they needed feed. The water in the dirty tank was not fresh and it was too low for the calves to reach it.

He slipped his hand through my arm. "You're some dairy crank but on MY farm you don't need to try to preach it. I've tried your pure-bred stuff and I'm sure I've had enough of it. I'm going to quit. They are twice as hard to raise and feed is so scarce these days, I can't make out on it."

I came back home and I saw here, the tank full of water, cool and clear. The cows were lying in the shade. My boy was whistling a merry tune. He'd be at the milking pretty soon. We knew our cows had paid. I saw my silo, tall and red. I saw the grain bins in the shed, I felt my bank book in my pocket. "I guess dairying's all right," I muttered. "These cranks don't know when their bread is buttered. I hate to hear them knock it."

It does take work to produce good yields and A. R. cows, but he who squeals at a little extra effort won't succeed in any business it's agreed. It's not the climate or the kind of breed. It's lack of care and lack of feed, that brings failure here. If good cows, good care, and good attention don't pay you well, I'll just mention, that I think it's mighty queer. North or South, East or West, the man and his methods are the best things for us to study. Now, ain't that so? Don't blame the business and fear to undertake it. You'll find it will be just what you make it. If you have it in you, you'll make it go.

A GEORGIA CRACKER.

Dairy For Sale

A one-half interest in the only dairy in town of 2700 people. Modern barn and a new house. Poor health and lack of help reason for selling. An unlimited market at good prices.

ORVILLE LEE & SON, SAC CITY, IOWA.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.



Farm Hands Enough

to do all the work, including the necessary "cleaning-up," may be hard to get, but here is help that more than cuts in half the time and labor needed to first whitewash and then disinfect. It's a better-than-whitewash paint and disinfectant combined, put on in one easy operation instead of two, and with better results.

CARBOLA
The Disinfecting White Paint

is a white paint in powder form combined with a disinfectant neither poisonous nor caustic, but many times stronger than pure carbolic acid. It is turned into smooth-spreading liquid paint simply by mixing with water—no waiting or straining. Can be applied to wood, brick, stone or cement, or over whitewash with a brush or spray pump. It will not clog the sprayer, or blister, flake or peel off. One gallon—one pound of the powder—covers 200 square feet. Mixed today and applied whenever convenient—on a rainy day.

Carbola kills lice, mites, fly-eggs, etc., and helps prevent the germs of contagious diseases—roup, canker, mange, glanders, white diarrhea, contagious abortion, etc.—from getting a start and spreading through flocks and herds. It is harmless to the smallest chick or stock that licks a painted surface. It makes it easier to do work that must be done and it works day and night—a constant protection for your profits.

Use It Instead of Whitewash and Disinfectants

to paint health and sunshine into the dark corners of poultry houses, stables, pig pens, cellars, garages, warehouses, factories, out-buildings, etc. Used regularly by Experiment Stations, Agricultural Colleges, and by thousands of poultry, dairy and breeding farms, because it gives good results and saves time, labor and money. Get some today—have it on hand when wanted. It doesn't spoil.

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DON'T risk losing a valuable animal. A Pilling "Easy-to-Use" Cattle Case will equip you to relieve promptly milk fever, bloat and other cattle troubles. One animal saved will repay you many times. Prepare *now* for emergencies.

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Lump Jaw

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Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis

HIGH SCHOOL GRADUATES

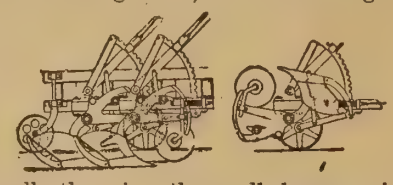
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INDIANA VETERINARY COLLEGE
816 E. Market Street Indianapolis, Indiana

Inventions and Appliances of Interest to Agriculture

Plow

The plows here are not raised and lowered in the ordinary way, but when the tractor driver pulls a wire to release the stop, the plows roll up out of the ground; and when he again

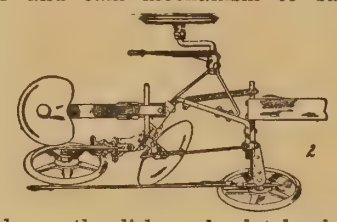


pulls the wire, they roll down again. The plows are up at the right of the figure and down at the left.

(International Harvester Co., Chicago, Ill. U. S. Patent 1,319,483.)

Single Disk Plow

This invention relates to a single disk plow supported by a land wheel, a front wheel, and a rear trailing furrow wheel. The latter wheel has a lever and cam mechanism to raise

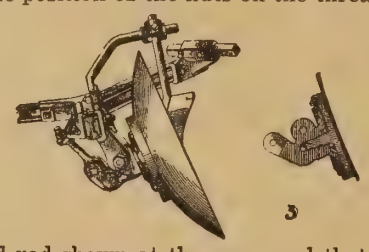


and lower the disk, and a latch which limits its lateral motion to keep the plow in line.

(Moline Plow Co., Moline, Ill. U. S. Patent 1,318,978.)

Disk Adjustment

The special features of the disk shown here are: that it can be set at different angles quickly by changing the position of the nuts on the thread-

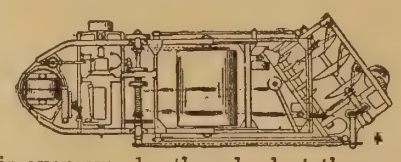


ed rod shown at the rear; and that it rotates with little friction on ball bearings.

(B. F. Avery & Sons, Louisville, Ky. U. S. Patent 1,311,773.)

Agricultural Machine

This machine consists of disks drawn by a tractor and rotated by power from the tractor. The front disks turn the upper soil and the rear disks, the deep soil; the side thrust

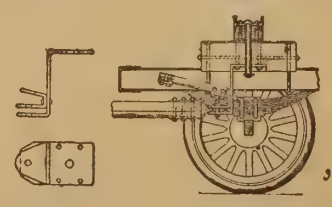


is overcome by the wheel at the rear of the disk frame.

(Cleveland Tractor Co., Cleveland, Ohio. U. S. Patent 1,316,990.)

Trailer Hitch

It is undesirable to connect a trailer to the rear axle of a truck because it may pull the axle out of line; it is desirable, however, to connect the trailer at the level of the axle. The Z shaped hitch shown here meets both requirements; it is bolted above to the bunk base of the truck and is braced



at the sides by bars bolted to the frame.

(Pacific Car & Foundry Co., Seattle, Wash. U. S. Patent 1,322,112.)

Canada. C. J. LYNDE.

When Cows Freshen

They may ABORT; may RETAIN the AFTER-BIRTH; May FAIL TO BREED

Hood Farm Antiseptic Breeding Powder is the best remedy for these troubles.

The best cows frequently have **Milk Fever.** Hood Farm Milk Fever Outfit never fails to cure milk fever.

All cows are subject to **Garget.** Hood Farm Garget Remedy will save the udder and the cow.

Calves may have **Infectious Diarrhoea** or White Scours soon after birth. **Jermkil** kills the germ before the germ kills the calf.

Calves often have **Scours** caused by indigestion. Hood Farm Calf Scour Remedy, and Digestive Powder will save the calves.

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To have the above named Remedies on hand. Order today before your cows begin to freshen.

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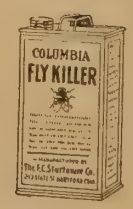
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She has been dehorned with a KEYSTONE DEHORNER, making her gentler, safer and more profitable. This also applies to steers. We make Keystone Dehorners, Bull Staffs, and other appliances for dairymen and cattlemen—all sold on a money back guarantee. Write for circular.

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Columbia Fly Killer

kills every fly it strikes, also destroys lice on animals and poultry. If your dealer won't supply you send direct. Sent prepaid on receipt of price. ½ gal., 90c; 1 gal., $1.50; 5 gals., $6. Salesmen and agents wanted.

F. C. Sturtevant Co., Hartford, Conn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

A Year 'round Feed *for* A Year 'round Yield *and* A Year 'round Profit



Dairy cows fed International Special Dairy Feed never weary of well doing. From the time the pasture is green and luxuriant until it shrivels and declines; when the grain is in the granary and the corn is in the silo—and later when the grip of winter makes milk production depend to a *greater* degree upon your judgment in feeding, International Special Dairy Feed keeps your herd in better condition, makes *more milk*, and delivers *greater profits* to you.

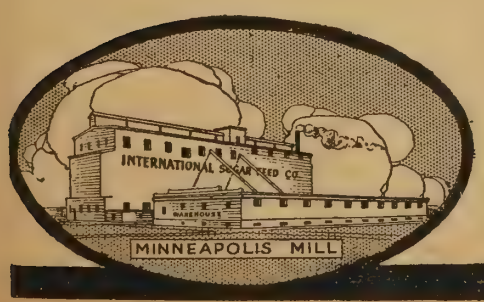
International Special Dairy Feed

Stabilizes Milk Production

There is no good reason why milk production should drop when cows are taken off grass. Balance up the usual roughage with a proper ration of International Special Dairy Feed and production will remain at its height. Cows that have been fed International Special through the summer months will have little tendency to "fall off." They have been built up in body even while their milk making mechanism has has been fed to capacity. Milk production has been *stabilized.*

International Special Dairy Feed is a year 'round feed. It is a scientific blend of carefully selected materials. It is *guaranteed* to increase milk flows. This guarantee is backed by a responsible organization composed of men who know feeds and feeding. Actual results have been back of International Feeds for years. When you begin feeding International Special Dairy Feed you begin to accept bigger milk returns. You may be sure of that.

Order a trial ton today. Feed it. Watch results. If your dealer hasn't International write us. We'll see that you are supplied.



International Sugar Feed Co.

MINNEAPOLIS MINNESOTA

Mills at Minneapolis and Memphis

Live Agents Wanted



Why Build a Silo?

Not only will the silo save 40 per cent of the corn crop from waste and deterioration, but it puts it in better condition for feeding purposes. One acre of corn preserved in the form of silage has a feeding value equivalent to that of 1½ to 2 acres preserved in the form of shock corn. In seasons where the grain fails to develop the ratio in favor of silage may run as high as one to five.

Silage has no equal in reducing feed costs. During the last few years all feeding tests with beef and dairy cattle have shown that where silage is used as a major portion of the ration, beef and milk are produced most cheaply. During the winter of 1917—1918, the Kansas Experiment Station fed one lot of baby beeves corn, linseed meal, and alfalfa hay. Another lot was fed corn, linseed meal, alfalfa hay, and silage. In the latter lot the cost of gains was $1.20 a hundred cheaper than in the former and it sold on the market at 25c a hundred more.

During the last ten years, due largely to the expense of winter maintenance of the cow herd, the number of beef cattle on Kansas farms has decreased 50 per cent. In view of this fact it is significant that the Kansas Experiment Station kept mature cows in good breeding condition during the winter of 1917—1918 on a ration chiefly of silage and wheat straw at a cost of five cents a day.

The dairyman has used silage longer than the cattle feeder though it is equally valuable for both. In a report of the cow testing associations of Minnesota covering records of 5,500 cows it is shown that the cows receiving silage produced 1,275 pounds more milk per cow and 51 pounds more butterfat than did those not fed silage.

In a farm management contest conducted by the Wisconsin Agricultural College records of the business were secured on 531 average farms for two successive years. The 390 farms which had silos made an average net profit of $875.00 per farm, while the 141 without silos made an average net profit of $535.00 per farm per year. It is pointed out that the difference, or $340.00 per farm, is enough to pay for a good silo once a year.

Silage alone is not a balanced ration. For the best results it should be supplemented with a small amount of clover, alfalfa, cowpea hay, or linseed or cottonseed meal. This is particularly important in the case of calves and young stock. Silage and alfalfa hay make the cheapest ration obtainable for feeding a dairy cow. One giving less than a gallon and a half of milk daily needs nothing else.

The general advantages of the silo and silage may be summarized as follows:

1. The silo reduces the amount of labor required to feed live stock during the winter, also in preparing the ground for next year's crop.
2. More live stock may be carried on a given acreage when crops are fed in the form of silage.
3. Silage insures the utilization of practically the whole corn or sorghum plant. Feeding in any other forms results in the loss of from 20 to 40 per cent of the plant.
4. The silo is an economical means of storing feed. A cubic foot of hay contains approximately four pounds of dry matter while a cubic foot of silage contains 10 pounds.
5. The silo preserves the succulence of the plant ensiled and this has a beneficial effect upon the digestive organs.
6. The silo preserves the palatability of the plant ensiled and the animal will consume more roughage than when fed in any other form thus resulting in a saving of other feeds.
7. The use of silage lessens the costs and adds finish in fattening cattle.
8. Silage insures a succulent feed for any season of the year.
9. Silage eliminates the bother of cornstalks in handling manure.
10. Manure is more easily preserved and less plant food is lost when crops are fed in the form of silage.—Kansas College of Agriculture.

Hog Cholera Serum

Arrangements have been made whereby the Veterinary Department of the Wisconsin College of Agriculture, Madison, can supply double-tested hog cholera serum and virus at the very low price of one cent per cubic centimeter (c. c.). According to the law any farmer of Wisconsin may secure the serum, but only a legally qualified veterinarian is permitted to use the virus.

With prospects for a substantial advance in the price of hogs by fall, it takes no argument to convince the owner of swine, especially in neighborhoods where hog cholera threatens, that he cannot afford to take the risk with his pigs, but should insure them by vaccinating with reliable hog cholera serum.—Wisconsin College of Agriculture.

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REGISTERED DUROC-JERSEYS

We are offering **For Sale** until **October 1st,** Spring **Duroc Gilts** and **Boars,** a number of Fall gilts and a number of brood sows including sows from **King Orion** and boars and gilts from **Crimson Orion Cherry King 2nd.** No better **Duroc** blood to be obtained. We will book orders now for pigs that will be farrowed in August. Satisfaction guaranteed on our **Durocs.**

EDGEWATER STOCK FARM, Ft. Atkinson, Wis.



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when you can see our DUROCS on your own farm before you pay. Everything in the Duroc line. Write for Catalog and price-list.

We deliver the Hogs, before you pay.
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BOX 6. LOUISVILLE, ILLINOIS

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

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Jerseys

A few cows. Also nice bulls from 6 months to 3 years old. Making special price.

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N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Cedar Crest Farms

JERSEYS

We have a few young cows and heifers for sale. Write for particulars.

J. K. Dering, Lake Villa, Ill.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons. Waupaca, Wis.

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.
Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.
Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.
Price, $150 f. o. b. cars our station.

Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

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Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th o: Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butterf Granddaughter Jacoba Irene, young stock; St. Lamber breeding for sale. **R. C. Green & Son, Albion, Wis.**

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.
Address: **J. Q. Emery & Son, Edgerton, Wis.**

MERIDALE JERSEYS

ANNUAL SALE

September 17, 1920

The sale list includes seventy head—about half of which were bred at Meridale Farms; the other half were imported. Progeny of every one of the famous herd sires at Meridale Farms is listed in the offering.

Jap blood is strongly represented. One of The Japs Gold Medal Daughters will be sold—Japs Mertha Lass 329714, with a yearly record of 15326 lbs. milk, 945 lbs. butter. A son of The Jap is likewise included.

After thirty-one years of constructive breedings, we feel very confident that the cattle thus offered will please the thoughtful buyer who demands correct type, robust health, and heavy production.

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Tom Dempsey, Sale Manager Westerville, Ohio

— OR —

AYER & McKINNEY

MERIDALE FARMS, Meridale, New York



"A good bull is more than half the herd. A scrub bull is mighty near all of it."
Start right - put an AYRSHIRE BULL at the head of your herd
No class of cow is in as great a demand to day as a GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS' last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right - put an AYRSHIRE BULL at the head of your herd





Willowmoor Miss Carston

Ravinia Ayrshires

Are the

All-Year Milking Sort

Almost any dairy cow will milk well on good pasture in spring and early summer; but the kind that pays your grocery bills and helps buy the things you want is the cow that keeps right on all through the year, especially in the winter when butterfat is high.

Our Ayrshires, led by Lily of Willowmoor, hold the world's record for the breed for two, three, four, and five consecutive years in both milk and butter production.
Write us for prices on bred cows and bull or heifer calves.

Ask, too, for "Why I Chose the Ayrshire".

GOSSARD BREEDING ESTATES
Preston, Kans. Martinsville, Ind. Axial, Colo.
Address all correspondence to General Offices, 1007 So. Michigan Ave., Chicago

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 — Rena's Champion No. 11816; 17 A. R. daughters incl. Henderson's Dairy Gem; Addington Queen 3d No. 29558; Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.



LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan
Sons of
Ringmaster's Brae Burn Diplomat
For Sale

GEORGE F. WHITE, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.

Middlesex Meadows Ayrshires

No matron stays in the herd that does not make an A. R. record of 10,000 lbs. or better. Most of them have records far exceeding this standard. Their bull calves by our herd sires are for sale.

A. Henry Higginson

SOUTH LINCOLN, MASS.



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

New York Dairy News

More Herds at State Fair:—Commissioner Fitts is enthusiastic about the way in which county organizations are preparing to send county dairy herds to compete for the total of $1,600 in prizes offered. He says that almost twice as many herds as competing last year are entered. It is believed that Holstein county exhibits will be especially strong, due to the interest which has been awakened by special prizes amounting to $850, and the Guernsey county herd entries will not be far behind.

Dairy Improvement Handicapped:—Many cow testing associations in this state that badly want the service will be unable to get it this year on account of the great scarcity of testers. In Cortland County alone six calls for cow testing associations are unfilled because licensed testers cannot be located. Association members that have been able to secure testers are well satisfied with the results.

Investigating Raise in Milk Price:—The federal grand jury which will re-convene in Jamestown the first of the week will be presented with evidence received in the investigation into the recent boost in the price of milk made by dairy companies, Assistant Federal Attorney John T. Walsh announced in Buffalo, Saturday. The investigation followed a raise of 1 cent a quart for milk by dairymen in western New York Aug. 1st.

Cheese Higher in Watertown:—Cheese prices advanced one-half cent over last week's quotation on the Watertown produce exchange, Saturday, going to 24½ cents. The market was steady with sales totaling 6,460 boxes. The local price was below the New York market, where from 25 to 26 cents prevailed.

New York. E. M. L. BLANCHER.

Foot Rot

Tell us where we can secure the best information with regard to treating hoof rot. There seems to be quite a little of it in this vicinity this year.

Bethel, Wis. R. W. C.

The following information relative to the treatment of foot rot is that given by the United States Department of Agriculture:

"In the earlier stages of the disease, before pus burrows beneath the horn, a thorough cleansing and an application of a carbolic acid solution—1 ounce to a pint of water—clean stabling, and laxative feed will usually remedy the evil. Cresol compound is an excellent remedy at this stage. It should be applied, in its pure or undiluted state, to the suppurating and putrefying tissue between the claws. It is best applied by means of a cotton swab on a thin stick. Care must be taken to keep it from contact with the skin about the coronary band or heels. If deep sloughing has taken place the carbolic solution should be used, and a wad of oakum or cotton smeared with pine tar should be secured firmly in the cleft. This can be done by taking a strip of strong cloth, 2 inches wide, passing the middle between the claws, then tying the ends after winding them in opposite directions above the hoof. Sometimes warm poulticing with flaxseed or bran is necessary to relieve excessive fever and pain. If the pus burrows under the horn, its channel must be followed by paring away the horn until the bottom is reached.

When writing advertisers please mention Hoard's Dairyman.

RED POLLED

August 11th

Public Sale

August 11th

We are offering at public sale August 11th at 10 A. M. at the Jean Du Luth Farm, Duluth, 80 of our best Red Polls. We doubt if a better string of milking Red Polls was ever offered at public sale in any herd. We are selling our senior herd bulls, also heifers and young bulls by them. Don't forget the date. Send for catalog.

Jean Du Luth Farms, Duluth, Minnesota.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

GUERNSEYS

Guernsey Calves For Sale

BULL CALF—SEVEN MONTHS OLD

Sired by Mixter King, a royally bred bull who is a grandson of Dolly Dimples' May King of Langwater; through the proven sire Langwater Demonstrator. Dolly Dimples' May King of Langwater is the sire of Langwater Nancy, who sold for $7,500 and who is the dam of Florham Leader, who sold for $25,000.

BULL CALF—FOUR MONTHS OLD

Sired by our senior herd sire, Imp. Gracey's Prize King. Our herd sire is a regular show bull, who is by Governor's King's Prize, by Governor of the Vanquidor, by Governor of the Chene, one of the greatest bulls of the breed. He is out of Imp. Gracey of the Padins, now owned by J. L. Austin, Newtown Square, on test at the present time, and making a good record. This bull calf is out of Imp. Godetta of Padins de Bas II, who in turn was sired by Polly's Pride, who took the King's Prize in 1915, who in turn was sired by Billy's France II, by Billy's France I. This calf has good conformation.

Both the above calves are of the best of Guernsey breeding, and any breeder will not make a mistake in adding this blood to his herd. We will furnish full pedigrees to anyone interested.

EAGLES MERE FARMS CO.
Farms at: MUNCY VALLEY
Office at: 236 ARCH ST., SUNBURY, Pa.

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137
Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Guernsey Bulls

May Rose on both sides. Dams in A.R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559,* pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398,* whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $600. Write for particulars.

Meadowland Farms, Litchfield, Conn.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

CLELAND FARMS GUERNSEYS

We always have a few good females in both bred heifers and cows in milk to offer.

At this time we can offer two choicely Golden Secret bred bulls most ready for service.

CLELAND FARMS, Chagrin Falls, O.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredite' Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd. August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Timonium Pure-bred Live Stock Exchange

Will Hold a Sale Thursday, Sept. 23 at Timonium, Md., at 11 A. M.

The Sale will be held in the Sale Pavilion, which is very comfortable.

Train leaves Union Station, Baltimore at 10:14. 30 minutes from Baltimore by train; 25 minutes by auto.

The Guernsey Breeders of Maryland will meet at the Hotel Emerson, Baltimore, Wednesday evening, Sept. 22d at 7 o'clock.

Dutch Treat Supper. Everyone welcome.

There will be offered 51 high class females and four young bulls.

The bulls are of the highest class from extra good dams and proven sires. One is a son of Langwater Warrior, senior sire at Langwater Farms.

The Females are as high class a collection as have been offered at Auction. They include daughters of such sires as, Ne Plus Ultra, King of Chilmark, Lavernas Ultra May King, Langwater Raritan, Langwater Peerless, Langwater Royal 2d, Uncle Jim, Rutila's Patient King, Ladysmith's Cherub, May King's Vrangue of Ingleside, Irene's King of the May, Meadowlea, etc.

On the dam's side the breeding is equally good, sisters to such noted cows as Prospect Rose des Huoards and Queen Celia being listed.

The daughter of Ne Plus Ultra is out of a Langwater Peerless dam; second dam by Gov. of the Chene; third dam the famous foundation cow Butter Queen. This wonderfully bred young heifer will be bred before Sale day to Herdlea Sensation, the last son of Follyland Nancy. The resulting calf will have an unequalled pedigree from every standpoint.

For catalogue write

Louis McL. Merryman, Cockeysville, Md.



Economy in Production ← GUERNSEYS → Quality of Products



Seven trophies, 16 placques, and $4,000 in prize money will be awarded by The American Guernsey Cattle Club at 1920 Fairs and Dairy Shows. Several thousand dollars are expended annually in other ways to acquaint the public with the merits of Guernsey cows and their products. Send for our free literature.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 78, PETERBORO, N. H.

A Son of Anton's King Confidence Ready For Fall Service

His dam is Gretchen of Prospect, now on A. R. test and doing nicely.

Anton's King Confidence, his sire, is a splendid individual bull that is siring some excellent sons and daughters. He traces six times to May Rose 2d and his dam, Ma Chere Confidence, recently finished in Class C has a record of 764.65 lbs. fat.



Anton's King Confidence 43517

This youngster we are offering is well grown, well marked and as straight as you could wish.

We also have a few other good sons of Anton's King Confidence for sale. Write for further information.

Hoard's Dairyman Farm, - Fort Atkinson, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.

Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN.

The New York State Guernsey Breeders' Association

— WILL HOLD THEIR —

SECOND ANNUAL SALE

at Fernbrook Farm, Menands Road, Albany, New York

(Kindly placed at the disposal of the Association by Hon. Henry M. Sage.)

Saturday, September 18th, 1920

Sixty head of carefully selected Guernseys will be offered, representing the best individuals and most fashionable blood from New York's most constructive breeders, including a number of cows with Advanced Registry records and others now on test, making a collection of cattle which will give a splendid opportunity to those about to start a Guernsey herd to get the best blood of the breed and the finest individuals at their own price.

SALE COMMITTEE

C. L. A. WHITNEY, ALBANY, N. Y. GEO. M. WHITE, FREEHOLD, N. Y. C. H. HECHLER, ROSLYN, N. Y. RAY H. ALEXANDER, UNION SPRING, N. Y.

FOR CATALOGUE ADDRESS:

LEANDER F. HERRICK, Sale Manager
405 Main Street, - - WORCESTER, MASS.

LONE TREE FARM

GREEN LAKE, WIS.

Has in its Herd 15 A. R. Guernseys and 11 R. of M. Jerseys
And Carries About 16 Cows on Test.

To inquiries for BULL CALVES we give full, honest particulars and stand behind every animal sold.
Jersey Sire—A Son of Pogis 99th. Guernsey Sire, Langwater Islander.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 860 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.

Send for sale list.

M. L. Welles, Rosendale, Wis.

Upland Farms Guernseys



THE GET OF LANGWATER CAVALIER NO. 21012

Langwater Cavalier is *Breeding On* in a remarkable way. His Granddaughters as well as his daughters are proving that he is a sire of sires.

Can you afford to overlook this point in selecting your *Herd Sire?* Write us for particulars about bulls that will *sire show winners* and *producers.*

F. P. FRAZIER & SON, Owners. W. K. Hepburn, Mgr. Ipswich, Mass.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

The Mixter Farm

325 GUERNSEYS 325

Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.

HARDWICK, MASSACHUSETTS.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right. and animals guaranteed to suit. W. A. Cloues, Mgr.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association
Appleton, Wis.

Dairy Cattle Congress

The new epoch in dairying begun during the past year makes the eleventh annual Dairy Cattle Congress of increased importance to the wonderful industry it represents. The revelations of the food value of dairy products and their vital relationship to the future citizenship of the nation are important factors bringing in the new era. The discoveries of Dr. E. V. McCollum and his associates are as startling to dairymen as to the general public and have been a means of starting a unification of all branches of the industry.

Economic conditions resulting from the war have brought pure-bred dairy cattle into their true place. The management of the Congress have this fact in mind in planning the 1920 exhibition. Mississippi Valley farmers realize the necessity of permanent agriculture and are in the market for all breeds of dairy cattle. The exhibitor at the Congress, therefore, not only has an opportunity to compete for the liberal prizes offered, but comes in direct contact with the buyers of the Middle West.

The dairy products exhibit will be of more than usual interest. It will be conducted by the Iowa State Dairy Association. An important part of the 1920 Congress is the exhibit of dairy farm and barn equipment. Machinery Hall contains 24,000 square feet of exhibit space, while the total floor space for this exhibit on the grounds is 62,000. Indications are that every foot of this space will be taken. The showing of milking machines will be larger than in 1919, as will the exhibits of many other dairy farm and barn equipments.

Iowa. J. P. EVES.

When writing advertisers please mention Hoard's Dairyman.

BROWN SWISS



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.

IRA INMAN, Secretary Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.

Undefeated Show Bull

for sale. Because of sickness it is impossible for us to show this year and we are offering Gallatin Brownie for sale. He was undefeated at 4 state fairs, Waterloo and the National in 1919. Grand champion at the National. Now 3 years old and in even better show form. His dam is on official test and going strong.

We also have several very promising yearlings and bull calves, good show prospects.

HULL BROS., - PAINESVILLE, OHIO

Pure-bred Brown Swiss

cattle for sale, consisting of

5 cows, 4 years old. 3 yearling heifers.
1 1-month-old heifer. 2 6-months-old bulls.
1 9-month-old bull. 1 1-year-old bull.

Will sell reasonable at a quick sale.

GEO. SCHUNK, R. R. 1. STANLEY, WIS.

HOLSTEINS

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*
At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*
2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

I Want a Heifer

Pure-bred Holstein

2 years or less, backed by type and production.

John P. Algie, - Como, Montana

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.

Long Distance Phone 389.

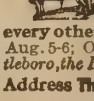
DUETT ROBINSON, R. 3, Capron Ill.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month,** Feb. 4-5; Apr. 1-2; June 3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America*

Address The Purebred Live Stock Sales Company.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed ' have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Bulls—Ready for Service

Sired by a son of former world record cow and out of A. R. O. daughters of Homestead Jr. De Kol 2d.

Their sire is a grandson of King Segis De Kol Korndyke out of Finderne Pontiac Netherland. a world record jr. 2-year-old, 28.26 lbs. butter in 7 days, 10.72 lbs. in 30 days, (31 lbs. at full age on three quarters). These youngsters are priced to sell,—$200 to $500. Write

Wm. Millar, Jr., R. 2, Menominee, Wis.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Cedar Lawn Farms

Headed by General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct lescendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

HOLSTEINS AND GUERNSEYS



Why not buy your cattle from a reliable firm established in the cattle and dairy business for twenty-five years? We can fill your order for any number, pure-bred or high grade, any age desired from four weeks up. Give us your mail order to insure satisfaction.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. S. A. BAIRD & SON, WAUKESHA, WIS.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

"BIG ROCK COUNTY FAIR"

Annual Holstein Sale and Cattle Show

EVANSVILLE, WISCONSIN

Friday, Sept. 10, 1920

50 Registered Holsteins 50

Consigned by 16 Different Breeders

These animals have been selected for their outstanding individuality and breeding, to represent the breeders of this community. Write

BENJ. T. GREEN, Manager

MACK, Auctioneer. **L. P. EAGER, Cashier**
F. B. GREEN in the Box

"QUALITY THRU CO-OPERATION"

Two Pounds More Milk Per Cow A Day — With a Pure-Bred Sire

A daughter of your cow when sired by a pure-bred bull should average at least two pounds more milk per day than the dam.

And we offer several well bred Holstein sires which will carry some of the most productive blood into your herd.

Here is one — Matador Segis Walker Hartog, E. T. No. 1061. Born 4/27/19, a son of Matador Segis Walker who has 28 A. R. O. daughters. 25 average twenty pounds of butter from 400 lbs. of milk at two years of age and 3 average 30.3 pounds butter from 531.20 pounds milk at 3 years of age.

His dam, Hazelwood Aaggie Hartog has a record of 24.95 pounds of butter from 495.5 pounds of milk in 7 days. She is one of the foundation cows in our herd and is a beautifully marked show type animal.

The youngster is nine-tenths white, well marked and is ready for service. Can be seen at Oconomowoc, Wis. Price $750.00.

Write for photograph and Special Pedigree of this bull.

GUARANTEE: All animals shipped as represented or money returned.

Eastern Office:
911 Consumers Bldg.,
Chicago, Ill.

Western Office:
911 Stuart Bldg.,
Seattle, Wash.

Carnation Stock Farms

FARMS
Washington Farm,
Near Seattle, Wash.
Eastern Farm,
Oconomowoc, Wis.

2500 Healthy Holsteins 2500

Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.
Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.
Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.
OTTO F. BRANDT, - HORICON, WIS.

PABST KORNDYKE SEGIS
a son of Korndyke Segis Johanna heads my herd. His dam, Pabst Citronella, made 669.4 lbs. butter, 16,867.8 lbs. milk in 1 year as a 2-yr.-old, 26.285 lbs. butter in 7 days as a 4-year-old.
HERMAN LUEBKE, R. 8, WATERTOWN, WIS.

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 8-month-old. Homestead Jr. De Kol breeding. Write at once.
W. E. BUSSEWITZ, - JUNEAU, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.
O. E. SETTE, - - - JUNEAU, WIS.

7-MONTH-OLD BULL—$150.
Marked more white than black. 27-lb. sire. Dam a 1700-lb. cow. Will be tested when she freshens in January. Rich in Homestead Breeding. Herd tuberculin tested annually. Check or bond takes him. **Chic Dairy Farm, - - Juneau, Wis.**

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.
150 head in the herd—tested annually.
HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.
S. L. De Smidt, Manager. - - - - - - - Burnett, Wisconsin.

BUY A BULL



That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.

W. J. Gillett & Sons, Rosendale, Wis.

Head Your Herd With a Bull!

Get a son of King Superba out of one of our good cows. King Superba's offspring won first and second in get-of-sire and calf herd at the Wisconsin State Fair, 1918. His four daughters sold in the Waukesha Sale, Nov. 1919, averaged $959. King Superba's dam was the first cow to be strictly officially tested for the entire year. She produced 1231 lbs. butter, 26,433 lbs. milk as a four-year-old. She has twice produced over 33 lbs. butter in 7 days. If you wish to combine individuality and production, head your herd with a Son of King Superba. We now offer a number of his choice sons, serviceable age and younger, out of dams with records up to 24 lbs. Several of the dams are on yearly test. Don't wait. Come and see them now. **BAIRD BROTHERS, WAUKESHA, WISCONSIN.**



One of the sons of King Superba. They are all excellent individuals.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.
J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.
JOHN PULS, - HARTFORD, WISCONSIN

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.
F. H. HEMBROOK | Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address
C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write
Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.
Walcowis Farms, Lake Geneva, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9, 1920

Oconomowoc, Waukesha Co., Wis.

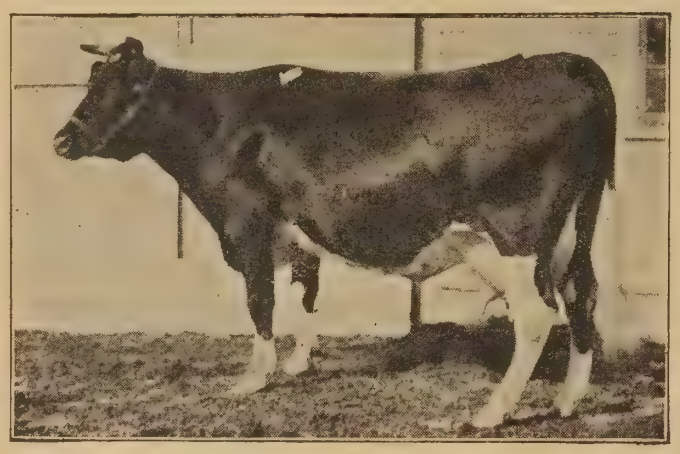
Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

A Son of this Cow for Sale

Born December 25, 1919



GLEN CANARY ORMSBY MERCEDES

Butter 365 days at 5 yrs.	722.60
Butter 7 days	27.94
Butter 365 days at 2 yrs.	550.86
Butter 7 days	20.71

She is a full sister to Glen Canary De Kol 2d, the junior four-year-old that last year made 1,323 lbs. butter for the year. She is sired by Sir Pietertje Ormsby Mercedes, the greatest sire of yearly producers and show ring winners in the world. Her dam is Glen Canary De Kol, former world's champion with 34.59 lbs. butter in 7 days and 139 lbs. in 30 days. She is by Sir Johanna Canary De Kol and from the grand champion, Glen De Kol Artis 3d, a daughter of Homestead Jr. De Kol.

THE SIRE OF THE CALF

is Uneeda King Alcartra. He is from a 33-lb. daughter of Johanna McKinley Segis, the only 40-lb. son of King Segis. His sire is the $50,000 bull, King Segis Pontiac Alcartra, a son of King Segis Pontiac and from a world's record daughter of King of the Pontiacs.

Price on this Calf is $1000.00

E. C. SCHROEDER FARMS,

Moorhead *(A Federal Accredited Herd)* **Minnesota.**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

FOR SALE

8 Registered H. F. Cows

your pick out of 16, all priced. Granddaughters of King Korndyke Colantha Ormsby. No sire has more World's Champion blood close up in his pedigree than Wisconsin Fobes, a 26-lb. cow. 3 bull calves from 4 to 7 months old. Sired by a 20-lb. grandson of Miss Korndyke Maid Ormsby. Price $75, $100 and $150. Cows bred to Grandson of Sir P. O. M. Age 2 to 8 years.

WM. SAARI, R. 1, Phone 316, Finlayson, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

King Segis Pontiac Fayne Star

is "The best individual King Segis Pontiac Count ever sired". His dam is Johanna Fayne Star, 32 lbs. in 7 days, 941 for the year. She is the highest record daughter of Sir Johanna Fayne. His sons are good enough to head any herd. Do you want that bull list now or later?

FLECKS FARMS - Faribault, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm

William Schmidt, Prop. St. Peter, Minn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

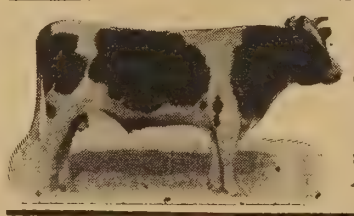
E. J. OPPLIGER, Box 20, Forest Lake, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - - E. GRAND FORKS, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

When You Buy A Herd Sire
Think First Of
King Pietertje Ormsby Piebe
Recognized As One Of
The Greatest of Present Day Sires.

We Have For Sale
A Very Few Of His Sons
From Well Bred Cows
With Good 7-day and Year Records.

Hargrove & Arnold Holstein Co., Norwalk, Iowa.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind —and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **C. I. Reamer, North Liberty, Ind.**

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

365-Day Milk Production

STILL ANOTHER ONE

Grandson of Sir Pietertje Ormsby Mercedes 44th out of a granddaughter of Lord Homestead Netherland De Kol, born Jan. 4, 1920.

Handsome calf beautifully colored, more white than black, well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within reach of the farmer or small breeder.

CERRO GORDO FARMS, - Mason City, Iowa.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. **Otto Brandenburg, Mgr.**

"IT IS OUR AIM TO PRODUCE FOR THE PROGRESSIVE DAIRYMEN WHO DESIRE HIGH MILK PRODUCTION WITH A HIGH AVERAGE BUTTER-FAT AND STURDY INDIVIDUALITY AT REASONABLE PRICES"

WHEATFIELD FARMS

"Four Aces and a King"

AT THE HOME OF THE WORLD RECORD TWINS, TWO-YEAR JR. We are offering FOUR 30-LB. CANDIDATES of serviceable age by KING MODEL, KING BURKE OF THE PONTIACS, JOH SEGIS AND BLOOD ROYAL

out of 22- to 30-lb. dams b. f.

Also a number of promising YOUNGSTERS, less than a year old, by our Senior Herd Sire:

ORMSBY JANE KING

By: AAGGIE CORNUCOPIA JOHANNA LAD, The Great Show Bull, and ORMSBY JANE SEGIS, The Famous 46.33-lb. cow.

Write for pedigree and prices and if you are in line to breed

TYPE, INDIVIDUALITY AND PRODUCTION

into your herd, we have very interesting news for you.

WHEATFIELD FARMS

J. C. Dold, Owner. **R. F. D. No. 14, LA SALLE, N. Y.**

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

M&P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.



Facts in BLACK & WHITE

Four Thousand Five Hundred Quarts of Milk per Year

The big-yield cow is the only cow that will ever make dairying profitable in the United States. The dairy farmers of Holland have blazed the way to a successful national dairy industry with their Holstein-Friesian cows that average between 9,000 and 10 000 lbs. of milk per year.

Imagine our cows averaging 4,500 quarts! Our farmers would then be able to make the finest, best and cheapest milk on earth, just as the Hollanders do now, and prosperity would abound, for every quart would mean profit.

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

October 5, 1920 October 5, 1920

HALL BROS.

— A Dissolution and Dispersion Sale of —

150 Head of Registered Holstein-Friesian Cows, Heifers and Bulls

at their Western Holstein Farm, 5½ Miles Southwest of Denver
On the Morrison Road

After twenty-three years of agreeable partnership of the brothers —Carlos W. and Storrs H. Hall, by their mutual agreement they have decided to close their partnership in this very successful business, and are offering at public sale one of the great herds of the day.

The foundation blood upon which this herd was established was of the best of the breed, and under the guidance of the Hall Bros. has increased in quality, and is today recognized from coast to coast as one of the great herds of America, and its breeding is the standard of excellence in the nation's greatest live stock exhibitions and sales, and in official testing.

The herd is composed entirely of animals of correct conformation and great milk and butter-yielding qualities. The herd is healthy and high class in every way. It was established with the view in mind of creating a herd of this breed in Colorado to supply foundation stock of this breed to the fast-growing dairy interests of the Rocky Mountain States. The Hall Bros. are, in live stock circles, well known men and highly respected. After years of successful operation in the dairy interests of Denver, the Western Holstein Farm and its herd of registered Holstein cattle, the owners believe a lightening up of their responsibilities of their large business should be observed, and hence this sale.

Just once in a great while does an apportunity present itself to buy your own selection of real foundation breeding blood of any blood of the various breeds, at your own price, and you should, those who are interested in this great breed, avail yourself of this great opportunity. *Remember the date, Tuesday, October 5, 1920.*

HALL BROS., Prop., WESTERN HOLSTEIN FARM
DENVER, COLO., South Denver Station

Catalogs ready September 1, 1920. Sale at the Farm.

COL. G. M. BANKS, Auctioneer, 709 E. 11th Ave., DENVER, COLO.

Two Days' Dispersal Sale

— OF —

Registered Holstein Cattle

At Fishers, Ind., Sept. 13 and 14

Three good herds, 100 head fancy bred cows, heifers and bulls, including the wonderful herd sire, Hengerveld De Kol Colantha 2nd, a 36-lb. bull; about 50 cows in milk; a number of good record cows; young bulls out of fine cows with big records; as fine a bunch of yearlings and two-year-olds as was ever led into a sale ring, including a Show Herd. Complete Dispersal of the Herds of Glen F. Reed, Dr. D. R. Ivey and Dr. S. P. Scherer.

FOR CATALOGUES ADDRESS

DR. S. P. SCHERER, - FISHERS, IND.

TOYON FARM ASSOCIATION

Mills Building San Francisco

AMERICA'S ONLY HERD OWNING EXCLUSIVELY TWO SONS OF SIR PIETERTJE ORMSBY MERCEDES

SIR PIETERTJE ORMSBY MERCEDES 43d
Dam's record 1250.35 lbs.

SIR PIETERTJE ORMSBY CANARY
Dam's record, 3½ yrs. - 862.88 lbs.
Dam's dam's record - 1009.87 lbs

SIR AAGGIE MEAD
His 5 nearest dams average 1177 lbs.

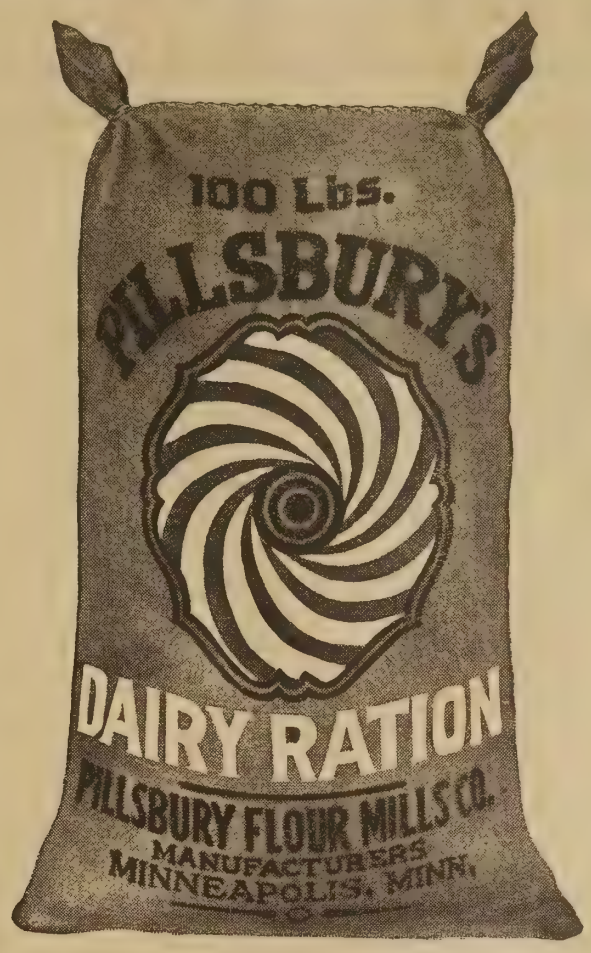
350 HEALTHY HOLSTEINS—UNDER FEDERAL SUPERVISION

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

A Steady, Consistent Producer



Pillsbury's Dairy Ration

To Maintain Maximum Production

Forced feeding for short periods has produced remarkable milk records, but it is the long time, day-in-and-day-out results that count. The dairy cow must have the right kind of feed if she is to produce consistently. Her feed must not only bring her into a full flow of milk, but it must keep her there during the entire lactation period. Production must be kept up to the highest point of which she is capable. That is the only way to bring out her full value.

Feed Must Protect Health of Cow

To-day expert feeders realize that in order to obtain continued high production over long periods, the ration of the dairy cow must contain sufficient mineral matter to safeguard her health. In formulating Pillsbury's Dairy Ration we have provided for the health of the cow. For perhaps the first time, the proper balance of protein, carbohydrates and fats has been combined with sufficient mineral matter to replace wasted tissues and maintain maximum milk yield. Read our guarantee.

Pillsbury's Dairy Ration Will Maintain Every Cow At Maximum Milk Flow Throughout Lactation Period

Cows Like It!

Pillsbury's Dairy Ration is palatable. The cows like it. We have yet to see the cow that wouldn't clean up a full feeding of Pillsbury's Dairy Ration the first time it was offered.

No Filler!

There is absolutely no filler in Pillsbury's Dairy Ration. It is a clean, honest, dependable feed, with 79.2% digestible nutrients. It contains no molasses or disguised roughage.

Economical!

The eight ingredients contained in Pillsbury's Dairy Ration were selected for their feeding value alone. Every one is high-grade. Yet its cost is no greater than that of other feeds, and you could not begin to mix the same ingredients yourself at a cost as low as Pillsbury's, and

You Can Always Get Pillsbury's.

Pillsbury's Dairy Ration Contains:
Ground Oats, Wheat Bran, Hominy Feed, Linseed Meal, Standard Middlings, Corn Gluten, Cotton Seed Meal, Mineral Salts, ***and nothing else.***

Your Feed Dealer Can Supply You, or write—
COMMERCIAL FEED DEPARTMENT
Pillsbury Flour Mills Company
MINNEAPOLIS, MINNESOTA

Guaranteed Analysis:

Crude Protein	19%
Crude Fat	4%
Crude Fibre	11%
Carbohydrates	50%
Mineral Matter	6%

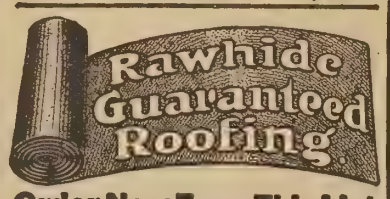
An Important Sale of Bargains for the Fall and Winter of 1920

Millwork at a Saving



$4.85 Each Typical of the many remarkable savings here in Chicago's greatest stock of millwork. Mail the coupon for our General Material Book now.

No. LB2—A large number of these fine, new, inside doors manufactured from old growth, yellow fir lumber have been set aside for this sale. Five cross panels; 1 ⅜ in. thick. Three sizes. "B" grade shows slight defects. 2 ft. 6 in. x 6 ft. 6 in. 2 ft. 8 in. x 6 ft. 8 in. 2 ft. 8 in. x 6 ft. 6 in. State size wanted. Sale price each **$4.85**



Order Now From This List

Take our advice and buy your roofing now. Snaps like these go fast when our low prices become generally known. You must act quick to get your share of these savings.

Gold Medal Roofing

No. LB4—Rawhide stone faced gold medal roofing guaranteed fifteen years. Fire resisting special coating. Full rolls of 108 sq. ft. complete with nails and cement.
High grade stock per roll . . . **$3.25**

Famous Rawhide Roofing

No. LB5—Rawhide roofing in three weights—a high grade covering in rolls 108 sq. ft. with nails and cement. Heavy weight guaranteed twelve years, per roll **$2.85**; medium weight per roll **$2.65**; light weight per roll **$2.15.**

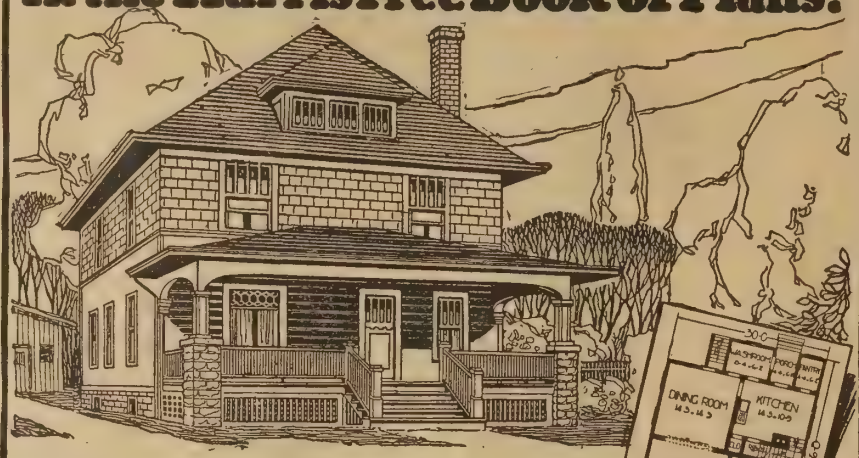
Corrugated Metal Roofing

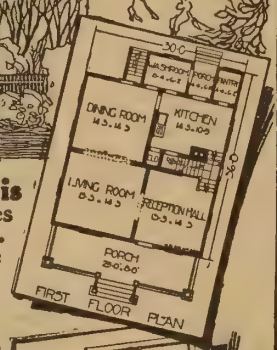
A large quantity of corrugated metal roofing in various weights; secured in big government and other purchases. Let us know your needs and our low quick sale prices will follow promptly. We can furnish 100 sq. ft. of corrugated metal sheets as low as . . **$3.00**

"PRESTO-UP" Bolt Together Garages and Houses

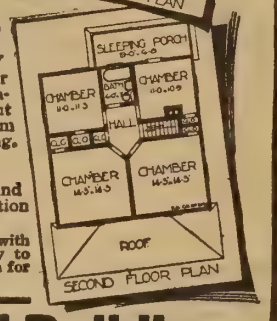
No. LB9—The wonder buildings of the age—wonderful because they are so simple. Your summer home or garage erected in a few hours—only tools needed a hammer and a wrench. Numerous styles and sizes illustrated and described in our complete free Presto-Up Book. Mail coupon now. This small car size garage, complete . . **$164**

One of A Hundred Ready-Cut Homes in the Harris Free Book of Plans!





Harris Home No. LB-2031 pictured above is but one of more than a hundred modern American homes shown in our 1920 Book of Plans—ready now for you. This home is the result of many suggestions which have come to us from our farm friends—featuring a "homey" well arranged interior and an impressive exterior. Good to look at but better to live in.



Guaranteed Ready Cut System

This ideal farm or suburban home has been built many times—always with big satisfaction and big economy to its owners. Our wonderful improved Guaranteed Ready Cut System of furnishing material machine cut is the only way to build your home right, without waste of a single penny. Our simplified marking and bundling system is instantly understood by anyone—if you can read you can't go wrong.

Selected Brand New Material!

The material which we furnish for all Harris Homes is brand new and carefully selected—guaranteed to please you and give you the satisfaction you have a right to expect.

FREE Blue Print Plan Offer! Our Free Plan Offers supply you with blue prints uniform in scale, easy to read and readily understood. Our Free Plan Book tells more. Mail the coupon for our Plan Book of Harris Homes now!

Army Camp Lumber and Buildings

Millions of feet of high grade lumber and complete buildings are ready now for immediate shipment from our latest purchase—Camp Merritt at Tenafly, New Jersey. Also plumbing material and general building supplies suitable for construction of buildings of every kind. If you can use material of this kind, mail coupon for complete catalogue of government and general material.

Angle Steel Fence Posts

No. Lb3—46,000 of these pointed drive angle steel fence posts have come to us with a big purchase of material from the government. Brand new high grade finely made posts at a remarkable saving. 6 ft. long, made of 1¾ angle steel ⅛ in. thick; easily driven. Hold 7 wires on one side of angle and 6 wires on the other side in alternating positions to hold line wire on every style of fence. Sale price each . . . **35c Each**
Lots of 100 each . . . 33c
Lots of 500 or more each . 30c

Government Barbed Wire

Greatest Offers Ever Made

A large quantity bought by us at less than the actual cost of manufacture. Fine barbed wire, made under rigid government supervision. 12 gauge open hearth steel wire with four point barbs ⅝ in. long, spaced 3 in. apart. Order quickly from special lots below.

4 point Painted Stock

No. LB6—This lot is coated with a special weather resisting paint. 58 lb. reels containing 750 ft.

625 reels or more per reel	$1.65
100 reels or more per reel	1.70
50 reels or more per reel	1.75
25 reels or more per reel	1.80
Less than 25 reels per reel	1.85

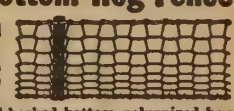
4 Point Galvanized Stock

No. LB7—This special lot contains quadruple galvanized coated barbed wire; galvanized after being made which means much to the life of the wire. 60 lb. reel contains 750 ft.

625 reels or more per reel	$3.55
100 reels or more per reel	3 60
50 reels or more per reel	3.65
25 reels or more per reel	3.70
Less than 25 reels per reel	3.75

Barbed Bottom Hog Fence

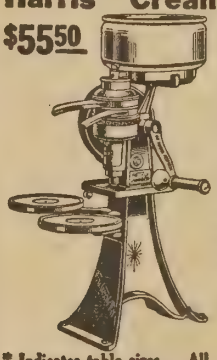
26 in. High Per Rod 32c



No. LB8—Special barbed bottom galvanized hog fencing made of No. 11 top wire and No. 14 intermediate line and stay wires. Stays spaced 6 in. apart. Space between line wires from bottom upwards are; 3, 3, 4, 4½, 5½ and 6 in. 100 rods weigh 425 lbs. 26 in. high per rod, **32c.** 32 in. high per rod, **39c**
By using two strands of barbed wire above this fence you can make a general purpose farm fence at very low cost.

Harris "Cream Getter" Separators

$55.50



Time to Pay If You Wish

No. LB12—These splendid machines have made a wonderful record in all sizes—all seasons of the year in all parts of the country. Newest model cream separators, easy to clean, easy to turn, easy to oil and now—easy to own.

Patented exclusive improvements everywhere—found only in these excellent separators.

Fully guaranteed to get all the cream—the best cream separator you can buy regardless of name, make or price. We'll take your old separator off your hands allowing liberally for it toward the purchase of your new cream getter.

Size No.	Cap'y lbs. per hr.	Sale Prices
* 1	* 175	* $34.95
* 2	* 250	* 38.90
3	375	55 50
5	500	59.95
7	750	68.00
9	950	75.00

* Indicates table sizes. All machines ready for shipments from Minn., Pa. and Chicago. 3% discount allowed if cash is sent with order.

No. LB13—Improved Cream Getter Junior Separator capacity 300 lbs. an hour on metal stand, each . . . **$33.50**

Bathroom Outfit $85.00



No. LB10—Splendid value is offered in this complete bathroom outfit. Consists of white porcelain enameled bath tub 5 ft. long, 30 in wide, fitted with nickel plated connected waste and overflow and nickel plated double bath cock. White porcelain enameled lavatory, size 17x19 in. with nickel plated trap and faucetts. Closet outfit includes white vitreous earthenware wash down bowl with highly finished golden oak tank, copper lined, seat and cover matches tank. Here's your chance to buy an outfit worth upwards of $100.00 now for **$85.00**

Famous Watts Corn Shellers

$99.50

The world's best corn sheller now offered at big reduced prices. Most liberal terms and a 30-day free trial with a guarantee of positive satisfaction. Order now from this ad or get full particulars without delay.

Watts No. 1 — $34.50

No. LB14—For the man who shells corn for his own use. Capacity 50 to 75 bushels per hour with a 3 h.p. engine.

Watts No. 4 — $79.50

No. LB15—With cleaning system, cob stacker and grain elevator. Shell for yourself and a few neighbors.

Watts No. 7—$257.00

No. LB16—With standard equipment including wagon box, grain elevator, cob stacker, type "R" feeder on steel trucks; 200 bushels per hour.

Watts No. 8—$390.00

No. LB17—Double cylinder corn sheller for custom work, with standard equipment, wagon box elevator, swivel cob stacker and feeder, on steel horse hitch trucks; capacity 600 bu. per hour.



No. LB18—*Watts No. 4 Corn Sheller with cleaning system, cob stacker, grain elevator and automatic feeder as shown.* **$99.50**
Sale price now ..

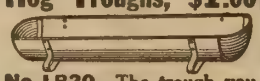
Guaranteed Paint

$2.64 Per Gal.



No. LB19—Best formula. White, black and 26 non-fading colors. Put up in 1 gal. cans, 5 gal. kits, 25 gal. half barrels and 50 gal. barrels.
Per gal. **$2.64**
Guaranteed barn paint red, yellow or maroon, gal. . . **$1.60**
Green, slate or red, gal. . . 1.90

Hog Troughs, $1.00



No. LB20—The trough you have hoped and waited for. Can't tip—flared legs. Ideal individual trough for hogs and sheep. Capacity 3 gal. Size 30 in. long and 7 in. wide. Built of heavy indestructible steel. Won't rust or cave in. Painted black. Lots of 12, each 90c.
Lots of 6 each 95
Sale price each . . . 1.00

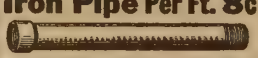
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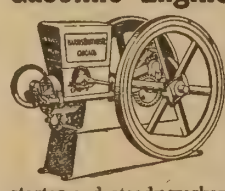
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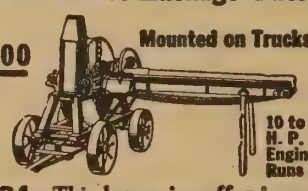


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1¾ H. P.	$49.50	3 H. P.	$ 96.00
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Genuine Advance Ensilage Cutter

$175.00 Mounted on Trucks



10 to 18 H. P. Engine Runs it.

No. LB24—This low price offer is your opportunity to save money on a high grade ensilage cutter. A 15 in. machine, capacity 15 to 20 tons per hour. Furnished with blower pipe for 30 ft. silo, mounted on horse hitch steel trucks. Buy the complete outfit during this sale for **$175.00**

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Latest pattern honeycomb radiator for Ford automobiles. Large water capacity and cooling surface, flexible core allows for expansion — prevents bursting. All parts coming in contact with water made of brass. Wrought steel casing, black Japaned finish. Weight 40 lbs.

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HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX FORT ATKINSON, WIS., SEPTEMBER 10, 1920. Number 8

THE MYSTERY OF THE SOIL

W. L. HOUSER, President Wisconsin Live Stock Breeders' Association

The Spiritual Side of Agriculture

There is mystery, profound and unfathomable, in the soil and its processes. This is the anchor that will hold men in their devotion and service to it, as the mystery and grandeur of creation hold men in devotion and service to The Great Author. Men find in modern agriculture a challenge to great learning ability, and skill of high order. The soil is the Mecca of their desire, a desire that is soul fed.

The soil, the earth, is holy. It is the cradle in which God rocks His children, soothed and comforted by the music of created things—a thousand singing birds, rushing, tumbling streams, rustling leaves, and the countless contributions of members of Nature's choir that swell their voices into a world chorus, grand and harmonious.

IN these days of intense commercialism, when the standard of achievement is the dollar, when the strife for wealth is mad and furious, when ideals are traded for profits, when compensation for effort is calculated only in cash, when integrity is legally defined, we find the tendency strongly away from things spiritual. And truly only in the pursuit of agriculture do we find an attachment for the calling that holds for those engaged in it a measure of compensation outside of the material gain that comes from the business. It is the spirit of the soil that does this. This is the subtle, though easily recognized influence that holds men, inspires and encourages them to continue in partnership with the soil even when the crops are poor, times hard, and returns in cash for labor and ability meagre. They love it as they love God and family. The soil is holy and men worship holy things. And things men worship most hold the greatest measure of mystery. There is mystery, profound and unfathomable, in the soil and its processes. There is no mystery involved in the making of a machine or the running of a railroad train, though judgment and skill are required to do either well. But there is hazzard, reservation, uncertainty, and speculation in the growing of crops and in every expression of the soil's economy. This makes the custody of the soil fascinating, romantic. There is so much room for interesting experimentation. The sources of investigation are so numerous and varied, the development of the crops and the response of the soil to scientific and skillful manipulation so pleasing and gratifying, that men are, and always will be, held under the magic of its irresistible influence. This is the spiritual side of agriculture. It is the anchor that will hold men in their devotion and service to it, as the mystery and grandeur of creation hold men in devotion and service to the Great Author.



HILCREST FARM, OWNED BY P. B. CRANE, NEW YORK.

Now this influence does not bind all men to the soil. The dominating desire for wealth, care-free employment, commercial success, luxury, and superficial pleasure, are winning sons of the soil away from farm environment and activity—too many of them. But yet the binding tie is there in the hearts of most men who have trod the earth, fed and handled domestic animals, enjoyed the music of the fields and the joy of partnership achievement with the soil, and all the scenes and experiences of farm life, though sometimes, oftentimes, hardships and disappointment outwardly seem to overbalance the compensating things. And wherever these go, whatever they do, the longing is active for a return to the scenes of youth and the country.

There is an attraction in the soil that has not been generally recognized in the past that will be potent henceforth in drawing men to the pursuit of agriculture. Men find in modern agriculture a challenge to great ability, learning, and skill of a high order. In fact, modern agriculture demands men highly trained and clever in all things that pertain to soil economy. Heretofore, locked up resources of the soil, the necessity for rehabilitation of exhausted areas caused by ruthlessness, carelessness, ignorance, and sometimes necessity, proper crop rotation, ascertainment of adaptability of certain soils for certain crops, application of business organization to farm operation, have been neglected, overlooked, ignored. But it is different now. The opportunity in farming for the use of ability, training, and skill is such a broad field, and returns result in achievements that are such splendid contributions to world needs, and hence are so gratifyingly compensatory to men of high ideals and lofty motives, men whose souls have not been poisoned and atrophied by the lust for pelf at whatever cost, men of fine fibre and clean, clear minds,—that these men and seeking and find the soil the Mecca of their desires—desires that are soul fed and that have in them the sublimity of consciousness of work with The Author in the evolution of His mighty plan of creation. Big men love to do big things. The soil offers opportunity for big achievement.

Sentiment, imagination, poetry, song, and beauty are the purveyors of tranquility. In farm life—in farm work—where the right spirit animates the man, are found these sweet things of life. It would be foolish to say that farming is one sweet unbroken song without discord or end, but from every farm task, however unpleasant, the right attitude of heart and mind coupled with scientific deduction will reason to and see the results that are compensating and in the achievement of which there will be stations along the way that are pleasant and beautiful. And the fruitage will be full and perfect. Everything that grows, that has life, is beautiful—beautiful in plan and if not marred or mutilated by man's neglect or ignorance should be beautiful in themselves. Beauty satisfies the imagination, the aesthetic in our natures, and pays all it costs. The fields and crops, the seasons, scenes and activities of the farm that are so shiftingly panoramic, so pleasing to the eye and soothing to the ear, that to men who have the spirit of their surroundings in their hearts, each day is a scenic picture far sur-

(Continued on page 308)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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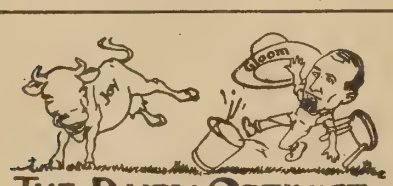
All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

The Great Question

I'd like to clear that green knoll lot,
And dig up all the stumps and rocks.
I'd like to count the hogs I've got,
And shoot that pullet-hunting fox.
I'd like to buy two dozen cows,
And have a larger, better herd.
I'd like to mend my broken plows,
But all these hopes are quite absurd.
(I can't get help—the sort that pays,
Nobody wants to work these days.)

I'd like to get new acreage,
And plant new fruit trees in the spring.
I'd like to make my stock the rage,
And have my dairy records sing.
I'd like to market butter, cheese,
And buy a truck, a tractor, too.
I need to prune these orchard trees,
The house needs paintin'—want it blue.
(But where's th' help? Th' kind that stays.
Nobody wants to work these days!)

The Old Dairyman's Philosophy

There's money in the dairy business, but how can you ever really know, until you keep books?

The calf may seem to have absolutely no sense at all. Notice one thing, however, you can't fool him when it comes his feedin' time.

Just to prove that the cow does her part, you can leave even skimmilk set for a while, and there'll be a little more cream on top.

One thing that makes a bull have such a temper is having a cold in his head and a ring in his nose, both at the same time.

Doesn't it strike you as significant that when doctors want to build a man or woman up, who have been ill, they always say, "Drink plenty of milk"? Some things are legal tender; milk is one of 'em.

Can't Always Tell

Mr. Cityman had stopped in his car by the farm.

And out of the gate and down the road went three young farm boys and two pretty farm girls. They all carried dress suit cases.

"Ah, that's the tragedy of the farm," said Mr. Cityman, "all of those young folks are leaving you, I suppose—going to town."

"Wrong," smiled the farmer, "there's a fancy costume shindig at the village and my young folks are attendin'."

Tribute to the Meadow

It is a sweet and holy way,
A place that's sanctified, I guess.
Where soft rains fall and shadows play,
And buds unfold their loveliness.
The meadow, velvet soft and green,
Embroidered with the kindly trees,
And broad, cool stretches in between,
Where work the tireless honey-bees.

It is a fair and gracious place,
The playground of the happy herd.
A realm of Nature-prettied grace,
Made glad by many a singing bird.
The cows know every winding lane
That leads to it—each little stream,
Each road that brings them back again,
To nibbled cud, and care-free dream.

It is a realm of farm-land pride,
Whence comes the profit and the gain.
A banquet spread, sun-kissed and wide,
And freshened by the gentle rain.
The milk, the butter, cream and cheese,
Trace back their inspiration here.
Dear happy streams and sheltering trees,
We hold you infinitely dear!

Being stung by a bee is not so bad, when you stop to remember that the pesky little beggar is tipped with honey.

And So It Goes

The Irish servant girl had just arrived from the city and in letters had agreed to help assume some of the responsibilities of farm work. But she stood at the gate and looked all around, skeptically.

"How do you like it?" asked Dairyman Jim Higgins.

"Shure," she replied, "it do be grand, but Oi'm afther tellin' yez here an' now, thot salt wather do not agree wid me and Oi would not hov coom if Oi' hod known th' place was on th' ocean. Yez can't fool me. Oi' see wid me own eyes thim two loight houses over yonder."

It was the first time Norah had ever been introduced to silos.

Cussin' Out Cantaloupes

I hear a lot of folks complain about cantaloupes, and accuse the farmer of swindling the public because the flavor is poor, or this and that. But will city folks please think these items over for a minute:

You eat them when they are still green.

You do not remember how long it has been since they left the melon patch.

You can't judge by feeling.

You cut the melon that should be eaten Monday, on Friday.

You must know that every melon can't be a good melon—even men aren't.

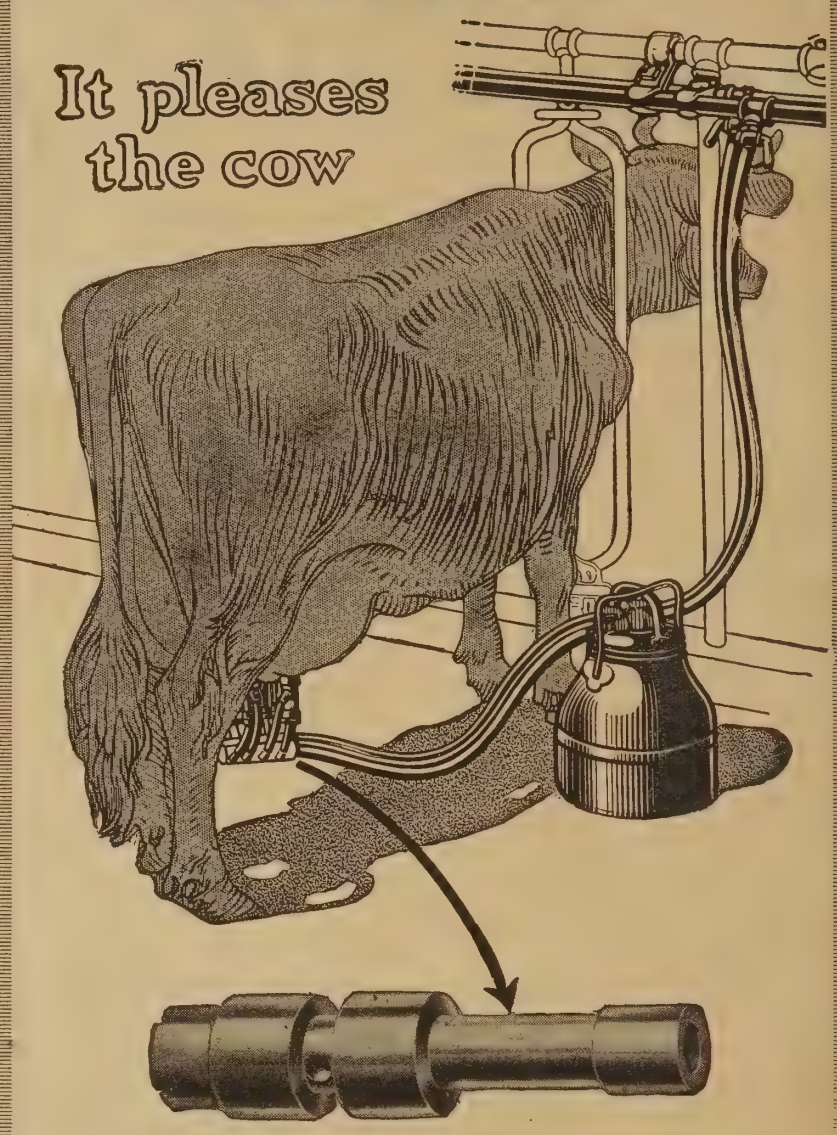
You fuss 'em all up with pepper and salt and sichlike.

Say—just you come out on the farm where we grow 'em, and let us pick you a fresh, ripe one from the patch, and sit right there under a tree and eat it. Then see what happens.

Mary had a little lamb.
Its fleas were mighty bad.
And catching one or two from it
Was what made Mary mad.

Just imagine eating sweet clover all day—is it a wonder that milk is so all-fired sweet?

The De Laval Milker



The only moving part of the Udder Pulsator

The De Laval Udder Pulsator is a remarkable advance in pulsator construction. It has no valves, no springs, no weights, no diaphragms. The only moving part is the small, plain piston of non-rusting, wear-resisting Monel metal, which never comes in contact with the milk, is entirely enclosed and lasts for years without oiling, adjusting or repairing.

The regular movement of the piston effects uniform action of the teat-cups and as the piston is moved with unfailing regularity by the De Laval Master Control, all cows are milked in the same manner every day in the year.

The De Laval Milker is alternating, positive, uniform and gentle in action—requiring no adjustment of any kind. It is faster, more reliable and more sanitary than any other method of milking, and is sold with full knowledge of the fact that more is expected of it than of any other milker—due to the Company's reputation for service and satisfaction to users of De Laval machinery.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway, New York
29 East Madison Street, Chicago
61 Beale Street, San Francisco

Owning an Ensilage Cutter

EARL ROGERS, OHIO

ONE of the biggest reasons for the silo to my mind is the advantage in having a place to take care of a frosted crop of corn. Without the silo it is almost a total loss; with a silo it is nearly always possible to save the whole feeding value so far as it has matured. There are other reasons, of course, but this is the biggest one.

So there is the main reason for a silo owner having a cutter of his own. If he has a late crop and it fails to mature he must wait for a custom machine to come along. Usually these machines make their trips before frosted corn days and are hard to get in later than that, without extra expense.

Four of us farmers here whose farms lie in one solid block own a 13-inch cutter of standard make. It will handle about 7 tons of silage an hour if cut ¼ inch long. We wouldn't want to be without a privately owned cutter since we've had one.

If one owns a silo 30 feet high and it is filled full with a big custom cutter the chances are that in 2 days he will have about 25 feet of silage. There's five feet of investment that isn't worth anything to him—no interest on it even. But with our size of cutter we don't have so much settling because it fills the silo slowly. There is time to settle while the work is being done. More than that, the cutter belongs here and we can let it stay at the silo and refill the settled space in a day or so if we wish. That allows us to get the full use of the silo. My silo has an extension of 2½ feet just for filling and allowing to settle. So I can get a full silo if I want it.

The biggest drawback we have is the lack of power to run this cutter. Steam is the really satisfactory power for this work and usually we can get a traction engine from our threshers to furnish the power. This cutter is rated to run with a 10-horse gasoline engine but it won't do it, of course. One seldom will find a machine that will do as it is rated or run as easy as it is rated.

I mentioned having a cutter for filling with frosted corn. Other corn that is matured without frost should go into the silo at a certain time to be best. A custom cutter can't get around for this just when it should be made into silage. They have a trip to make and your corn may go in the silo too green while the other fellow's may get in too ripe. The value of silage depends on getting it into the silo when it should go in—not latter or earlier. There is a certain day when oats should be cut and hay or most any farm crop. Corn for silage is just as particular.

By having this size of cutter we are able to fill with a reasonable gang. We hire very little. There will probably be five silos this year to fill with this cutter. That will furnish nine men among us. Three men with teams if the field is close to the house with three men to handle bundles in the field, a feeder for the machine, and whatever one wants in the silo make the gang, outside of the engineer. I rather think I will use one man only this year in the silo. Tramping seems to be one of the relics of the first silos in some sections and I want to try once and see for myself.

We have found some things that may be of value to newer silo fillers. At first we had a man to cut bands and another to feed. One day we were short of help and I was feeding. I piled a few bunches of shingles up close to the feeding table and had the bundles thrown on the shingles. Then I cut the bands on this temporary table and fed alone. It is hard and fast work but it saves a man and does better work because one man always knows just what both hands are going to do. Two men bother each other more or less. Now we make a feed table as long as the feed box on the cutter. We slant it a little toward the feeder. It is about 2½ feet wide.

I think it pays to have an extra team and wagon on hand. The cutter must be kept busy. If one team is behind it holds up ten men at least. Ten men held up for three minutes is equal to one man for a half hour and that is too much. Every man on a job where the cutter is operated by owners of farms is apt to want to work. We don't care about loafing while the wagons come. So the extra team with a load on can be brought up and the machine kept going. There is usually a chance when stopping for oiling or something of that kind to load the extra wagon again.

We find that a hard oil for the cutter with graphite in it makes the machine work much easier. Graphite is the slipperiest stuff I ever saw in the lubricating line. Mix it with hard oil and you have something extra good. It pays to keep the oilers turned down often, too. Too much grease seldom harms a machine and too little does. A heavy balance wheel running 700 times a minute pushes grease away from its bearings pretty quick. Better keep the grease there.

Keeping the cutter knives sharp is another thing worth while, too. We have two sets and a grinder on the cutter. A man who is standing around waiting for his load to be cut can sharpen the knives and be ready for a change. We change every half day always and sometimes more often. The machine pulls easier and does much better work when the knives are sharp. Of course, it is easier on the machine if the cutting is done easily.

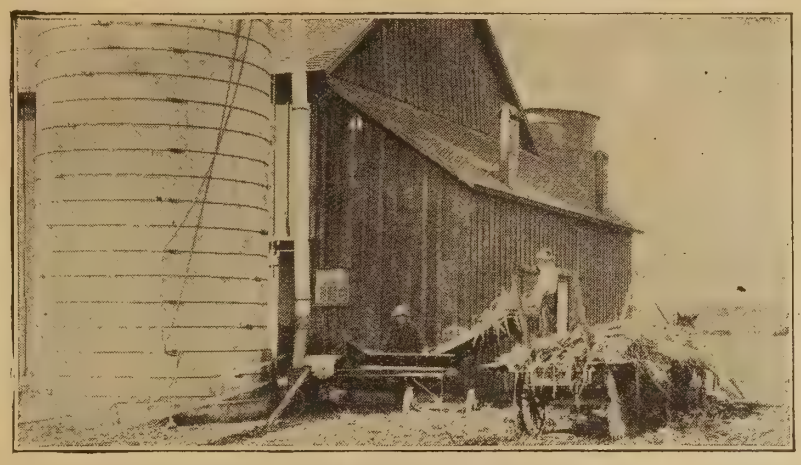
It pays to be careful in throwing the bundles on the feeding table. One bundle at a time will enable the feeder to cut the band and keep going easily. But if you throw two bundles down together and cross them, a little he has to straighten them out and gets behind. The machine runs partly empty while this is being done. If the unloader can throw three or four bundles down straight on the table for the last of the load the machine can be kept busy until the next team gets up and starts to unload. It is as hard on a machine of this sort to run empty as to run loaded and it doesn't pay to slow down for such a short time.

We have found that it is a loss of time to have to back a team out every time it is unloaded. If possible have a place so arranged that the teams can drive right on by the cutter. The following team can then be ready to unload at once.

Probably there are a lot more points that we will discover from time to time. But these have helped us so far.

If one can have a small pulley and good ⅜-inch rope the distributor pipe and blower pipe can be hauled up to the silo top much easier and with less danger of falling.

It certainly pays to have a distributor pipe.



POPULARITY OF THE SMALL SILO FILLING OUTFIT

It is on the job when wanted. There is no waiting till a dozen or more neighbors finish and the corn is dry. Refilling is more conveniently done. A smaller crew is needed. The interest on the investment may bring the cost above that of the commercial equipment, but the insurance of good silage is worth it. Last year saw good corn wasted and cows shrink in milk because the corn got too dry before filling and molded badly.



KEEPING MEN AND TEAMS BUSY MAKES FOR ECONOMY

Geese Milk Cows

The following effusion of a city reporter may be of interest to readers of Hoard's Dairyman who are more familiar with farm animals than the writer of an article which appeared in a Wisconsin local weekly paper. The occurrence is presumed to have been on a farm in Wisconsin owned by George Handsome. A portion of the tale follows:

"Mrs. Handsome discovered that instead of geese eggs, which she was attempting to fry for dinner, being composed of ordinary 'yolks and whites', they contained nothing more or less than real country butter!

"Mr. Handsome discovered several members of his big flock of geese deliberately 'sucking' milk from his cows as they stood or laid about the pond placidly chewing their cuds. That was enough for Handsome. He would have slain the entire flock of geese but for the interference of his wife.

"For several weeks the Handsome cows had been giving very little milk, and what they did give produced no butter. The family was compelled to buy milk and eat 'store butter', when they should have been having the best in the country. The calves, robbed of their sustenance by the geese, were pining away—literally drying up and about to die.

"These facts worried the Handsomes. They also worried their five children and about as many calves. To overcome the shortage of milk and butter and to cut the high cost of living Handsome and the family began eating geese eggs.

"For the past ten days Mrs. Handsome had noticed these eggs were 'getting thicker'. Finally they were 'so thick' they wouldn't fry. It was then Mrs. Handsome made the discovery. She tried to break one of the eggs into a pan of smoking grease, but the egg didn't pour. It just 'lumped out'. She broke another and it 'lumped out into a pan', where she examined it. It was then she found the egg was nothing else than butter!"

The Methylene Blue Reduction Test

A Simple Method of Determining the Number of Bacteria in Milk

E. G. HASTINGS, Wisconsin College of Agriculture

WHEN one speaks of the quality of milk, he may have in mind one or more of the factors that determine quality. If he is thinking of the nutritive value of the milk, he considers its content in fat, in casein, and in sugar. If his interest is broader, he will include in his consideration the keeping quality of the milk, its healthfulness, its taste and odor, and its cleanliness, i. e., its freedom from foreign matter. The importance of cleanliness is twofold. All wish clean milk for purely aesthetic reasons, and, furthermore, dirt introduces bacteria into milk which may injure its keeping quality, its taste and odor, and its healthfulness.

If one wishes to gain any adequate idea of the quality of a sample of milk, he must in some way determine the kinds of bacteria it contains and the relative number of each kind. The milk will contain a great many forms of bacteria since it receives its contamination from so many sources. It is impossible to determine by any one method all of the bacteria in a sample of milk. That method is best that comes most closely to this ideal. There are three methods of determining the bacterial content of milk. All are widely used. The most common is the plate culture method which requires a considerable amount of expensive apparatus and is costly in labor and materials. It is the one ordinarily used in laboratories that are concerned with the control of milk. Another method involves the counting of the bacteria under the microscope. This method is less expensive than the plate culture method to carry out. Each has its advantages and disadvantages. Under certain conditions the plate culture method can best be used; under other conditions the microscopic method will prove the better. Both have the disadvantage of requiring a considerable amount of time, and therefore but few tests can be made in a day.

Another very simple test for the number of bacteria in milk has been widely used abroad, especially in the Scandinavian countries. When a small amount of the dye, methylene blue, is added to milk the blue color imparted to the milk disappears sooner or later. The time required for the milk to become white again is dependent on the number of bacteria it contains. Different kinds of bacteria vary in their power to reduce or to decolorize the methylene blue. The lactic-acid-forming bacteria exert the most marked action, the other acid-forming and non-acid-forming a less reducing action. This is the order of their importance in influencing the keeping quality of milk.

The test must be made at some definite temperature in order that the results may be comparable. The smallest amount of methylene blue that will impart a decided color to the milk should be used since it has an unfavorable effect on the growth of bacteria. The test is carried out as follows: Ten cubic centimeters of the milk to be tested is placed in a clean glass tube. Such an amount of the dye is added that there will be one part in two hundred thousand parts of milk. The tube is now placed in water that is heated to 98°F. At intervals the tube is observed to note whether the color has disappeared.

A stock solution of methylene blue is made by dissolving one gram of the dye in 500 cubic centimeters of distilled water, or in pure well water if the former is not obtainable. This stock solution is diluted for use by adding one cubic centimeter of it to 39 cubic centimeters of pure water. One cubic centimeter of this solution added to 10 cubic centimeters of milk will give a suitable concentration for the test. The stock solution will keep for several months if stored in the dark. The more dilute solution should be made up at intervals of two or three days.

Methylene blue is carried by many of the larger drug firms. It is probable that the tablets used in Denmark for making the test will soon be on the market in this country.

The dye in the strength mentioned imparts to the milk a robin's egg blue. The disappearance of the color is very apparent since the milk returns sooner or later to its normal yellowish or bluish white. By comparing the tubes of milk which are being tested with a tube of milk to which no dye has been added one can easily decide whether all the color imparted to the milk by the dye has disappeared.

In actual practice abroad it is common to divide the milks into the following classes: The milks that decolorize in less than 20 minutes are classed as poor. As a rule, they will contain over 20,000,000 bacteria per cubic centimeter. The milks that decolorize in from 20 minutes to two hours contain from 20,000,000 to 4,000,000; those that decolorize in from two to five and one-half hours contain from 4,000,000 to 500,000, and the milks that require a longer period less than 500,000 and are classed as good market milks.

By extending the period of observation and by noting the milks at more frequent intervals, the grading can be made much more closely than is done in the above scheme. Milks that contain but a few thousand bacteria per cubic centimeter will require eight to ten hours before the disappearance of the color, while milks that are almost sour will lose their color in a moment. The milks falling between these two extremes can be divided into many classes, the number being dependent on the frequency of observation. It is evident that a large number of tests can be made in a day, that no expensive apparatus is required and no technical training is demanded.

The test has not been used to a great extent in this country, apparently because a number of papers have been published which showed that the results obtained did not always check with the counts obtained by plate cultures. There are many reasons why this should be so, and the non-agreement can not be used as an argument against the reduction test. It may be in its favor. A considerable amount of experimental work has been done in the writer's laboratory, and the conclusion to which we have come is that the reduction test is as accurate a means of judging the quality of milk as is any of the other methods. It excels them all in ease and cheapness.

The writer believes it can be used with great advantage in many places, as by milk distributors who desire to check up their various producers and do not feel justified in maintaining a bacteriological laboratory, by dis-

(Continbed on page 309)



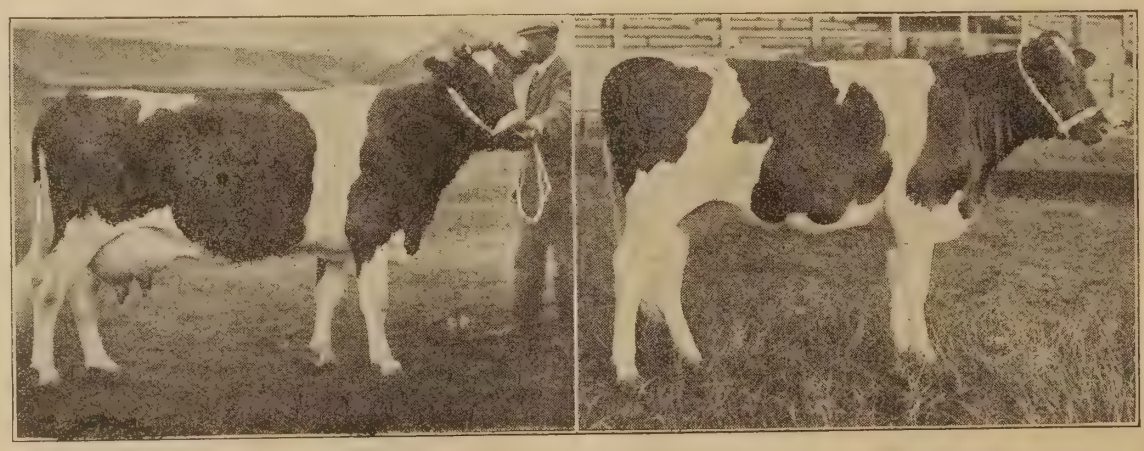
A NEW GUERNSEY CHAMPION

MAY Rose of Westbrook Farm, owned by G. W. Koser, Pennsylvania, now heads the list of Class BB cows in the Guernsey Advanced Register, with a record of 15,530 pounds milk, 757.07 pounds butterfat. This performance exceeds the record of the previous champion of the class by almost 600 pounds of milk and 47 pounds of butterfat.

May Rose of Westbrook Farm was placed on test on May 5, at the age of four and one-half years, and was milked three times daily. In addition to making this large record, exceeding her requirement for entry in the Advanced Register by considerably more than 100 per cent, she carried a calf 273 days of her test period.

The new champion was bred by S. I. Murphy, Pennsylvania, and was dropped on August 27, 1914. She was purchased in dam by Mr. Koser. Her sire is Irene's King of the May, a son of Imp. King of the May. Her dam is Napoleon's Gentle Lee.—AMERICAN GUERNSEY CATTLE CLUB.

Winners, Highland Show, Scotland



LOCHLAND'S CHLOE, FIRST PRIZE BRITISH-FRIESIAN COW IN MILK

LOCHLAND'S PEL NASPA, CHAMPION BRITISH-FRIESIAN FEMALE



SLODAHILL ALICE 2ND, AYRSHIRE FEMALE CHAMPION

HOWIE'S HOT STUFF, CHAMPION AYRSHIRE MALE

Eighty-Eight Acres of Sand

F. E. ELLIS, ONTARIO



MR. AND MRS. BECKER

GOOD soil is the basis of successful and profitable agriculture. This is almost a truism; an agricultural axiom, if you please. Every traveller can tell you that the houses, the barns, and the live stock—the outward symbols of the farmer's prosperity—are generally a reflection of the quality of his land. The farm with a fertile, strong soil will almost always be well built upon. The owner of 100 acres more or less of sand banks usually lives in a shack. There are exceptions, of course; such remarkable exceptions that one is led to believe that, after all is said and done, the man himself is a more important factor than his natural opportunities. The right man will rise superior to his environment and make a success in spite of the greatest obstacles. Such a one is Arthur Becker of Waterloo County, Ontario.

Mr. Becker is gradually becoming known in the live stock world. At his Heart's Delight Farm several good yearly records have been made in Record of Performance test. More recently he has made a few creditable Record of Merit tests. His Holsteins are attracting attention and are becoming so well known that one of his cows topped the last Waterloo Sale. In his registered herd are some of the choicest lines of breeding. His gross income in the past year on an 88-acre farm will total around $6,000. I mention these facts to prove that Mr. Becker is making good—even as many others are making good. The special feature of Mr. Becker's success, however, is that he has made good on a poor sandy farm; such soil, in fact, as many a farmer would not take as a gift if he had to make his living from it. It is for the encouragement of others who may be laboring under similarly adverse conditions that I persuaded Mr. Becker to tell me his story.

The Farm

Heart's Delight Farm is four and one-half miles from Petersburg on the Grand Trunk Railway. It consists of 88 acres of sandy land. The back half of the farm has a soil which would be classed in commerce as a fine grade of builder's sand. What is true of the surface is equally true of the subsoil; it is just sand as far down as anyone has ever cared to dig. The front half of the farm is more of a loamy nature, but even it must be classed as a light sandy loam. Just around the buildings there is considerable stone. A more unsatisfactory soil on which to farm would be hard to find outside of the blow sand areas. To make matters worse, the land had been grain farmed for years and the soil exhausted to the point where it would produce only enough on the 68 acres of workable land to winter a couple of horses and feed fourteen head of cattle. Such were the conditions when Mr. Becker, a young man in his twenties, moved on to the place fifteen years ago. Today the farm supports a herd of 44 pure-bred Holstein cattle, 20 of them two years old or over, and four horses. All of the roughage and a part of the grain is produced on the farm. How was such a transformation wrought? I asked Mr. Becker about it.



A COW OF MR. BECKER'S BREEDING THAT TOPPED THE WATERLOO SALE

"Progress has been made largely in the past eight years," he replied. "I did not have the advantage of even a short course in agriculture, or any other special instruction to enable me to study conditions and start right at the beginning. I knew of no other system of farming than that which had already impoverished the place and, because I had practically no ready working capital, I kept right on growing grain and feeding a few head of beef cattle in the winter. I got nowhere and soon became convinced that I was going to get nowhere. Accounts were always hard to meet and I guess some of my friends were figuring on just how long it would be before I would have to leave the place."



MR. BECKER HAS FOUND SWEET CLOVER AN EXCELLENT CROP FOR LIGHT SOIL.

But the hard pressed young farmer had already made two good moves. It came out in conversation later. He was doing all of his business through the bank when it was not common for the farmers to use the bank at all, except as a safe place for depositing their savings. This relationship created with the banker was used to Mr. Becker's advantage on more than one occasion when credit was badly needed. In the second place he had become an omniverous reader of agricultural literature. All of the leading agricultural journals published in his province were subscribed for and several of the best farm papers issued in the United States. At one time there were fourteen periodicals of one kind and another entering the Becker home. And they were read. Everything that had any bearing on his own problems was more than read; it was carefully studied. Then Mr. Becker began to write to agricultural experts, asking for information on points which were not covered in his reading. In the light of the information which he acquired, he began to analyze the possibilities of his farm.

Two Good Moves

"The first year I was on the farm," Mr. Becker told me, "I had just two cows. They were very ordinary cows and the increase from them was ordinary also. When I had definitely decided on dairying I made the best moves of my life. I started to keep daily milk records and I purchased a pure-bred bull. The herd, such as I had, was tested for one year. Their average production was just 3,600 lbs. of milk. It was a poor showing but it was not all the cows' fault. I had one silo then, an old square one, 8x15 feet on the ground and 22 feet high. I did not know as much about feeding and management then as I do now, but even under better conditions the cows would not have been profitable producers. They just didn't have it in them.

"I sold off all of that herd but two and invested the money in a few good grade Holsteins," continued Mr. Becker. "The next year with my improved herd and, I suppose, a little better management, I secured an average production of 7,500 lbs. of milk a cow. Then the daughters of the pure-bred sire I had purchased began to come into milk. Two-year-old heifers of this breeding were giving more milk than their mature dams and in a couple of years I had an average production from the herd of almost 11,000 lbs. of milk. The poorest cow I ever owned produced 2,600 lbs. of milk in a year and the best cow I have ever owned made almost that much in a month as a three-year-old.'

In the meantime Mr. Becker built another silo. The astonished contractor protested when he found that the specifications called for a cement silo 14 feet in diameter and 42 feet high. He assured his customer that such silos were never built on such a farm; a silo 30 feet high would be ample to store all the corn that he would ever grow. Mr. Becker replied that he was going to double his corn area. Then well intentioned friends argued with him that corn is a very exhaustive crop on the land and that his soil would not stand such heavy cropping with corn. The silo was built, however, and the corn grown to fill it. At the present time 23 acres are devoted to this great ensilage crop and another silo was built 12 by 36 feet to be succeeded last fall by a third of similar proportions.



THE BECKER YOUNGSTERS ARE ENTHUSIASTIC YOUNG HOLSTEIN FANCIERS

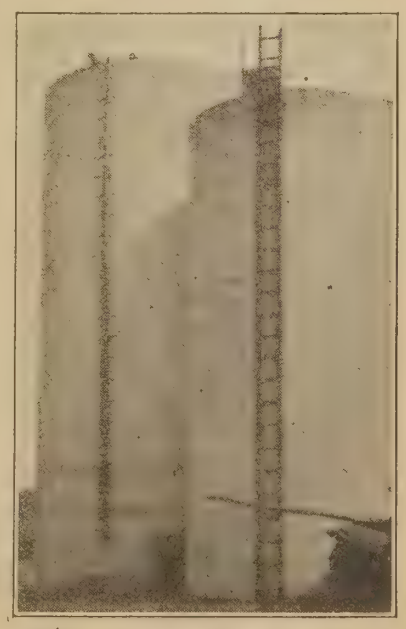
Alfalfa Now a Standby

Six years ago Mr. Becker made another good move. He seeded his first field to alfalfa. He got one excellent crop of hay, but the alfalfa was killed out in the following winter. "It was here," remarked Mr. Becker, "that I learned the importance of a hardy variety. The first seed used was merely northern grown. Ever since then we have used the Ontario variegated seed and have had no trouble in keeping our stand. We consider alfalfa as profitable a crop as we can grow and consider that it is a mighty good acre of oats that will make as much feed as an acre of alfalfa, or bring in as much money."

And here we have the secret of this farmer's success from the cropping end. His two principal crops are excellently adapted to his light soil and at the same time they afford the best possible combination of roughages for the basis of a ration for dairy cattle.

"The variety of corn grown is an important point on such soil as this," said Mr. Becker in discussing his corn

(Continued on page 300)



Two of the three silos that make it possible to carry a herd of 44, besides horses, on 88 acres of land.

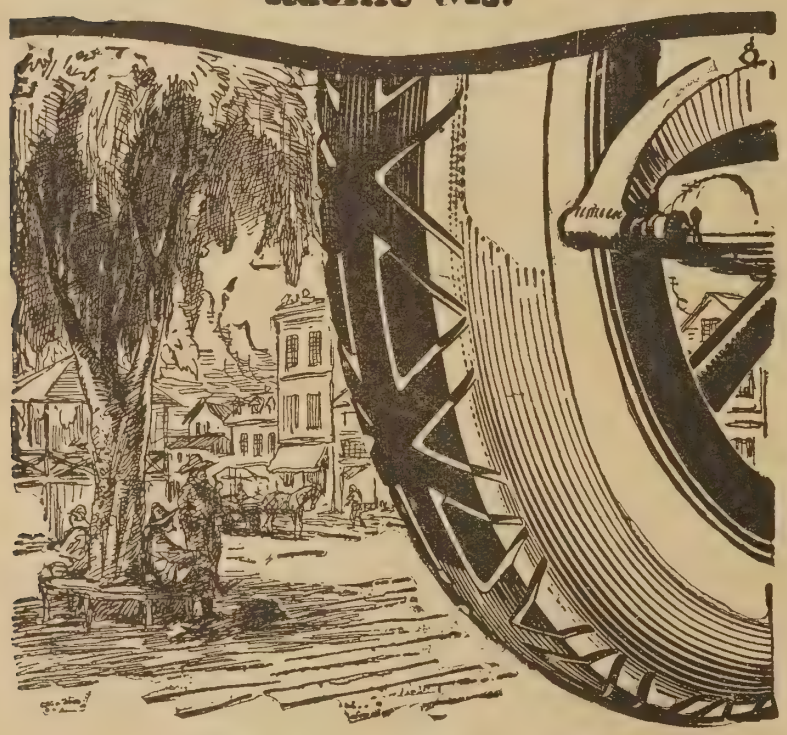
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Peterboro, New Hampshire.

Uncle Sam's Hired Men Who Serve You

If George Livingston, Chief of the Bureau of Markets, Doesn't Put Money in Your Pockets It Won't Be His Fault

FRANK GEORGE

This is the fourth of a series of articles this publication is running, in co-operation with the U. S. Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the Department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITOR.

IT will be recalled that in Greek Mythology Argus, the son of Zeus and Niobe, had a hundred eyes. George Livingston, Chief of the Bureau of Markets, United States Department of Agriculture, has but two eyes—being just an every-day human being—but his friends say that his vision is better than Argus' ever was. It has to be good to see all sides of the big farm marketing problems of today and then to look after 100 field offices distributed throughout the United States, as well as to direct the activities of some 1,330 employees who are trying to solve them.

But going back a little farther, George Livingston first saw the light of day on September 14, 1886. Thereafter, he spent 18 years on a farm. During that time he saw a great many things. Other people saw them, too. But, whereas others sat down and grumbled at the hard lot of the farmer, George Livingston determined to apply corrective measures if he ever got the opportunity. At the same time he perceived that Mr. Opportunity might fail to put in an appearance, so he donned his hunting togs and went after him.

At tweny-nine G. L. was an authority on grain and grain marketing. He had graduated from the Ohio State University and thereafter spent five years specializing in agricultural and marketing methods in the capacity of instructor and assistant professor at various universities. His post-graduate course at Cornell University subsequently led him to Europe to study agricultural practices there. Then he joined the Bureau of Markets. His executive ability and genius for organization were soon recognized and four years later. he was appointed chief of the bureau.

Quick to recognize ability in others, George Livingston is never satisfied until its full force is being applied. When he established the grain inspection service he assembled the best talent that could be found—men who knew their business from the ground up. It was not an easy job. There were many persons who knew that while the adoption of standard grades would remove the guesswork from grain marketing and therefore be of huge benefit to the farmer, it would also reduce their own incomes considerably. However, that did not deter G. L. for a moment. But instead of holding a bludgeon over their heads he sought quietly to secure their cooperation. And he did it. That is the way he does everything—quietly, courteously, unerringly.

For more than half a century agricultural experts and agencies have devoted almost their entire attention to production problems. But these experts are now agreed that the question of marketing is of equal importance, and that the present marketing system is wasteful and inefficient in many spots. They say that with the present methods farmers lose millions of dollars annually. More important than that is the economic waste caused by the quantity of food actually lost.

It is only comparatively recently however, that any organized effort has been made to develop the machinery of marketing to meet the nation's requirements. And with the United States leading the world in the maintenance of a government agency to study and devise new marketing methods, economists and students of food distribution problems everywhere are watching closely the results secured by the Bureau of Markets and the man who directs its activities.

Already conspicuous achievements have been secured by establishing standard grades for farm products, reducing waste caused by faulty storage and shipping methods, and lowering costs of distribution of some agricultural products. One or two examples will indicate what it is possible to accomplish by improving present marketing methods.

By developing an inexpensive storage house for sweet potatoes and widely advocating its use the loss by decay of the sweet potato crop has been reduced from 25 per cent to 2 per cent—a saving of about $2,000,000 a year.

The president of a national bank in Marshall County, Texas, has stated that the service rendered by the Bureau of Markets in connection with the assistance given cotton growers in grading and stapling cotton before sale has been worth $150,000 to the county. Another prominent man in Hall County, Texas, states that similar service performed there has been worth $200,000. Hundreds of letters containing statements such as these regarding all agricultural products are continually received by the bureau.

G. L. considers that the standardization of farm products and the containers in which they are packed is fundamentally the most important work being performed by the bureau a work that is basic to all improvement in marketing, for without established standards and grades there is no recognized basis for buying and selling; no common language by which the parties to a transaction may understand each other; no uniform standard of quality upon which values and prices may be based.

Mandatory standards have been fixed for American upland cotton, including grade, color, and length of staple; for shelled corn, wheat, and oats; and for climax baskets and containers for small fruits, berries, and vegetables. Permissive standards have been recommended for white potatoes, sweet potatoes, Bermuda onions strawberries, Sea Island and American-Egyptian cottons, and tentative standards have been formulated for some other commodities. There is urgent need for the standardization of

hay, wool, live stock, dairy and poultry products. In the matter of hay alone many farmers have stated that nine-tenths of the losses sustained in the hay business are due to a lack of standard grades and a uniform impartial inspection service.

He also believes that the economic waste caused by shipping products to glutted markets and away from under-supplied markets will be prevented by the use of the Bureau of Markets news service which many farmers find of inestimable value in marketing their produce. These reports cover live stock and meats, poultry and dairy products, fruits, vegetables, peanuts, cotton, hay, feeds, and seeds. The data are secured from most reliable sources by special representatives at the markets, and by means of a reporting arrangement with 474 railroads. The cantaloupe growers and shippers of California state that this service, together with the assistance given by personal representatives of the Bureau of Markets, have saved them $1,000,000 in a single season.

The daily, weekly, and monthly market reports and summaries showing market conditions, prices, movement, supply and demand in connection with live stock, meats, wool, hides, and skins; the preliminary standardization of classes and grades of these products; investigations of waste and loss in marketing with suggestions for improved methods, and stockyard supervision calculated to detect and prevent dishonest practices have effected a stabilization of the live stock markets and a saving of millions of dollars, directly and indirectly, to the producers, shippers, and handlers concerned.

Another important factor in marketing is the Food Products Inspection Service established by the bureau, by the use of which shippers and others interested can obtain certificates attesting the condition of their perishable products received at central markets; a service that facilitates the distribution of the products covered, hastens the release of cars, lessens deterioration and waste on account of delays resulting from disputes as to the condition of products, and prevents unfair trade practices.

Then there is the organization of farmers' co-operative associations—permanent, economic institutions that have a far-reaching effect. There are now more than 14,000 farmers' co-operative associations in the United States, in the organization of many of which the bureau was called upon to lend assistance. A staff of experts is maintained to study practical methods of co-operative marketing and to place the results in the hands of the farmers.

The writer endeavored to draw out from George Livingston something about himself. But without success. Self has no place in his lexicon. But he had a great deal to say about the work of the Bureau of Markets, and in doing so the force of his personality and capability was plainly evident in spite of his modesty.

"The Bureau of Markets is endeavoring to devise the quickest, most direct, and least expensive methods of getting products to market," he said. "Slip-shod methods must go, for the new methods will be better."

"Of course, it must be appreciated that the job can not be done over night. Present marketing methods are the product of evolution, and better marketing practices must come through gradual improvement in methods and procedure. It has taken decades and in fact a century or so to develop the production side of agriculture to its present degree of efficiency, and there yet remains much to be done. I hope that the development of efficient marketing machinery will not take that long, but it is a vast undertaking, and every step of the journey must be sure-footed.

"To accomplish that result the bureau needs to have on its staff workers of proved ability through practical experience; workers who are keenly sympathetic with the farmer's needs. In a word, we want in the Bureau of Markets the best marketing specialists found anywhere in the world.

"But of equal importance is the hearty co-operation of everyone. By the character of service rendered we want the farmer to know the bureau is his friend, and not to hesitate to call upon it to help him solve his marketing problems. It is his bureau, and we are ready and anxious to serve him."

In that last sentence is contained the keynote to George Livingston's code. Service to others is his religion. He is constantly devising means of helping the farmers with their problems, and the only reward he asks is that the farmers come half way to meet him.



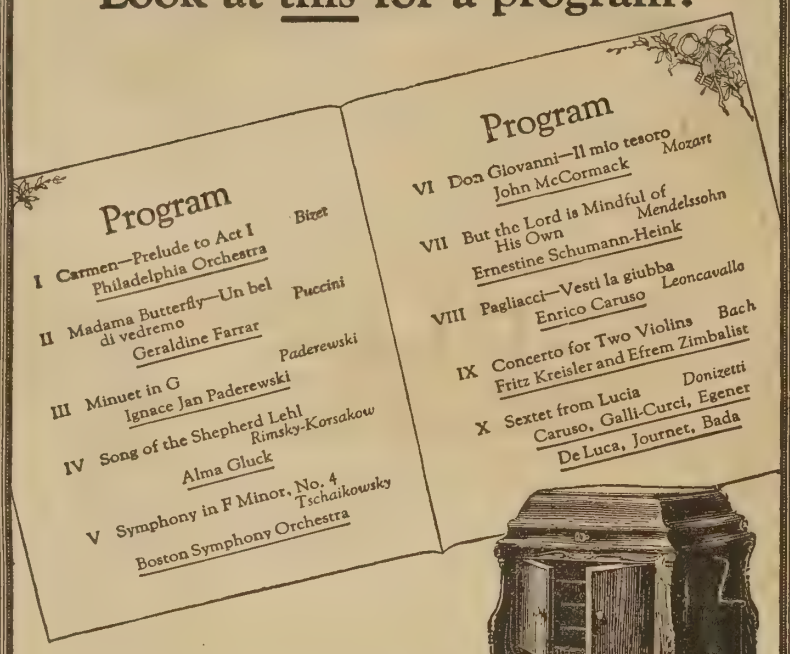
GEORGE LIVINGSTON, CHIEF BUREAU OF MARKETS, UNITED STATES DEPARTMENT OF AGRICULTURE





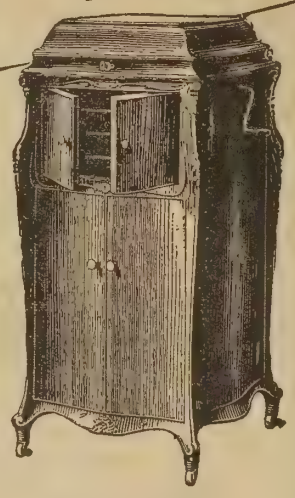


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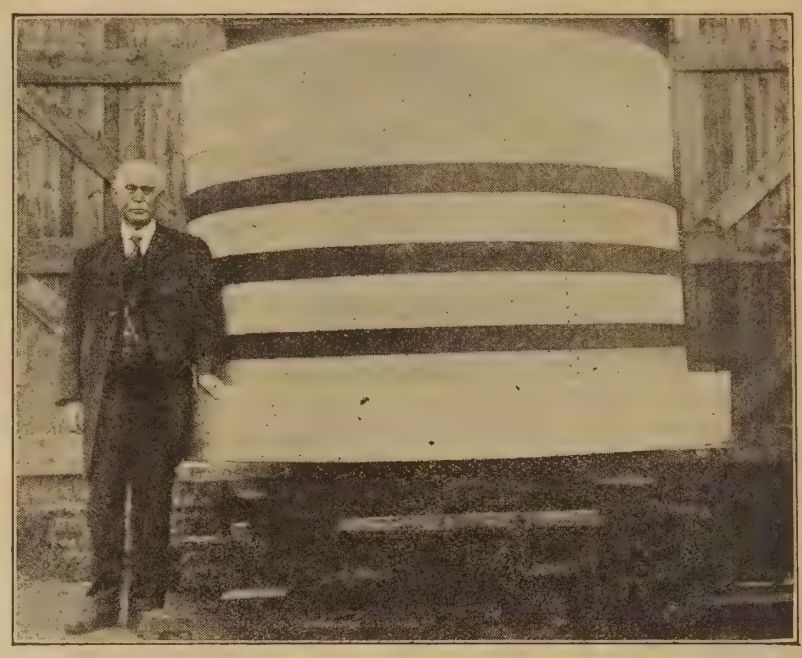
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A 12,000-pound Cheese



MR. HORACE REECE OF NEW YORK STATE AND THE 12,000-LB. CHEESE WHICH WILL BE DISTRIBUTED AT THE 1920 NEW YORK STATE FAIR

THE biggest cheese ever made in New York State was recently turned out at Reese and Searle factory at West Martinsburg, Lewis County. It weighs 12,000 pounds and into it went the curd from seven factories made from two days' supply of milk. The weight of the milk used was about 120,000 pounds and was the output from 2,400 cows for two days. The cheese was made for exhibition and distribution at the New York State Fair in Syracuse.

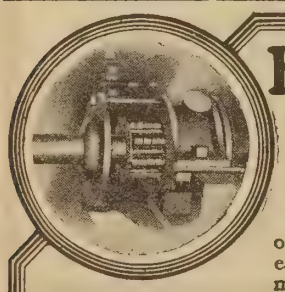
Horace Reese superintended the making of the cheese, although the dozen or more expert makers, including some sent by the State Commissioner of Agriculture, were under the direction of Albert Searls. Lieutenant Governor Harry C. Walker and State Commissioner of Agriculture George Hogue attended the ceremonies when the curd was poured.

Mr. Reese is 79 years of age, although he looks only 60 and is as active as a man of 40. He has been making cheese in Lewis County for sixty years. For thirty-one years he has been an instructor in cheese and butter making under the direction of the state department of agriculture. In this capacity he has traveled from one end of the state to the other, helping make fancy cheese and aiding makers who were having a run of bad product to get straightened out.

Mr. Reese made a cheese weighing 11,000 pounds which was exhibited at the San Francisco exposition. Only one cheese larger than the one made this year has ever been produced in the United States, that being the one at the Dairy Show last year, a Wisconsin product.

The accompanying picture shows the huge mold in which the cheese was formed, with Mr. Reese standing beside it.

New York. P. H. WERTZ.



Easy Running

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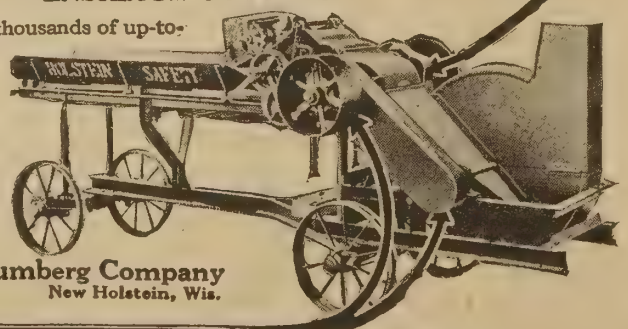
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New Jersey Holstein Breeders Going After a Paid Secretary

HOARD'S DAIRYMAN:—Saturday, August 21st, was a banner day for New Jersey Holstein breeders. For about a year things have been livening up among the New Jersey Holstein men. Somerset County started things going in August, 1919, when they started plans for an organization made up of breeders of Hunterdon and Somerset Counties. The next thing that happened, Salem and Cumberland organized the Salem—Cumberland Association. Following this Warren County organized the Warren County Club. Mercer County came next. Morris County organized her local club in the spring of 1920. Three of the clubs have held sales with very good success, but the capping climax has arrived. New Jersey is to put on a statewide campaign for a paid secretary, September 13 to 23. President Aitken and R. C. Pollock are going to spend ten days in the state and put something worth while across.

New Jersey had the first 40-lb. cow. New Jersey boasted of some of the pioneer breeders. Some of the best breeding in the country has originated in this little state. Although she has but 120,000 Holsteins she stands twelfth in the list among the states of the Union. She has the Allamuchy and Tranquility Farms, the home of King of the Ormsbys and King of the Sadie Vales. She has Pequest Farms, the home of the $100,000 bull, King Pontiac Hengerveld Fayne; Bloomingdale Farms owned by the late A. A. Cortelyou, the home of King Model. Mr. Cortelyou has given some of the best cattle of the breed to the Holstein world; Bernard F. Myer developed Valdesa Scott (2); Forsgate Farms who now have 100 pure-bred females and 8 cows on semi-official test; and one of the last, but not the least, Rancocas Stock Farm where some of the best cows of the country are being brought together.

At the meeting on Saturday at New Brunswick, about fifty enthusiastic breeders were present. Mr. G. D. Brill of Forsgate Farm and president of the state association introduced Dr. J. G. Lipman, director of the Agricultural Experiment Station and dean of the Agricultural College. Dr. Lipman urged upon those present the strengthening of their association. He was followed by John Ridgeway of the Salem County Holstein-Friesian Association who told of the work of Mr. Bullard, the secretary of their local Holstein-Friesian Club. He made the statement also that Mr. Bullard, although he had only been on the job two months, had made his salary both months. He said that the men in that section were so interested in the Black and Whites that they had gone down in their pockets and put up

enough money to assure the success of a paid secretary for the first year.

The next man on the program was Mr. R. C. Pollock of the Holstein-Friesian Association of America. After Mr. Pollock had talked to the dairymen for a few minutes he called for a vote as to how many thought a paid secretary for the state organization would be worth while. Every man voted in the affirmative. When Mr. Brill called for a vote on whether New Jersey should put on a campaign or not, the vote was again unanimous that a campaign be started. New Jersey will be the seventh state in the Union to have a paid secretary. Although this little state is known as the Garden State, she produces annually about thirty million dollars' worth of dairy products. These products are practically one-fifth of the total valuation of agricultural products of the state.

Meetings in the local counties during the campaign will be in charge of the presidents of the local clubs. These men are Salem—Cumberland Club, Walter Garrison; Mercer County, DeWitt Green; Warren County, Ernest Race; Somerset—Hunterdon Counties, John Tine; Morris County, L. F. Castle. A great deal of credit for this movement is due to the interest that the county agents have taken in this black and white organization. In connection with the meeting on Saturday, the Somerset—Hunterdon Club held a summer tour making the meeting at the College Farm its first stop. County Agent Haines had a good crowd with him from his club. Mr. Crissey, county agent in Salem County, also made the event one for holding a tour of several dairymen from Salem County. Breeders of other states must watch New Jersey. She was one of the first ones in the Union to boost the black and white and she is going to stay in line and be one of the first states in the Union to have a paid secretary.

New Jersey. JOHN W. BARTLETT.

U. S. Chamber of Commerce

We publish the following report sent to us by the Chamber of Commerce of the United States to show our readers what this organization is doing to keep its members informed upon business conditions throughout the United States. This report emphasizes agricultural products which is another reason for presenting it to our readers:

Washington, August 13—Somewhat lower prices of foodstuffs as the result of bumper crops in all parts of the United States is predicted by A. W. Douglas, chairman of the committee on statistics and standards of the Chamber of Commerce of the United States in his monthly bulletin on crop and business conditions.

According to Mr. Douglas, receipts of grains at primary points have not been heavy, largely due to lack of cars, yet prices have been on the toboggan slide because of a great surplus, which, sooner or later, must find not only a domestic but a foreign market.

"There is no longer any question as to an abounding harvest in all manner of agricultural products," says the report. "The winter wheat crop will be about 535,000,000 bushels and the spring wheat not less than 275,000,000 bushels despite severe local damage by black rust in some states in the Northwest. With a few more timely rains there will be 3,000,000,000 bushels of corn, of which the southern states will furnish about one-third. Texas has the greatest corn crop in its history, while Kansas has the unusual accompaniment of large corn and wheat yields in the same season.

"There will be a plentiful supply of other food products: grain, tubers, forage, fruits, and vegetables for man and beast. Those prophets of famine and bread lines can have the satisfaction that no one now remembers who they were or what they said. The wheat surplus in Kansas alone, taking into account that carried over from last season is over 100,000,000 bushels, and requires 100,000 cars to move it, or about 4 per cent of the total of all freight cars in the country. Shipments from southern points of fruits and vegetables average about 15,000 cars weekly and are gradually bringing down the prices of these table necessities once regarded as merely delicacies and luxuries.

"We have only to consider the uncertainties which would have confronted us in the event of an actually poor harvest to realize the altered meaning of the presence of untold numbers of boll weevils in some sections, and the lateness of the season. This come-back is due, as in the case of all other agricultural products—this season, to favorable weather of late, and to incessant, industrious cultivation. These things make for large production per acre, which, rather than large acreage, is the basis of all great crops. The promise now is for a production of 12,300,000 bales, barring those 57 varieties of things which may happen in the next three months.

"There is now on foot a widespread and comprehensive movement to treat the cotton crop from planting to picking and marketing in a strictly scientific business manner. This, as in all like movements in other agricultural products, simmers down in the last analysis to the elimination or modification of the final operation of marketing as a thing subject mainly to all manner of competition, from local to international.

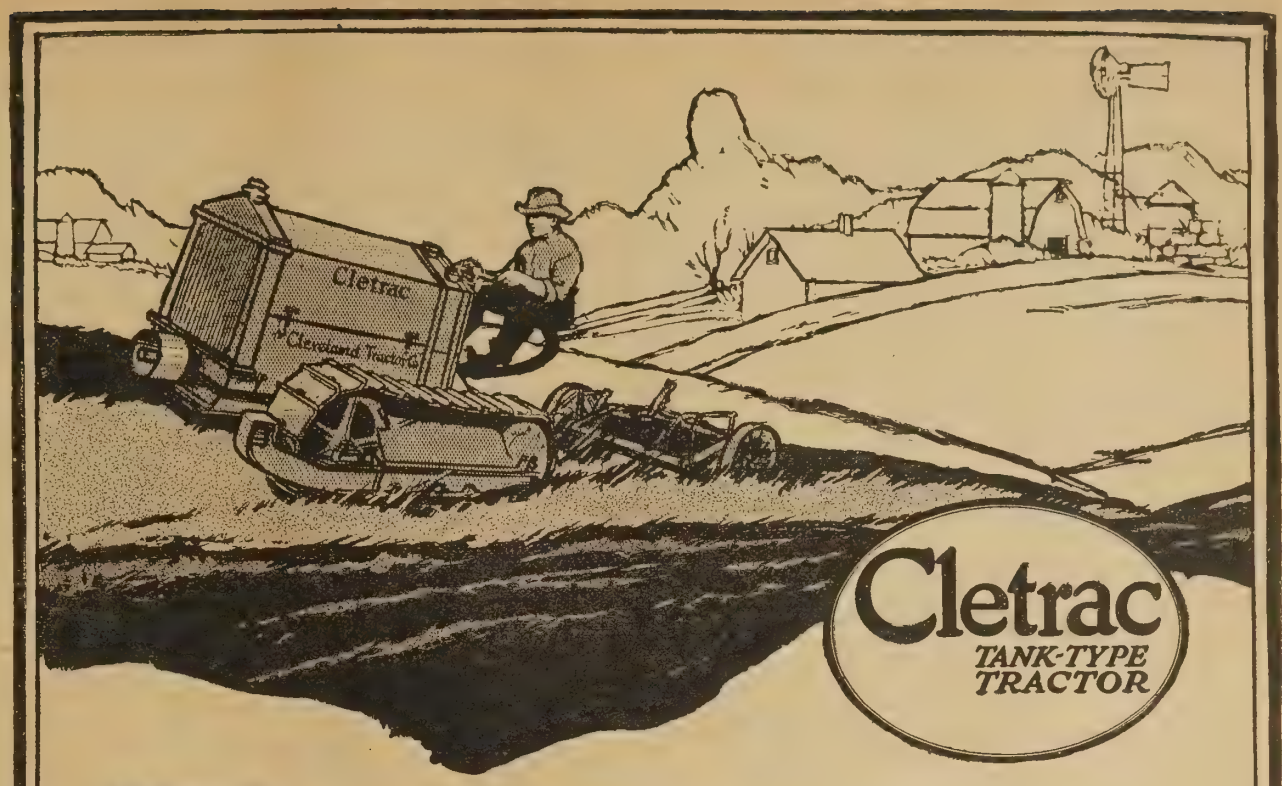
"As regards probable prices in either the near or far future, cotton has nothing on Providence in that its ways are past finding out. Cotton raising by irrigation in California and Arizona is growing in volume and importance. From 1912 to 1919 the acreage in Arizona increased from 400 to 37,000 acres and the yield from 240 to 40,000 bales. This year the acreage has still further expanded to 210,000 acres.

"Indecision and hesitancy still characterize textiles and some leather products. Reduced working days and sometimes entire closing down of the mills marks textiles in some localities. It seems to be more a waiting and readjustment period in a moderate way than the prelude to any marked change. This waiting attitude commences with the consumer and extends to the manufacturer. Conditions in metal lines are much the same.

"Lack of transportation is the principal hindrance to better and larger distribution. This operates to maintain and even advance prices because of the comparative scarcity thus caused. Railroad rate advances point the way to an ultimate solution, but, at the best, it seems a long story. Unless experience be misleading the new purchasing power of the railroads will be a strong factor in maintaining both prices and the volume of business.

"Building operations are much hampered by almost everything that can happen to them: Scarcity and the high price of labor and material, and difficulty of financing loans on con-

(Continued on page 312)





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CONTENTS

The Mystery of the Soil	277
The Dairy Optimist	278
Owning an Ensilage Cutter	279
The Methylene Blue Reduction Tests	280
Eighty-eight Acres of Sand	281
Uncle Sam's Hired Men Who Serve You	282
A 12,000-lb. Cheese	284
New Jersey Holstein Breeders Going After a Paid Secretary	284
U. S. Chamber of Commerce	285
Virginia Jersey Club Meets	286
August Milk Prices	286
Sale Announcements	286
Coming Events	286
Washington, D. C., Weekly News	287
Education or Law	287
Value of Advertising	288
Chamber of Commerce Report	288
Makers of Filled Cheese Found Guilty	288
Annual Sweet Clover	288
Summer Feeding Pays	288
Erecting Second Hand Silo	289
Sweet Corn Fodder	289
Antitoxin Available for Forage Poisoning	289
Relative Efficiency of Tuberculin Tests	289
Tool Rental	289
A City Owned Milk Plant	290
James Wilson	291
Costs and Milk Prices	291
Destroying Canada Thistles	292
Dairying Thirty Years Ago	293
Illinois State Fair	294
Cow Testing Associations	296
Union County, Ohio, Off With a Bang	296
Missouri State Fair	298
Quality in Milk Counts	298
A Milk Dispensary	302
Convincing a Sceptical Father	304
Junior Dairy Clubs in Montgomery County, Tennessee	304
Minnesota Club's Show	304
An Inspiring Pig Club Member	305
Junior Letters	305
Scrub Bull Funeral	306
Inventions and Appliances of Interest to Agriculture	307
Farm Leaders Go West to Study Co-Operative Marketing	307
Be a Leader	307
Cheese Not True to Type	308
Pointers on Painting	309
The Cow Race at the Missouri State Fair	311
Bulletins of the week	311
Advice to the Tester	312
Veterinary—Urinary Difficulty—Lame Cow—Blind Quarters—Hump-backed Calf	313
Ten Reasons Why à Farmer Should Use a Silo	314
Markets	314
American Farm Bureau Federation	315
Adulterated and Misbranded Seeds	318
Swollen Glands	319

Coming Events

New York State Fair, Syracuse, N. Y., September 13—18. J. D. Ackerman, Jr., Sec.

Kansas Free Fair, Topeka, Kans., September 13—18. P. Eastman, Secretary.

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Louisiana State Fair, Shreveport, Louisiana, October 28 to November 7. W. R. Hirsch, Secretary.

Virginia Jersey Club Meets

A good turnout of Jersey breeders attended the annual picnic of the Virginia Jersey Cattle Club, held at Snowden Farm, Fredericksburg, August 25th.

The meeting was formally opened at 12 o'clock and talks were given by Mr. William G. Houston, president of the club, Mr. Baldwin, the secretary, and Professor B. H. Rawl, Assistant Chief of the United States Bureau of Animal Industry.

In the course of Mr. Baldwin's talk he related the story of Edwin Orrock, former superintendent of Snowden, and told of the development of his Jersey herd. After Mr. Orrock left Snowden Farm he devoted his entire attention to his herd which consisted of pure-bred and grade Jerseys. During the winter of 1918 Mr. and Mrs. Orrock were victims of the "flu", leaving three children, the oldest being Sarah, aged 14. With only the guidance of an aunt, and the assistance of one hired man these children are now running the farm and developing the herd of Jerseys left to them. Every morning little Miss Sarah delivers the cream at the local creamery, hurries off to school, and then returns to the work of the farm.

Mr. Baldwin brought the little girl before the audience and introduced her as a little fellow breeder.

After the picnic lunch on the beautiful grounds of Mr. Baldwin's farm, Capt. R. C. Vance gave an interesting and instructive talk, illustrating the points by which a careful buyer should judge Jerseys. He also gave a cow judging demonstration.

Then the cow judging contest was held. Contestants were requested to write their opinions on the merits of cows brought out for this purpose, and these were submitted to a committee for consideration. Mr. Sanford of Orange, Virginia, won the prize, a gold medal donated by the American Jersey Cattle Club.

When the formalities of the meeting were concluded everybody was invited to inspect the beautiful Jerseys and the barns of Snowden. After all had admired to their heart's content the meeting was closed and everyone departed feeling they had spent a pleasant and profitable day.—American Jersey Cattle Club.

August Milk Prices

The following table from the U. S. Bureau of Markets August report presents a comparison of the net prices received by producers for fresh milk (test 3.5%) f. o. b. local shipping points or milk plants operated by fluid milk dealers:

Sections	Range of Aug. prices per cwt.	Comparison of average prices 1920 July	1920 Aug.	1919 Aug.
United States	$2.10—$6.69	$3.34	$3.59	$3.40
New England	2.50— 4.90	3.96	4.12	3.76
Middle Atlantic	2.84— 4.35	3.21	3.62	3.37
E. North Central	2.30— 3.96	3.17	3.26	3.41
W. North Central	2.10— 4.42	3.11	3.40	3.10
South Atlantic	3.05— 6.69	4.37	4.49	3.79
E. South Central	2.85— 4.45	2.90	3.14	3.23
W. South Central	2.87— 4.65	3.87	4.10	4.06
Mountain	2.45— 3.70	3.01	3.01	2.98
Pacific	3.00— 4.41	3.59	3.65	3.25

Producers' and Consumers' Prices

In general August shows an increased price of nearly twenty cents paid producers. The next table shows, for certain representative city markets, the prices of standard grade milk (Grade B, test 3.5%) received by producers and paid by consumers during the month of August:

	Producer receives per cwt.	Consumer pays per qt.	Butterfat allowance per lb.*
Birmingham, Ala.	$3.15–3.50	$.22	$.95
San Francisco, Cal.	4.51	.17	.29
San Diego, Cal.	4.45		
Denver, Colo.	2.98	.12	.85
New Haven, Conn.	4.85	.17	.40
Washington, D. C.	4.13	.16	.46
Jacksonville, Fla.	5.47	.25	.50
Atlanta, Ga.	5.82–6.40	.25	flat
Chicago, Ill.	4.20	.16	.40
Indianapolis, Ind.	2.80–3.52	.14	.65
Des Moines, Ia.	3.50	.15	.50
Kansas City, Kans.	3.22	.15	.29
Louisville, Ky.	3.33	.16	.50
New Orleans, La.	4.42	.17	.50
Portland, Me.	2.82		.57
Baltimore, Md.	4.13	.16	.58
Boston, Mass.	4.65	.17	.55
Detroit, Mich.	3.70	.16	.40
St. Paul, Minn.	3.51	.14	.50
Kansas City, Mo.	2.97–3.78	.16	.35
St. Louis, Mo.	3.84–4.42	.16	flat
Butte, Mont.	3.33–3.49	.15	flat
Lincoln, Neb.	2.98	.15	.85
Carson City, Nev.	2.91	.12	flat
Trenton, N. J.	4.40	.15	.40
New York, N. Y.	3.91	.16	.40
Asheville, N. C.	4.50	.17	flat
Fargo, N. D.		.15	.40
Cleveland, Ohio	4.13	.16	.50
Cincinnati, Ohio	3.85	.15	.45
Okla. City, Okla.	3.50	.18	1.00
Portland, Ore.	3.05	.14	.50
Pittsburg, Pa.	4.19	.16	.50
Philadelphia, Pa.	4.40	.15	.40
Providence, R. I.	4.65	.17	
Sioux Falls, S. D.	3.75	.14	flat
Memphis, Tenn.	4.32	.16	flat
Dallas, Tex.	3.85	.21	1.10
Salt Lake C., Utah	3.26–3.49	.12	flat
Burlington, Vt.	2.50–3.00	.14	flat
Richmond, Va.	5.12	.16	flat
Seattle, Wash.	3.58	.14	.70
Milwaukee, Wis.	3.75	.13	flat

*In actual practice this allowance is made on the basis of a certain price per hundred of milk of a certain test, one-tenth of the price per pound fat being paid or deducted for each one-tenth per cent above or below the stipulated basic test. Where the word "flat" appears in this column, it means that no allowances are made for butterfat content but the milk must not be lower in test than legal requirement and must not be adulterated or skimmed.

The prices quoted for producers are for milk testing 3.5 per cent and delivered f. o. b. city, from which must be deducted the various transportation costs in order to get the actual price. In certain cities the prices given apply only to that portion which is considered as the producers' average production, the surplus being either handled by the producers' association or the dealers at somewhat lower prices.

The prices given are here reduced to the comparable basis of 3.5% fat, as different cities vary from 3% to 4% as the basic fat test. To reduce the prices per hundredweight to either a gallon or a quart basis divide by 11.63 or 46.33, respectively.

The prices paid by consumers are for average testing milk delivered in quart bottles. It is the grade of milk most generally sold in these cities and in most cases is for pasteurized milk.

Country Shipping Stations

Prices per cwt. paid at the dealers' country receiving stations or at producers' railway shipping plants are given as follows for August:

New Haven	$3.74	Butte	$3.15
Washington	3.49	Lincoln	2.63
Chicago	3.70	Trenton	3.78
Indianapolis	2.33	New York	3.55
Portland	2.82	Albany	3.64
Baltimore	3.40	Cleveland	3.55
Boston	3.94	Cincinnati	3.00
Kansas City	2.36–3.43	Pittsburg	3.40
St. Louis	3.75	Philadelphia	3.87

New Price Basis

The method of determining prices for the Minneapolis and St. Paul markets has been modified somewhat. The price paid producers for 100 pounds of 3.5 per cent milk will be determined by averaging ten times the average of the Plymouth, Wis., quotations for cheese (styles Twins, Daisies, and Young Americas) for the preceding month; with 5.2 times the average of the New York quotations for 92-score butter for the preceding month; plus an arbitrary differential which will vary as follows: August, $.85; September, $.90; October, $.95; November, $.90; December, $.80; January (1921), $.70; February, $.65; March, $60; April, $.55; May, $.50; June, $.40; and July, $.60. For fat in milk above or below 3.5%, 5 cents per one-tenth per cent will be added or deducted.

Retail Prices

The following table gives, for a few cities, the retail prices of milk, cream, and buttermilk for August, 1920:

Cities	Common milk per quart	Special milk per quart	Certified milk per quart	Light cream* per half pint	Butter milk per quart
	Cents	Cents	Cents	Cents	Cents
Boston	17.5	20	25	16	11
New York	17	20	27	21	12
Philadelphia	15	17	30	18	13
Pittsburg	16		25	19	
Cleveland	16	20	32	20	15
Chicago	16	22	25	17	10
Milwaukee	13	15	25	15	8
Detroit	16	22	25	16	11
Minneapolis	14		21	16	14
St. Louis	16	20	25	13	14
Des Moines	15	17	25	15	12
Washington	16	17	30	19	14
Richmond	16	17		16	16
Jacksonville	25	30		30	12
Baltimore	16	20		22	16
New Orleans	17	19		16	15
Salt Lake City	12.5	15		15	8
Portland	14		21	17	14
San Francisco	17		25	17	14

*Testing 18—20 per cent butterfat.

The world is given as a prize for the man in earnest.—F. W. ROBERTSON.

Sale Announcements

Sept. 10—Holsteins. Rock County Fair Annual Holstein Sale, Evansville, Wis., B. T. Green, Manager.
Sept. 10—Holsteins. Westham Dispersal Sale, Richmond, Virginia.
Sept. 13—Holsteins. Edward Wagner, Wheeling, West Virginia.
Sept. 13-14—Holseins. Dispersal Dr. R. Ivey, Glen F. Reed, and Dr. S. P. Scherer herds, Fishers, Indiana.
Sept. 18—Guernseys. New York State Geurnsey Sale, Albany, N. Y., L. F. Herrick, Sale Mgr., Worcester, Mass.
Sept. 21—Guernseys. Langwater Farms, North Easton, Mass. L. F. Herrick, Sale Manager, Worcester, Mass.
Sept. 22—Holsteins. G. H. Horrell, Humbird, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Sept. 25—Holsteins. John Stotzer herd, Suffield, Ohio.
Sept. 27—Holstein bulls. Holstein Breeders' of Lake County Indiana, Crown Point, Ind. Roscoe Clark, Sale Mgr.
Sept. 29—Ayrshires. Ayrshire Dispersion of C. H. Peverill of Waterloo, Ia., at Dairy Cattle Congress, Waterloo, Ia. Amos Burhans, Sale Mgr.
Oct. 1—Jerseys. Virginia Jersey Cattle Club Sale at Fredericksburg, Va. Tom Dempsey, Sale Manager.
Oct. 1-2—Holsteins. Vermont Breeders' Sale at Rutland, Vermont.
October 1-2—Holsteins. Dairy Center Sale at Northfield, Minnesota. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 4—Holsteins. Summit Co. Holstein Breeders' Ass'n. Sale at Akron, Ohio. Wm. F. Cook, Hudson, O., Mgr.
October 5—Guernseys. Blue Earth County Breeders. Mankato, Minn. Dr. M. B. Wood, Mankato, Minnesota, Sale Manager.
Oct. 5—Holsteins. Hall Bros., South Denver Station, Denver, Colo.
October 6—Guernseys. Guernsey Breeders' Association of Northern Minnesota and Northern Wisconsin, Tristate Fair Grounds, Superior, Wisconsin. E. P. Gibson, Sale Manager, Duluth, Minnesota.
Oct. 6—Holsteins. Dispersion of H. G. Cox herd of Registered and Grade Holsteins at St. Charles, Minn.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, D. C., AUGUST 30—The Washington office of the National Dairy Union has word of the effective anti-oleomargarine action taken this week by the New York State Fair Commission, which has refused to permit space to be leased or supplied in the buildings or anywhere on the grounds of the New York State Fair at Syracuse, for the display of oleomargarine in any form, or any advertising or propaganda in the interest of butter imitations. It is suggested that this be made the basis of an appeal to the managers of all the great agricultural fairs and expositions to take similar action. The National Dairy Union is also "going after" national magazines which permit in their columns statements claiming imitation butter as equal to the real article. McCall's Magazine is a recent offender. The attitude of the Dairy Union office is that the time is ripe to be on the aggressive and maintain at the fairs and in newspaper and magazine publicity everywhere that there is no substitute for butter, and that those who are engaged in the dairy industry should know the offenders and those spreading the opposite doctrine.

⚜

Manager Warber of the Washington office of the National Milk Producers' Federation has gone to Columbus, Ohio, where the Federation is holding a session in connection with other farmers' organizations in conference there. Mr. Warber has been in Washington long enough to be able to present to his association a very clear picture of the needs of an office here, and the plans and policies to be pursued. It is expected that the association will approve of more active work and more general activity from their Washington headquarters.

⚜

The Maryland-Virginia Milk Producers' Federation at a meeting of its directors and executive committee declined to permit the August rates for milk to remain in force another month, and ratified the decision to charge Washington distributors 40 cents per gallon for the month of September. The August rate has been 36 cents a gallon. The District of Columbia Health Officer, Dr. W. C. Fowler, appeared before the committee and basing his plea on the alleged surplus of milk in sight, asked the producers to continue the August rate in effect. The committee representing the producers unanimously rejected this plea, but adopted a resolution inviting the District authorities to join with them in a study of the cost of production of milk in this territory. Their resolution asks for a "cost of production" committee to consist of "one representative of the Federation of Citizen's Associations, Health Officer Dr. W. C. Fowler, one representative of the milk dealers, one representative of the Maryland State College of Agriculture, one representative from the Agricultural College of Virginia, and one representative of the milk producers. This committee, it is expected, will hold a meeting soon to organize and begin work.

In addition to proposing this committee to study costs, the producers drafted a reply setting forth why it was impossible to continue the 36-cent price. The reply cited the increases in rates from 36 cents to 40 cents in Philadelphia, Baltimore, and Boston, from 42 to 46 cents in Cumberland, Md., and the 44-cent price which has been in effect all summer at Richmond, Va. "Dairy farmers have proceeded," says this reply, "on the assumption that this raise would take effect, as it has been planned for a long time. Many of them already have contracts with their dealers on this basis. To lower the September price four cents as asked would cause serious financial losses to more than 1,200 farmers supplying milk to this city, and would undoubtedly bring on an acute shortage during October and November when there usually is not enough milk to meet the demand. Another factor which the producers have to contend with is the increase in freight rates which will add one cent a gallon to the cost of delivering milk in Washington."

⚜

Propaganda for the appropriation of several hundred million dollars for reclaiming land, a new version of the Lane-Mondell raid on the treasury discovered and headed off by prompt work by the National Grange in the last Congress, has again made its appearance. This scheme masquerades as a "Land for the Soldiers" project. Agents of some invisible interests are visiting congressmen, and congressional nominees in widely scattered states, asking pledges to put this bill through this next session. A Washington newspaper says the bill will call for two hundred-fifty milion dollars to "reclaim 4,000,000 acres for farm lands". This is at the rate of $62.50 per acre. A real project of value to agriculture, and to the soldiers would be to make a large sum available, not a quarter of a billion dollars, however—for loans to soldiers who knew how and wanted to farm, with which they could buy the farms they might select and be able to pay for. This was the plan of the Morgan bill in the last Congress, and the death of Congressman Morgan, since the adjournment of Congress removes a real friend of the soldiers as well as a real friend of the farmers and of honest legislation from the lower House. It will pay all friends of agriculture to watch out for the Soldier Land scheme in its treasury raid form. It is now pending in the Senate where it is known as the Borah bill.

⚜

Dr. Kiernan, of the tuberculosis eradication work in the Bureau of Animal Industry, reports good progress in the anti-tuberculosis campaigns now going on in many states. A special effort is being put forth just now especially in Iowa. List No. 3, of the accredited herds is in the printers' hands.

⚜

Butter markets show a slight upward tendency, according to the Bureau of Markets. And this is in spite of receipts of two additional shipments of Danish butter amounting respectively to 2,300 and 1,900 casks. Declining receipts of high quality butter are held responsible for a steadying of the market, sufficient to overcome the effects of these imports, and force a slight increase during the past week. Total cold storage holdings increased over the corresponding week last year, but is still only about sixty-six million pounds as against more than 82 million pounds at this time in 1919. Figures on the total receipts since January 1 in the five chief markets as compared with total receipts in the same markets and the same period last year, show the 1920 shipments to be fifty million pounds less than the 1919 shipments.

⚜

Chairman McFadden of the House Banking and Currency Committee is in receipt of letters from Congressman Haugen and Senators McLean and Gronna, indicating that there will be early action by all three in appointing the members of the special committee to hold a judicial hearing on rural credits. Action of the Record Associations in asking for this legislation, backed up by many leading breeders' associations, has started action with unusual celerity. Plans now call for hearings to begin November 8.

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October 7th to 16th

Another record breaking mile stone

—It marks the progress of the years of dairy world-wide improvements.

—It means actual money to everyone who depends upon the dairy for profit.

Well worth while
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There are thousands of real profit-producing ideas — each a reason for you to come to Chicago.

Make a date to Grow — Go — Oct. 7 to 16
Get the big ideas

The National Dairy Show
Union Stock Yards CHICAGO

Education or Law

"Education or Law" is the title of an editorial published in our issue of August 27th. We find we are in error. In the first place, Ontario has never enacted such a law as was stated in the editorial nor has any province in Canada such a drastic law as we presented. It is the province of Nova Scotia which at its 1919 session enacted a law governing the use of the scrub bull and, in part, is as follows:

"No keeper of a scrub bull shall allow or permit such scrub bull to serve any cow that is owned or harbored or kept within the boundaries of any agricultural society, except a cow owned by him as hereinafter provided.

("The word 'keeper' includes any person who owns, harbors, or has the custody or control of a scrub bull.)

"When a scrub bull is within the boundaries of any agricultural society, the keeper of such scrub bull shall keep the same in some place so fenced or otherwise enclosed that the passage of such bull therefrom will in any event be prevented while such scrub bull is unaccompanied by or not under the control of a competent attendant.

"Where it is made to appear to the president or secretary of an agricultural society that it is impracticable for a person owning a cow within the boundaries of such society to procure the services of a pure-bred bull, such president or secretary may issue a permit authorizing the keeper of a scrub bull to allow such bull to serve said cow. In case of refusal or neglect to issue such permit, the superintendent of agricultural societies may, if he thinks proper, issue the same.

"Every person who is guilty of a violation of any of the provisions of this Act shall be liable, on summary conviction, to a penalty of not more than one hundred dollars."



ONE OF THE GUERNSEY HEIFERS IN THE HUNTINGTON COUNTY CALF CLUB IN INDIANA

The 27 heifers owned in this club are all in good condition and the boys are well pleased with the results from their work. These heifers will be shown at the Huntington County Live Stock Show both in the calf club classes and in the heifer classes. Through such activities as this club work, Fred A. Loew, county agent, reports that the dairy interests of Huntington County are steadily increasing.

EDITORIAL COMMENT



It has been known for a long time that second growth sorghums are poisonous under certain conditions. The poisonous substance which develops in the leaves of sorghums is prussic acid. Just what causes produce this poison is not clearly understood, but experiment has shown that second-growth sorghum is likely to develop prussic acid, especially when it is dry or after the leaves have been frosted. Therefore, it is not safe to pasture second-growth sorghum.

The question has been raised as to whether sudan grass will develop these properties under certain conditions. It is reported that in a few instances Johnson grass has been poisonous to cattle. If any of our readers have any definite knowledge regarding sudan grass developing poison under certain conditions we would be pleased to have them write us. The reports from those who have had experience in raising sudan grass state they have never known of a case of poisoning caused by sudan grass.

Elsewhere in this issue will be found a letter commenting upon our editorial entitled "Milk and Meat". This letter comes from a milk producer who thoroughly appreciates that to increase the consumption of milk and to secure a price in keeping with its value the dairyman must produce a high quality product. There are too many milk producers who do not appreciate that to increase consumption and to secure a better price for their product they must put quality into it.

Effort is being made to put forth the food value of milk, but little can be accomplished in increasing the consumption of milk unless the man who milks cows appreciates that the consumer's taste must be taken into consideration, that he is the judge and the one who controls the price and the consumption of dairy products to a large extent.

The milk producer who is indifferent to quality is not only working against his own interest but against that of his neighbors'. Milk can be advertised, its food value set forth in glowing terms, but unless its taste pleases the consumer the consumption will not be increased.

We commend this letter written by a subscriber, for it points out what we consider one of the fundamentals in successful dairying and in securing reasonable prices for dairy products.

VALUE OF ADVERTISING

A state dairy council received the following in reply to its solicitations to a co-operative creamery to become a member of the council: "Wish to advise that at the present time we cannot see our way clear to give you our membership. The demand for butter is greater than our output at the present time, and any further advertising would be needless."

The state dairy councils and the National Dairy Council are attempting to inform the consumer regarding the food value of milk and its products in order that there will be a larger consumption and a willingness on the part of the consumer to pay what dairy products are worth. In the past, milk, butter, and cheese have sold relatively cheaper than other food products because the consumer has not been educated as to their food value. Before the consumer will pay what an article is worth he must be taught its value to him. The manager of the co-operative creamery, from whom this letter was received, evidently does not appreciate that advertising is done for the purpose of enlarging the market and to lead the consumer to pay willingly what a commodity is worth.

The dairy farmer is producing the best food product, the most nutritious and the cheapest animal food on the market. Yet, as a people, we do not consume over one-third as much butter, cheese, and milk as we should to nourish us properly. With the right kind of advertising people can be led to consume more dairy products and to pay what they are worth. The trouble has been with the dairy industry that too many have taken the same view of advertising as the person who wrote the letter quoted above. When butter was sold as low as 10 cents a pound the manufacturer of good butter could sell all he could make, but there was no profit in it at that price.

The conception this man has of advertising shows clearly that state dairy councils must educate those engaged in the production and manufacture of dairy products to understand the value of judicious advertising.

CHAMBER OF COMMERCE REPORT

A report of the Chamber of Commerce of the United States will be found elsewhere in this issue. This is an organization representing the various business interests of the country. It is to the manufacturer, the merchant, the banker, etc., what the American Farm Bureau Federation is to the farmer. Its purpose is to keep its members informed upon the business conditions of the nation and the forces which are likely to affect it.

It will be observed in the report we are publishing that the production of the various farm crops is presented, the purpose being to inform its members in regard to our agricultural conditions, for business depends upon farm crops.

If the American Farm Bureau Federation, when it is fully organized, can keep its members informed upon the business activities of the country, upon the supply and demand for various agricultural products, and the general trend of business conditions, it will be serving its members the same as the Chamber of Commerce of the United States. The manufacturer, the merchant, the banker, the distributor have seen fit to establish agencies to keep them informed upon the entire business of the nation, in fact, of the world. If it is wise for them to secure such information, it is also wise for the farmer to be similarly advised. He can then gauge the acres he devotes to certain crops according to the world's needs. In other words, he can to a large extent regulate production according to the demand of the market and not have a great surplus in one crop and a large shortage in another. This will assist to stabilize the market and to make his income more uniform and minimize his losses. No system will ever be devised that can control the production of various crops to the degree, perhaps, which would be desirable, for seasons are not uniform nor are the buying powers of the consumer constant; but with an effective farm organization, statistics can be gathered which will assist the farmer in the conduct of his business as the member of the Chamber of Commerce of the United States is assisted in his. We consider it well for the farmer to study and understand the methods of successful business men.

MAKERS OF FILLED CHEESE FOUND GUILTY

Dairy and Food Commissioner George J. Weigle of Wisconsin has lately been successful in a court case against makers of filled cheese in Wisconsin. Cocoanut oil was used to replace butterfat in this cheese and the product was sold in competition with the real product of Wisconsin cheese factories. The maker was found guilty and fined and the owner of the factory forfeited his bail rather than face trial. The factory will not continue in operation. Commissioner Weigle makes this statement: "We are very much pleased at the promptness with which we were able to stamp out the manufacture of this cheap imitation cheese before it had a chance to injure the reputation of Wisconsin's full cream product."

This experience of Commissioner Weigle brings to our mind the experience which Wisconsin had with filled cheese more than thirty years ago. Prior to this Wisconsin had developed a splendid reputation for a cheese producing state and the demand for her cheese became general. A great deal of the cheese made in Wisconsin was exported to England where it found a very favorable market. Then came those who thought they would capitalize this reputation and fool the consumer with a spurious product. The manufacture of filled cheese became general as there was no law at that time to prevent its manufacture and sale. This counterfeit product was also exported and, as a result, less cheese was consumed in a short time and English merchants refused to buy cheese from Wisconsin. The cheese market was destroyed and a legitimate product injured. This condition brought about a law which does not permit the manufacture of filled cheese but, notwithstanding this, an outsider came into Wisconsin last year and in the face of advice against manufacturing filled cheese established himself and got a factory in Wisconsin willing to turn out an illegal and unlawful product. This man had no interest in the welfare of dairying in Wisconsin nor in the welfare of humanity. He simply desired to manufacture a product with which he could make money, but the prompt action of Dairy and Food Commissioner, Mr. Weigle, annihilated this business and the person who started it has left the state.

The producers of dairy products, the men who milk cows, should appreciate that it requires everlasting vigilance to keep the counterfeiter and the dishonest manufacturers of spurious, so-called dairy products out of our markets.

ANNUAL SWEET CLOVER

The new annual sweet clover discovered by Professor Hughes of the Iowa Experiment Station is gaining favor. It will be remembered that most sweet clover is biennial. This annual white sweet clover is a new plant for agriculture. It can be sown with grain in the spring or as late as the middle of July and develop much growth which will bring to the soil both nitrogen and organic matter.

This annual white sweet clover was described in an issue of Hoard's Dairyman early this summer. Its general use is limited because of the high cost and scarcity of seed. The seed is now selling at $5 per pound. The Henry Field Seed Company has stated to us that from 50 seeds sent them by Professor Hughes two years ago they raised two pounds of seed, and from the two pounds they raised 300 lbs. This year they estimate that from 25 lbs. of seed on about five acres they expect 40 bushels.

The Rural New Yorker reports this annual sweet clover grown on the editor's farm in New Jersey, planted June 12, as being 22 inches high on August 1 and for the seven days following grew 8½ inches, more than one inch per day.

The biennial sweet clover is far better for fertilizing purposes than most farmers appreciate and should have a larger place in agriculture, but annual sweet clover promises a still better green manuring plant and we look forward to the time when there is an abundance of seed, that its use will become general. It has been estimated that a good crop of annual sweet clover will yield as much nitrogen to the soil as eight tons of manure and also furnish a large quantity of organic matter.

Summer Feeding Pays

Has it been proven a paying proposition to supplement short pasturage with grain? The cows freshen in the fall and reach their highest milk production during the winter months.

Round Lake, Ill. R. C. S.

Hoard's Dairyman is very certain that it pays to supplement pasturage with a grain ration or by supplying liberal amounts of a palatable hay. A profit on high priced feed may not be received in direct returns, but, considering the whole lactation period, we are positive that very good returns will be received from the feed inve ted at this time.

It is important that a milking herd should not be allo ed to get in thin flesh or in weakened vigor, because for a few weeks during short pasturage they do not receive as much feed as should be

allowed. The extra allowance helps them enough at this time that they are brought to the winter milking period in better strength and enough better condition that they produce more profitably during those months than they would had they been stinted during the summer. We hold that liberal feeding is much more profitable at all seasons than too great economy in the matter of concentrate supply.

Erecting Second Hand Silo

I have purchased a second hand stave silo. In putting it up again would it be advisable to paint the edges of the staves with coal tar? Would it be a good plan to paint the inside with creosote?

Maquoketa, Iowa. H. E. S.

We see no objection to painting the edges of the staves with coal tar, particularly if the tar is thinned somewhat. There is, however, a tendency for coal tar to crystalize in time. If it is applied thick enough to keep the staves slightly apart, it will finally prove a detriment instead of an advantage.

We would suggest, as a preferable method, that the edges of the staves be coated with creosote prior to erection. However, if the exterior is to be painted with an oil paint, care must be exercised in not getting any of the creosote on the exterior of the staves. Paint will peel off when applied over creosote.

It would be highly desirable to paint the interior of the silo with creosote after its erection. If the exterior is not to be painted, the staves might well be given a brush coat of hot creosote prior to the erection of the silo.

Sweet Corn Fodder

We are growing a few acres of evergreen sweet corn to feed our cows this fall and early winter. As we have no silo we would like to know what stage to cut this corn to receive the most milk from it. We expect to cut it and put in large shocks unless you suggest some other way of keeping it in a green stage.

Adams, N. Y. H. E. W.

There is no practical means of preserving corn as a green and succulent feed except as one may have a silo. If the sweet corn was rather thickly planted it will make a very palatable feed if cut and cured as shocked corn. The ears will not be so hard and dry and they are easily masticated. When grown in this manner a considerably larger portion of the nutrients remain in the stalk and leaves, which makes the whole plant a better roughage feed than thinly planted corn. This corn may be cut shortly before frost or before it commences to dry up unduly. Since the stalks stand almost vertical in the shocks, as the leaves wilt there is ample room for the upward passage of air. This tends to rapidly dry the interior and check molds and fermentation. Care must be taken that this corn fodder is well cured before it is stacked, as it often carries a considerable quantity of moisture even when thought to be very dry.

If the sweet corn was thinly planted and matures well grown ears, it would be doubtful economy to cure it in a manner above outlined and feed it without husking out the ears. It is quite possible that if a good quality of roughage is desired it would be preferable to cut this corn when in the roasting ear stage and cure it as fodder corn. As to whether this last suggestion would prove most profitable depends upon a variety of conditions, such as the possible yield of ear corn, the demand for a good roughage, etc.

If ten or more cows are kept it will be found highly profitable to erect a silo before another year rolls round. The silo is well nigh indispensable on the dairy farm, both because it conserves labor in handling and feeding the corn crop and because it provides a succulent feed that helps to induce a good and profitable milk flow.

Antitoxin Available for Forage Poisoning

Circular No. 38 of the Extension Service of the Illinois College of Agriculture, by Robert Graham, just issued, dealing with the cause and treatment of certain forms of forage poisoning, will be found of unusual interest to veterinarians and to farm advisers in helping to combat this very fatal and costly disease of farm animals.

Forage or food poisoning of farm animals, has, by extended experiments, been definitely established as a specific fatal disease. Originally it was believed that horses were the only animals affected, but more recent studies contribute evidence of the existence of this disease in cattle, sheep, swine, and poultry, as well as the human family. The noticeable symptoms of food poisoning in different animal species are somewhat variable but in general affected animals display marked weakness together with varied nervous manifestations. The extent of forage poisoning in farm animals remains to be more accurately established, yet the experimental work at the Illinois Experiment Station and College of Agriculture indicates that this, or closely related diseases, are somewhat prevalent throughout the Mississippi Valley. The public interest in food poisoning has been stimulated from the recent outbreaks of the disease in man, resulting from the consumption of incompletely sterilized ripe olives. The results of investigations show that animals suffer from a similar disease.

Cause of Food Poisoning

Food poisoning, as discussed in extension circular 38, deals principally with the disease commonly referred to as botulism. The poison is developed on animal feed, including ensilage, wheat screenings, ground oats, oat hay, or other feeds, during the time it is stored before being fed. The poison is the result of bacterial growth upon the feed and may take place without any visible change in the feed. Molds so often associated with food poisoning in animals have a very remote connection with the primary cause of the disease, according to the results of recent experiment.

Antitoxin Prevents

A specific antitoxin which will prevent the development of food poisoning has been developed and applied under practical conditions with good results, as reported in bulletin 210 (1918) of the Illinois Experiment Station, by Ruek and Crindley. From preliminary observations made by the Illinois station, as well as observations in connection with the outbreaks referred to in Circular 38, it appears that veterinarians may find botulinus antitoxin a very valuable asset in combating food or forage poisoning in domestic animals. It can be obtained from the Illinois Experiment Station, until available from commercial sources, at the cost of production, which at the present time is two cents per cubic centimeter.—Illinois Experiment Station.

Relative Efficiency of Tuberculin Tests

I was much interested in your comparison of tuberculin tests in your May issue. I note it seems to be agreed that the subcutaneous is the most accurate. Does that mean that it is less liable to overtake a reactor, or that the intradermal is more apt to condemn a healthy cow? Why does it require greater ability on the part of the operator to interpret the intradermal test? Are there other factors besides a swelling to be taken into consideration? I have been told by a man who has helped do the work that a swelling as large as a pea is considered final proof against a cow, while a local veterinarian tells me a swelling that large may be made by a mistake in applying the test. A little further light on this subject would be appreciated.

Redding, Calif. E. W.

The above inquiry was referred to Dr. J. S. Healy, of the United States Bureau of Animal Industry, who replies as follows:

"The statement that the subcutaneous test is the more accurate is, no doubt, based on experience tables carried on to check the relative efficiency of the three tests—the intradermal, subcutaneous, and ophthalmic. It was found by applying the test to a large number of herds and containing a large number of cattle that the subcutaneous test revealed more reactors than any of the other tests. Therefore, they concluded that it was more accurate. However, in some individual herds it was found that the intradermal test revealed more reactors than either of the other tests. The statement that the subcutaneous test is the most accurate should not lead anyone to draw the inference that the intradermal test is more apt to condemn a healthy cow.

"Second: 'Why does it require greater ability on the part of the operator to interpret the intradermal test? Are there other factors besides a swelling to be taken into consideration? I would rather use the word 'skill' in this case than the word 'ability' as the injection is purely a question of technique and for an operator to be skillful requires experience.

"Third: In the case of the interpretation of the test—all authorities are agreed that the swelling the size of a buckshot or greater constitutes a reaction. We have watched our post-mortems on reactors on which the character of the swelling was indicated by a notation 'skin thickening' to the 'size of an orange' and find out that lesions are demonstrated in those swellings of lesser size as constant as those of a larger character. The factors extraneous to tuberculin that have to be considered in interpreting the test are traumata caused by the needle and infection introduced by the needle. However, these cases are negligible as demonstrated by the application of the test and the substantiating post-mortems.

In speaking of the swelling the size of a pea I agree with the authorities that it should be considered a reaction as that is a rather large swelling. However, there is a swelling which is constant following the application of some tuberculins, which is described as a 'match head' swelling right at the seat of injection and which is not regarded by those using such a product, as a reaction."

Tool Rental

HOARD'S DAIRYMAN:—"What will I charge my neighbor for the use of my tools and what should I pay him for the ones that I use?" These are questions that every farmer has to solve from time to time. I have them because I do not own all the farm tools that I must use. Some of them I may not use for five years but I need them when I want them.

For my own farming I have a fortunate co-operative condition that helps out. My neighbor lives about four rods from us. He has a manure spreader and I haven't. I have a 12-hoe fertilizer grain drill. Our grain acreage is not big enough but that we have plenty of time to get both jobs done. Another neighbor has a grain binder and I have a corn binder. We make this trade very well. It saves a lot of investment for both of us and saves much room for housing the machinery.

But how are we going to get at this rate for charging when we do hire a machine? So far I've never charged a neighbor for a machine. I never expect to. Yet others than my neighbors may want to borrow. Then I ought to figure it out.

A potato planter near here used to rent for $1.25 an acre. I always thought that was a little high. It cost about $75 in the first place. About 60 acres of work would have it paid for. It ought to be good for two or three times that amount. I have paid 10c an acre for a two-row corn planter. I thought that was rather low. I've also paid that price for a grain drill with fertilizer attachment. Probably that was too low.

I rather think that the life of a machine plus about 6% interest and repairs is the fair base for a rental. Yet if a man uses his own machine it might easily last twice as long as when every fellow uses it. Perhaps an average tool will last for ten years and give fair service. Then if it is a corn binder it ought to cost $21 a year. Interest on it is about $13. There's $34 a year. It will average five or six acres a day and the average farm will use it for a week or so. Probably 30 acres of corn to the farm is cut though this is hard to estimate off hand. At that rate a dollar an acre is about right. That seems high but it isn't. Suppose that a part is broken that costs $4 to replace? Then that comes out of the owner's pocket.

A corn planter costs about $75 now without a fertilizer attachment. I know of one planter that has planted something like 600 acres. The repair cost has been slight—probably $5 in all. Ten cents an acre in this case would have let the owner out all these years. Yet I don't think he ever charged for the use of it at all. However, it is good for more years as the wearing parts to a corn planter are not many and are not expensive to replace.

There are bigger tools that we are using now that have to be considered. Tractors usually have idle days when they could be hired out. Yet I wouldn't care to hire a tractor to some other fellow or wouldn't care to hire his. I would want to hire the driver along with it. I know one neighbor who disced for a farmer and charged a dollar an acre. That made him $15 a day. His fuel cost about $4 and his time was worth at least $5—hired man price here—besides the wear on the machine. I paid $4 an acre to have a tractor plow alfalfa sod for me last year. It ought to be more this year.

Plows, cultivators, harrows, and a few other such tools with little or no moving or wearing parts are lent to neighbors everywhere I suppose without a rental price being mentioned. There are some tools that I would rather not lend if I can help it. A garden drill is one of them. If the furrow opener is allowed to get rusty from leaving dirt on it it is a hard job to get it to working again. With larger tools this isn't so important. A plant setter comes in this class as also does a spray pump. Most farmers will clean up a spray pump when they are through but if one doesn't then there are new parts to buy and a general clean-up in order before it can be used again. With some spraying material this is not true but with many it is. However, I would just as soon lend these machines to some neighbors because I know they will take as good care of them as I would.

Ohio. EARL ROGERS.

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$2.45

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Don't Miss it!

With every pair of these Dress Shoes at $4.84 you get the Work Shoes put in at $2.45—total only **$7.29—both pairs for one price**—a record smashing bargain.

Send Coupon

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We positively do not sell either pair separately.

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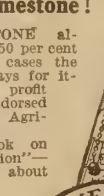
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Get My Special Prices now being made on Stationary and Portable Engines—in sizes 2, 3, 4, 6, 8, 12, 16 22 and 30 H-P. Also, Power Cut-Off Saws for sawing cord wood and pole wood. This $125 Offer on WITTE Drag Log Saws is for immediate acceptance. Don't wait if you want to get in on this big advertising offer. You know **if it's a WITTE,** it's all right. Quick shipment, have your banker wire order, or mail order today and Save $50. Address your nearest shipping point.

WITTE ENGINE WORKS

1645 Oakland Ave., KANSAS CITY, MO.
1645 Empire Bldg., PITTSBURGH, PA.

Cow Waters Herself



with this wonderful new **Libbey Automatic Water Bowl.** Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

When writing advertisers please mention Hoard's Dairyman.



Water Should not be Stored in a Tank

This water supply system pumps direct from the well or other source of supply—no storage tank is required. No tank to leak, freeze, rot, rust, overflow or collapse. No stale, stagnant water. The

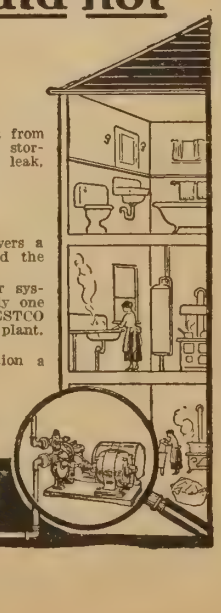
WESTCO
Tankless Water System

is marvelously simple. As you open the faucet the pump starts and delivers a full, steady stream of water **under ample pressure.** Close the faucet and the pump stops.

It is the lowest priced, simplest, most dependable, automatic, power water system obtainable. Easy to keep in good running order. The pump has only one moving part. No belts, no valves, no gears, no springs, no oiling. The WESTCO System can be run off the regular electric light circuit or farm lighting plant. Thousands are in daily, successful operation.

Send for bulletin C-4 and find out what a great saving and satisfaction a WESTCO will mean for you.

Western Pump Company
Davenport, Iowa **Moline, Ill.**
Branch offices and distributors in principal cities.



There's a Westco pump for every purpose

A City-owned Milk Plant

Jamestown, New York, the First City to Vote Bonds for this Purpose

PAUL A. DAVIS, NEW YORK

A MAJORITY of 115 taxpayers in the city of Jamestown, N. Y., August 21, voted to loan the credit of the city the sum of $150,000 to be used in the erection and operation of a municipal milk plant. Thus Jamestown becomes the first city in the United States to take this step, and adds one more municipal enterprise to its already good sized list. For several years past now, Jamestown has conducted with success a municipal water and lighting plant and a municipal hospital and market, and Mayor Samuel A. Carlson, supporter of all these movements, has at last, after ten years of effort, obtained the consent of the majority of the taxpayers to go into the milk business.

It is proposed to pay off the bonded indebtedness of the city at the rate of $5,000 annually, with interest on unpaid bonds, from revenues derived from the sale of milk from the plant.

The proposition in its same form, in February, 1919, was voted down by a majority of almost two to one against it, the total vote at that time being about half of the total vote recorded in the recent election, which was 2,185.

Supporters of the plan, during the campaign waged prior to the last election, took the position that the plant was needed to insure a better quality of pure milk, to insure more stabilized prices to the consumer, and even lower these prices, and to safeguard the future milk supply to the city.

It was argued that with the ever increasing number of milk condenseries, a shortage is likely in the future. The city should be in a position to offer the producer as attractive a market as the condenseries, it was contended, and this will be worked out by the contract system. Thus, when the height of the milk season is on, and the city's population leaves for summer vacations, producers will be assured that their supply will all be taken.

The milk will be pasteurized in the plant. This the board of health claims will protect the public health of the city. During the past, from time to time, the health board has had complaints of dirty and impure milk. This really caused the question to come about some ten years ago.

The cost of overhead operations will be reduced, the supporters of the plant claim. In place of some 70 peddlers, there will be about 25 to deliver the 18,000 quarts of milk delivered daily. Each peddler will have his own district to cover, and there will be no crossing of routes and no occasion for a dozen peddlers to pass over the same block each morning.

Sentiment of the dairymen about the outcome of the venture seems divided. Some contend that were the city located in a region where there is not an abundant supply of milk, as there is in Chautauqua County, the plan would be successful. How the city expects to shut out competition is not exactly known, but it has been suggested on numerous occasions that this be done by the adoption of drastic ordinances regulating the kind of milk which can be sold within the city limits.

Dairymen seem generally, however, to be skeptical over the prospects of reducing the cost of milk to the consumer. Just before the opening of the mayor's compaign prior to the recent election, dealers in the city were compelled to reduce their prices from 15 cents to 13 cents. They had boosted them from 12 cents to 15 cents, and a federal grand jury which investigated this increase declared there was a violation of the Lever Act, strengthened by the fact that the dealers made the increase jointly. A federal attorney allowed them to come down to 13 cents, because the dealers had advanced the price to the producer a cent and a cent and a half, the average price paid to the producer per quart of milk being around 8 and 8½ cents.

The experiment will be watched with interest, however, this is certain, inasmuch as Jamestown is the first city in America to adopt this plan. A milk commission recently named by Governor Alfred E. Smith of New York, after making an investigation, reported that municipal distribution would solve the situation which many cities face.



JERSEY HEIFER, TRILL POGIS OF LILYDALE

In 332 days as a 3-year-old she has produced 11,012 lbs. milk, 619 lbs. fat. She is owned by University Farm, Minnesota, and by this production becomes the record Jersey of her age in that state.

JAMES WILSON

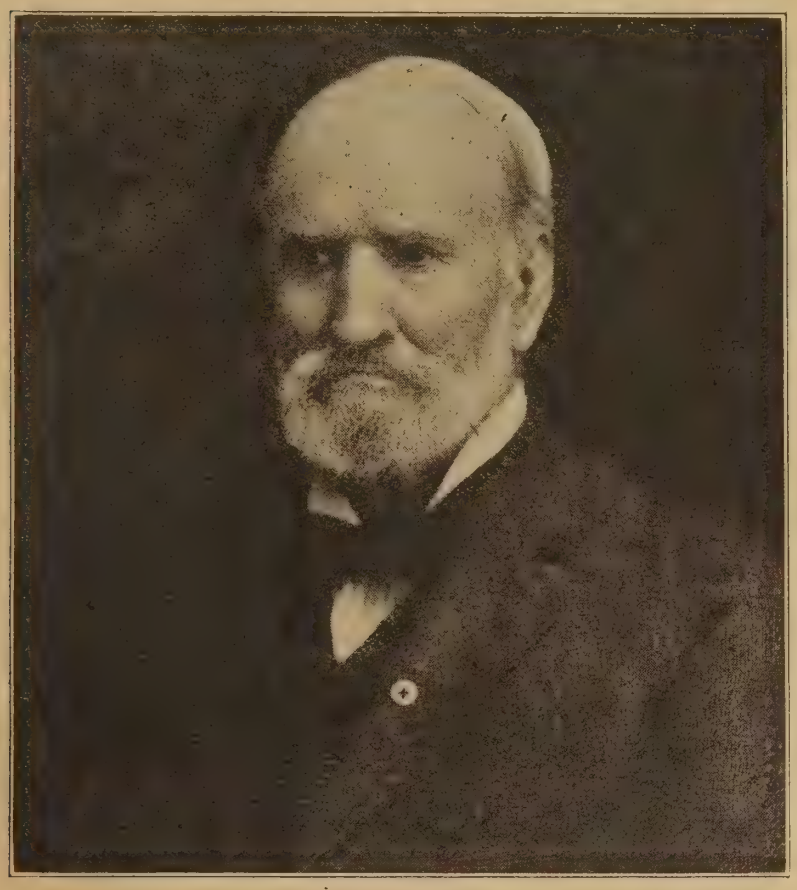
JAMES WILSON, ex-secretary of agriculture, is dead. He was born in Ayrshire, Scotland, Aug. 16, 1835, and died at Traer, Ia., Aug 26, 1920. He came to this country with his parents in 1851 and settled in Connecticut and in 1855 moved to Traer, Tama Co., Iowa, which has been his home for sixty years. In 1861 he engaged in farming, but his natural abilities led him into various fields of activites and especially into the service of agriculture.

He was educated in the public schools of Iowa and the Iowa College. His work for the advancement of agriculture won for him unusual recognition from several universities and he was given the degree of L. L. D. by the University of Wisconsin, Cornell College, and Iowa in 1904 and by McGill in 1909. Mr. Wilson's services in behalf of advanced agriculture were appreciated by the farmers and they recognized him as an intelligent and safe leader in their affairs. In the years 1890 to 1897 he was director of the Iowa Experiment Station and professor of agriculture in the Iowa Agricultural College; and secretary of agriculture, U. S. Department of Agriculture, from March 5th, 1897, to 1913, a period of 16 years, serving under Presidents McKinley, Roosevelt, and Taft.

Mr. Wilson's interest in public affairs extended beyond the realm of agriculture. He was a member of the 12th, 13th and 14th Iowa Assemblies and speaker of the 14th. He also represented his district three terms in Congress, in 1873—77 and again 1883—85.

In the passing of James Wilson, agriculture has lost a good friend and comprehensive leader. He was closely associated with such men as Henry Wallace and W. D. Hoard, both of whom are considered pioneer leaders in agricultural education. They were earnest advocates of better methods of farming, better rural schools and a better rural life. All these men were spared to serve agriculture until they were 80 or more years old and the death of Mr. Wilson marks the end of their generation.

His splendid service to agriculture in Iowa attracted the attention of President McKinley and he made Mr. Wilson secretary of agriculture. He was so admirably adapted to this work that he was retained in this position during Roosevelt's and Taft's administrations. He enjoyed the distinction of serving longer in the U. S. Cabinet than any other person. This distinction cannot be attributed to his political service or activities, but rather to his constructive work as secretary and the service which he rendered to the farmers. Under his administration this department of government became a strong and useful institution to the agricultural interests of our country. His accomplishments as secretary of agriculture were a most fitting and satisfactory ending of a successful and useful career. Blessed be the memories and work of this good man.



JAMES WILSON

Costs and Milk Prices

Consumers often complain that the farmer is getting too much for his milk. The best way to settle the question is to have definite figures on the cost of producing milk in each community. The Dairy Division of the United States Department of Agriculture has organized community groups in 7 states for this purpose. Each group consists of about 20 representative dairy farms, with a supervisor in charge. Cost items are collected in terms of quantity rather than price, wherever possible. Results may then be interpreted at any time using prevailing prices. Data from four of the states—Indiana, Vermont, North Carolina, and Washington—will be available at the exhibit of the Dairy Division at the National Dairy Show, Chicago, October 7 to 16.

WISCONSIN VITEX DAIRY FEED

Feed 4-All to horses, sheep, beef cattle, hogs and poultry. It costs less than grain and keeps them in better condition.

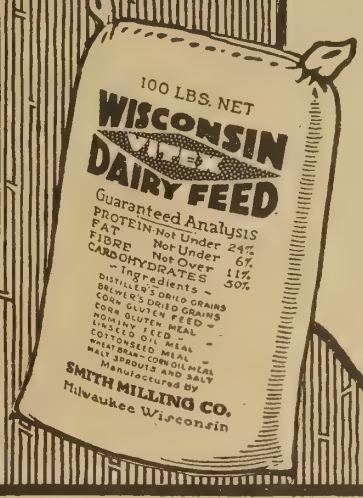
WHEN your cows get off pasture you'll want a mixed feed to keep them in condition and maintain low feeding costs.

Vitex Dairy Feed is made in Wisconsin, the nation's greatest dairy state. It is made from the best milk-producing ingredients and contains no molasses, hulls, dirt, chaff or other waste. You get full money's worth.

When you feed Vitex Dairy Feed you increase the milk yield at lower cost and save your whole grain for the market. Vitex can be fed with equal success to either single breed or mixed herds.

If your feed dealer does not handle Vitex and 4-All, write us for the name of a dealer who does.

SMITH MILLING CO.
36th and Lincoln Aves.
MILWAUKEE, WIS.





14-28 H. P. Avery Tractor

Get Your AVERY Now for Fall and Winter Work

Get your Avery Tractor NOW when it can give you the most valuable service in your fall and winter work. Avery owners use their machines the whole year around—winter as well as summer. Think of the belt work you could do with *your own Avery* on the job. Not only get your fall plowing, discing and seeding done on time, but fill your silo, saw wood, grind feed and do other jobs. The extra work you can get done with an Avery Tractor this fall and winter will help to pay for a big share of its cost. *Now* is the time to get it.

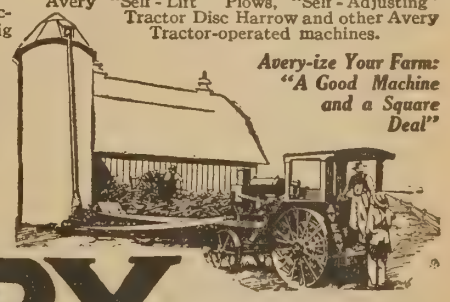
You can get an Avery Tractor outfit to exactly fit your size farm or the kind of power work you have to do. Avery Tractors in sizes from 8-16 to 40-80 H. P. are built with the famous Avery "Draft - Horse" Motors and "Direct - Drive" Transmissions. They have Renewable Cylinder Walls, Adjustable Crankshaft Bearings, Gasifiers which turn kerosene into gas and *burn it all*, and other features which enable Avery Tractors to give unusual service.

There are also two small sizes of Avery Tractors, 6-cylinder model "C" and 5-10 H. P. model "B." Ask for special circulars describing these machines or

Write for the Avery Catalog

Also learn about Avery Roller-Bearing Threshers and Silo Fillers, Avery Motor Cultivators, Avery "Self - Lift" Plows, "Self - Adjusting" Tractor Disc Harrow and other Avery Tractor-operated machines.

Avery-ize Your Farm: "A Good Machine and a Square Deal"



AVERY
Motor Farming, Threshing and Road Building Machinery

AVERY CO.
6109 Iowa St., Peoria, Ill.
Branch Houses, Distributors and Service Stations covering every state in the Union

Keep Tab on Your Cows

Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. Hoard's Dairyman, Fort Atkinson, Wis.

"SNAG-PROOF"
Rubber Footwear



Here's a Happy Combination of Warmth, Comfort and Economy

THE Pennsy, lighter than a boot, warmer than a shoe. The ideal rubber footwear for all work around the farm. You'll get more service and save more money by wearing Pennsy's this fall. Made out of the finest grade rubber and fabric, absolutely watertight, springy, tough, natural fitting and warm.

The Pennsy is a Snag-Proof product. You know that means the best in rubber footwear. For nearly fifty years the Snag-Proof label on rubber boots, shoes and arctics has meant the utmost in quality. You just ask anyone who has ever tried Snag-Proof—he'll tell you that for comfort, fit and service, Snag-Proof footwear *can't be beaten.*

Do you know the Snag-Proof dealer in your town? He's an exceptionally fine fellow to know. For his big desire is to make you a friend by giving you more satisfaction than you can get anywhere else. That's the reason Snag-Proofs have so many warm friends today. Every customer is a satisfied customer. Find out for yourself.



LOOK FOR THE GREEN LABEL

LAMBERTVILLE RUBBER COMPANY
Lambertville, New Jersey

Destroying Canada Thistles

The Grundy County, Illinois, Farm Bureau has taken as one of its projects the destruction of Canada thistles. County Advisor F. E. Longmire and his assistant, W. F. Keepers, have prepared instructions as to how this may be accomplished in various ways. We reproduce their circular below:

Owing to the general spread of Canada thistles throughout the county, and to the lack of good control measures, we have gathered together as many methods as seem practical in destroying this weed.

After the weed has obtained a foothold the best way to eradicate it is to prevent it from sending up top or above ground growth, which finally causes the roots to die. Therefore, starve the root by preventing top growth. This is the basic principle which must be kept in mind. The top of the plant serves much the same purpose as the lungs of the animals. If the plant is continually deprived of that part it must soon die.

Clean Cultivation

Plant infested land to corn and give clean cultivation. Follow up each week with hoe. This method requires unusual persistence, but gives good results.

Cutting or Hoeing

In pastures which can not be cultivated, the best method is to cut each week or ten days just below the surface of the ground. It helps to apply a little kerosene with oil can to the cut surface.

Salting

Applying damp salt to the tops of plants at regular intervals of a week to ten days, is very effective. Some farmers succeed by applying moist salt to the cut surface after cutting off the plant. In pastures live stock can be salted on the patch and help to keep down the crop.

Smothering Crop

One plan which has given good results in some cases, is to seed very heavily to cane or sorghum, using about 80 lbs. of seed per acre, in early June. Cut the cane for hay in early September and prepare the land for rye, seeding any time before November 1, the earlier the better. Use the rye for fall, winter and spring pasture, then plow it under and plant to either corn or cane and cultivate. This gives good results.

Plowing or Summer Fallow

If patch is large, plow shallow in early spring and either plow or disc each week until late fall, about October. This method is generally satisfactory if followed by a cultivated crop the following year. The roots of the Canada thistles extend deeply down into the soil, hence for this reason, deep plowing will be of no avail.

Smothering

Smothering with straw is rarely successful since the thistles finally grow through it, aside from depriving the owner from the use of the land for a longer time than summer fallow. If the patch is to be smothered with a straw stack, the stack should extend well out over the boundaries of the patch so the plants will not grow out around the edges. In some cases tarred paper has been used for smothering, with good results.

Gas-Crude Oil Spray

Use two parts of crude oil and one of gasoline and spray plants with this mixture or apply it with sprinkling can. This will kill the tops and starve the roots. Patches in small grain or in stone piles and waste land where they are difficult to reach, can be treated in this way.

These are a number of ways of keeping down top growth. There is no best way for all cases. The farmer should use the method which best fits his rotation or convenience. About ninety-five per cent of the efforts to kill thistles are failures because the man tires of the job about the time he has the best of the thistles and they



SANOMA'S ARCHER GIRL, A DOUBLE CLASS LEADER

SANOMA'S Archer Girl, a Guernsey owned by Harbor Hill Farm, New York, now holds two places among the class leaders as a result of her second official record recently completed in Class BB. Her latest achievement is the production of 12,098.9 pounds milk, 652.72 pounds butterfat in Class BB. This record qualifies her for seventh place in her division. She also holds tenth place in Class E, with a record of 13,270.6 pounds milk, 692.08 pounds butterfat.

Sanoma's Archer Girl was bred by R. H. L. Chichester, Virginia, and was dropped on August 27, 1914. Her sire, now owned by F. K. Babson, Illinois, is King of Chilmark, a bull that has attained unusual distinction through the splendid performance of several of his descendants. The first six Advanced Register records completed by his daughters average 699.2 pounds of butterfat.

The history of Sanoma's Archer Girl is another intensely interesting proof demonstrating the value of Advanced Register work. Sanoma Girl, the dam of Sanoma's Archer Girl, was purchased by Mr. Chichester for $100. None of the immediate ancestors of this cow had Advanced Register records to their credit. After Sanoma's Archer Girl had completed her first official record she was consigned at the first Guernsey combination sale and brought $4,000.—AMERICAN GUERNSEY CATTLE CLUB.

obtain a new foothold and grow as rank as ever.

If the basic principle is understood, that is starving the roots, and a systematic plan is carried out for the destruction of the plant, a farm can soon be free of thistles.

Dairying Thirty Years Ago

Notes From the Issue of Hoard's Dairyman for September 12, 1890

"How are you going to cure "depression in agriculture" when the actual depreciation in the productive capacity of the land from what it was, "in a state of nature" is greater than the depreciation in the prices of general farm products between war and "soft money" prices, and now. Legislation cannot evoke good crops out of a soil that lacks manure and judicious cultivation. But there are lots of men who would rather howl and carry a banner with some "strange device" imprinted upon it, than to make a compost heap and apply it to a soil gaping for food,—and there are lots of demagogues who will "egg" them on. "Depressed agriculture" stalks in vengeance over land that is deficient in phosphorus, acid, nitrogen, and potash."

"Mr. W. H. Randolph of Iowa writes he has seen it stated that at a Wisconsin Farmers' Institute 22 Wisconsin farmers expressed by a show of hands a desire to exchange their silos for the money they cost. He asks, "Is there any sequel?"

"We guess not; or beginning, either. This is the first we ever heard of such a condition of mind among Wisconsin farmers. We do not believe it, for two reasons: First, that we have more faith in the good sense of the Wisconsin farmers who have built themselves silos; and second, we think silos have not yet been built so plentifully in any part of the state that there would be 22 farmers present at any institute, who owned so many silos.

"There are easy-go-luck, 'general purpose' farmers who are content to farm land that is not fertilized more than is done by keeping a cow or horse or 8 sheep to each 5 or 6 or 7 or 8 acres of the farm, their ambition being to keep a farm from 'running down' as it is called; they believing that if they keep it in as good a condition as it was 'in a state of nature' that they have achieved high success as farmers. They do better than those do who sell the farm gradually, by the bushel, but they do not get the approbation or the respect of such a farmer as J. M. Smith of Green Bay who says life is too short for him to fool it away in farming, unless he makes the land far richer than any land he ever saw in a state of nature.

"Mr. A. L. Crosby had said in the National Stockman: 'It is a question in my mind whether a cow can stand a steady diet of ensilage 365 days.'

"'A Blast at the Untidiness in Cheese Factories' was the heading given an article. Our correspondent said:

"'I am not exaggerating when I say that the great majority of our factories are anything but clean. I have been in factories this summer where the flies were so thick that the limit of my endurance was reached in five minutes and I beat a retreat. Many of the luckless ones are found floating in the vat, but the maker carelessly remarks, 'Oh we do not mind those now, by and by we skim them all off.' I'd like to invite him into a kitchen and while the flies drop into the soup-kettle I would console him by telling him I'd skim them off before dinner time. Think you he would relish the soup?'"

Iowa State Dairy Commissioner Tupper had been after the dealers of adulterated milk throughout that state. At Cedar Rapids he had secured 12 pint samples from as many dealers and found all but three adulterated. The names of the delinquent dealers were published.

Market quotations for September 8th were as follows:

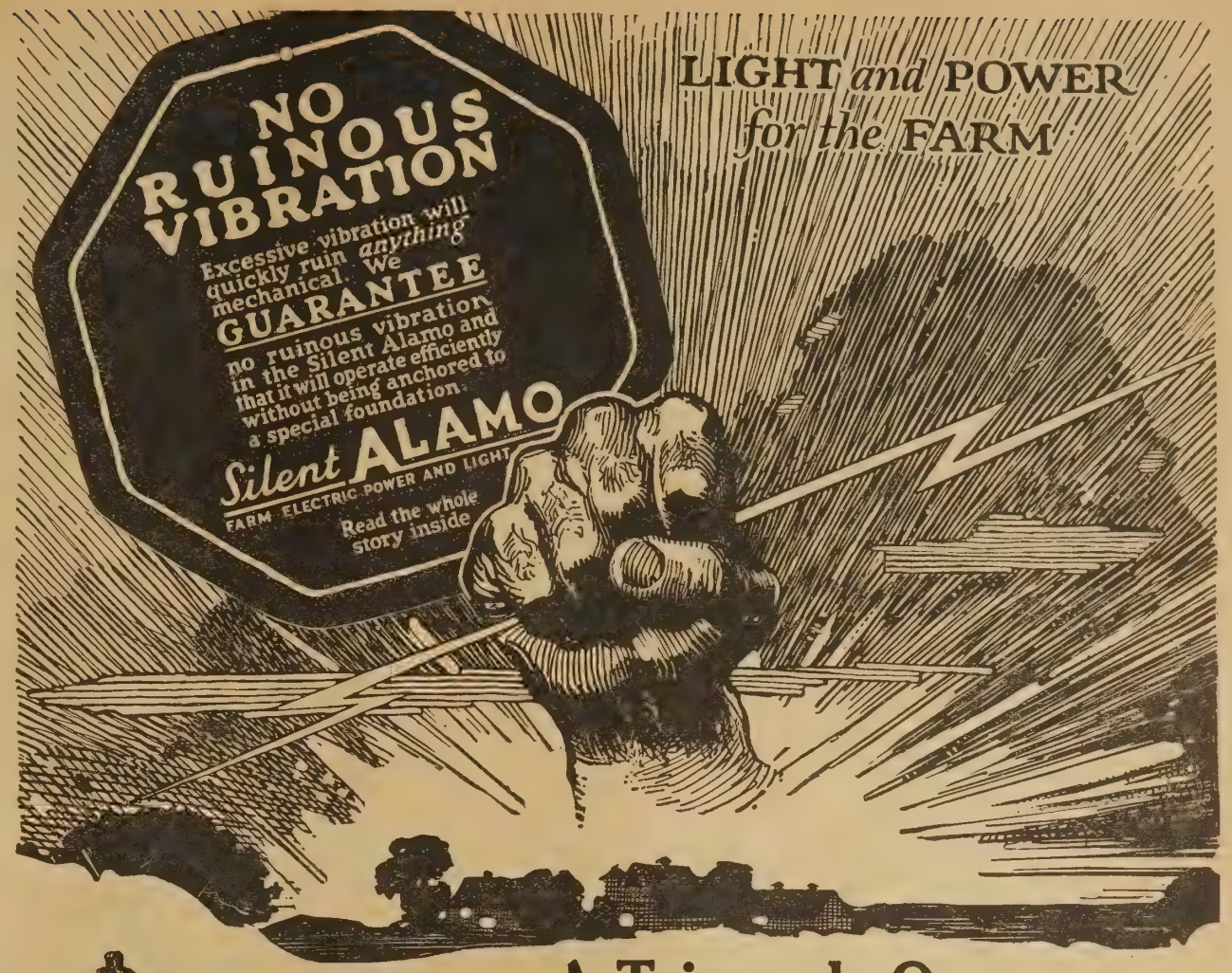
Elgin, Ill., Sept. 8—Butter call board sales 80 tubs at 22 cents. Floor sales, 312 tubs at 23c. September 1, 1920, butter sold at 24—24⅛c. Sept. 9, 1889, butter sold at 21c., Sept. 10, 1888, sold at 24c. Sept. 12, 1887, sold at 23½c.

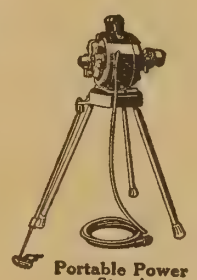
Fond du Lac, Wis., Sept. 8—The attendance at the Fond du Lac Dairy Board today was large and offerings up to those of a week ago, namely, 4,000 Cheddars, and 2,000 boxes flats. The price paid for both Cheddars and flats was 8½c. This price was one-half cent lower than last week, and few sales were made.

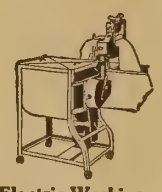


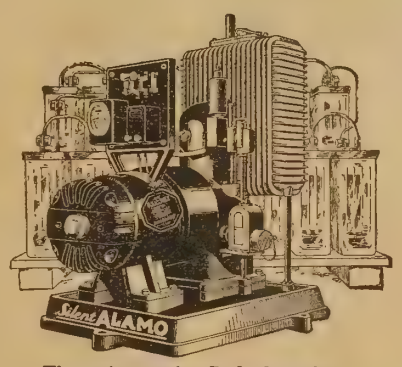
E. L. WESTOVER

First Guernsey field representative appointed by the American Guernsey Cattle Club. His territory is the Rocky Mountains and Pacific Coast States.




Portable Power Stand


Electric Washing Machine



The quiet-running Red plant that needs no special foundation

A Triumph Over *Ruinous* Vibration

In the silent Alamo you have a machine of watch-like perfection. All that terrible shaking—that violent jarring and jolting which loosens bolts, breaks down adjustments, wears bearings unevenly, and quickly ruins any machinery, *is gone*. It requires no anchoring to a special foundation.

Read the Guarantee Tag

The whole story of this great achievement is told in the tag-booklet illustrated above, attached to each machine. It explains the ruinous effects of excessive vibration. Tells graphically how Silent Alamo engineers have finally overcome it. Explains why this remarkable plant will operate at 100% efficiency while mounted on three frail drinking glasses; why it needs no anchoring to a special foundation. It shows, too, why all this added efficiency means more power to operate your pressure water system, to run your churn, separator, washing machine, sewing machine, electric iron, percolator, fan, etc. *More* current to illuminate your house and barns—at less cost for operating.

These are things you should know. They determine the value of your investment. Visit the local Silent Alamo dealer. Read this tag-booklet. See the Silent Alamo demonstrated. In the meantime—

Write for These Startling Facts—FREE

Write at once. We'll send you a copy of our booklet, "Electrify Your Farm." Contains the whole story. Now is the time to get the facts about lighting plants. Write today.

ALAMO FARM LIGHT CO., *General Office* 733 Tower Building, CHICAGO
Factory at Hillsdale, Michigan

Silent ALAMO
REGISTERED IN U. S. PATENT OFFICE
FARM ELECTRIC POWER AND LIGHT PLANT
Electrical Accessories Any Silent Alamo dealer can take your order for the electrical labor-savers you want

(74)

Silos At Half Price

I must clear my present warehouse before winter. About 200 silos left, which I will sell at half price as long as they last. Silos are well known make, new, built of genuine Clear Oregon Fir, and absolutely first class in every way. You have as good a chance at these as anyone else if you get your order in before they are gone. No partiality shown big buyers. Everybody treated fairly. Orders filled in order of their receipt. Prepared to make immediate shipment.

M. L. SMITH, *Manufacturer's Agent*
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MEADVILLE, PENNSYLVANIA

Learn Auctioneering

at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog.
Jones Nat'l School of Auctioneering, 38 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

ILLINOIS STATE FAIR

ILLINOIS State Fair continues to benefit from the non-political administration of its affairs, legislated in 1917 and first put into operation in 1919. This year's attendance and exhibits give it rank with the best agricultural expositions in the middle west.

The quality and number of live stock shown reflect a healthy optimism and faith in Illinois agriculture. The hog show was a record breaker while the beef classes contained over 100 more entries than a year ago. The horse show drew much interest and had many entries, and the sheep exhibit was the best ever held at Springfield. The dairy cattle entries failed to maintain the 1919 mark but the show was distinctly creditable, a total of 443 animals being on the grounds. Transportation difficulties and labor shortage kept a number of herds away. While the animal husbandry of Illinois is all improving, good hogs being particularly in demand, dairying has much more than held its own. A new agency has entered upon its promotion in the activities of the Farm Bureau. Also, a plan is under way to bring more dairy cattle into "Egypt", the southern twenty-three counties being studied to determine upon a working extension plan.

In the Dairy Building

The National Dairy Council's "Use More Milk" exhibit was used in the dairy building. The Holstein-Friesian booth in this building was equipped for good service but too few breeders left the barns to visit it. Demonstrations of milk testing and butter making were given daily. Sample rations were suggested by the University of Illinois Dairy Department and graphic illustration showed the value of the pure-bred sire. A scrub cow whose production was 3,874.6 lbs. milk, 192.66 lbs. fat, when bred to a pure-bred bull, dropped a heifer which at maturity produced 6955.5 lbs. milk, 266.25 lbs. fat. A calf from the daughter and by a pure-bred sire was so much of an improvement that at maturity a production of 13,366.2 lbs. milk, 497.9 lbs. fat was made.

A miniature breeding crate furnished an example of the construction of this valuable and inexpensive piece of equipment.

The only striking thing in the building, except J. E. Wallace's butter sculpturing, was C. S. Rhode's roulette wheel. His adaptation of the famous gambling device to dairying draws attention. By two wheels he shows the chance of good and poor offspring through mating a herd to a pure-bred and to a scrub bull. His wheel shows that the occasional daughter of the scrub bull may produce as much as some daughters of pure-bred sires, but that the average is very much lower. He spiced the arguments of the wheel with the lines:

Simple Simon took some live stock to the county fair,
But his scrubs with all the pure-breds did not well compare,
"How can I improve my stock?" Simon did inquire,
And the judge told Simple Simon, "Use a pure-bred sire."

The Dairy Judging

W. S. Moscrip placed the Brown Swiss and Holstein awards and pleased both exhibitors and onlookers, as is his custom. W. W. Yapp, of the University of Illinois, appraised the Ayrshires, Jerseys, and Guernseys and did a thoroughly good piece of work.

Ayrshires

The Ayrshire show failed to bring forth the offerings of any new exhibitors. Three veterans represented the breed, Stephen Bull and Adam Seitz of Wisconsin, and C. H. Peverill of Iowa sending a few more than half a hundred of the red and whites. The Seitz herd made its usual circuit beginning by annexing the greater part of the winnings, taking the blue in all male classes but losing three first honors to Stephen Bull in the female classes.

Lord Roseberry easily held his place among the males, being a clear winner of the grand championship. His chief competition came from his sons, all three two-year-olds and the winning calves being by his service. Friendlesshead Victor is much improved over previous showings and was considered worthy competition for the Seitz winner in the aged class. Cavalier's Sherry Redman, senior calf, has unusual promise as a youngster. He won his class easily and made good company in the final awards for his sire.

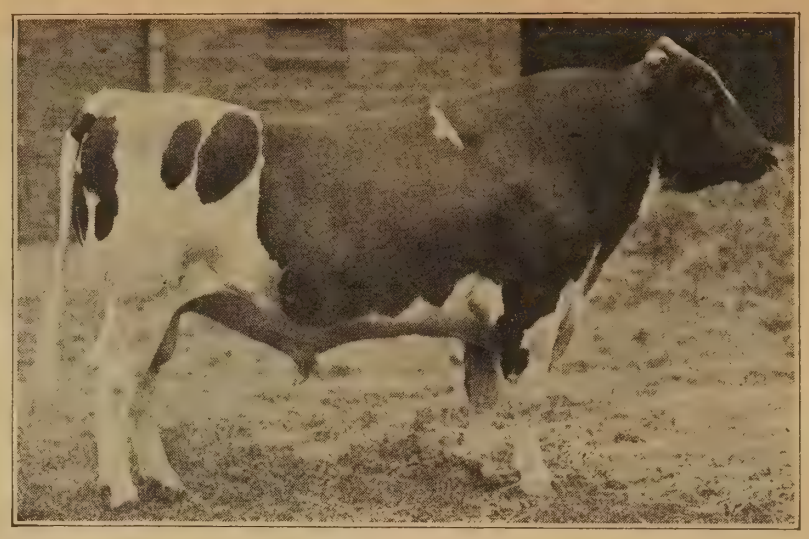
Beuchan Lady Lofty, shown dry but due to freshen for the National, led the aged cows for Seitz. The first strong female class was that for two-year-olds in which Silver Actress, junior champion at the 1919 Illinois fair and grand champion at the Iowa Dairy Cattle Congress, was an easy winner. A winner last year, she is greatly improved for the 1920 circuit. She repeated her performance of the week before, winning grand championship. Stephen Bull's Violet Finlayston 2nd won among the senior yearlings but lost in the finals to Seitz's younger entry.

In all, the show was commendable. The animals were in good condition and were well shown. The absence of beginning breeders was its only shortcoming.

The list of awards follows:

Bull 3 years or over—1, Seitz on Lord Roseberry; 2, Bull on Friendlesshead Victor. Bull 2 years and under 3—1, Seitz on Cavalier Silver Mint; 2 and 3, Peverill on Cloverdale's Choice Goods and Cavalier's Fashion Plate. Bull 1 year and under 2—1, Seitz on Cavalier's Wonder Boy; 2, Peverill on Rosebud Buster; 3, Bull on Garclaugh Ivanhoe. Bull calf 6 months and under 12—1 and 2, Seitz on Cavalier's Sherry Redman and Cavalier's Cupbeam; 3 and 4, Peverill on Rosebud Carl and Rosebud Bill; 5, Bull on Aldebaran Crest. Bull calf under 6 months—1, Seitz on Cavalier's Ping Pong; 2, Bull on Aldebaran Hugh; 3 and 4, Peverill on Cavalier's Good Gift and Rosebud Lassie Boy.

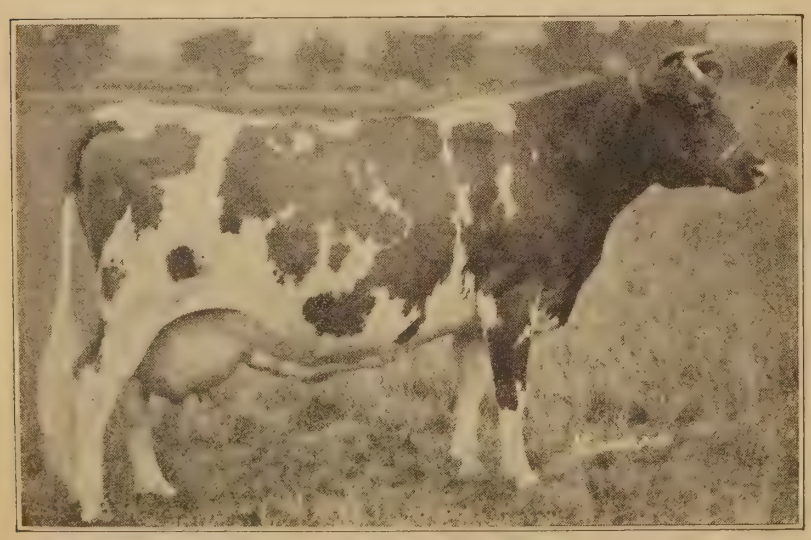
Cow 5 years or over—1, Seitz on Beuchan Lady Lofty; 2 and 3, Bull on Rosy Genevieve and Rosie Noxemall; 4, Peverill on Enid Lessnessock. Cow 4 years and under 5—1, Bull on Creigley Ada; 2, Peverill on Sylva Good Gift. Cow 3 years and under 4—1, Seitz on Howie's Glen of Valley View; 2, Peverill on Beauty of Cloverdale. Cow 2 years and under 3—1 and 3, Seitz on Cavalier's Silver Actress and Cavalier's Silver Queen; 2 and 4, Bull on Aldebaran Milkmaid and Hughina Beauty. Heifer 18 months old and under 24—1 and 4, Bull on Violet Finlayston 2nd and Garclaugh Snow; 2, Seitz on Cavalier's Creampot; 3 and 5, Peverill on Rosebud Stonehouse Lucy and Rosebud Nellie Carlton. Heifer 12 months and under 18—1 and 3, Seitz on Netherall Katchleen 2nd and Cavalier's Queen 2nd; 2 and 4, Bull on Aldebaran Blossom Again and Aldebaran Delightful; 5, Peverill on Rosebud Financier's Violet. Heifer calf 6 months and under 12—1 and 2, Seitz on Cavalier's Dorothy II and Cavalier's Lila Lee; 3 and 6, Bull on Aldebaran



KING AAGGIE HENGERVELD, SENIOR AND GRAND CHAMPION HOLSTEIN BULL AT THE ILLINOIS STATE FAIR
OWNED BY CASS FARM CO., IOWA



LOU ANNA OF LAKE VIEW, JUNIOR CHAMPION BROWN SWISS COW AT ILLINOIS STATE FAIR
OWNED BY A. E. BOWER, OHIO



IMP. MILDRED II OF LES GODAINES, SENIOR AND GRAND CHAMPION GUERNSEY COW AT ILLINOIS STATE FAIR
OWNED BY JONES & MCKERROW, WISCONSIN



CHIEF RALEIGH, SENIOR AND GRAND CHAMPION JERSEY BULL AT ILLINOIS STATE FAIR
OWNED BY LONGVIEW FARM, MISSOURI

Flirt and Aldebaran Clementine; 4 and 5, Peverill on Rosewood Cherry Blossom and Rosewood Fair Beauty.

Dairy Herd—Peverill only. Graded Herd—1 and 3, Seitz; 2, Bull; 4, Peverill. Young Herd—1, Seitz; 2, Peverill; 3, Bull. Calf Herd—1, Seitz; 2, Peverill. Get of Sire—1 and 2, Seitz; 3, Bull; 4, Peverill. Produce of cow—1 and 2, Seitz; 3 and 4, Peverill.

Senior and Grand Champion Male—Lord Roseberry. Junior Champion Male—Cavalier's Sherry Redman. Senior and Grand Champion Female—Cavalier's Silver Actress. Junior Champion—Cavalier's Ella.

Brown Swiss

Brown Swiss cattle took third rank in numbers among the five dairy breeds. Four herds furnished eighty head, most of them distinctly creditable exhibits for the breed. The exhibitors were: W. O. Bohart, Montana; A. E. Bower and E. W. Wilson, Illinois; and Hull Brothers, Ohio, with herds, and W. V. Crane of Illinois with one junior heifer calf, the winner in her class.

Bower's aged bull, Nick's Prize Master, easily led his class and was made senior champion. In the finals, Wilson's yearling, Milo of Walhalla, found favor with Judge Moscrip for highest award. Swiss Valley Girl 7th, a consistent winner in the Hull herd in former years, suited Mr. Moscrip's ideas of dairy type so well that he delivered what he termed "an oration" to the ringside on her qualities. She was made grand champion over Betty of Lakeview, winning four-year-old and grand champion at the 1919 National, and Bob's Mascot, first prize senior yearling and a 1919 ribbon gatherer for Bohart. Bower's junior yearling, Lou Anna of Lake View, led the under two years females.

The list of awards follows:

Bull 3 years or over—1, Bower on Nick's Prize Master; 2 and 4, Bohart on Sunny Hill Bob and Beauty 2nd's Master; 3, Hull Bros. on Gallatin Browny. Bull 2 years and under 3—1, Hull Bros. on Ethel V.'s Militor; 2, Wilson on La France of Swiss Summit; 3 and 4, Bohart on Beauty C.'s N. M. and Zell A. W. Bull 1 year and under 2—1 and 2, Wilson on Milo of Walhalla and Eldred of Walhalla; 3 and 4, Bohart on Tassa M.'s Nick and Bruno B; 5, Hull Bros. on Prince of Lake View. Bull calf six months and under 12—1, Bower on General of Sedgley; 2, Wilson on Jubilee Prince; 3 and 4, Bohart on Beauty 2nd Dick and D.'s Dick. Bull calf under 6 months—1, Bower on Dutch Boy; 2 and 3, Bohart on Bozeman Boy and Little Nick's Dick; 4, Hull Bros. on Gold King; 5, Wilson on Jubilee Trumpiter.

Cow five years old or over—1, 2, and 5, Hull Bros. on Swiss Valley Girl 7th, Swiss Valley Girl 9th, and Nan of Lakeview; 3, Bohart on Master's Beauty C.; 4, Wilson on Penelope. Cow 4 years and under 5—1, Bower on Betty of Lakeview; 2, Bohart on Master's Bernice; 3, Wilson on Queen's Daughter; 4, Hull Bros. on Darlene W. Cow three years under 4—1, 2, and 5, Bower on Elsie of Lakeview 3rd, Fairview Maxine and Ethel of Lakeview; 3, Bohart on Browny's Perfection; 4, Wilson on Aimee. Cow two years and under 3,—1, Hull Bros. on Forest Girl 7th; 2, Wilson on Francis of Walhalla; 3, Bohart on D.'s Tassa; 4 and 5, Bower on Silver Girl and Elsie of Lakeview. 4th. Heifer 18 months and under 24—1 and 2, Bohart on Bob's Mascot and Catherine's heifer; 3, Hull Bros. on Nettie of Lakeview; 4 and 5, Wilson on Trilba of Jubilee and Uhleen of Jubilee. Heifer 12 months and under 18—1 and 5, Bower on Lou Anna of Lakeview and La Mark of Sedgley; 2 and 3, Wilson on Elenor of Walhalla and Kathryn of Walhalla; 4, Bohart on Nellie Dear. Heifer calf 6 months and under 12—1 and 5, Wilson on Helena Walhalla and Retha of Jubilee; 2 and 3, Bohart on Dick's Madge and Dick's Charm; 4, Hull Bros. on Vogel's Girl of Lakeview. Heifer calf under 6 months—1, Crane on Kate of Bower Farm; 2 and 4, Hull Bros. on Lottie H. of Lakeview and Militor's Nan of Lakeview; 3, Bower on Anna Dean; 5, Bohart on Bob's D. 2nd.

Dairy Herd—1, Bower; 2, Hull Bros.; 3, Bohart. Graded Herd—1, Bower; 2, Hull Bros.; 3, Bohart; 4, Wilson. Breeder's young herd—1 and 4, Bohart; 2, Wilson; 3, Hull Bros.; calf herd—1, Wilson; 2, Bohart; 3, Hull Bros. Get of Sire—1, Wilson; 2 and 3, Bohart; 4, Bower. Produce of cow—1, Bohart.

Senior Champion Bull—Nick's Prize Master. Junior and grand champion bull—Milo of Walhalla. Senior and grand champion cow—Swiss Valley Girl 7th. Junior champion cow—Lou Anna of Lakeview.

Guernseys

Guernseys put up the best exhibit of the dairy breeds. Eight breeders from six states contributed to the exhibit of 125 head shown; J. L. McIntosh, South Carolina; John Ebels, Michigan; Dairyland Farm and W. W. Marsh, Iowa; Goodhand Kingston and Son and Jones and McKerrow, Wisconsin; Folly Farm, Illinois; and W. O. Bohart, Montana. Not only did the fawn and whites outnumber other milk breeds but the average quality was superior, except for some animals in the Bohart herd which had suffered so much from shipping as to be unfit for competition. The winnings were quite well divided among the Iowa and Wisconsin herds, with Marsh the leader with nine firsts and three of the six championships.

Eight aged bulls made a class fit for the National. Cherub's Prince, shown by Marsh, was an easy first on his pronounced dairy type in his length, depth, openness of frame, quality, and color. After that the class had close contests in every placing, especially between the Dairyland Farm and Kingston entries for third place, the latter farm winning on Hopeful of Edgemoor. The age of Chene King, Jones and McKerrow entry, kept him from a higher rating than fifth. Aristocrat of Muskego, a junior calf, won junior championship for Kingston.

Imp. Mildred II of Les Godaines, owned by Jones and McKerrow, was as showy as when she was twice made first prize A. R. cow and second in the open class at the National. She has the finish, capacity, and mammary development to carry her high in any exhibition. Dairyland Farm's first prize three-year-old at the 1919 National, Velma of Mapledell, won in the four-year-olds. Honey Bloom of the Prairie, made grand champion five times in 1919 and this year at the Missouri State Fair, was junior champion from the senior yearlings. She lost in the finals mainly through the advantage accorded a mature cow. Professor Yapp found his hardest classes among the younger females. Fifteen were shown as junior yearlings and nineteen as senior calves. The tops were well conditioned and of a uniformity which made every ribbon won well earned.

The placings were as follows:

Bull 3 years or over—1, Marsh on Cherub's Prince; 2 and 5, Jones & McKerrow on Bonnie Boy of Riverside and Chene King; 3, Kingston & Son on Hopeful of Edgemoor; 4, Dairyland Farm on Plato of 4 Pine. Bull 2 years and under 3—1, Marsh on Marie's Cherub of the Prairie; 2, Dairyland Farm on Cloth of Gold's King; 3, Ebels on Starlight of Bon Ayre; 4, Bohart on Prince Boy. Bull 1 year and under 2—1, Dairyland Farm on Lalla's Prince; 2, Marsh on Golden Laddie of the Prairie; 3, Folly Farm on Folly Noble; 4, Jones & McKerrow on Dora's King; 5, Bohart on Major Bozeman. Bull calf 6 months and under 12—1 and 2, Marsh on Prince Charming of the Prairie and Blossom Prince of the Prairie; 3, Jones & McKerrow on Coral Tom King; 4, Goodhand Kingston and Son on Steadfast of Muskego; 5, McIntosh on Six Roses. Bull calf under 6 months—1 and 3, Goodhand Kingston and Son on Aristocrat of Muskego and Warrior of Muskego; 2, Marsh on unnamed; 4, Bohart on Select's Major; 5, Folly Farm on Folly Jupiter.

Cow 5 years old or over—1 and 4, Jones and McKerrow on Imp. Mildred II of Les Godaines and Imp. Bordeaux of Courtil Bree; 2, Goodhand Kingston and Son on Imp. Violet of Tol. Val; 3, Folly Farm on Imp. Cynthia of Sarnia; 5, McIntosh on Glenwood's Soso of Oak Ridge. Cow 4 years and under 5—1, Dairyland Farm on Velma of Mapledell; 2, Bohart on Prince's Lela B. Cow 3 years and under 4—1, Jones and McKerrow on Kate of Aurelian Farms; 2, Marsh on Princess Bo Peep of the Prairie; 3, Goodhand Kingston and Son on Raider's Surprise of Muskego; 4, Bohart on Onward Girl; 5, Ebels on Rosette of Butternut Hill. Cow 2 years and under 3—1, Goodhand Kingston and Son on Itchen's Queen of Edgemoor; 2, McIntosh on Gemsey's Soso; 3, Jones and McKerrow on Century Girl of Edgemoor; 4, Bohart on P. Lela Onward; 5, Ebels on Princess of Oliver. Heifer 18 months and under 24—1 and 3, Marsh on Honey Bloom of the Prairie and Golden Locks of the Prairie; 2, Jones and McKerrow on Eidelweiss of Edgemoor; 4, Dairyland Farm on Nonpariel Cherry; 5, Goodhand Kingston and Son on Lillian of Edgemoor. Heifer 12 months and under 18—1, Marsh on Princess Pretoria of the Prairie; 2 and 3, Jones and McKerrow on Spring Maid of Edgemoor and Dancing Girl of Edgemoor; 4, Goodhand Kingston and Son on Wonder Girl of Muskego; 5, McIntosh on Gemsey's Princess of Clover Farm. Heifer calf 6 months and under 12—1, Goodhand Kingston and Son on Hopeful's Miss of Sunny Slope; 2 and 5, Marsh on Honeydew of the Prairie and Sensation of the Prairie; 3 and 4, Jones and McKerrow on Ultra Rosie and Ultra Elizabeth Beauty. Heifer calf under 6 months—1, Jones and McKerrow on Chene King Northern Lady; 2, McIntosh on Soso's Sunbeam of Clover Farm; 3, Marsh on unnamed; 4, Dairyland Farm on ————; 5, Goodhand Kingston and Son on Wonderful Girl of Muskego.

Dairy herd—1, Goodhand Kingston and Son; 2, Bohart. Graded herd—1, Jones and McKerrow; 2 Goodhand Kingston and Son; 3, Dairyland Farm. Breeders' young herd—1, Marsh; 2, Dairyland Farm; 3, McIntosh; 4, Folly Farm; 5, Bohart. Calf Herd—1, Marsh; 2, Jones and McKerrow; 3, Goodhand Kingston and Son. Get of Sire—1, Marsh; 2, Jones and McKerrow; 3, Goodhand Kingston and Son. Produce of Cow—1, Marsh; 2, Goodhand Kingston and Son; 3 and 4, Jones and McKerrow.

Senior and Grand Champion Bull—Cherub's Prince. Junior Champion Bull—Aristocrat of Muskego. Senior and Grand Champion Cow—Imp. Mildred II of Les Godaines. Champion Female—Honey Bloom of the Prairie.



CHERUB'S PRINCE, SENIOR AND GRAND CHAMPION GUERNSEY BULL AT THE ILLINOIS STATE FAIR

He was recently owned by Charles L. Hill of Wisconsin who has lately sold a third interest to F. G. Rueping of Wisconsin for $11,000, made a gift of a one-third interest to W. W. Marsh of Iowa, and retained a one-third interest.

Holsteins

Two more than one hundred black and whites were shown owned by seven farms in three states: Cass Farm, Iowa; The Pickering Farm, Missouri; and John H. Diehl, E. M. Detweiler, A. F. Randolph, Elmer Frazier, and Bert Irwin, all of Illinois. The Pickering Farm exhibit of ten cows filled the double capacity of contesting in the ring and serving as nurse cows for beef calves. Cass Farm took fourteen firsts, losing two and a junior championship to Frazier and one each to Detweiler and Randolph.

King Aaggie Hengerveld, Cass Farm's aged bull, headed his class, defeating Ragapple Korndyke Segis Echo, shown by Diehl, and leaving Ragapple Korndyke 8th, entered by Detweiler, in third money. The aged sire maintained his lead throughout the showing. Frazier's first in the open classes came in the junior bull line-up where his Merrygold Bo Peep won on his scale, capacity, and strength. With these qualities he carries sufficient quality to make him junior champion. No classes of extra merit among the males were shown.

In the aged cow class a Cass Farm entry, Lulu Baby Girl, of "the Moscrip type" won. She was shown dry but had quality from nose to tail, being an easy leader of the senior line-ups and a successful contender in the championships with Fayne Glitka De Kol, a Cass Farm junior calf. A highly pleasing feature of the younger female classes was the uniformity of the get of Fayne Bessie Homestead. This was especially noticeable in the junior calves where first, second, third, and sixth were awarded to half sisters in a strong class. These classes were the redemption of a rather common showing for the breed. They were well filled with distinctly attractive, straight lined heifers of producing form.

The awards as made are listed below:

Bull 3 years or over—1, Cass Farm Co. on King Aaggie Hengerveld; 2, Diehl on Ragapple Korndyke Segis Echo; 3, Detweiler on Ragapple Korndyke 8th. Bull 2 years old and under 3—1, Cass Farm Co. on Aaggie Almeda Hengerveld. Bull 1 year old and under 2—1, Cass Farm Co. on Bessie Homestead Alcartra; 2, Detweiler on Superior Ragapple Mata; 3, Ramsey on Ramsey Segis Paul Meteor. Bull calf 6 months old and under 12—1, Elmer Frazier on Merrygold Pontiac Bo Peep; 2 and 4, Cass Farm Co. on Hengerveld Walker Homestead and Fayne Mollie Walker; 3, Randolph on Hengerveld De Kol Homestead Lad; 5, Detweiler on Greenway Segis Hengerveld Lad. Bull calf under 6 months old—1, Cass Farm Co. on King Aaggie Craddock; 2 and 5, Detweiler on Golden Oak Sarcastic Clorinda and Unnamed; 3 and 4, Randolph on Mercedes Mechthilde Ormsby and Mercedes Homestead De Paul.

Cow 5 years old or over—1, Cass Farm Co. on Lulu Baby Girl; 2 and 4, Detweiler on Prilly Clothilde De Kol and Hartwood Spotford Again; 3, Irwin on Johanna De Kol Fairmont Maid; 5, Frazier on Adelaide Tritomia Prilly. Cow 4 years old and under 5—1, Cass Farm Co. on Almeda Luecke Hengerveld; 2 and 3, Detweiler on Lady Calamo Hengerveld and Greenway Lady Sarcastic Segis; 4, Diehl on Berndale Pontiac Bloemer; 5, The Pickering Farm on Nellie Quora De Kol. Cow 3 years old and under 4—1 and 5, Randolph on Whitehurst Colantha Homestead and Whitehurst Ormsby Homestead; 2, Lanus on Lady Pontiac Jewel Mechthilde; 3, Cass Farm Co. on Pearl Johanna Pontiac De Kol; 4, The Pickering Farm on Spring Valley Queen Pontiac. Cow 2 years old and under 3—1 and 2, Cass Farm Co. on Aaggie Hengerveld Daisy Homestead and Aaggie Hengerveld Tritomia De Kol; 3, Lanus on Queen Clothilde Aaggie Pontiac; 4, Hill Den Farms on Greenlawn Aaggie Changeling; 5, Randolph on Whitehurst Gretqui Mechthilde. Heifer 18 months old and under 24—1, Detweiler on K. S. P. Nancy Pontiac; 2, Frazier on Merrygold Lilly Korndyke; 3 and 4, Cass Farm Co. on Bessie Homestead Jewel and Queen Waumandee Beauty; 5, Hill Den Farms on Greenlawn Lily Posch Change. Heifer 12 months old and under 18—1 and 2, Cass Farm Co. on Bessie Homestead Walker Lyons and Canary Bessie Homestead; 3, Frazier on Merrygold Pearl Segis Korndyke; 4 and 5, Diehl on Diehl Ragapple Echo Segis and Diehl Ragapple Cornucopia. Heifer calf 6 months old and under 12—1, 2, 3, and 6, Cass Farm Co. on Payne Glitka De Kol, Bessie Homestead Baby Girl, Ormsby Bessie Johanna, and Bessie Alcartra Pink; 4 and 5, Frazier on Merrygold Queen Bo Peep and Merrygold Elenora Bo Peep. Heifer calf 6 months old—1 and 2, Cass Farm Co. on Nirvana Grace De Kol Fayne and Aaggie Hengerveld Canary Pearl; 3 and 6, Detweiler on Golden Oak Clara De Kol and Golden Oak Maggie Segis; 4, Diehl on Diehl Ragapple Colantha Pontiac; 5, Frazier on Merrygold Bess Pearl Bo Peep.

Dairy Herd—1, Cass Farm Co.; 2 and 3, The Pickering Farm. Graded Herd—1 and 2, Cass Farm Co.; 3, Detweiler. Breeders' Young Herd—1 and 3, Cass Farm Co.; 2, Frazier; 4, Randolph. Calf Herd—1, Cass Farm Co.; 2, Frazier; 3, Detweiler. Get of Sire—1 and 3, Cass Farm Co,; 2, Frazier; 4, Randolph; 5, Detweiler. Produce of Cow—1, Frazier; 2 and 3, Cass Farm Co.; 4, Randolph; 5 and 6, Detweiler.

Senior and Grand Champion Male—King Aaggie Hengerveld. Junior Champion Male—Merrygold Pontiac Bo Peep. Senior and Grand Champion Female—Lulu Baby Girl. Junior Champion Female—Payne Glitka De Kol.

Jerseys

The Jersey Show fell far short of last year's record. In 1919, a dozen herds brought 180 animals, while this season's total of 75 was furnished by four herds: Longview Farm, Missouri; Crystal Brook Stock Farm and W. A. Brewerton, Illinois; and A. M. McClenahan, Colorado. Longview cleaned the boards, taking ev-

(Continued on page 306)



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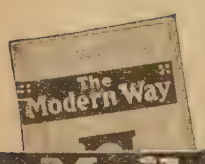
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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ill.	Lake Co. No. 5	Earl R. Jackson	Aug.	300	20	74	R. C. Meyer
Wis.	Rock Prairie	W. J. McKee	"	411	12	64	J. Wehinger & Son
Ohio	Southern Ohio	A. Mossbarger	"		24	63	Louis Lang
Vt.	Waterbury—Waitsfield	K. R. Manning	July	473	15	58	M. H. Moody
Kans.	Dickinson Co.	A. Bowser	June	118		82	E. S. Engle & Son
"	Montgomery Co.	R. E. Bausman	"	147	9	55	T. M. Ewing
"	Oswego Co.	O. L. Norton	"	233		59	M. Cellars
"	Shawnee Co.	Louise Krigbaum	"	187	20	86	H. B. Cowles
"	Lyon Co.	L. G. Williams	"	234	14	88	R. S. Griffith
"	Washingon Co.	W. O. Skinner	"	125	10	49	B. D. Sperry
"	Meade Co.	Chas. W. Foote	"	152	4	46	H. N. Holdeman
Wash.	Whatcom Co.	J. Vickers	July	546	167	92	P. Bergsma
Penn.	Meadville	H. C. Drissel	"	350	40	72	R. C. Jackson
Ill.	Lake Co. No. 2	R. Williams	Aug.	432	84	75	B. Rouse

Association Notes

Rock Prairie, Wisconsin:—One pure-bred Guernsey bull and three pure-bred Guernsey calves were purchased during August. Six sets of drinking cups were installed and one new silo built. A carload of oil meal was purchased. Market milk testing 3.5% sold for $3.70 per cwt., and 4c per point above. Milk retails for 15c per quart, butter for 64c per pound, and cheese for 50c per pound. Local feed prices are: barley, $2.85 per cwt.; oats, $3.60; bran, $2.80; oil meal, $4.

Waterbury—Waitsfield, Vermont:—A few unprofitable cows were sold during July. Several members of the association purchased pure-bred stock and three new herds were entered during the month. A large quantity of grain was ordered through the Farmers' Exchange at Montpelier. Milk brought 9½c per quart delivered in Boston. Milk retails at 14c per quart. Cottonseed meal is rated at $4 per cwt.; corn meal, $3.40; mixed feed, $3.50.

Dickinson County, Kansas:—Two cows were sold for breeding purposes and six cows were sold because of unprofitable production. One faulty separator was found during June.

Montgomery County, Kansas:—A Jersey herd was dispersed July 3rd but another Jersey herd came in to take its place. There was a complete dispersal sale of a herd of 70 head of fine Holsteins on July 17th.

Meade County, Kansas:—Two registered cows and one registered bull were purchased in June by the owner of a grade herd. Two faulty separators have been found.

Lake County No. 5, Illinois:—The following improvements in this association took place during the year just finished: Four silos were built, 7 sets of drinking cups installed, 8 pure-bred bulls purchased to head herds, one barn built, one barn remodeled, 30 pure-bred females purchased, and 81 cows sold. There were 300 cows in 18 herds that finished the year's work. The association average was 6,907 lbs. milk, 259.36 lbs. fat, with a fat per cent of 3.75%. The herd with the highest fat average was that of H. F. Berghon, which averaged 321 lbs. fat in 9,551 lbs. milk. The high cow belongs to R. C. Meyer with a fat production of 468 lbs. in 8,381 lbs. milk. There are 10 herds in this association that have not used pure-bred bulls until this last year. Some herds are still using grades. Six herds have used pure-bred sires for five years or longer. From these herds the following information is gathered: Herds using pure-bred sires average a production of 7,772 lbs. milk and 272.89 lbs. fat, with a profit above feed cost of $94.99. Herds using grade sires average a production of 616.70 lbs. milk and 239.93 lbs. fat, with a profit above feed cost of $79.12. A difference of $15.87 per head profit above feed cost is shown in favor of the herds using pure-bred sires. On a herd of 20 cows, this would amount to $317.40, a sum worth saving.

Rosendale—Eldorado, Wisconsin:—The average production of 35 herds for the year just ended is 6,890 lbs. milk containing 259 lbs. fat. The number of cows qualifying for the Register of Production was 26. Seventy-two low producers sold during the year. The average for the high herd was 9,875 lbs. milk containing 360 lbs. fat, with a profit above feed cost of $179.55. The low herd averaged 4,990 lbs. milk and 180 lbs. fat, with a profit above feed cost of $88.

Lake County No. 2, Illinois:—One pure-bred sire was purchased during August. One new silo is being built. August market milk sold for $3.70 per cwt. Local feed prices are as follows: Oats, $70 per ton; bran, $56; cottonseed meal, $78; Unicorn, $78; B. Q., $76; oil meal, $79; alfalfa hay, $30; silage, $10; pasture, $2 per cow per month.

Meadville, Pennsylvania:—July market milk sold for $3.15 per cwt. and 5c per point above 3.5%. Feed prices are: Cottonseed meal, $75 per ton; oil meal, $77; gluten, $75; corn meal, $78; bran, $60; pasture, $1.50 per cow per month.

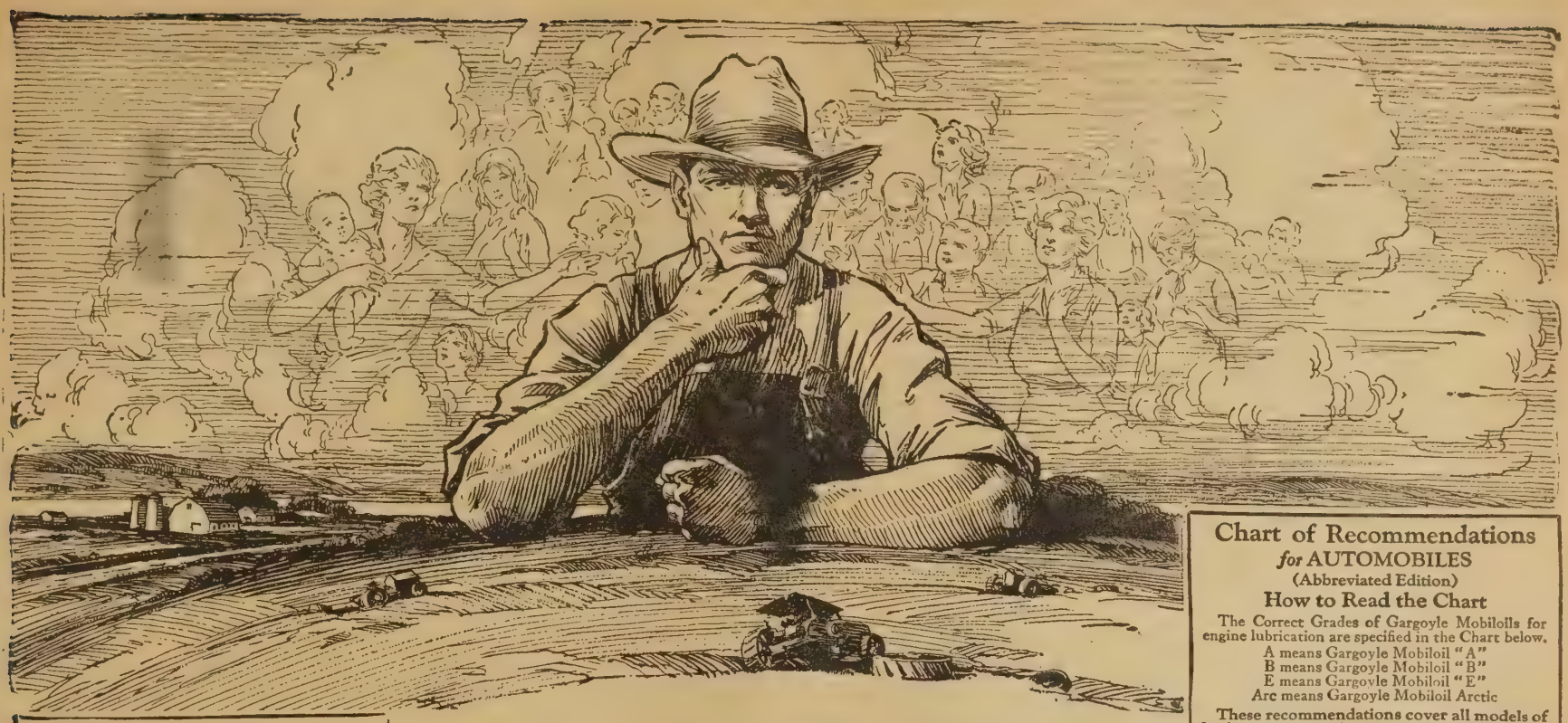
Union County, Ohio, Off a Bang

Two very profitable and enjoyable days were spent July 27 and 28, in Union County, Ohio. President Williams and Secretary Nuetzel had planned a tour of the farms of the following breeders: Harry Burns, J. F. Geigel, Christ Berger, Richard Bishop, Farm Ladnas, Liberty Stock Farm, Kirtland Bros., Sweeny & Shields, L. P. Ruppright, Frank Ruprecht, and O. P. Neutzel.

At a meeting the evening of the 27th a large number of the local club and their families came together for a general good time. Secretary H. C. Barker told of Holstein activities in Ohio and urged that there be a big showing of Holsteins at the Union County fair. A committee was appointed by the chairman to see that every Union County breeder show at least a few head. Every breeder present bought one of the "Holstein-Friesians on this Farm" signs.

The three high herds in the Union County Cow Testing Association during the year ending June 1st were Holstein herds. Ten cows from this county are shown in the cow testing association exhibit at the Ohio State Fair.

H. C. BARKER.



Tractor Shortage

A problem which every farmer must face

FOOD is the reconstructor of nations. In their efforts to regain a normal peace production, European Peoples are bidding their bottom dollar for food—*and machinery to produce food.*

Here in America, lack of man power has for some time caused a scramble for farm machinery. Authoritative sources predict a serious shortage of tractors.

This condition makes it more important than ever that the farmer get the utmost service from his tractor. New tractors may be hard to get. In any case the replacement cost will be high.

In the conservation of the tractor no one thing is more important than scientific lubrication.

Working constantly in a cloud of dust and grit, farm tractors demand lubrication of the highest quality. These lubricants, to be efficient, must be scientifically correct for the engine of the particular make of tractor on which they are used.

The Vacuum Oil Company has for years been recognized as an authority on scientific lubrication. Gargoyle Mobiloils when used as specified in our Chart of Recommendations have time and again proven their superior value in actual savings of oil and fuel and in greater power delivered.

The Charts shown here will tell you exactly what grade of Gargoyle Mobiloils will enable you to get most power and longest service from your auto, truck and tractor.

Gargoyle Mobiloils are put up in 1- and 5-gallon sealed cans, in 15- 30- and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a booklet containing complete automobile and tractor charts and other valuable data.



Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world

DOMESTIC BRANCHES: New York, Philadelphia, Detroit, Minneapolis, Kansas City, Kan, Boston, Pittsburgh, Chicago, Indianapolis, Des Moines

Chart of Recommendations *for* TRACTORS
(Abbreviated Edition)

How to Read the Chart

The correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

NAMES OF TRACTORS	1920 Summer	1920 Winter	1919 Summer	1919 Winter	1918 Summer	1918 Winter	1917 Summer	1917 Winter	1916 Summer	1916 Winter
Allis-Chalmers(General Purpose)	A	A	A	A	A	A				
" " All Other Models	BB	A	BB	A	BB	A	BB	A	A	A
All Work	B	A	B	A	B	A	B	A	B	A
Appleton	BB	A	BB	A	BB	A	BB	A		
Aultman-Taylor (18–36)					BB	A	BB	A	A	A
" " (22–45)	BB	A	BB	A						
" " (15–30) (Waukesha Eng.)	BB	A	BB	A						
" " All Other Models	B	A	B	A	B	A	B	A	A	A
Avery (5–10)	A	A	A	A			A	A	A	Arc.
" Motor Cultivator & Planter	A	Arc.								
" All Other Models	B	A	B	A	B	A	B	A	B	A
Bates Steel Mule	B		B	A	B	A	B	A		
Bean-Track-Pull	B	A	A	A	A	A	A	A		
Big Bull			B	A	B	A	B	A	B	A
Buckeye (Findlay, Ohio)	B	A	B	A	B	A	B	A	B	A
Case (9–18)					A	A	A	A		
" (10–18)			BB	A						
" (10–20)					A	A	A	A	A	A
" (12–25 & 20–40)					BB	A	BB	A	B	A
" (15–27)	BB	A	BB	A						
" All Other Models	B	A	B	A			B	A	B	A
Cletrac	BB	A								
Cleveland			BB	A	BB	A	BB	A		
Coleman	B	A	B	A	B	A	B	A		
Common Sense	BB	A	BB	A	BB	A	BB	A	A	A
C. O. D.			BB	A	BB	A	BB	A	A	Arc.
Craig	BB	A	BB	A						
Creeping Grip			BB	A	BB	A	BB	A	B	A
E. B. (9–16)			B	A	B	A				
" (Reeves)	B	A	B	A	B	A	B	A	A	A
" All Other Models	A	A	A	A	A	A	A	A	A	Arc.
Flour City (20–35)	B	A	B	A	B	A	B	A	A	Arc.
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Fordson	BB	A	BB	A	BB	A				
Gas Pull					B	A	B	A	B	A
Grain Belt	BB	A	BB	A	BB	A	BB	A		
Happy Farmer					B	A	B	A	B	A
Hart Parr	B	A	B	A	B	A	B	A	B	A
Heider	BB	A	BB	A	BB	A	BB	A	B	A
Hession			B	A						
Hollis			BB	A						
Holt Caterpillar (Model 18)							BB	A		
" " (Model 45)	BB	A	BB	A	BB	A	BB	A	BB	A
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Huber	BB	A	BB	A	BB	A	BB	A	B	A
Illinois	B	A	B	A	B	A	A	A		
Indiana	A	A	A	A						
K. C. Prairie Dog	BB	A	BB	A	BB	A	BB	A	B	A
La Crosse	B	A	B	A						
Liberty	B	A	B	A	B	A				
Lightfoot			BB	A	BB	A				
Minneapolis	B	A	B	A	B	A	B	A	B	A
Mogul (8–16)					A	A	A	A	A	A
" All Other Models			BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A	BB	A
Monarch	BB	A								
National			BB	A	BB	A				
Neverslip (20–12)			B	A	B	A	BB	A		
" (20–18, 10–6)			BB	A	BB	A				
" All Other Models					B	A				
New Age			BB	A	BB	A	BB	A		
Nilson	BB	A	BB	A	BB	A	BB	A	B	A
Oil Pull (14–28, 10–20)					BB	A				
" " " (12 20, 16–30)	B	A	BB	A						
" " (20–40)	B	A	BB	A	BB	A				
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Parrett	B	A	BB	A	BB	A	BB	A	A	A
Pioneer	B	A	B	A	B	A	B	A	B	A
Royer	B	A	B	A	B	A				
Rumely (8–16)					BB	A	BB	A	BB	A
" (12–24)					B	A	B	A	A	A
Russell (Giant)	B	A	B	A	B	A	B	A	A	Arc.
" All Other Models	BB	A	BB	A	BB	A	BB	A	A	A
Sandusky	BB	A	BB	A	BB	A	BB	A	A	A
Square Turn (15–30)					BB	A				
" " (18–35)	B	A	B	A	B	A				
Titan	BB	A	BB	A	BB	A	BB	A	BB	A
To-Ro	A	A	A	A						
Townsend	B	A	B	A						
Trundaar	BB	A	BB	A	BB	A				
Turner Simplicity	BB	A	BB	A	BB	A	BB	A		
Twin City (Model 15)									A	A
" " (Model 16)			BB	A	BB	A				
" " (Model 12–20)	BB	A	BB	A						
" " (Model 20–35)	BB	A								
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Velie			B	A	A	A				
Wallis	BB	A								
" Cub					B	BB	B	BB	A	Arc
" " (Junior)			BB	A	BB	A				
Waterloo Boy	A	A	A	A	A	A	A	A	B	A
Wheat			B	A						
Whitney	BB	A	BB	A	BB	A	A	A		
Wisconsin	B	A	B	A	B	A	BB	A		

Chart of Recommendations *for* AUTOMOBILES
(Abbreviated Edition)

How to Read the Chart

The Correct Grades of Gargoyle Mobiloils for engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
E means Gargoyle Mobiloil "E"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of both passenger and commercial vehicles unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendation should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Automobile Lubrication.

If your car is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication," which lists the Correct Grades for *all* cars.

NAMES OF AUTOMOBILES AND MOTOR TRUCKS	1920 Summer	1920 Winter	1919 Summer	1919 Winter	1918 Summer	1918 Winter	1917 Summer	1917 Winter	1916 Summer	1916 Winter
Allen	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Anderson			A	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Armleder (1 ton)			A	A						
" All Other Models	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc.
Auburn (4 cylinder & 6-38)							A	Arc.	A	Arc.
" (6 cylinder)	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" (6-39 B) (Teetor-Hartley Eng.)							A	Arc.		
Buick	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc.
Cadillac	A	A	A	A	A	A	A	A	A	A
Chalmers (6-48)									Arc	Arc.
" (6-60)									A	Arc.
" All Other Models	A	A	A	A	A	A	A	A	A	A
Chandler Six	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Chevrolet (8 cylinder)			A	A	A	A	A	A		
" (F. A.)			A	Arc.	A	Arc.				
" (F. B. & 1 ton)	A	Arc								
" All Other Models	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Cleveland	A	Arc								
Clydesdale (120 B)	A	A	A	A						
" All Other Models	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Cole (6 cylinder)									Arc.	Arc.
" (8 cylinder)	A	A	A	A	A	A	A	A	A	A
Cunningham	A	A	A	A	A	A	A	A	A	A
Dodge Brothers	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Elgin	A	Arc.			A	Arc.	A	Arc.	A	Arc.
Essex	A	Arc.	A	Arc.						
Federal (Model S-X)					A	A	A			
" (Special)			Arc.	Arc.						
" All Other Models	Arc.	Arc.	Arc.	Arc.	A	A	Arc.	Arc.	Arc.	Arc.
Ford	E	E	E	E	E	E	E	E	E	E
Franklin	A	A	A	A	A	A	A	A	A	A
Garford (3½, 5 & 6 tons)	A	A	A	A	A	A	A	A	A	A
" All Other Models	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Grant (6 cylinder)	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" (Com.) (Model 12)			A	Arc.						
" " All Other Models	Arc.	Arc.	Arc.	Arc.						
Haynes (6 cylinder)	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" (12 cylinder)	A	A	A	A	A	A	A	A	A	A
Holmes	B	A								
Hudson Super-Six	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	A
" All Other Models									Arc.	Arc.
Hupmobile	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Jordan	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc		
Jumbo	A	A	A	A	A	A				
King (8 cylinder)	A	A	A	A	A	A	A	A	A	A
Kissel Kar (Model 48)									A	A
" " (12 cylinder)					A	A	A	A		
" " All Other Models	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Kline Kar	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Lexington	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Liberty	A	A	Arc	Arc	Arc	Arc	Arc	Arc		
Locomobile	A	E	A	E	A	E	A	E	E	E
Mack (Models AB & AC)	A	Arc	A	A	A	A	A	A	A	A
" All Other Models									A	E
Maibohm	A	Arc	A	Arc.	A	Arc.	A	Arc.		
Marmon	A	A	A	A	A	A	A	A	A	A
Maxwell	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Mercer	A	A	A	A	A	A	A	A	A	A
Mitchell (6 cylinder)	A	Arc	A	Arc	A	Arc.	A	Arc	A	Arc.
" (8 cylinder)									A	A
Moline-Knight			B	A	B	A	A	A	A	A
Moon	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Nash (Quad.)	A	A	A	A	A	A				
" (Model 671)					A	A				
" All Other Models			Arc.	A	Arc.	A				
National (6 cylinder)	A	A	Arc.	Arc	Arc	Arc	Arc	Arc	A	Arc.
" (12 cylinder)			A	A	A	A	A	A	A	A
Nelson	A	A	A	A	A	A	A	A		
Oakland (8 cylinder)									A	A
" All Other Models	A	A	A	A	A	A	Arc	Arc	Arc	Arc.
Oldsmobile (4 cylinder)	A	Arc.	A	Arc					Arc	Arc.
" (6 cylinder)	A	A	A	A	A	A	Arc	Arc		
" (8 cylinder)	A	A	A	A	A	A				
Overland	A	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Owen Magnetic (Model M-25)					A	A	A	A	A	A
" " All Other Models	A	A	A	A	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Packard	A	A	A	A	A	A	A	A	A	A
Paige (6 cylinder)	A	A	Arc.	A	Arc.	A	Arc.	A	Arc.	Arc.
" (Cont. Eng.)	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" All Other Models	A	A	A	A						
Peerless (8 cylinder)	A	A	A	A	A	A	A	A	A	A
" All Other Models			Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Pierce Arrow	A	A	A	A	A	A	A	A	A	A
" " (Com.) (5 ton)	A	A	A	A	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" " " All Other Models	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Premier	A	A	A	A	A	A	A	A	A	Arc.
R. & V. Knight	B	A								
Rainier (1½ ton)	Arc	Arc	Arc	Arc						
" All Other Models	Arc	Arc	A	Arc	A	Arc.	A	Arc		
Reo	A	A	A	Arc	A	Arc	A	Arc	A	Arc.
Riker	A	E	A	E	A	E				
Rock Falls	A	Arc	A	Arc						
Saxon			E	E	E	E	E	E	E	E
Scripps-Booth (4 cylinder)					Arc.	Arc	A	Arc	A	Arc.
" (6 & 8 cylinder)	A	A	A	A	A	A	A	A	A	A
Standard Six									A	A
" (8 cylinder)	A	A	A	A	A	A	A	A	A	A
Stearns-Knight	B	A	B	A	B	A	B	A	B	A
Stewart (Buffalo)									Arc	Arc.
" " (Com.) (3½ ton)	A	Arc.	A	Arc	A	Arc.	A	Arc	A	Arc.
" " (") (1 ton)	Arc.	Arc.	A	Arc.	A	Arc.	A	Arc	A	Arc.
" " All Other Mod.	Arc.	Arc	Arc	Arc	Arc.	Arc.	A	Arc	A	Arc.
Studebaker	A	Arc	A	Arc	A	Arc.	A	Arc	A	Arc.
Stutz	A	A	A	A	A	A	A	A	A	A
Templar	A	A	A	A	A					
Velie (Model 34)	A	Arc								
" (6 cylinder)	Arc	Arc.	Arc	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" (Com.) (3½ ton)			A	Arc	A	Arc				
" (") All Other Models	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.				
Ward La France	A	A	Arc	Arc						
Westcott	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc.
White (16 valve)			A	A	A	A				
" (3 ton)			A	Arc	Arc					
" All Other Models			Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc.
Willys-Knight	B	A	B	A	A	A	B	A		
Willys-Six	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc		
Winton	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc

MISSOURI STATE FAIR

THE 1920 Missouri State Fair in attendance and in its exhibits was the best which has yet been held in the "Show-me" state. Though some sections of the state have suffered from light rainfall, general crop conditions are highly favorable and Missouri is prosperous. This is reflected in the heavy attendance, the largest total being 65,000 for one day.

The dairy cattle show was superior to that of former years, outranking previous exhibits both in numbers and in quality. The total of 317 head compares with 225 shown in 1919. L. S. Gillette of Iowa served as judge of all breeds and gave universal satisfaction both to the exhibitors and to those who were in attendance at the fair to see the best types within the several breeds.

Ayrshires

Stephen Bull of Wisconsin and C. H. Peverill of Iowa furnished the Ayrshire exhibit and divided winnings quite evenly, Peverill taking the grand championship on his two-year-old bull, Cloverdale Choice Goods, while this honor among the female classes went to the Bull herd on Hugina Beauty, a two-year-old. The division of junior championships was the same, that on bulls going to Peverill, on Rosebud Carl, senior calf, and that on females to Bull on Aldebaran Blossom Again, a junior yearling.

Guernseys

The Guernsey show was the strongest of the dairy exhibits in quality, five herds being represented with 66 head; J. L. McIntosh, South Carolina; H. W. Scott, Missouri; and three Iowa herds, Mountain Bros., W. W. Marsh, and Dairyland Farm. Marsh and Mountain Brothers were the heaviest winners with Dairyland Farm ranking next as a competitor. Cherub's Prince led the male classes, bringing the grand championship to the Marsh herd and defeating for this honor the Marsh junior champion, Golden Laddie of the Prairie. The Marsh 1919 senior heifer champion begins the circuit with a grand championship to her honor, winning over the senior champion cow owned by Mountain Brothers, Ingleside Pretoria Vrangue.



JOHANNA BONHEUR CHAMPION 2ND, GRAND CHAMPION HOLSTEIN BULL AT THE MISSOURI STATE FAIR
OWNED BY THE UNITED STATES DISCIPLINARY BARRACKS FARM COLONY, KANSAS



CLOVERDALE CHOICE GOODS, GRAND CHAMPION AYRSHIRE BULL AT THE MISSOURI STATE FAIR
OWNED BY C. H. PEVERILL, IOWA

Holsteins

Seven out of nine Holstein herds came from Missouri farms, the only out of state exhibits being the Cass Farm Company of Iowa and the Kansas State Holstein-Friesian Association. A total of 95 head were shown. The Kansas herd took five of the six champions, losing only two to the Cass Farm Company in the junior champions for females, which was won by Canary Bessie Homestead. Johanna Bonheur Champion 2nd easily held his place against the Cass Farm entry, King Aaggie Hengerveld, and faced no serious competition from the juniors. The grand champion female, Rijanta Inka Hengerveld, from the Kansas herd was shown dry but had the advantage of scale and showiness over the Cass Farm cow, Lulu Baby Girl, an animal of unusual quality and type.

Jerseys

Twelve Missouri breeders exhibited Jerseys, A. M. McClenahan of Colorado and White City Dairy Farm of Oklahoma being the only out of state exhibitors. The Colorado herd and Long View Farm of Missouri made the heaviest winnings. In the aged cow class 26 animals were led in. Long View's Rollie's Star of Peace led the class and maintained her position to the championship. The junior champion cow came also from Long View Farm, from the senior yearling, Raleigh's Blue Feather. Among the bulls, Leda's Raleigh won in the aged class. A senior bull calf from the same farm, Wolf's Chieftain 2nd, was given the advantage in the purple competition and placed grand champion.

QUALITY IN MILK COUNTS

A. W. ROSSITER, PENNSYLVANIA

YOUR most excellent editorial "Milk and Meat" in your August 20th issue brings to my mind an experience I have been enjoying for most one year since starting a retail milk route.

Next to the last paragraph in your editorial states "Mr. Whisenand suggests letting people balance their rations according to their tastes." Taste is the vital factor most dairymen seem to overlook. Tastes in milk are of as many as 57 varieties; tastes for milk are destroyed by the indifference of many dairymen as to the taste of their milk.

For most one year my trade has been telling me about my milk keeping so well; and question: "What makes it so sweet?" One woman urges another, "If you can't drink milk, try Green Acres Jersey; it's wonderful milk." An elderly person started out with 3 pints a week; now she takes a pint daily. Recently a new customer tried the flavor test on three boys from 9 to 12 years (my competitor was a neighbor with good milk). These boys judged in my favor, without having a forehand knowledge of which milk they were drinking. Regular consumption in this family was 1½ qts.; now 2½ qts. and going up. This woman's next door neighbor came in on the same kind of test. She was a two-quart customer, but is now consuming three quarts per day. Two instances of a 33⅓% increase in demand and many more could be cited.

The truth is, I've spent fifteen years in business and seven years farming. I've never in this time heard such praise for a food product. What is the reason? I think healthy cows, clean udders, clean hands, covered bucket, prompt cooling and bottling on the farm, protection from weather during delivery, plus the all important grain ration in liberal quantities the year round, and the elimination of all feeds that make bad flavors.

These words of praise have been for me a stimulating force; have proven to me that each dairyman's responsibility is far greater than he assumes.

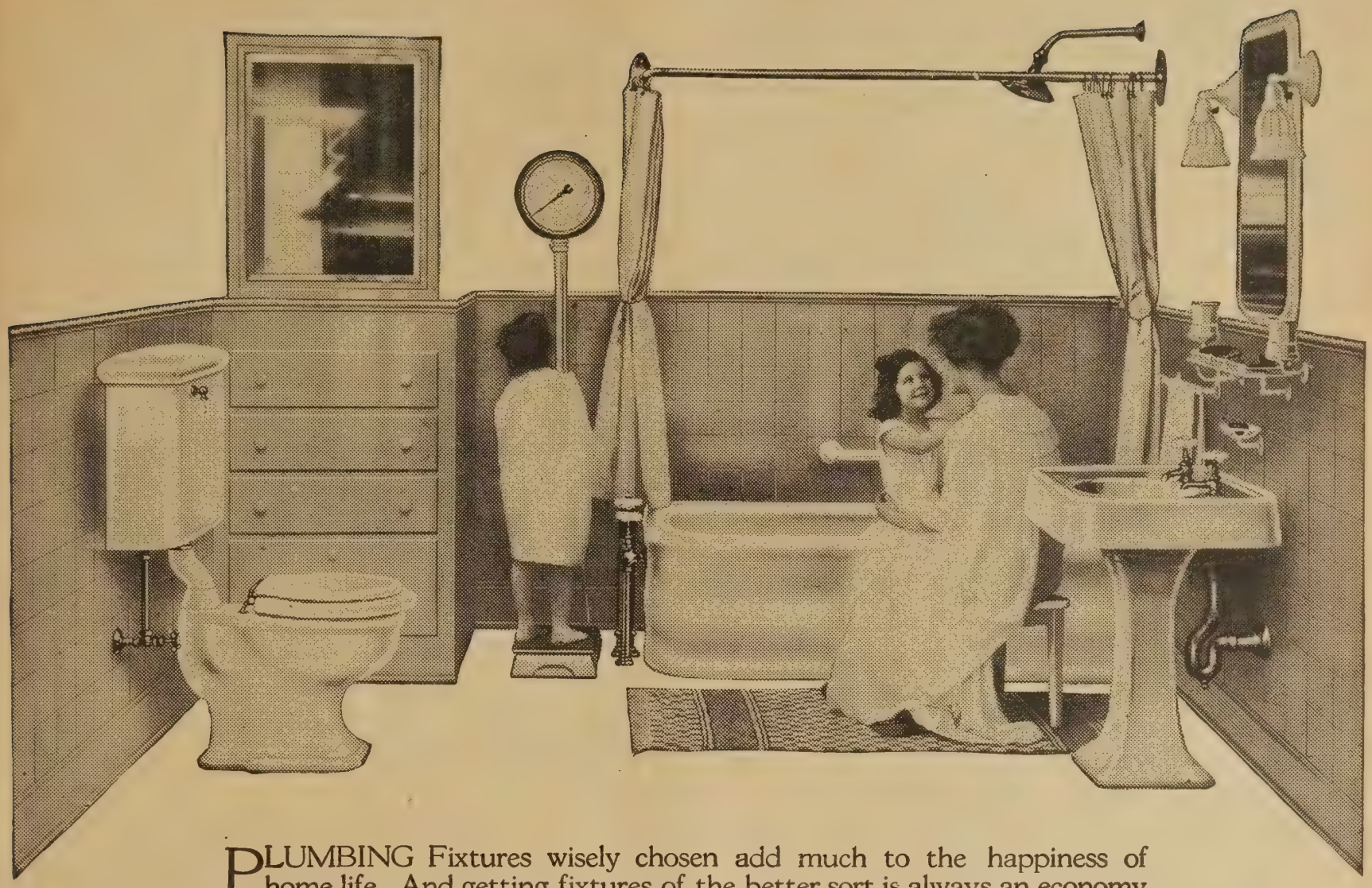
If each and every milk producer could have a thirty-day experience at retailing he would wind up by quitting the production end or brushing up his ideals toward the production of sweeter and cleaner milk. This would make delightful retailing competition as then no one milk would be best. It would simply be a question of alloting territory and simplifying delivery.

My experience convinces that no educational campaign will increase consumption of milk if the producer doesn't build in flavor and keeping qualities and maintain a healthy herd through supervision, thereby making pasteurization unnecessary.



PART OF A RECENT SHIPMENT OF AYRSHIRES FROM CRESTMONT FARM, PENNSYLVANIA, TO VICENTE USERA OF PORTO RICO
Left to right: Daisy Dummond 2nd, Dolly of Midland, and Captain Ayer of Crestmont.

Don't be afraid to ask questions. That's the only way you can find out a good many things.—FARRINGTON.



PLUMBING Fixtures wisely chosen add much to the happiness of home life. And getting fixtures of the better sort is always an economy when their cost is spread over years of service.

Give your home a *modern* bathroom. Why wait until the family grows old? Passing years should be no less pleasant than the years still to come, and it is better to install the best fixtures the first time and enjoy the advantages of their service.

Get in touch with a Contracting Plumber in your vicinity and let him help you solve your problem. Get the benefit of his years of training and experience.

Write for our color-printed catalogue "Standard" Plumbing Fixtures for the Farm." It illustrates all types of fixtures.

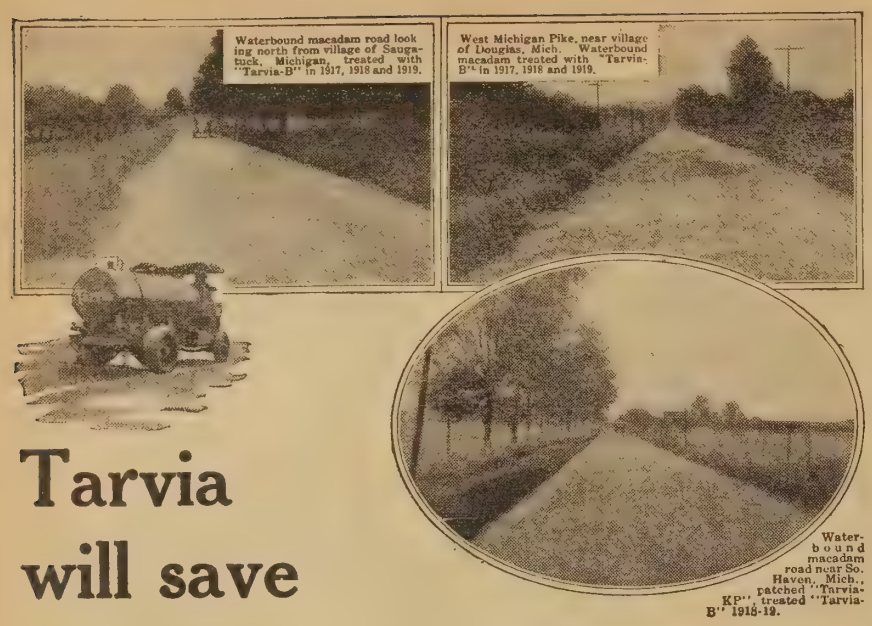
Standard Sanitary Mfg. Co., Pittsburgh

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Service at "Standard" Branches In the cities marked (*) are carried complete lines of Plumbing and Heating Supplies; Farm Lighting and Water Supply Systems. Write or call on nearest branch.



Tarvia will save the country's roads—

ALL over the United States there are thousands of road commissioners facing the prospect of having to build new roads at the present high cost of construction.

And all around them are miles and miles of old gravel and macadam roads, not in themselves equal to traffic conditions, but which can be made serviceable if they are repaired and given a Tarvia treatment.

Some Michigan roads, illustrated herewith, show how easily and economically old roads can be salvaged with Tarvia.

One road, for instance, was so bad that the Township Board decided the only thing to be done was to rebuild it at the cost of a new road, but after seeing results obtained on other roads, decided to patch and treat with "Tarvia-B" and stone chips, and—*"the road is better than when new,"* they say.

It is just as easy for your community to beat the high cost of new roads by saving and restoring your old ones. It is almost a crime to neglect your old roads and let them go from bad to worse, when Tarvia treatment can be applied so easily and cheaply.

Tarvia is a coal-tar preparation for restoring old roads and building new ones. With it you can also widen your narrow roads by adding Tarvia macadam shoulders. It provides a smooth, dustless, mudless, waterproof, traffic-and-frost-proof roadway at moderate first cost and with the minimum upkeep expense.

"Tarvia-KP" is a cold treatment for patching existing roads of every type. It fills up worn places, restores broken shoulders and edges and keeps the road always at the top notch of condition. Let our engineers advise you how to salvage your old roads with Tarvia, at very attractive costs.

Special Service Department

In order to bring the facts before taxpayers as well as road authorities, The Barrett Company has organized a Special Service Department, which keeps up to the minute on all road problems.

If you will write to the nearest office regarding road conditions or problems in your vicinity, the matter will have the prompt attention of experienced engineers. This service is free for the asking.

If you want *BETTER ROADS* and *LOWER TAXES*, this department can greatly assist you.

Illustrated booklets free on request.

Tarvia

Preserves Roads—Prevents Dust

The Barrett Company

New York Chicago Philadelphia Boston St. Louis Cleveland Cincinnati Pittsburgh Detroit New Orleans Birmingham Kansas City Minneapolis Dallas Nashville Syracuse Seattle Peoria Atlanta Duluth Salt Lake City Bangor Washington Johnstown Lebanon Youngstown Milwaukee Toledo Columbus Richmond Latrobe Bethlehem Elizabeth Buffalo Baltimore

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Eighty-Eight Acres of Sand

(Continued from page 281.)

crop. Our choice is the Eureka or Late Leaming, both of which are very large southern corns. On light soil, these varieties reach a fair degree of maturity and give a large tonnage. On the same soil the earlier maturing corns, such as Wisconsin No. 7 or Flints, would go largely to ears and the tonnage would be small. Had I heavier land, however, I would not pick the varieties that I have as I would not then get the same degree of maturity.

Herd Bull a Fortunate Buy

But while Mr. Becker has been improving his soil the herd also has been progressing. He made a most fortunate buy in his herd bull. He paid only $65 for him as a yearling. When he had used him a couple of years he was about to sell him, but decided to wait and see what his daughters would be like. He also sent for an extended pedigree. The calibre of the daughters we have already mentioned—the two-year-old heifers were heavier producers than their dams. The extended pedigree showed that the sire of his bull, Brightest Canary, had 15 tested daughters, one of them with 34.64 lbs. of butter from 727.9 lbs. of milk in seven days and several others running around 28 lbs. He in turn was a son of Paul De Kol Jr., a brother of the first 41-lb. cow, with 23 A. R. O. daughters and a grandson of Paul De Kol with 38 A. R. O. daughters. Mr. Becker was more concerned with yearly production than short time records, however, and the most pleasing feature of the extended pedigree was the knowledge it brought him that the sire of his bull was also a brother of Creamelle Vale with 29,591 lbs. of milk in a year, a world's record when made. The dam of his bull he found to be a granddaughter of DeKol 2nd Butter Boy 3rd, with 118 A. R. O. daughters. His dam had never been tested, but Mr. Becker knew her to be an excellent individual, and it was on the strength of her individuality that he had purchased her son in the first place. The bull remained in the herd.

In the meantime a start had been made with pure-bred cattle. Money was still very scarce, but the bank was friendly. In fact, banks usually are friendly with farmers who do business with them and who are trying to get ahead in a sane and intelligent manner. Mr. Becker's first purchase was an old registered cow that died the next year, but not before she had left him one heifer calf. This heifer calf, Lily Pamela Butter Girl, when of milking age, produced 15,051 lbs. of milk and 475 lbs. of fat as a junior two-year-old in Record of Performance, the seventh highest in her class for that year. And she is one of four daughters of the herd sire now qualified in Record of Performance.

The real start with pure-breds was secured the following year, however, when Mr. Becker purchased Mary Gray and her daughter. This old cow is still in the herd although 13 years old and still a profitable producer. In the herd also are four of her daughters in milk, one two-year-old that will soon freshen and other daughters and grand-daughters. Several of these have made excellent yearly records and they are good individuals. By the spring of 1917 the pure-bred herd totalled 10 head, eight of them being two years old. By this time Mr. Becker was milking 20 cows. He decided to call a sale and sell off his grades.

A Record Making Sale

It was at this sale that Mr. Becker reaped his first really substantial reward from his herd improvement policy. The most of the grades he had to offer were two-year-old daughters of his herd bull. One four-year-old grade cow topped the sale at $185. A two-year-old heifer with a private record of 10,592 lbs. of milk in the year sold for $160. The average price of the sale for cattle in milk was $139.35. At the present time, cows such as these would sell readily at $175 to $200. No sale in this district had ever brought such prices. Its results were a surprise to his friends and, I have no doubt, convinced many of the doubting Thomases among his neighbors that Mr. Becker was on his right track and not simply getting ready for a greater failure than he might have had in the first few years under the old system of farming.

Aside from the two purchases mentioned very little new blood had been introduced; none in fact except four heifers purchased from the estate of A. C. Hallman. At the dispersion sale of the Hallman herd, Mr. Becker also purchased a successor to his first herd sire paying over $500 for Sir Echo Beets Posch, a young bull by the same sire as May Echo Sylvia, world's champion milk producer. On his dam's side, too, this new sire traces back to May Echo and he is therefore more than 50 per cent of the same breeding as May Echo Sylvia.

The pure-breds have multiplied since 1917 and now they fill the stables numbering over 40 head. This valuable herd has been built up from a small foundation representing a very moderate outlay; in fact, the increase in value of the herd alone would represent good wages for Mr. Becker during the years of its development. In the year 1918, receipts from the creamery were $159 per cow. The skimmilk is fed to calves and hogs and in the past year the income from hogs alone will be about $2,000. There will be an additional $2,000 from cream and $2,000 from surplus stock. The first two items will more than meet all expenses and the latter will represent wages for labor.

As yet the farm is not paid for in full. Here, too, Mr. Becker has shown good business judgment. He has put his money where returns are greater than in a first mortgage on a farm. The old and out-of-date stables have been remodelled. The fittings are now of the most modern steel design. A litter carrier simplifies the cleaning out process. A small gasoline engine runs the milking machine and the cream separator. The home has been refinished throughout. The increased fertility of the soil must also be counted on the credit side and is a credit that is always growing as 40 acres of the 68 are manured each year. The clearing off of the balance of the mortgage with such a money making plant as Mr. Becker now has will be easy.

Mr. and Mrs. Becker, for both must be included, have worked hard for the success they have obtained. For a couple of years now, or perhaps more, the cows have all been milked three times a day. Occasionally, on Record of Merit work, they are milked four times a day. This involves a couple of hours of chores in the barns at midnight, and it is at this time that the milking machine is most appreciated. Even the hardest work, however, would not account of itself for such success as has been theirs. Good management as represented in herd improvement and the adaptation of crops to soil is the most important factor. Here, too, Mrs. Becker has been a real inspiration to her husband. Their success is well deserved.

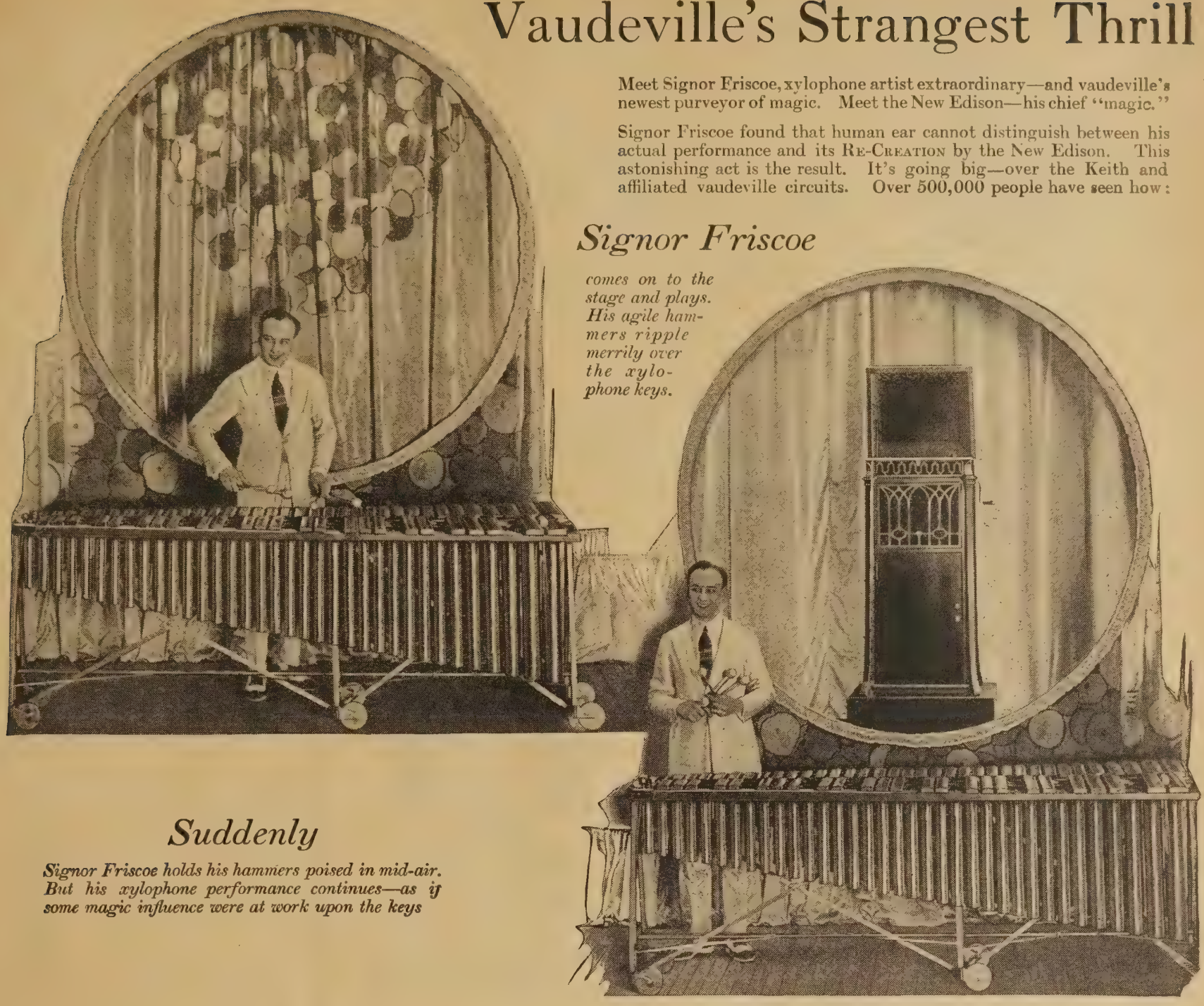
Vaudeville's Strangest Thrill

Meet Signor Friscoe, xylophone artist extraordinary—and vaudeville's newest purveyor of magic. Meet the New Edison—his chief "magic."

Signor Friscoe found that human ear cannot distinguish between his actual performance and its RE-CREATION by the New Edison. This astonishing act is the result. It's going big—over the Keith and affiliated vaudeville circuits. Over 500,000 people have seen how:

Signor Friscoe

comes on to the stage and plays. His agile hammers ripple merrily over the xylophone keys.



Suddenly

Signor Friscoe holds his hammers poised in mid-air. But his xylophone performance continues—as if some magic influence were at work upon the keys

Then *the curtains part. The audience gasps. The New Edison stands revealed. It has been matching Signor Friscoe's performance so perfectly that its RE-CREATION could not be distinguished from his original performance.*

Ask them to explain this!

THE absolute realism of the New Edison has been demonstrated by actual comparison with the art of living artists. More than 4,000 comparisons have been given, with more than fifty great artists, before a total of 3,500,000 people.

America's principal newspapers have reviewed these comparisons at length. They have conceded that the New Edison's RE-CREATION of an artist's voice, or instrumental performance, cannot be distinguished from the actual singing, or playing, of such artist.

It has been reported to us that over-zealous salesmen, who are interested in the sale of talking-machines, have stated that the artists, who take part in these comparisons, imitate the New Edison.

In the first place, it is a physical impossibility for any person to imitate the phonograph in a way to sustain this comparison.

In the second place, the artists, who make these comparisons are of the first rank, and would not lower themselves to sing, or play, in an unnatural way.

In the third place, the music critics who have witnessed the comparisons could not, for a moment, be deceived by an attempted imitation, and would immediately expose an imitation, if one were attempted.

HOWEVER, argument is unnecessary. Signor Friscoe's extraordinary act makes the accusation of "imitation" quite absurd. Everyone knows that a xylophone cannot be made to imitate a phonograph so as to deceive its hearers.

In the interest of fair play, and for your own satisfaction, hear Signor Friscoe when he comes to the vaudeville theatre in your town. He is the world's greatest xylophone player. Pay particular attention when he plays in direct comparison with the New Edison's RE-CREATION of his xylophone performance.

IF anyone suggests to you that the artists imitated the New Edison in the 4,000 comparison tests that have been given by the Edison Laboratories, ask such person to explain Signor Friscoe's act.

Your Edison dealer has a New Edison exactly like that used by Signor Friscoe. Test its supreme realism for yourself. The dealer gives the Realism Test in his store.

The Price of the New Edison

—has increased less than 15% since 1914, and this increase includes the War Tax.

Mr. Edison has absorbed, out of his own pocket, more than half of the increased cost of manufacture, in order that the New Edison might remain within the reach of every pocketbook. The high-grade materials and expert craftsmanship required in the manufacture of the New Edison continue to be scarce, and our selling prices may have to be increased, but we shall make every effort to avoid such action.

Thomas A. Edison, Inc., Orange, N. J.

The NEW EDISON

"The Phonograph with a Soul"



Mixing Feed Is More Than Scoop Shovel Work

JUST NOW, with the bins full of grain, dairymen are often tempted to experiment in mixing feeds.

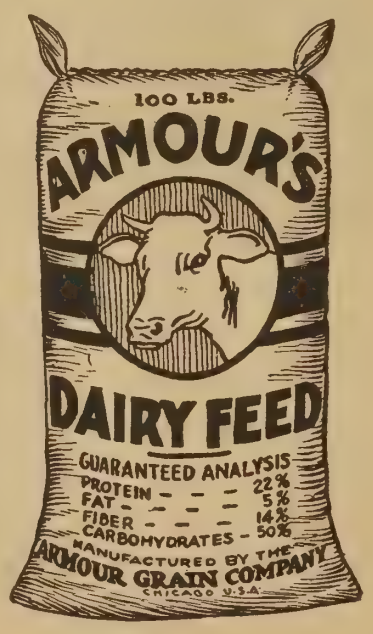
Don't do it. Your scoop may cost you money instead of making it.

For the modern dairymen cannot afford to take chances on cutting down his milk production by feed box mixtures which have not the greatest milk producing qualities in them.

With Armour's Dairy Feed you have something that is time-tried, satisfactory and mixed along scientific formulas.

The profits from this complete feed are so satisfactory that dairymen who use it will not take a chance on anything else. A test will convince you.

ARMOUR'S DAIRY FEED



Examine Armour's Dairy Feed at your dealer's, or write us for a sample and state in what quantities you usually buy. The Armour dealer will gladly supply you with Armour's Stock Feed and Armour's Hog Feed also.

ARMOUR GRAIN COMPANY
CHICAGO, U.S.A.

A Milk Dispensary

When the people of Sheboygan, a little city in eastern Wisconsin, recognized that many children in their city were suffering from lack of proper food, they arranged with the American Red Cross through their Committee of Public Health to start two milk dispensaries and sell milk to the children at less than cost. In three months, 28,565 half pints of milk were sold, and the plan proved so successful that the school board decided to place a dispensary in all schools.

The Sheboygan Chapter of the American Red Cross selected a practical means of improving the health of their town children, when they decided to start a milk dispensary where the children could secure milk at a very low price. A local dairy company was charging 3½ cents per half pint bottle of milk, but they agreed to let the Red Cross chapter have a limited amount each day at 2 cents per half pint. At first the Red Cross thought that they would give this milk to the children in need. Since most children have a penny or two for an all day sucker or some other kind of candy, and because they believed it would be poor policy to get the children in the habit of getting something for nothing, they decided to sell the milk at 1c per bottle, providing the milk was drunk on the grounds, thus preventing the children from taking the milk home for cooking purposes.

In some cities children have been supplied with milk during the school year, but in very few have dispensaries been operated during vacation. But the Sheboygan people recognized the value of a vacation dispensary. The county nurse had asked different children how many got milk to drink at home and very seldom over 10 or 12 hands out of 50 or 60 would be raised. Yet when asked how many received coffee for breakfast almost every hand went up. The Red Cross saw the need of proper food for the growing child. They remembered that while nature furnishes the mill the grist is of our choosing. Upon the wisdom of that choice depends health and safety.

On July 16th, two milk dispensaries were opened. Since they were new institutions each school only ordered 125 half pint bottles the first day. Those in charge soon realized that they did not have enough milk so they ordered an extra supply. Children of all descriptions came with their pennies from every direction. Since the milk had to be drunk on the grounds, some device had to be put into operation whereby the milk would not be wasted. Consequently, each child was supplied with a fountain straw which attracted attention and added to the novelty of the scheme. Some of the smaller children were supplied with paper cups though in most cases the straw method was preferred. During the first four weeks, the highest amount sold at one school was 430 bottles. Only twice did the number fall below 100 bottles.

Eleven thousand and forty bottles were served the first month. This makes a total of $108.64 spent by the children for milk which in many instances would have been spent for candy. During the three months the two dispensaries served 28,565 half pints of milk, 3,600 straws, and 925 paper cups. The receipts amounted to $271.47. Besides keeping the children from eating unwholesome candy and other confectionary material they had consumed the best food product on the market, the only material that is a perfect food. The saving cannot be measured in dollars and cents because the benefit of this wholesome food to these children, many of whom were undersized and undernourished, who are struggling for development into robust manhood and womanhood, cannot be measured in that way.

When the supply was adequate and all the children had been served, some came back for a second, third, and even fourth bottle. Practically the same faces appeared every day, which goes to show that children like milk if it is given them. So many mothers claim that their children will not drink milk. Miss Gertrude Lohmann, county nurse who originated the plan, claims that is the poorest excuse any one can offer because most children like milk if a good sanitary quality is given them. She says every mother should compel her child to drink at least two glasses of milk each day and more if they will take it.

Many children who received milk at home craved it at the dispensaries because of the novel way it was served. Then, too, the children enjoyed getting together during the vacation months and meeting with their little playmates, and they enjoyed their bottle of milk through the straw. Two or three children were selected each day to assist in serving the milk and caring for the dispensaries. Each child received one bottle of milk for its services.

After the three months' campaign the committees recognized the value of milk as a food and knew that the children needed it, so they recommended to the School Board of Sheboygan that a dispensary be placed in every school. Dispensaries were started in all schools and many quarts of milk are supplied to the school children at cost. Several children who get milk at home now buy their extra bottle at school because they say that the milk tastes better than that they get at home. In all cases the children are drinking more milk than ever before and the teachers say they see great improvement in their mental and physical development.

If more schools had these dispensaries there would be less malnutrition among our school children. When we stop to think that there are six million children, or one out of every four, in the United States suffering from effects of undernourishment, it is high time for mothers to realize that they must feed their growing children proper food. Miss Lohmann examined 1,047 children in Sheboygan County and found only 38 physically perfect children. Six hundred ninety-two out of 1,047 had one or more physical defects and 358 had three or more physical defects; 526 of these children had enlarged tonsils; 681 had defective teeth; 37 were underweight; 21 had symptoms of anaemia; and 6 showed symptoms of tuberculosis. It is not so much a case of poverty as it is ignorance. Much of the food now given to children costs more than dairy products, yet the average housewife complains about the price of dairy products.

Dr. McCollum says: "The people who have achieved, who have become large, strong, vigorous people, who have reduced their infant mortality, who have the best trades in the world, who have an appreciation of art, literature, and music and who are progressive in science and in every activity of human intellect, are the people who have used milk and its products liberally."

Many people deserve a vote of appreciation for this wonderful scheme worked out at Sheboygan. Among those are the Sheboygan County Chapter of the American Red Cross, the Committee of Public Health, Miss Gertrude Lohmann, Mrs. Albert Wagner, the Sheboygan Dairy Products Company, the county board, and the Sheboygan School Board.

Douglas Fir
Northern White Pine
Idaho White Pine
Western Soft Pine

WEYERHAEUSER FOREST PRODUCTS
TRADE-MARK REGISTERED IN U.S. PATENT OFFICE

Arkansas Soft Pine
Washington Red Cedar
Red Fir and Larch
Norway Pine

WHY THIS TRADE-MARK MEANS A NEW SERVICE IN THE LUMBER BUSINESS

IN nearly everything we buy or use we have become accustomed to look for a standard article of known merit.

We want to know where it comes from, who is back of it, what can be expected of it, and how it compares in quality and price with similar merchandise sold for a like purpose.

This is a busy world. We cannot take the time to learn solely by our mistakes; we may learn too late.

We cannot wait to test every coin we accept in payment for goods or services. So we have a standard currency—the Government's stamp or trade-mark to certify its worth.

For like reasons we insist on products with the stamp or trade-mark of responsible manufacturers to assure us the value we pay for.

Some of these makers' stamps are almost as dependable as the mint-mark on a coin.

Yet when it comes to lumber most of us know very little about it; what species or grade of wood is best for the purpose we have in mind, where it comes from, who manufactures it.

As substantial factors in the lumber business, the Weyerhaeuser people want you to think more about the wood you use. To this end they will supply to lumber dealers and to the public any desired information as to the qualities of different species and the best wood for a given purpose.

This service will be as broad and impartial as they know how to make it. They are not partisans of any particular species of wood. They advise the best lumber for the purpose, whether it is a kind they handle or not.

What they advocate is conservation and economy through the use of the right wood in its proper place.

From now on the Weyerhaeuser Forest Products trade-mark will be plainly stamped on their product. You can see it for yourself at the lumber yard or on the job after it is delivered.

When you buy lumber for any purpose, no matter how much or how little, you can look at the mark and know that you are getting a standard article of known merit.

WEYERHAEUSER FOREST PRODUCTS
SAINT PAUL · MINNESOTA

Producers of Douglas Fir, Washington Red Cedar and Cedar Shingles on the Pacific Coast; Idaho White Pine, Western Soft Pine, Red Fir and Larch in the Inland Empire; Northern White Pine and Norway Pine in the Lake States; and Arkansas Soft Pine in the South.



HOARDS DAIRYMAN JUNIORS



A DEPARTMENT FOR THE DAIRY FARM BOY

Convincing a Sceptical Father

"A pretty bum crop of clover, I'd say," Jimmy Greene grumbled disgustedly to himself, as old Dick and Betsey jogged lazily along before the noisy old McCormick. "I'll swear if there isn't something sick on this farm most of the time. But dad doesn't take any stock in this soil acidity business. That's because he doesn't understand about the chemistry of things, I suppose. Well, though that isn't any reason for his not listening to the soil expert," he continued, thinking aloud.

"Get up, Dick, you old fox," as the wise old bay eased up to a dead standstill. "Can't I talk loud without you thinking that someone is visiting with me. You'd stop on the way to Heaven if you thought there was a chance to rest. Your years of hard work have made you pretty wise, I'll admit, but you can't get away with that stuff, can he, Betsey," as the nervous little black mare struggled to drag both old Dick and the mower.

Just then a shrill whistle from the rear caused him to shout "whoa" in startled tones. Looking around he saw the elder Greene approaching, swinging a pail in one hand as he hurried along.

"Gosh, dad, I'm as famished as this clover crop, the only difference being that I want water and this crop wants lime. If this stuff was mine, I'd let the cows harvest it. 'Tisn't worth the time it is taking to make it into hay. Dad, I haven't seen a respectable crop of clover on this field for some time, and I don't think you can lay it all to poor seasons. I'll just bet you enough money to pay my school expenses next year that this field has a pretty acid soil."

"Don't talk any more of the moonshine stuff to me," answered the father. "This farm is just as good as ever. The Lord didn't figure that his old earth would wear out, did he? If He did, what about future generations? How will they be fed, eh? Answer that now if you can with all your college education."

"Why, dad," said Jimmy as he swung around on the mower seat reaching for the pail of water. "Let me wet up first, then I'll show you up. Now," as he hung the pail on one of the levers of the mower. "Will you promise to answer all of the questions I ask?"

"Will do my best," he grinned, "but remember I ain't college bred, and what's more I'm proud I'm not sometimes when I see some of the college product."

"Never mind that, dad. That isn't in the argument, and remember you said you'd be square. Now for question number one," as he turned to brace his feet against one of the wheels. "Are you as good a man today, for work I mean, as you were twenty years ago," he asked with the grin of confident victory upon his face.

"Well, I consider myself pretty good yet," drawled the father, thinking to evade a more direct answer.

"But are you through?" broke in his son impatiently. "Don't you tire out easier than you used to?"

"Yes, I guess so if that's what you want me to say," he answered.

"I don't want you to say anything, dad, unless it's the truth. All right, then your answer is yes to question one. Does this old mower do as good a job now as when you first got it, and besides, why did you buy a new grain binder this year? Yes, and why is old Dick nearly played out? You know right well, dad, that there is but one answer, and that is, everything wears out with age and work. Isn't that so?"

"Why, of course, but you haven't proved one thing in the argument yet, young man," answered the father somewhat triumphantly.

"Give me time, dad, I'm just spreading my net and bye and bye I'll begin to draw it in on you. So you'd better be on your guard, if you don't want to be trapped."

"Don't all plants take some things from the soil," he continued, "which are never returned in the amount they were removed?"

"There's where you're wrong, young feller," snapped Pat Green. "You forget the return of them things to the soil in the manure."

"Hold on, dad," broke in Jimmy excitedly. "Only 80 per cent at the most can be returned in the manure and that only when the best of care is given it. I guess you never have returned any more than 30 or 40 per cent in yours, the way you handled it. The best of it has run away in that brown stream of water following every rain. That water wasn't colored that way for nothing, dad," he added as he scored on point number three.

"Now dear old dad, I'm going to pull in on you. Guess this will land you O. K. on good dry soil too," he laughed.

"Can you name one single thing in this world that isn't changing daily and doesn't the Bible say that everything shall change, nothing remains the same? Therefore arguing from what we know to be the case and also from what the good book says, yes and from what the soil expert has found out, doesn't it stand to reason that all of the soil on this farm isn't what it was when you started in farming? It just naturally is wearing out, dad, in things that plants must have. Any soil won't stand always taking away more than is returned. You don't need to answer this question, dad, your face tells the answer. Now let's get down to business.

"Soils like everything else are made up of two kinds of compounds, those which are acid in reaction and those that are basic. To illustrate: vinegar is acid and lye is basic. Now if there are two kinds of compounds together in the soil, and there is more of one than the other, then a test of the soil will react in favor of that kind which is present in larger amount. Just as simple as if I pass money from my pocket to yours."

"It usually goes from mine to yours though," interrupted the father quickly.

"All right, dad," laughed Jimmy, "and I guess 'twill have to be that way, at least until I get through school. Point for you, dad, but I'm not through yet.

"I learned this year at school—college of course I mean—that the carbonates of the soil leach away faster than the acid compounds, so of course that leaves the soil with an acid reaction." Then noting his father's furrowed brow furrowing more deeply, he added, "carbonates, dad, means the same thing as bases that I spoke of a moment ago. We call them soil carbonates down there, but that's only, well, the college of it, that's all. If that is true, then doesn't it stand to reason that a soil could get acid and that plants like clover and alfalfa that like a lot of basic materials couldn't grow very good for the lack of them? They usually get sick and thin out very easily. Same thing as an animal that isn't properly fed.

"And I'll just bet you the first hundred dollars that I make, this soil is acid. What do you say? And I'll prove it by the latest scientific method too. That's why we aren't getting good stands of clover on this field any more. The carbohydrates are worn out."

"Well, I won't take your bet, son. Might be betting against your own game. I don't know all the things you learned this year and you may be right. Why don't you test the soil then if you are so sure?" he added.

"Haven't a tester, dad, that's a good reason, isn't it? We ought to own a Truog Soid Acidity Tester. I feel certain we could use it to good advantage. Ramsay's have one, maybe I could borrow theirs. They found acid soil, and by the way have you seen the alfalfa on the field they limed two years ago? It's a sight. Up to your knees, every bit of it. That's what lime did for them. Made a sour soil sweet and make the alfalfa happy."

"Where did you get them testers from?" inquired his father a little skeptically, "and what do they cost?"

"From the Central Scientific Co., Chicago, and I guess they cost about $12.00. Gone up in price like everything else," he added. "Why, dad, going to get one?"

"I'll think it over. Suppose we ought to make use of your education and test you out. No use paying for an education unless it can be used. If this land needs lime to make it yield more clover, then it will have to have it, that's all. But your case isn't won yet, son. You've still to apply the scientific test."

"What time is it, dad? I feel as though I need lime too. Isn't it noon yet?" as he gazed up at the hot morning sun.

"Eleven," called back the father. "You'll have about time to finish before noon. Poke old Dick along, he's good for another hour now."

"You'll have to hand it to dad," Jimmy said to himself as he continued with the morning's work. "He's always open to conviction anyway even if it does take a lot of arguing. I'm not going to wait for him to get one of those testers either. I'll just borrow Bob's. He'll be glad to loan it if it will help to convince dad. I might be wrong about this, Dick, then wouldn't dad make sport of me? There could be other reasons and I suppose there are, but this soil is acid though, I'm sure. Yes, so acid, Dick, it makes you all out of sorts to walk on it. But never mind, old boy," as he clucked away at him. "You will still live to see the day that will make some decided improvements on this farm."



TRUOG'S SOIL ACIDITY TEST TELLS IF THE SOIL NEEDS LIME TO GROW CLOVER AND ALFALFA SUCCESSFULLY

Junior Dairy Clubs in Montgomery County, Tennessee

The Montgomery County Dairymen's Association made its first shipment of milk Saturday, June 19, and since that time milk has been shipped every Wednesday and Saturday. Farmers have become more interested in dairying and several are recruiting for herds with pure-bred animals.

Naturally, the farm boys and girls are becoming interested in dairying, and there is much talk of organizing junior dairy clubs. County Agricultural Agent Harmon believes such clubs will be successful and practical, and the bankers of Montgomery County have agreed to loan money to the members of the club without interest to enable them to buy pure-bred dairy cows.

The junior dairy club complete includes three years of work divided as follows: First, raising a heifer calf from weaning to breeding time; second, caring for the bred heifer; third, caring for the cow during first lactation period. A club may begin with either year, e. g. with the calf, bred heifer, or the milk cow.

Seeing the immediate possibilities for dairying, the club boys of Montgomery County have about decided to purchase bred heifers. While they will cost more in the beginning than calves, they will bring quicker returns. The junior dairy club work will be a big asset to the present system of farming in Montgomery County.

Minnesota's Club Show

Do you know that Minnesota leads in boys' and girls' club work, perhaps due to the reason that the people of the state believe in true co-operation? The live stock breed associations, state breeders' association, state dairymen's association, state club leader, county agents, and others are all back of this enterprise and work together for their development.

This year Minnesota boys and girls are feeding approximately 750 baby beef calves, about 450 dairy calves

about 300 lambs, and over 1,000 pigs. Some of these projects are being carried on in nearly all of the counties in the state. County shows are held in connection with county fairs where the contestants can get together, compare notes, and compete for prizes.

The two highest winners in the baby beef and dairy calf classes of each county are each eligible for entrance in the state contest. The junior Live Stock Show will be held at South St. Paul, November 17, 18, and 19. The junior show this year will be one of the largest and best exhibits of this kind ever held in the United States. Nearly 200 head of the choicest calves, both dairy and beef, will be on exhibition, as well as the choicest individuals of the other classes.

In connection with this show the Junior Live Stock Judging Contest will be held. The counties are co-operating in this project. About 350 boys and girls will compete in the county contests in 25 counties. The two in each county which have proven themselves the best judges by competition will enter the state contest and compete for state honors.

The Minnesota Live Stock Breeders' Association together with various St. Paul and South St. Paul interests will finance the baby beef show. The dairy calf club will be financed by the above and also the State Dairymen's Association which is giving full co-operation. The live stock judging contestants will have their railroad fares paid by the Minnesota Live Stock Breeders' Association.

Minnesota. W. A. Mc KERROW.

An Inspiring Pig Club Member

When Erwin Eckert of Markesan, Wis., decided to join the pig club work in the spring of 1917, he did so with a firm determination to win. His achievements in this direction have not only been of monetary value to him, for as he himself says: "The experience of my work, and the incentive which it has given me to be of service, although I am still but a boy, to say nothing of a new point of view about farm life which I have gained, is worth the time I have spent while engaged in this interesting project."

This is not the first time that this young man has been introduced to our Juniors, for it was but a few months ago that I noted an interesting account of him somewhere in the body of the Dairyman. Although this did not appear as a feature of the Junior page, I take it for granted that many of the Juniors had it called to their attention at that time. But the story is so good that all prospective pig club Juniors should know about it, and since we now have more complete information, obtained directly through personal conversation with Erwin, we shall give the story just as he tells it.

Erwin is now really beyond club age, but his enthusiasm is just as great as ever, and although not continuing as a club member, he does not intend giving up a piece of work which has been so interesting and profitable to him. He will continue, but in a larger way than he has done before. At present he is taking a short course in agriculture at the University of Wisconsin, and it has been the Junior Editor's pleasure to have formed an intimate acquaintance with the young man as a member of one of his classes, and his work here is characterized by that same spirit in which he entered the pig club work.

America's greatest inventor, Thomas Edison, at one time said to his employees: "Men, there are just three things that will make any man successful. These are hard work, stick-to-itiveness, and common sense." Edison is a splendid example of this combination of factors. I usually like to add what I call a fourth factor, although I am sure Edison has expressed this, but in a rather hidden way. This is enthusiasm, that driving force which makes one get on the inside of the proposition which he has undertaken. The difference between the successful man and the failure is not so much one of a difference in capacity as it is the difference in amount of genuine enthusiastic energy put into the work. It is the thing which makes play out of what is usually termed work, but most of all it is the one thing which will make a place for you higher up.

Erwin Eckert had the right idea at the outset, and I really believe that it was this idea, put into execution, that has crowned him with so much success. He said: "I made up my mind that the only sensible way to start out would be to buy a pure-bred sow. And do you know," he added, "that I had to go outside of my own county to get one that would be suitable and of the breed which I wanted. So after much inquiry I got in touch with Mr. J. W. Thomas of West Salem. I had heard that he was a breeder of pure-bred Duroc-Jerseys, and as this was the breed that I was looking for, I decided to buy a bred gilt, registered as Golden Girl. It took what I then called a nice little sum of money to get her. She cost me $75, but when you know what she has done for me you will say that she was well worth that and then some. I relied entirely upon the judgment of Mr. Thomas, and he certainly did not disappoint me. She was an excellent type for a young sow, at least that is what I thought at the time she arrived. She looked good to me, and I want to add right here that she looks better to me today than she did then. If any one thinks that my success was due to the fact that I was right on the job all the time, I want to let you know that Golden Girl is the one that was really on the job, like any good sow should be."

"I suppose you were pretty anxious for that first litter to come," I inquired.

"Anxious does not express it," he laughed. "I lived with her day and night, and I guess I never had such a thrill as I got on March 29th, 1917, when I found her with a litter of 11 pigs, one of which was dead. But she raised the other 10, and I thought that was doing pretty well for her first litter. When they were six weeks old, I started feeding them buttermilk diluted with warm water. To this I added some middlings, and as they grew older I added ground barley and oats and also fed more buttermilk and less water. I considered this a pretty good ration, as my pigs did very well on it. In addition to the above they had a clover pasture to run on. This gave them plenty of green feed and exercise and they grew like weeds. At the age of five and one-half months, I started to sell them for breeding purposes. My price was $50 apiece and I did not have any trouble in disposing of them at that rate. They weighed about 250 pounds apiece, and I thought that this was a mighty good record for spring pigs. Well, I got $500 for that litter, and before they were all disposed of Golden Girl came across with another litter in September. This time she did not do quite as well, but I was satisfied. She had 9 and raised all of them.

"It was a trifle more trouble to raise this litter as I had to provide better shelter than for the first. But I kept them warm at night and allowed them to run outside on the warm, bright days. This entire litter was sold at the same rate as the first, so you see I received $450 for these. The cost of the feed for the two litters I estimated to be about $300. This left me with a balance of $650 for the year 1917, and in addition I had the sow left.

"During 1918 she raised two more litters, both good sized ones. The first one was sold for $475 and the second for $60. You may think it queer that I got so small amount for the second litter. Well, I sold them when they were six weeks old, because I was about to enter the army. This made $535 for that year, and as I figured that it cost about $200 to raise them, I realized a profit of $335.

"This past season has been Golden Girl's banner season. In the spring of 1919, she had the largest litter, numbering 15. Twelve of these were raised and at six weeks I sold them for $175. In the fall she had another litter of nine live pigs and these I estimated were worth $150 at six weeks of age. I figured they cost me about $150 during this year."

"Your profits have been remarkably good on one sow," I remarked. "She is certainly the type that one wants for breeding purposes."

"Yes, and she is just as good today as she was at the start for all that I can see," he enthusiastically added. "There was no mistake in buying her and I certainly made no mistake when I joined the pig club. If you will take the trouble to add up the gross receipts received and subtract the costs as I have given them, you will find that Golden Girl has made me a bank account of $1,160 in three years."

"Well, that is a record to be proud of," I remarked. "But do you think that one could do as well if he had a number of sows?"

"I don't think it, I know it from experience," he replied. "This past summer I worked for L. P. Martiny at Chippewa Falls and I had my eyes opened to the possibilities of pure-bred hog production. I'm not going to give away any secrets, but I will say that what I have done with Golden Girl can be done on a larger scale, and some day not in the far distant future, I hope to prove it through my own efforts. I'm going to give some of Wisconsin's pure-bred swine raisers a little competition. I figure that I have learned a lesson early in life that it takes years for some of our farmers to learn, and that is this: It's far more profitable, pleasanter and more businesslike to engage in pure-breds than it is to deal in scrubs. It takes high class material to run a high class farm."

Junior Letters

Hoard's Dairyman Juniors:—I received my fob, creed, and button.

I have a cow, a calf, and a Poland-China pig. My father gave me the pig. I paid $12 for my cow. I got her when she was a little calf. My calf is her calf. They are part Holstein. My cow's name is Violet; my calf's name is Pansy. I have a pony; her name is Dais We have two silos.

I will close for my letter is getting long.

Stockton, Kan. Harold Cooper.

Hoard's Dairyman Juniors:—I will write to let you know I am still a junior. We have built a new dairy barn 38 feet wide and 52 feet long. We also built a new wagon shed. We cut all of our grain. We are cutting hay now. We take our cows to the pasture every day with our pony. Us boys bought two calves. We have 24 head now, 10 of which are milking. We will be milking 15 cows this winter. It is dry here and the crops do not look very good.

Minong, Wis. Roy Fiedler.

Hoard's Dairyman Juniors:—I received the watch fob and creed and I thought them very nice.

I am 15 and in the seventh grade. The name of our school is Fairmont.

I live on a 40-acre farm. We just moved on it this winter.

We have eight cows and are getting about 10 gallons of milk a day. They are Jerseys, except two and they are Holsteins.

Macomb, Ill. Helen Baker.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

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The Standard of Weight in Your Neighborhood



WHEN YOU INSTALL a Fairbanks Scale for Wagon and Stock use, you establish the standard of accuracy for your neighborhood.

Why? Because for ninety years Fairbanks Scales have been the world's standard, by which the accuracy of all others is judged.

An enviable record, which is the logical result of painstaking, unswerving accuracy in manufacture. This year's farm profits will come from a close scrutiny of the wastes and "guesses" of the past. The first step in learning your exact profits is *to know your weights*, and to base your transactions on the knowledge which only a Fairbanks Scale reveals.

Fairbanks, Morse & Co.
INCORPORATED CHICAGO

The Canadian Fairbanks-Morse Co., Ltd., Montreal



FRESH WATER FOR EVERY DRINK

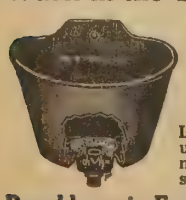
The more clean, fresh water a cow consumes the more milk she gives. Make it easy for her to get fresh water.

The ACORN Drinking Bowl

permits her to obtain fresh water by simply poking her nose into the bowl—valve opens automatically giving fresh flow of water. Write for circular.

John W. Ladd Co.
(Branch) Cleveland, Ohio
574 Lafayette Blvd. DETROIT, MICH.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

Illinois State Fair

(Continued from page 295)

ery first and the major part of the second prize money.

Chief Raleigh, closest competitor of the Longview champion, Poet's Whiteheart, last year at the Illinois fair, was an outstanding candidate for the purple award. The quality of this three-year-old makes him fast company in any show against bulls of his age. Professor Yapp found sufficient promise in the junior calf, Star's Fairy Lad, to let him head the junior class.

Golden Matron, grand champion female at this fair a year ago, attained that honor again when she headed a class of sixteen aged cows. Raleigh's Pretty Maiden, senior calf, represented the juniors in the championships.

The Illinois Jersey Cattle Club held its annual meeting and banquet the evening of the Jersey show. A. L. Tichane, representing the American Jersey Cattle Club, addressed the breeders, urging increased extension activities for the breed within the state and recommending the co-operative employment of a fieldman by the breeders of Illinois, Indiana, and Ohio. The sum of $1,500 per annum was pledged to this end. It was voted to bring together a state show herd from the herds in Illinois and send it to the National Dairy Show. Also, an expression of favor was made for holding a state consignment sale of Jerseys. In the election of officers, W. A. Brewerton and Carlton Trimble were retained as president and secretary-treasurer, respectively, and Miss Mary Judy was made vice-president. The board of directors is made up of J. C. Piper, W. L. Hull, J. K. Dering, W. W. Yapp, and C. A. Clegg.

In the past year a good start has been made toward carrying out the program outlined twelve months ago. The meeting was one of enthusiasm and every indication was evidenced that an active campaign will be waged to give the Jersey cow a larger place in Illinois. A Jersey booth was in operation in the Jersey barn where breed literature was distributed.

The awards were as follows:

Bull 3 years or over—1, Longview Farm on Chief Raleigh; 2, Crystal Brook Stock Farm on Brampton Beauty Heir. Bull 2 years and under 3—1, Longview Farm on Fashionable Fern Lad; 2, McClenahan on Majesty's Feather Lad; 3, Crystal Brook Stock Farm on Brampton Second Garcon. Bull 1 year and under 2—1 and 3, Longview Farm on Raleigh's Golden Pioneer and Manora's Fairy Lad; 2 and 4, Brewerton on Raleigh's King Thornbury and Jap's Prince Thornbury. Bull calf 6 months and under 12—1 and 2, Longview Farm on Wolff's Chieftain 2nd and Blue Feather's Raleigh; 3, Crystal Brook Stock Farm on Bright Radiator; 4 McClenahan on Maj. Feather Lad's Boy. Bull calf under 6 months—1 and 2, Longview Farm on Star's Fairy Lad and Buttercup's Butter Lad; 3, Brewerton on T. N. T.; 4, McClenahan on Bosnian's Shy Duke.

Cow 5 years or over—1, Longview Farm on Golden Matron; 2, 3, and 4, McClenahan on Westfield Girl, Gray Cannoness and Jolly Oxford Buttermilk. Cow 4 years and under 5—1 and 2, Longview Farm on Queen's Raleigh Nimay and Raleigh's Star of Peace; 3, McClenahan on Western King's Flora Dora; 4, Crystal Brook Stock Farm on Brampton Lady Brebis. Cow three years and under 4—1 and 2, Longview Farm on Rochette's Noble Nina and Fairy Flag; 3, McClenahan on Ruby's Financial Girl. Cow 2 years under 3—1 and 2, Longview Farm on Raleigh's Fairy Finance and Raleigh's Evening Star; 3, Crystal Brook Stock Farm on Larkin Farm Glory. Heifer 18 months and under 24—1 and 2, Longview Farm on Raleigh's Queen O' the Night and Raleigh's Blue Feather; 3, McClenahan on Maj. Finance Oxford; 4, Brewerton on Jap's Alma Thornbury; 5, Crystal Brook Stock Farm on Larkin Farm Pirmula. Heifer 12 months and under 18—1 and 3, Longview Farm on Raleigh's Royal Fairy and Raleigh's Golden Brightness; 2, Brewerton on Raleigh's Bessie Thornbury; 4, McClenahan on Princeley's Sweet Rose; 5, Crystal Brook Stock Farm on Viola's Bright Maiden. Heifer six months and under 12—1 and 2, Longview Farm on Raleigh's Pretty Maiden and Raleigh's Miriam; 3, Brewerton on Miss Pennithorne; 4, McClenahan on Maj. Cowslip Feather. Heifer calf under 6 months—1 and 2, Longview Farm on Raleigh Royal Maid and Raleigh's Starling; 3, McClenahan on Maj. Feather Lads Dodo; 4, Brewerton on Jap's Ophelia Thornbury.

Dairy Herd—1, Longview Farm; 2, McClenahan. Graded Herd—1 and 2, Longview Farm; 3, McClenahan; 4, Crystal Brook Stock Farm. Breeders' Young Herd—1 and 2, Longview Farm; 3 and 4, McClenahan. Calf Herd—1, Longview Farm; 2, Brewerton; 3, McClenahan; 4, Crystal Brook Stock Farm. Get of Sire—1 and 2, Longview Farm; 3, Brewerton; 4, McClenahan. Produce of Cow—1, 2 and 3, Longview Farm.

Senior and Grand Champion Male—Chief Raleigh. Junior Champion Male—Star's Fairy Lad. Senior and Grand Champion Female—Rochette's Noble Nina. Junior Champion Female—Raleigh's Pretty Maiden.

Scrub Bull Funeral

One of the most impressive and inspiring funerals ever held in Waupaca County occurred on Wednesday, July 28th, when the Bear Creek Cow Testing Association commemorated the passing of the scrub bull in that vicinity. Twenty-two cars followed the likeness of such a bull from Bear Creek to Chain o' Lakes where it was dumped over board with due ceremony.

Mr. Ralph Spillman, tester of the Bear Creek Association and five other young men acted as pallbearers while "Chub" Raisler, prominent Holstein breeder of Bear Creek, officiated as undertaker. The casket was covered with beautiful bouquets of bull thistles, presented by members of the association. Remarks of tribute were made by Tom O'Conner in view of the deceased having so long resisted the inevitable coming of the pure-bred sire.

The procession was interrupted by stops at farms where registered bulls hold places of profound respect and high esteem.

The herds visited were those of Christensen Bros., W. P. Kissinger, John E. Erickson, A. B. Rowe, A. E. Smith, W. H. Taggert and Sons, and George Lindsay and Sons. It was a long, hot trip and the place on the county agent's Ford where a speedometer should be, registered about 125 miles. The members of the association have voted in favor of corporal punishment and are already looking for a victim for next year's excursion.

JAMES H. DANCE, County Agent.

Inventions and Appliances of Interest to Agriculture

Back Rest

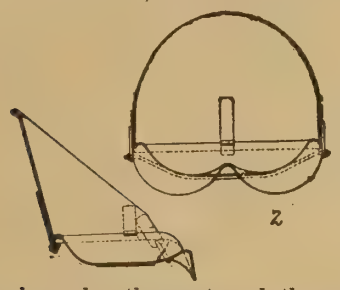
This back rest is made by bending and twisting heavy wire in the manner shown. It is fitted to seats of different sizes by means of the chain and spring shown at the left. Try



your hand at making one.
(Carl Gerstenmaier, St. Paul, Minn., U. S. Patent, 1,309,725).

Back Rest

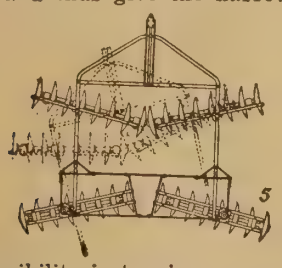
This back rest is made of sheet metal bent into a U shape, and with a roll at the top. It is attached to seats of varying sizes by means of a bolt at the back, and a tie rod which



extends under the seat and through both sides.
(Emerson Brantingham Co., Rockford, Ill. U. S. Patent, 1,315,810).

Tandem Hitch

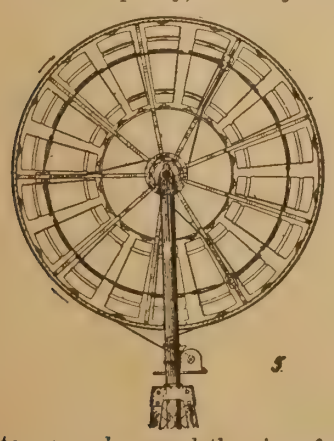
The side connecting straps of the rear gang on this harrow keep the rear disks in proper alignment to strike the hills left by the front disks; also, they can slide or telescope backward and thus give the harrow pro-



per flexibility in turning a corner.
(International Harvester Co., Chicago, Ill. U. S. Patent, 1,322,046).

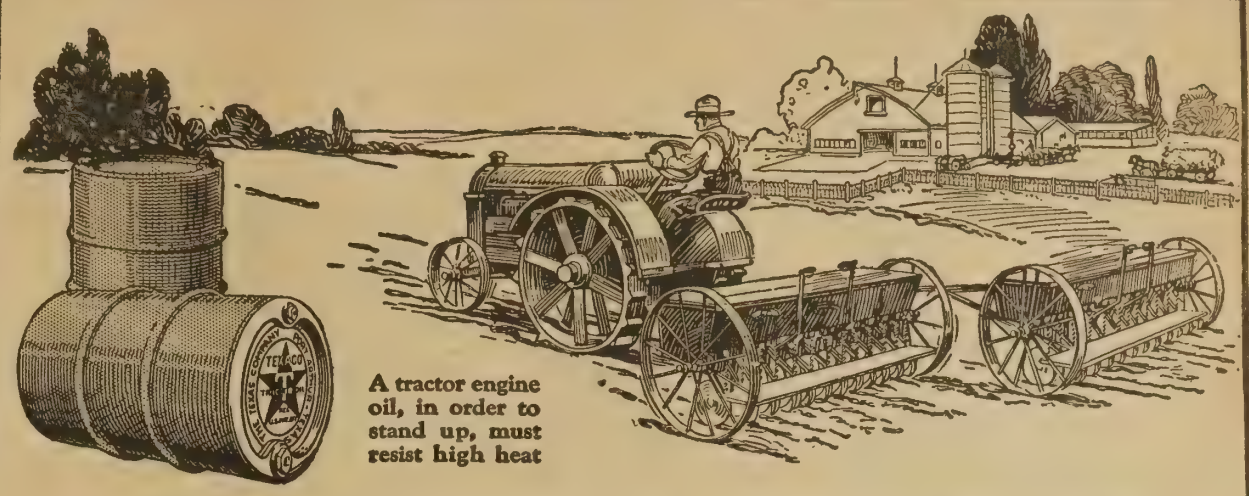
Windmill

The power of this self-regulating windmill is used to generate electricity for lighting and for running small machines on the farm. The dynamo is attached to the mast and is driven by a leather belt which passes around the pulley, over a yielding



tightener, and around the rim of the wheel.
(Wind Electric Corporation, Wyndmere, N. D., U. S. Patent, 1,334,458).
Canada. C. J. LYNDE.

TEXACO MOTOR OIL ★ THUBAN COMPOUND ★ HARVESTER OIL ★ AXLE GREASE



A tractor engine oil, in order to stand up, must resist high heat

TEXACO

Tractol—*for Tractors*

The tractor engine operates under a severe strain. Full rated horse power is reached and maintained for long periods. High engine heat is developed. A tractor engine oil, in order to stand up, must resist this heat. A good tractor oil must resist dilution by the fuel. It must prevent leakage of the kerosene past the piston rings. Leakage means loss of fuel and when this occurs, stroke by stroke, the loss is multiplied. The oil must be thoroughly dependable—as repairs and replacements are hard to make and continuous operation is a vital factor in securing full return on the investment. The oil must burn clean—as excessive carbon deposits mean trouble and stops for cleaning out.

There are three grades of TEXACO TRACTOL—"B," "C," "D"—Grade "B" for large engines in severe summer conditions. Grade "C" for large engines in winter. By "winter"—frost temperature (about 40°F.) is understood. For smaller engines use Grade "C" in summer, Grade "D" in winter.

TEXACO TRACTOL is shipped in 55 and 33-gallon steel drums, wooden barrels and half-barrels, and five-gallon cans. Try it. "You'll see a difference"—*now* in power, and *later* in your bearings.

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Farm Leaders Go West to Study Co-operative Marketing

Plans Taking Shape to Market Principal Farm Crops Co-operatively

Washington, D. C., August 17.—A party of farm bureau officers from eight of the mid-western and eastern states are now enroute to California to study the co-operative marketing system so successfully used by fruit, nut, and raisin growers of that section, with a view of adopting some of the principles in the marketing of staple farm crops of the grain sections, according to advices received today at the Washington headquarters of the American Farm Bureau Federation.

At a recent meeting held in Chicago by the federation more than 500 prominent agricultural leaders went on record as favoring some plan of co-operative marketing of farm crops which would cut down selling expenses and eliminate ruinous fluctuations. A committee of seventeen, representing all the grain growing sections, is being appointed by President J. R. Howard to develop a plan of co-operative marketing that will handle the entire grain crop of the United States.

The delegates now on their way to California have been commissioned by their respective states to learn at first hand just how the Californians sell their farm crops so advantageously through co-operative effort and to what extent this system is adaptable to the staple farm crops of the rest of the United States.

This delegation is at Denver today and is sitting in at a session of the executive committee of the American Farm Bureau Federation which is considering a number of important agricultural and economic questions, among others the attitude of the organization toward proposed national tax legislation.

Professor T. S. Adams of Yale University, who is also tax adviser to the U. S. Treasury Department, is the guest of the executive committee at Denver today and is discussing certain taxation principles on which the federation hopes to formulate a farmers' policy toward new tax legislation expected during the coming session of Congress.

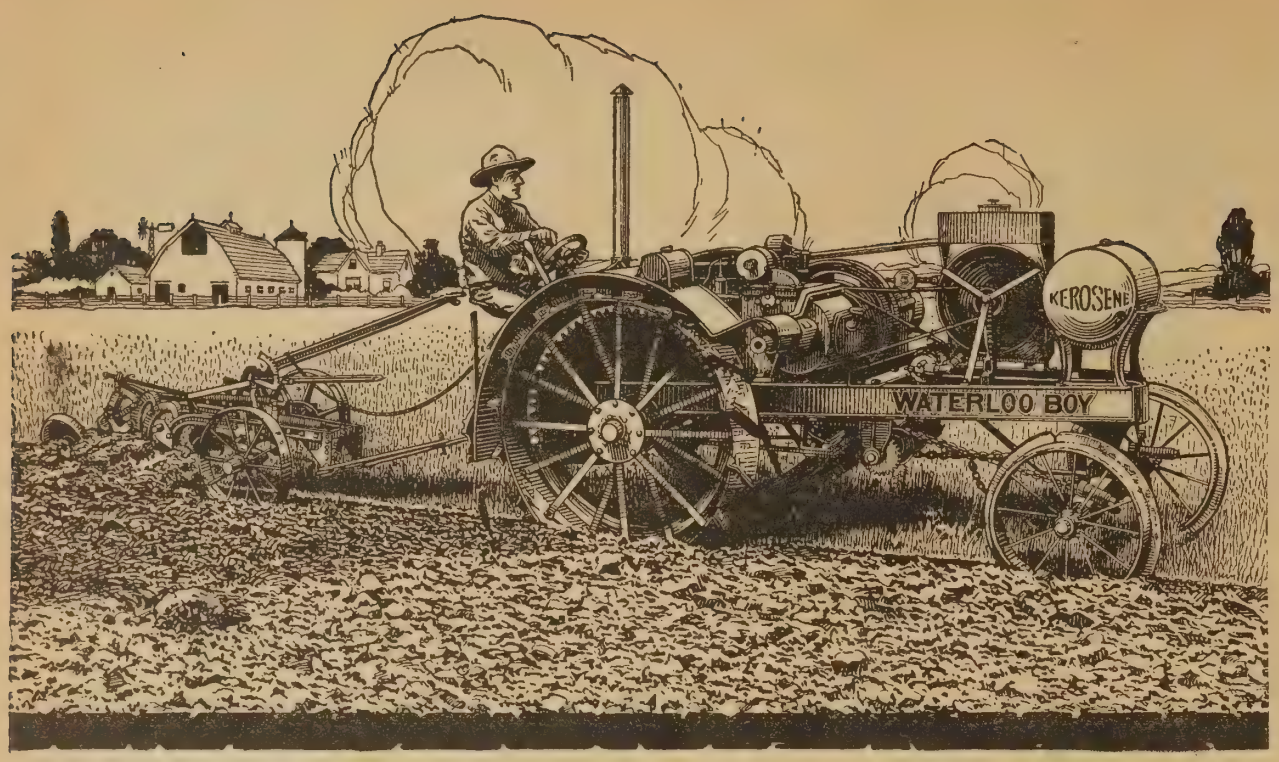
Following the Denver meeting the executive committee will meet at Salt Lake City with representatives of leading wool growers' interests of the range states to consider the advisability of extending the wool pool of the Middle Western states to include the entire United States.

The pooling and storing of wool has already prevented millions of dollars of loss to farmers and now that the wool market is beginning to show signs of recovery from the violent slump brought about last May by cut price clothing sales and the resulting cancellation of buying orders, extraordinary care must be exercised in bringing the available wool supply upon the market only as needed instead of in one huge wave.—American Farm Bureau Federation.

Be a Leader

When you work, work. Put the whole mind and heart in it. Know nothing else. Do everything the very best. Distance everybody about you. This will not be hard for the other fellows are not trying much. Master details and difficulties. Be always ready for the next step up. If a bookkeeper, be an expert. If a machinist, know more than the boss. If an office man surprise the employer by model work. If in school, go to the head and stay there. All this is easy when the habit of conquering takes possession.

Be yourself the leader, not the trailer. Set the standard as conscience dictates. Then you will mold instead of being molded.—ARCHER BROWN.



Power You Can Rely Upon

To make you the most profit, each of your different farm operations must be timely. Often weather conditions call for extraordinary effort. It is then that you can count on the dependability and rugged power of the Waterloo Boy.

WATERLOO BOY
BURNS KEROSENE COMPLETELY

It gives you dependable service at small operating cost. Its twin-cylinder engine develops full 12 H. P. at the drawbar and 25 H. P. on the belt, using kerosene as a fuel. A patented manifold converts every drop of this low-priced fuel into power. Two gallons of kerosene per acre is the average amount used when plowing.

The cooling system always holds the engine at the proper temperature. While the motor runs at the right temperature for perfect lubrication, enough heat is maintained to insure complete combustion and full power. The radiator holds thirteen gallons of water. You don't have to stop in the field every few hours and fill it.

The Waterloo Boy is especially strong and rugged. Its various parts are designed to meet every possible strain. Every part is easy to get at. The engine runs without vibration. Its well-balanced weight provides proper traction in soft ground.

Buying a tractor is an important investment. We have a booklet describing the Waterloo Boy fully. Drop us a postal card or letter today. Address John Deere, Moline, Illinois, and ask for booklet WB-514.

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When Writing to Advertisers, Mention Hoard's Dairyman

The Mystery of the Soil

(Continued from first page.)

passing the artistry of the screen or the skill of painters of greatest renown—they who are only imitators of He who made the earth, the grass, the trees, and beasts—all, things of beauty and joy forever, and all pleasing parts of farm life. Our shortcomings are in magnifying the so-called drudgeries of the farm, so that they obscure the beauty of scene and play—the great drama of nature nowhere so close to man, of which he is so much a part, as on the farm. The spirit of agriculture! The spirit of the soil! Again, the soil, the earth, is holy. It is the cradle in which God rocks His children, soothed and comforted by the music of created things—a thousand singing birds, rushing, tumbling streams, rustling leaves, and the countless contributions of members of nature's choir that swell their voices into a world chorus, grand and harmonious. There are no bad or broken notes in creation's music.

Count your cash, ye captains of industry, glory in your sceptors, ye governors and kings. Satisfy your lust for wealth and power, ye who determine the destiny of government and commerce by their use and misuse. But when we seek the place where the soul is satisfied, where tranquility of spirit is found, where health, a clear conscience, and clean living are common, look to the farm and its contributing environment. And they will weigh in the balance against all these other things when we reflect and return over life's paths and seek in retrospection the comfort and consolation that the evening of our lives demands.

Cheese Not True to Type

There seems to be an idea prevalent among many cheesemakers that so long as they keep within the law pertaining to the moisture content of cheese they need not give any particular attention to other defects for which in their carelessness they are responsible.

Cheese are being delivered at receiving points from factories supposed to be making American cheese and in so far as the color and general shape are concerned are of the American type, but when flavor, texture, and general appearance of a plug are concerned are of a type for which no name has been coined. Such cheese have not the characteristic texture of American Cheddar and certainly are not an ideal Brick, simply a cross bearing an imitation of both and are a disgrace to the ideal American and Brick type.

The first idea that comes to mind upon examination of this mongrel type in the form of American cheese is that some Brick maker not experienced in the American process has attempted to make American and has followed rather closely the Brick process up to the salting point and the finished product seems to combine the undesirable features of both types. Cheese of such inferior character whether it be American or Brick is an injury to the industry and makers who through ignorance or carelessness place such goods upon the market should not be classed as cheesemakers.

This type of American cheese is mostly found to be the result of the "granular" or "hand stirred" process and the makers that can turn out a cheese of fair quality with this method are mighty scarce. Even the best cheese of this type are undesirable for they invariably lack keeping qualities and rarely develop true Cheddar flavor. Many cheese dealers absolutely refuse to purchase this kind of cheese except at a price that will protect them against defects and imminent future deterioration.

The only safe and sane plan is to follow the true Cheddar process for making fine American cheese. Cook the curd to the proper degree of firmness with the right amount of acidity. Mat and mature the curd together with the proper acid development before milking, then give plenty of time for further mellowing and maturing. After salting allow plenty of time for the salt to properly dissolve and the curd to again acquire a smooth velvety texture before hooping.

The extra time required to make a fine article is not wasted as so many makers suppose, but is a protection against possible losses on account of poor quality. It is the duty of every cheesemaker to do his best to maintain and to uplift the reputation of Wisconsin cheese. There is always a penalty attached to inferior work in any line and this is true today particularly in the cheese industry.—Wm. Winder, Wisconsin Dairy & Food Commission.

If we are wise, we never leave school.—Horace Fletcher.

The Methylene Blue Reduction Test

(Continued from page 280)

tributors in checking up the condition of their plants, and by cities that are seeking to improve their milk supplies and realize the first step in a general survey to determine which producers are delivering milk of poor quality with the idea of showing them how by a few simple precautions they can greatly improve their milk. To hire a bacteriologist and to equip a laboratory involves a greater expenditure than many small cities feel justified in making. By employment of a man with a practical knowledge of milk production who would be able to successfully instruct the producers in proper methods and by use of the methylene blue reduction test in order to discover those producers whose methods should be improved, a marked betterment in the general supply might well be attained at the minimum of expense.

Many producers of high grade milk desire to determine the number of bacteria in their milk from day to day. It is doubtful whether the reduction test can supplant the plate culture method for this purpose. Here the milk is of practically the same quality from day to day even though one day's milk may contain 5,000 bacteria per cubic centimeter and that of the next day 15,000. The problem here is to check up the efficiency with which the various operations concerned in production have been carried out. The plate culture method does this admirably and probably is the only method that will do it successfully.

The test as described gives information concerning the number of bacteria alone. If the tubes of milk are kept at the temperature used in the test, 98°F., for twenty to twenty-four hours, much can be determined concerning the kinds of bacteria from the nature of the curd. The solid jelly-like curd is evidence of the presence of the lactic bacteria while a curd containing many gas holes is proof of the presence of harmful organisms.

Does Lack of Fresh Air Prevent Your Cows From Having 30-Lb. Records?

HOW much more milk could your cows give you with plenty of fresh air in the barn? Couldn't the cow that produced 28 pounds on her last test have given you 30 pounds with the barn properly ventilated? The loss of that extra two pounds on just a few animals may be costing you many times the price of a King Ventilating System.

No one can tell definitely how much more milk a cow can give with her barn properly ventilated, but everyone knows that she can show you an increase worth while. One owner of a prize dairy herd, Mr. E. T. Winship, living near Owatonna, says, "I know that it cost me at least $5,000 during the winter of 1917 and 1918 because I did not have my barn properly ventilated."

When you order a King System, you order your building to be ventilated. This is our obligation in the guarantee we give with every King System. We design and place the units of the King System according to the conditions of the building, guided by the years of experience we have had in this work.

Send For the Book That Shows How to "Make Good Barns Better"

Many farmers saved more money than they expected by sending for this book. It answers many questions that most farmers want to know about barn ventilation —questions that you are vitally interested in.

"How many cubic feet of air space can a cow heat?" "How can twenty cows keep warm in a barn built for thirty cows?" "Why is a good barn in Iowa not a good barn in North Dakota?" "How much moisture does a thousand-pound animal throw off every twenty-four hours?" "How many pounds of air does a cow need to properly digest one pound of food and water?" "Why does foul air in a barn attract lightning fires?" "Why can you get a King System for less money than you could properly ventilate your barn yourself?" These and many other important questions are answered for you in this book. Shall we send you a copy free?

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KING SYSTEM OF VENTILATION
"Make Good Barns Better"

Pointers on Painting

Paints and painting cost less than repairs necessitated by decay or disintegration.

There is no such thing as an all-service paint. Paint should be selected according to the material to be painted and the conditions under which it must give service. The wear on a floor is more severe than on a wall; hence the floor calls for a tougher, more elastic paint.

Painting should not be done when the temperature is lower than 50°F. as the paint will not flow well. It is impractical to paint a hot surface. The old painting axiom is: In spring and fall follow the sun; in summer, follow the shade.

Outside painting should be done in dry weather. Surfaces should not be painted when wet.

Surfaces to be painted should be gotten as smooth and clean as possible. They should be free from grease. In painting new wood knots and sappy surfaces should be shellaced first. If painting over previously painted surfaces, all blisters and loose or peeled spots should be scraped or burned clean. A brushing with stiff wire brush followed by sandpaper is good practice.

A priming coat usually pays for its cost. A firm base for the final coats is very essential to insure long service. The primer should be thin enough to penetrate the lumber; it should be well brushed in.

Only pure linseed oil or pure turpentine should be used to thin paint.

Although frequently used, ochre is not a good primer. The primer should be of as good quality as the body coats, but reduced to the right consistency. Elbow grease is a very good thing to use on paint, especially the priming coat.

If the paint is cracked in small hair lines which do not go through to the wood, reduce the first of priming coat with equal parts of raw linseed oil and turpentine, in order to penetrate clear through to the wood. This only applies where the old paint is well bound to the surface.

If the old paint does not adhere well, scrape the surface with a stiff wire brush to remove all scale, then dust with a stiff brush.

Spots from which much of the old paint is scraped should be touched up with a thin coat of paint, reduced with turpentine. After this has dried, the surface is then ready for the first coat.

Paint may peel from any one of several causes, but the most frequent cause is the improper application over a damp or frosty surface.

Paint that is peeling rolls back from the surface in thin scales. A coat of paint put over a seemingly good surface will sometimes peel down to the bare wood or to the priming coat, showing that the old paint has lost its grip. Be on the lookout for this condition when re-painting surfaces. The old paint surface should be well wire-brushed and dusted, after which the bare spots should be touched up with a thin coat of paint, reduced with pure turpentine. When these spots are dry, paint over with the first coat.

Blistering is easily recognized and is caused by moisture having come out of the surface under the paint or from priming to cheap ochre. When this condition exists, wire-brush and dust the surface, than wash with turpentine to cut any grease or excess oil which may be present. After this is dry, proceed as directed for first-coat work.

When the paint cracks into large blocks of every conceivable shape (becoming alligatoried, so-called), it is caused by the application of heavy, non-drying undercoats, "fat" paint, the use of adulterated oils or from painting over cheap ochre priming. Boiled linseed oil in the under-coat will also produce this condition. The only treatment is to burn and scrape off the paint down to the bare wood.

Better Butter Prices

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Pioneer Parchment Paper keeps it clean and sweet. Makes butter *worth* more, and *sell* for more. The cost of Parchment Paper is small. The extra profit more than justifies it.

Our free booklet, "Better Butter" is your money-maker. Send for it.



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We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.

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The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 5-6

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

For Sale—Registered Holsteins, Guernseys, Jerseys and Ayrshires, both sexes. Some very choice individuals. Bulls of serviceable age. A number of high grade cows and heifers priced to sell. Call on or write. FARM DEPARTMENT, Bank of Colfax, Colfax, Wis. 6-3

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

See my calves before you pay for them. I offer extra choice high grade Holstein heifer calves at $25.00. Registered bull calves $40.00. C. O. D. Safe delivery and satisfaction guaranteed. J. M. McFARLAND, Watertown, Wis. 7-2

For Sale—Registered Holstein-Friesians. Young cows and heifers bred to freshen in middle winter and fresh cows and heavy springers for $200.00 each. By selling bunch can add some open heifers for $125.00 and $150.00 each to make a heavier load. Some A. R. O. FRANK STAFFEN, Route 3, Howard City, Mich.

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

Holstein bull, Ormsby, 2 years old. Excellent individuality and backing. $250 for quick sale. C. J. WILL, Waukesha, Wis. 7-3

For Sale—15 head, very choice, high-grade, good producing, Holstein cows. Nearly all fresh, a few springers. 1 pure-bred heifer, 1 pure-bred bull; also double unit Empire milking machine nearly new. Going out of business. FRANK DECHANT, Route 6, Waukesha, Wis. 6-3

Three hundred high grade and pure-bred Holsteins of all ages. Write for prices. FRICK & HOESLY, New Glarus, Wis. 2-spl

For Sale—22 high grade Holstein heifers coming two years old in spring. All bred to freshen in spring. These are all from high grade herds and well marked. T. E. MACKESEY, Blue Mounds, Wis.

Registered Holsteins. 13 open heifers 17 to 21 months, sired by 34-lb. bull. 9 over two years from same sire. Would sell few young cows to same purchaser. R. P. CLEMENT, Route 8, Adrian, Mich.

The New Richmond—Star Prairie Agriculture Association offers fifty springing Holstein cows and heifers from tuberculin tested herds. HAROLD M. STEPHENS (Sec'y.), New Richmond, Wis.

For Sale—26 Holstein heifers 2 and 3 years old, to freshen this fall and winter, at $90.00 per head. WILL H. GIBSON, Brodhead, Wis. 8-4

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Choice registered Holstein Bulls, 5 to 10 months old. Sire's 5 nearest dams both sides average 1,007 lbs. butter. H. R. BURGDORFF, Oxford, Wis.

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

For Sale—Advanced Registry Guernsey cow, with bull calf at side, either or both. G. D. FELLOWS, Algoma, Wisconsin. 7-2

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

STOCK FOR SALE

For Sale—One registered Holstein cow due to freshen in October. Perfect individual and a real show cow. Also several choice heifers of various ages. J. M. McFARLAND, Watertown, Wis. 7-2

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

Two registered Guernsey bull calves out of A. R. dams for sale. Fine, typy individuals in every respect. Gov. of Chene and Holden IV breeding. Write for photos and pedigrees. The Glenayre guarantee goes with them. GLENAYRE FARM, Glenview, Ill. 2*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

Yearling Guernsey Bull. A. R. backing. Write for pedigree. H. O. HINKLEY, Route 2, Rockford, Illinois. 6-3

One-year-old May Rose Guernsey bull for sale, Edgar of Linwood, good individual, good color. A grandson of Imp. Clara's Sequel and a 740-lb. cow. Dam a 540-lb. cow, daughter Langwater Frenchman who has 12 A. R. daughters with two class leaders. HOMER RUNDELL, Livingston, Wis.

For Sale—A carload of high grade Guernsey cows made up from the pick of Polk County Guernsey herds. What you want in grades. Polk County Guernsey Breeders' Association, J. H. STEWART, Sec., Clear Lake, Wis. 8*

For Sale—Pure-bred Guernsey bull, one and two-thirds years old, with papers and pedigree. Well marked, guaranteed breeder, good individual. JOS A. TRAXEL, Route 4, Almond, Wis. 8-4

Bargains—Grade Guernsey and Holstein cows and heifers. Dry weather and shortage of feed compels immediate sale. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wis.

For Sale—Twenty head high grade, tuberculin tested Guernsey heifers and young cows, nearly all bred at this time to pure-bred Guernsey bulls. If interested address A. W. BROWN, Rhinelander, Wisconsin. 8-4

A Real Bull—Son of 500-lb. two-year-old, record made in pasture, 10 years ago. She milked 45 lbs. daily at 12 years of age. A show bull. Other well bred bulls for sale, some of serviceable age. FRISSDALE FARM, Hopkins, Minn. 5-4

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Registered Jerseys—One cow, two yearling bulls. Most approved breeding. S. G. BANKS, Eldorado Springs, Mo. 5-4

Jersey high-grade heifer calves $35, highest herd in Testing Association. Sire, First North Dakota, Wisconsin. G. B. NEWCOME, Pewaukee, Wis. 7*

For Sale—Complete dairy equipment; including 44 head of pure-bred registered Jersey cattle. Milk is retailing at 25c per quart. Located near Tulsa, Oklahoma, the best market in the world for dairy products. Will sell any animal, or all of them. Address: J. M. SPRINGER, Box 11, Tulsa, Okla. 7-3

For Sale—Some good quality registered Jersey cows, newly freshened. PARKER DOW, Whitewater, Wisconsin. 8-4

Grade Jersey cows for sale in carlots. Prices reasonable. TRIMBLE BROTHERS, Trimble, Ill. 8-4

STOCK WANTED

Will buy six pure-bred Holstein cows. Must be of large type with good milk flow and butter test. Address JOHN W. MARSHALL, 235 W. Jackson Blvd., Chicago, Ill.

Describe fully your registered and grade Guernsey and Holstein females for sale. Purchaser J. G. DuPUIS, Lemon City, Florida.

Best Bargain registered Guernsey females, heifers preferred. State price, breeding, records, health. MORNINGSIDE FARM, Freeport, Ill.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

SWINE

Hampshires. Registered stock, either sex, all ages. State fair winners. GLEN EYRIE FARM, Delavan, Wis. 7-5

For Sale—Big type Poland Chinas. Three choice spring boars, sired by Big Bob Mastodan. His sire was world's champion. H. T. EVANS, Eau Claire, Michigan. 7-2

Good growthy Chester Whites, either sex. Prices right. E. C. KUNZELMAN, Baraboo, Wisconsin.

For Sale—Eight-week-old pigs. Reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 8-8

HORSES

For Sale—Registered black Percheron mare coming four. Beautiful individual, sound and gentle. CITY LIMITS FARM, Watertown, Wis. 7-2

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Ill. 8-4

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

New Zealand Reds—For food, fur, pleasure or profit. Every family should have a trio at least to reduce the H. C. L. Two to three months old $5.00 pair, $7.00 trio. Add $1.00 pair for each month older. All thoroughbreds. FULLER'S RABBITRY, Fort Atkinson, Wisconsin. 7-4

MACHINERY

20—70 Nichols Shephard Steam tractor threshing engine, perfect order, $2,000. W. H. LUDWIG, Marshfield, Wisconsin. 6-3

For Sale—Empire Milking Machine, two single units, complete pipe line, vacuum tank and pump. Price to quick buyer $200.00. A bargain. Good reason for selling. H. M. SPAHR, Woodsboro, Maryland. 7-3

For Sale Cheap—One Model B La Crosse tractor. One 12-horse-power Sta-Rite Gasoline Engine, with friction clutch pulley and magneto on steel truck. One 1½-horse-power Sta-Rite Gasoline Engine. 54 feet of rubber belting, in good condition. One 5-horse-power. William Galloway engine. STARCH BROTHERS COMPANY, La Crosse, Wisconsin. 7-2

Empire Separator—No. 2B good condition. Price $25.00. MINARD ROTE, Dakota, Ill.

For Sale—De Laval separator No. 17. Cheap. Perfect condition. LEON RICHARDSON, Amelia, Va.

Perfection Milker. One double unit, with pump, tank, gauges, piping all complete for 18 cows. Good condition. A bargain at $210.00 FELIX JULIUS, Stockton, Ill.

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

SEEDS

Wisconsin Pedigree Rye, Rosen Rye, and Pedigree Winter Wheat. Highest yielding strains grown. NOYES RAESSLER, Beloit, Wis. 7-3

Wisconsin grown winter sand vetch. VAN LOON, La Crosse, Wis. 8*

Guaranteed Seeds—High germinating alfalfa $12.00 bu.; red clover, $25.00; sweet clover, $15.00; timothy, 5.00; rye, $2.25; sugar, $17.50 cwt. Bonds accepted. MEIER SEED COMPANY, Russell, Kansas. 7-3

Winter Vetch and Rosen Rye mixed ready for sowing. $5.00 per bushel. BOLLERUD & BOLLERUD, Hollandale, Wisconsin. 8-2

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 7-5

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

MISCELLANEOUS

Poultry & Egg man, Dairy Expert, Creamery Inspector, Cheese Factory Inspector, and Food Inspector. Examinations September 25. For detailed information write the Wisconsin Civil Service Commission, Madison, Wisconsin.

FARMS WANTED

Have party with $5,000 cash and five duplex flats. Another has 2 cottages and $1,500. Another 4 flats and $4,000. Over 30 other buyers. Stock necessary. WALTER MILLER, 320 Brumder Bldg., Milwaukee.

Farm Wanted—Have $15,000 second mortgage to pay down. Two banks for reference. ELLIS WADE, Waterville, Iowa. 8-3

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

DAIRY FOR RENT

For Rent—Three hundred-acre dairy farm with two brick silos and large buildings near Burlington, Wisconsin. Only a worthy, capable dairyman is wanted on share proposition. Farm is good and has never been rented. H. W. AYERS, Box 72, Honey Creek, Wisconsin. 6-4

PARTNER WANTED

Dairy Partner Wanted—1,000 acres good land, 3 miles from town, pike road. Will sell third to half interest to good man for $5,000 to $10,000. You manage dairy, I run farm. A. R. WILD, Fort Deposit, Alabama. 7-3

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

Free Wisconsin bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wis. 22-13

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

A Dairy Farm of Real Value—An exceptionally productive dairy farm of four hundred thirty-eight (438) acres, located one mile from Chautauqua, N. Y., known the world over as a summer resort and educational center, is offered for sale at $100 per acre, if sold by November 1st. The farm has never been leased, is carrying at present 97 head of pure-bred Holstein-Friesian animals, is beautifully watered, well located and exceptionally fertile. As a matter of good faith, the owner will pay one-half of the railroad fare of anyone from any place, who upon investigation fails to find that this farm has the local reputation of being at least one of the most fertile productive farms in the section. The owner is a manufacturer in Detroit. He has owned the place nearly twenty years. His reason for selling is to transfer his stock operations from New York to Michigan. Terms can be arranged and a discount will be given for cash. The property is free from all kinds of incumberances. Arrangements can be made to buy a portion of the stock. G. E. WILDER, Gemmer Manufacturing Company, Detroit, Michigan. 5-4

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Administrator's Sale—Fine farm of 275 acres for sale to close estate. Located just five miles from Barre, Vermont, the Granite Center of the world. An excellent market. Good roads, good buildings lighted by electricity, two telephones, house steam heated, hard wood floors, barns in excellent condition and painted, stable room for sixty head; milking machine operated by electricity; tillage land in best of condition and operated by tractors. Good pastures, well fenced; sugar place of 1,300 trees. $9,000.00 worth of hard and soft wood, timber and pulp wood. Never failing water at house and barn. Address: MRS. I. W. BATES, East Barre, Vt., or MR. E. R. DAVIS, Administrator, Barre, Vt. 7-2

400-acre grain and dairy farm, one-half pasture, remainder cultivation, large shade, orchard, big improvements, rich dairy proposition, write for full particulars. THE MANSFIELD LAND & LOAN CO., Ottawa, Kans. 7-2

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

130 acres level, black clay loam, 2½ miles from county seat, gravel road, large 9-room house, 30x60 gambrel and 54x62 gambrel roof barns, granary, tool shed, and all the necessary outbuildings, all buildings painted and in good condition. Good orchard, good fences, well drained, 100 acres under cultivation, 30 acres pasture and timber. This farm is in a high state cultivation and is in every way a No. 1 farm. Price $135 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 16-spl

Notice to prospective Purchasers of land in Noxubee County, Mississippi, and adjoining counties in Alabama. I offer my services to prospective purchasers of lands in Noxubee, and adjoining counties. I know these lands and will give my best judgment as to real values of same and their adaptability for the use for which they are to be purchased. My terms are reasonable, and will be given on application. If employed by you I shall represent your interest. As to my honesty and ability I refer to either bank in Macon, Miss., or any county officer of Noxubee County. J. R. SPARKMAN, Cooksville, Mississippi. 7-2

Farms in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (Not Inc.) Medford, Wis. 7-4

Are you looking for good farm land? We are offering real bargains in Aitkin County, "The County of Land Opportunity". This big railroad wants new settlers and for that reason can offer you a real bargain in a farm for a small down payment and on easy terms. Write today and we will send you free information on how to get one of these farms. L. B. ARNOLD, Land Agent, Rock Island Railroad, 154 Wolvin Bldg., Duluth, Minn. 7-4

For Sale—240 acres of the best land in Wisconsin. All level plow land, black soil with clay subsoil, every foot corn land. In Southwestern Wisconsin. 25 years time at 5 per cent. Address BOX 341, care Hoard's Dairyman. 7-2

Alfalfa farm for sale of 100 acres on good road 2 miles east of the beautiful village of Cazenovia, N. Y. 20 miles from Syracuse on good road. 12-room house with light, also 8-room house, new outbuildings in A-1 condition, plenty of good water and shade. Will sell with or without stock, tools and crops. Reason for selling is ill health. Possession any time. R. D. LEE, Cazenovia, N. Y. 8-2

High Class Virginia Bluegrass stock, grain and dairy farms. Near Washington and best markets. Mild climate. Write for free booklet. CAVINESS REALTY CO., Leesburg, Virginia. 8-5

100 acres—6 miles from town, good roads, good 10-room house, good 50x60 barn, two smaller barns, outbuildings, black clay loam tiled, 76 acres under cultivation, 20 acres saw timber, balance pasture. Without help, must sell. $125 per acre. MICHIGAN FARM AGENCY, Box 928, East Lansing, Mich. 24-spl

$2,000 cash secures equipped 361-acre farm. Alfalfa soil; near town, big buildings; real money-maker; machine-worked fields cut upwards 100 tons hay including alfalfa; 50-cow spring-watered pasture, several thousands cords wood, 300,000 ft. timber; 50 apple trees, 300 sugar maples; 2-story 9-room house, running spring water, magnificent shade; 77-ft. cement basement barn, silo, running water; 5-room brick house, 3 other barns; borders pretty lake; quick buyer gets pair young mules, machinery, hay and grain; everything $5,900, only $2,000 cash, balance easy terms. Details page 33 Strout's Big Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

240 acres, mostly alfalfa, plenty of water, buildings in good repair, a bargain if taken at once. Possession to suit the buyer. Want to sell direct and save middleman's profit. Do not write, but come. I mean business. R. D. LEE, Cazenovia, N. Y. 8-2

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

For Sale—One-fifth interest in a large farm land company to a working manager who has $10,000 to $20,000 to invest. Good buildings, located on beautiful lake, in northern Wisconsin, two miles from town. Have federal accredited registered Holstein herd, registered Duroc hogs. No agents. Will make price interesting to the right man. Give references and experience. Address BOX 352, care Hoard's Dairyman.

100-acre alfalfa farm 3 miles from Cazenovia village. Seven miles from state school, buildings in good repair, plenty of running water. R. D. LEE, Cazenovia, N. Y. 8-2

FARMS FOR SALE

For sale by owner in "The College County", cash or contract; fully equipped 200-acre dairy farm divisible into two good homes; within 15 minutes of State Normal College, 30 of University of Michigan, 60 of Detroit, 90 of Toledo, on good roads; with or without equipment and herd, registered Holstein cattle in government accredited list. WILLIAM B. HATCH, Ypsilanti, Michigan.

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

For Sale—472 acres of fine farming land. Near Chicago. Nicely improved with nine-room house, large barns, cement silo, cattle sheds, hog houses and other buildings. 1¼ miles to depot. All tillable land, well fenced, lots of fine blue grass, large acreage in timothy, good oats and wheat just threshed. Corn looking good. Land can not be duplicated in the state for the price. $145.00 per acre and you will be surprised to know how little money down it will take to handle this farm as I am ready to quit farming and don't need the money and can carry you at 5½ per cent interest. Address BOX 355, care Hoard's Dairyman.

For Sale—160 acres, 30 head cattle, tools, $15,000. E. S. RANSOM, Jericho, Vermont.

New York Farm Agency, Westfield, New York, specializes dairy stock farms. Westerners buying fast. Best bargains on earth. 8-spf

FARMS FOR SALE

For Sale—1,240-acre farm near Chicago in high state of cultivation; four sets of improvements. Cost over $50,000; large dairy barn for 100 head of cattle, modern equipments; water to all buildings. Electric lights to all buildings. Four houses, large cattle barn for 300 head, two silos 16x66, three horse barns, six large cribs, two large granaries for oats, wheat, rye, etc. One double hog house 24x120, ten individual hog houses, machine sheds and numerous other out buildings. Farm all level and well fenced into 40- and 80-acre fields. No better equipped farm in this country. Gravel road entirely around the place. Just threshed 21,000 bushels of oats, 1,964 bushels of wheat, 1,400 bushels of rye, and 900 bushels barley. Cut 150 tons fine hay. 215 acres in corn looks fine. No encumbrance on the farm. One mile from depot. Will sell the farm for $147.50 per acre on favorable terms. Can give possession by December first. Address BOX 354, care Hoard's Dairyman.

Dairy Farm. 189 acres partly in town of Spring Grove, McHenry County, Illinois, 60 miles from Chicago. Buildings half mile from P. O. Good 9-room house, barn for thirty head cows, ten head horses. Silo, new hog house. Electricity available if desired. $175 acre, half cash, balance 5 years 5½ per cent. H. B. COLBURN, Burns, Wyoming. 8-2

110 acres $5,000. With 15 cows, pair horses, five 2-year-old heifers, poultry, all farming implements to continue successful farming; all crops; good seven-room house, basement barn 60x100 ft., worth $5,000 to build today; granary, hen house, etc. Owner who is all alone, will take $5,000 for quick sale; only $2,000 required. D. B. BAXTER, 28 Isbell St., Binghampton, N. Y.



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Testers Wanted—Experienced men for cow testing association work. Can pay as high as $125 per month and expenses. Write C. S. RHODE, University of Illinois, Urbana, Illinois. 8*

Wanted—A farm manager, first class, thoroughly experienced man. None other need apply. State experience, references and salary expected. Address BOX 289, care Hoard's Dairyman. 8*

Wanted—Married man to bottle milk, separate, clarify, etc., and assist in taking charge of most up-to-date dairy in Florida. Must know how to make A. R. O. records, understand feeding, and experienced in raising calves. Beautiful bungalow partly furnished, hardwood floors, hot, cold running water, electric light, tiled bath and toilets. Must not be over 45 years of age. Preference given to couple with grown son who can milk. Salary $100 month, and yearly bonus. Railroad fare, one way. Must give references. ORANGEHURST FARMS, Orlando, Fla. 5-4

Wanted—Dry hand milker for registered Jersey herd. State salary expected and experience first letter. REYNOLDA FARMS, Reynolda, N. C. 6-3

Wanted—At once, several maids at Wisconsin School for the Blind, Janesville, Wis. J. T. HOOPER, Sup't. 6-3

Wanted—Testers for Cow Testing Associations in Iowa. $75.00 a month with board, room and transportation furnished. Desire men with dairy farm experience. Special training given for this work at Iowa State College. Apply to C. L. BLACKMAN, Extension Department, Ames, Iowa. 6-3

Young single man as assistant herdsman. Registered Guernseys doing A. R. work. Modern improvements. Close to good city. Steady work. Give all particulars in first letter. E. S. PERSON, Minot, N. D. 6-4

Carpenter and General Farm Mechanic, wanted—Rock River Farms has a place for a steady man, married or single, who can do satisfactory work in the following lines or as many of them as possible. Plain carpentry and painting, steam boilers and plumbing, electric motors and wiring, farm machinery, repairing, including tractors and autos. State qualifications, wages expected, and furnish references in first letter. H. W. ALLYN, Byron, Ill. 6-4

Wanted—A man, experienced in making A. R. O. records, to take charge of our testing cows. UNION COLLEGE, College View, Nebr. 7-3

Wanted—Experienced milker for test cows, Holsteins. Will pay $100 per month and $180 bonus at end of one year for single man to milk eight cows four times a day and care for same. BURR FARM, Route 2, Los Angeles, Calif. 7-2

Wanted—Competent, reliable married man to take charge small Holstein herd. Experienced in A. R. O. work and raising pure-bred calves. A good home and good wages. State experience. H. E. DICKINSON, Oconomowoc, Wis. 7-2

Wanted—A capable married man to work on farm. Must be a good milker. Wife willing to board two extra men. Good wages. KAYEWOOD HERD, E. J. KELLEY, Manager, Walworth, Wis. 7-2

Wanted—Herdsman, married or single, for herd 100 registered Holsteins, one who can get results from cows and help. Give references and wages expected. Address BOX 346, care Hoard's Dairyman. 7-2

Want to Hire Married Man for farm and dairy work on large Guernsey farm. Start September. New house, some furniture, garden, milk, some potatoes and fuel. State wages and experience. Personal application preferred. HOMER RUNDELL, Livingston, Wisconsin. 6-spf

Wanted—Man and wife at forty-acre country home on Lake St. Croix, Wisconsin. Man to do farm work; woman to do house work. Year round job; owner's family not there in winter; must have good references; no children. H. A. BLODGETT, Brown, Blodgett & Sperry Company, University & Wheeler Aves., St. Paul, Minn.

Wanted at once—One clean, good worker for general farm man on four hundred-acre Holstein farm. Fifty dollars, board, room, washing. Give references and wages expected in first letter. STEVENS STOCK FARM, Sycamore, Ill.

Wanted—A working herdsman. State wages and particulars in first letter. W. H. TAGGART & SONS, Manawa, Wisconsin.

Wanted—Practical working dairyman, who knows how. Good opportunity. State wages wanted, references, nationality, and number in family. Ten to twenty Guernsey cows. C. A. CARLISLE—PERKINS CORP., Mishawaka, Indiana.

First class, experienced, reliable, Protestant, married man for manager of Wisconsin farm. All modern conveniences. House comfortable and convenient. Good wages for right man. Apply with references to 503 McCORMICK BLDG., Chicago. 8-4

Wanted—Test milkers for large herd. $80.00 a month and chance for advancement. GOSSARD BREEDING ESTATES, Martinsville, Ind.

Wanted November 1st—Experienced married man as working foreman on a dairy farm of 200 acres in northern Illinois. Must understand general farming, feeding for milk production and raising calves. Good house, fire-wood and garden furnished. State age, experience, addresses of former employers and wages expected first letter. Address BOX 359, care Hoard's Dairyman.

Wanted—Two efficient, practical and first class men workers. One for poultry and one for the farm. If interested, address W. IRVING HEWITT, M. D., Olean, N. Y.

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 8-4

HELP WANTED

Wanted—Single man for general farm work. Good place to work. State wages and experience. Address BOX 356, care Hoard's Dairyman. 8*

Wanted—Man for general dairy work. Please state age, nationality, experience, and wages first letter. S. J. BURGESS, Helena, Montana. 8-2

Wanted—Single man for general farm and dairy work. Pure-bred and grade Holsteins. An opportunity for young man wanting to learn to feed for records. State wages expected. Address Route 1, BOX 55, Lake Geneva, Wis.

Wanted—A young married man with some dairy experience, also knowledge of other stock and general farming on an improved road, good house and good equipment. Good opportunity for a young man wanting to get a start. Address BOX 353, care Hoard's Dairyman. 8-3

Wanted—Married herdsman for semi work. State records you have made in first letter. W. B. BARNEY & SONS, Chapin, Iowa. 8-4

POSITIONS WANTED

Expert farm manager, open for position October 1, who will put your farm on a paying basis. University training, wide, successful experience. Only a big proposition considered. Write BOX 344, care Hoard's Dairyman. 7-2

Wanted—Position as farm manager where big results are expected. Wide experience, University education. F. B. HYATT, 27 N. Butler, Madison, Wis. 7-3

Wanted—Position as manager of large dairy. Thoroughly experienced in general farming, stock raising. Advanced Registry work and general care and feeding of pure-bred cattle. Agricultural college graduate. 31 years of age. Life experience in farm work. Married. Address BOX 347, care Hoard's Dairyman. 7-2

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work, Salary, $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spf

Selling my farm. Have very good farm manager with his own help. They are at present operating 240-acre farm with 35 head of Holsteins. This man understands care of cattle, horses, machinery and crop production, and gets the work done on time. Would like share proposition. Write O. BECKWITH, Fridley, Minn, or myself at 2730 Lyndale So., Minneapolis, Minn. H. C. JOHNSON.

Wanted—Position by a working manager, a No. 1 dairy farmer in every way. Twenty years practical experience. Hollander, married, 36 years old. Will go anywhere. Address H. DOUWENGA, Route 1, Lenexa, Kansas.

Dairy farm manager or herdsman, open for position Oct. 1st. American, age 29, small family. Farm reared, graduate Agricultural College, six years experience. Experienced in official records, calf raising, dairy sanitation, mechanical milking, farm bookkeeping, etc. Protestant, no tobacco nor alcohol. Consider salary percentage or partnership. References. Route 5, BOX 168, Independence, Mo.

Farm manager and dairyman open for position Oct. 15 or later. Farming given preference to dairy. Not a college trained farmer or dairyman, but 18 years practical work. Age 35. Eastern states or southern preferred. Address BOX 350, care Hoard's Dairyman.

Working manager. Wants to run dairy farm with grade cattle, starting about Sept. 15th or Oct. 1st. Must clear no less than $125 per month. Want complete charge. Am single, have the experience, ability and necessary reference. Age 32. Address BOX 357, care Hoard's Dairyman.

Herdsman, dairyman, American, single, scientific training, life experience, milking machines, best habits, and references. Give particulars including salary. Address BOX No. 348, care of Hoard's Dairyman.

Position wanted by experienced dairyman. Scotchman. Graduate of University of Wisconsin two-year course. Prefer the west. Address BOX No. 349, care Hoard's Dairyman.

Farmer, 42, experienced, successful, two years dairy investigation with M. A. C. Sold my farm and desire position as dairy farm manager, $3,000. RAY BAKER, Camden, Mich.

Wanted—Position in modern dairy. American, single, experienced milker. State wages. Address BOX No. 351, care Hoard's Dairyman.

Herdsman wants position. American, single, 24 years old. Experienced in all branches A. R. O. work, certified milk, show ring and calf feeding. Will go anywhere. State wages. Address BOX 358, care Hoard's Dairyman.

Wanted—Position on dairy farm, barn work and care of stock. Can commence November 1st. Address BOX 362, care Hoard's Dairyman.

Correspondence invited with parties wishing a practical manager and herdsman combined. Will run upon shares from next spring. Agricultural college training. Swede, married, best references. Address BOX 361, care Hoard's Dairyman.

Wanted—A position as herdsman or at general farming. Am a Swiss. Have been in America 33 years. Reference. ALBERT HANNY, care Crosby Farm, Route 1, Rhinelander, Wis.

Two young men, Hollanders, single, want positions on dairy farm to work in cow barn or field. Good milkers. State wages in first letter. Address BOX 360, care Hoard's Dairyman.

Farm Manager with wide experience in dairy farming. College graduate with initiative and supervisory ability. Highest references. Address GEO. ARNOLD, Guelph, Ontario.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

The Cow Race at the Missouri State Fair

The rain and mud spoiled the horse races and auto races, but it did not interfere with the cow race. It took place in a big tent between the dairy barns. No, they were not hitched to sulkies as some had thought, but they were milked three and four times a day for butterfat production. This race attracted almost as much interest as a horse race, as great crowds streamed through the tent daily and watched the bulletin board where the daily production and rank were posted. This race was conceived and promoted by E. G. Bennett, State Dairy Commissioner. He induced the creameries and some of the agricultural papers of the state to put up $500 for each of the two breeds, Jerseys and Holsteins. This was increased by $500 each by means of entry fees.

First place was won in the Holstein breed by Pettis County Holstein Company, Missouri, and in the Jersey breed by Longview Farm, Missouri. Neither breed made any very high records owing to the abnormal conditions under which the cows were kept. The crowds going through all the time would not let the cows rest and a part of the time it was very hot.

While this was not a breed contest it aroused a great deal of interest among the lovers of each breed. The highest butterfat record was made by a Jersey, but it was only .68 of a pound higher than that made by a Holstein. In the 2d, 3d, 4th, 5th, 7th, and 9th places the Holsteins exceeded the Jerseys. The nine high Holsteins produced 4% more butterfat and 46% more milk than a like number of Jerseys. The contest was conducted under the rules of the two national associations, and supervised by the Missouri Agricultural College.

C. N. LONG, County Agent.

Bulletins of the Week

Crop Rotations to Starve the Chinch Bugs, by W. P. Flint and W. L. Burlison. Extension Circular 39, Illinois College of Agriculture, Urbana, Ill.

Forage Poisoning, by Robert Graham. Extension Circular 38, Illinois College of Agriculture, Urbana, Ill.

Sheep Scab, by Marion Imes. Farmers' Bulletin 713, U. S. Dept. of Agr., Washington, D. C.

A Classification of Ledger Accounts for Creameries, by Geo. O. Knapp and B. B. Mason. Bulletin 865, U. S. Dept. of Agr., Washington, D. C.

Sweet Clover Seed, by H. S. Coe and J. N. Martin. Bulletin 844, U. S. Dept. of Agr., Washington, D. C.

The Use of Fermented Milk and Milk Diets to Control Intestinal Putrefaction, by R. C. Fisher. Bulletin 104, Storrs Experiment Station, Storrs, Conn.

The Occurrence of Red Calves in Black Breeds of Cattle, by L. J. Cole and Sarah V. H. Jones. Bulletin 313, Wisconsin Experiment Station, Madison, Wis.

Effects of High Protein and High Energy Rations in Feeding Dairy Cows, by W. B. Ellett and C. W. Holdaway. Technical Bulletin 20. Virginia Experiment Station, Blacksburg, Va.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

Dairy For Sale

A one-half interest in the only dairy in town of 2700 people. Modern barn and a new house. Poor health and lack of help reason for selling. An unlimited market at good prices.

ORVILLE LEE & SON, SAC CITY, IOWA.

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois.

REGISTERED DUROC-JERSEYS

We are offering **For Sale** until **October 1st,** Spring **Duroc Gilts** and **Boars,** a number of Fall gilts and a number of brood sows including sows from **King Orion** and boars and gilts from **Crimson Orion Cherry King 2nd.** No better **Duroc** blood to be obtained. We will book orders now for pigs that will be farrowed in August. Satisfaction guaranteed on our **Durocs.**

EDGEWATER STOCK FARM, Ft. Atkinson, Wis.



Green Valley Cherry King 2nd No. 260435n.

Why Take Chances?

when you can see our DUROCS on your own farm before you pay. Everything in the Duroc line. Write for Catalog and price-list.

We deliver the Hogs before you pay.

GREEN VALLEY STOCK FARM

BOX 6. LOUISVILLE, ILLINOIS

Duroc-Jerseys Are Prolific and Profitable



They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Durco-Jerseys.

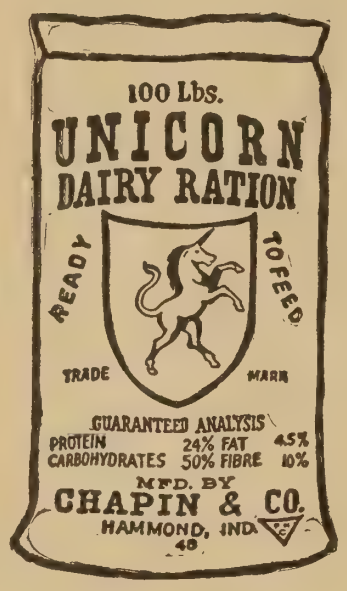
WRITE FOR BOOKLET—"DUROC-JERSEY HOGS ARE PROFITABLE"

published and mailed free by the largest swine record association in the world (over 10,000 members) for the benefit of hog raisers everywhere.

THE NATIONAL DUROC-JERSEY RECORD ASSOCIATION

Dept. 300—PEORIA, ILLINOIS

Honor and Profit for Mr. Dayett



We have said that a large number of leaders in cow testing associations are Unicorn users.

J. Irvin Dayett is one of these. He is a member of the Diamond State Cow Testing Association of Delaware.

For the year ending August 1, 1920, his herd stood first in average yield of both milk and fat for less than ten cows:

Milk . . . . . 12,271.0 lbs.
Fat . . . . . 416.4 lbs.
Average profit per cow, $186.63

His herd contained the champion producers of both milk and fat:

	Milk	Fat
Cow No. 7 . .	15,101	488.2
Cow No. 9 . .	13,691	519.1

Mr. Dayett feeds Unicorn and gives it much credit for his success. Credit is equally due to his good cows and to his skill in feeding.

From the annual report of the Association we copy the following:

"The question of whether or not it pays to feed cows heavily when the price of grain is so high has been answered through this year's work. In every case where heavy feeding has been practiced a good profit has resulted"

It pays to feed Unicorn to your cows.

CHAPIN & COMPANY, Chicago

"BetterSires—BetterStock"

We will award a money prize of $1,000 to the county that first eliminates its inferior sires.

This prize will be awarded under rules provided by the Bureau of Animal Industry, United States Department of Agriculture.

Detailed information on request.



45 Years on the Line

Come to Headquarters for

Cotton Seed Meal

OWL Brand *DOVE Brand* *JAY Brand*

F. W. Brode & Co.

Established 1875
Incorporated 1915
MEMPHIS, TENN.

Our Brand on the Tag Means Quality in the Bag.

U. S. Chamber of Commerce

(Continued from page 285)

struction projects. Few things, in the present situation, could do more than general building and construction to give stability to conditions, employment to labor, and cause a widespread demand for commodities in every branch of business. The needs of new housing and new construction are too obvious to need comment. But it is equally obvious that only the most imperatively necessary construction can and will proceed under the present costs, present difficulties, and present uncertainties.

"The automobile industry gives indications of approaching the peak of production for the present. This may release material for other steel and glass industries which greatly need those commodities. Any complete point of "saturation" in automobiles does not seem imminent; rather, in a moderate way, a readjustment which has long been looked for. Not only will there be a demand for replacement but also for new purchases, for we are fast realizing that automobiles are a necessary and inalienable factor in modern civilization. Any talk about their being luxuries and unessentials is rather unknowing and foolish. There was once the same talk about telephones and the telegraph. Outside the definite part which automobiles play in business, and which steadily grows in importance, they have done more to broaden the understanding and the mental horizon of their users than any invention within a generation. In especial they have been a boon, beyond comparison, to the dweller on the countryside—on the farm and in the small town. Of a one popular sport, that of bicycles, now relegated altogether to strictly useful purposes, it is interesting to learn that the annual output is much in excess of the days when they were a passing craze.

"Among the things of cheer is the promise of good harvests in those sections of the Northwest, practically all of Montana, western North Dakota, western South Dakota, and northern Wyoming, which have been sorely distressed by crop failures for from two to three years past. With the completion of the harvest there will come a change in conditions in the volume of business in nearly all these sections.

"It is a great season for watermelons, with shipments close upon 30,000 cars before the season is ended. They come northward about 1,000 cars daily, not only from the southern states but even from far away California. Georgia leads with nearly 10,000 car loads, with South Carolina and Florida each approximating about 4,000 cars."

Advice to the Tester

HOARD'S DAIRYMAN:—Having enjoyed reading several articles by different cow testers of their experiences and impressions, an article by a member of a cow testing association may be interesting and perhaps profitable reading for some of the large number of young men who are now or soon will be engaged in this work.

Speaking for myself, I must say I joined the association reluctantly. The cost seemed out of proportion to anything I expected to get in return and the extra work it would cause my wife made me hesitate a long time before giving my consent to become a member. The credit belongs to our assistant farm advisor who did not give up when I refused to join at his first invitation, but kept after me till I consented to give the tester a trial.

The tester arrived one hot afternoon when we were hauling in hay. As soon as he was introduced by my neighbor, who brought him over, he asked what he could do to help me. This surprised me that he should be so anxious to assist, and yet it made me like him right away. So I gave him the trip rope and he pulled the fork out of the barn. After unloading he asked where he could change to his overalls so he might go to the field with us. He did go to the field and helped put on the next load of hay. After unloading the hay we started our chores. Here he was just as anxious to work even wanting to help milk.

In the house he was just as willing to help as he was outside. He didn't wish to cause any extra work and kept telling my wife to "Let me help you", "Don't make coffee for me", etc. Such an attitude takes all the strain off the women and makes them glad to do for such a person.

If I were a cow tester I would pay some attention to the children. In my early experience as a teacher I learned that the way to a mother's heart is by way of her children. And since founding a home of my own I know that the stranger who comes to our house and eats at our table absolutely ignoring the presence of our children is an unwelcome visitor whose return is not desired by the children's mother. Here again our tester scored, for he talked and played with the little folks. If the children are glad to see the tester come back he can be mighty sure the children's mother will do her part towards making his stay a comfortable and pleasant one.

Then our tester took great pains in making the tests so as to give every cow all the credit she deserved. A man wishes his pure-bred cows to make a good showing in the record book. Also he put the records in with ink and made a neat job of that part of his work. Afterwards he showed me the figures and explained everything to me.

We will not always need the tester to pitch hay or help with silo filling, but when we are engaged in that kind of work one appreciates the kind of man who is willing to lend a hand. And often the tester will be our guest to be taken to an entertainment in the evening, or spend part of a day hunting or fishing; in fact, we will try to give him pleasant memories of good times spent at our home.

Illinois. ZENAS SPICER.

Don't Keep and Feed a Barren Cow

But Make Her Breed By Using

Hood Farm Breeding Powder

A MARVELLOUS PREPARATION

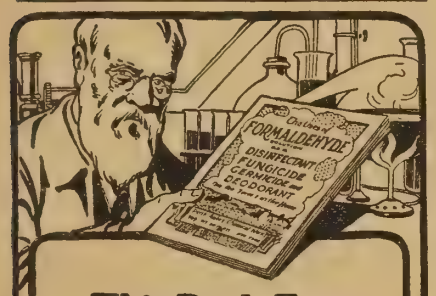
It restores the reproductive functions.
It corrects the irregularity of cows and heifers that do not come in season.
It removes the irritation and restores the organs to normal condition in cows that are constantly in season.
It is antiseptic, soothing and healing.
It does NOT harm a cow or heifer.
It does NOT cause straining.
It is easily administered.

AND ECONOMICAL

Order today, mentioning this paper.

Prices prepaid, $1.15, $2.75, and $5. Flexible Injection Tube, by mail, 90c., with a $5 order, 75c.

C. I. HOOD CO., Lowell, Mass.



This Book Free

Every farmer and his wife should read our big illustrated hand-book and learn how to scientifically treat seeds with the best and most economical disinfectant—

FORMALDEHYDE
The Farmer's Friend

Positively rids seed grain of smuts, potatoes of scab and black-leg; destroys disease germs in drains, stables, kennels, chicken houses, etc., kills flies. Endorsed by the U. S. Dep't of Agriculture for treating all seed grain. One pint bottle of *Formaldehyde* from our laboratory will treat 40 bushels of seed. Write for Book—just issued—free.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK

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Farm Land at $15 to $30 an Acre

—land equal to that which through many years has yielded from **20 to 45 bushels of wheat to the acre**—grazing land convenient to good grain farms at proportionately low prices. These lands have every rural convenience; good schools, churches, roads, telephones, etc., close to live towns and good markets.

If you want to get back to the farm, or to farm on a larger scale than is possible under your present conditions, **investigate what Western Canada has to offer you.**

For illustrated literature with maps and particulars regarding reduced railway rates, location of land, etc., apply to Department of Immigration, Ottawa, Canada, or

George A. Hall
123 Second St., Milwaukee, Wis.
Canadian Government Agent.



Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
KansasCity, Mo. Chattanooga, Tenn.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Urinary Difficulty

What should I do for a valuable mule about 10 years old which has lately shown a growing tendency to strain in urinating, and stop several times, and attempt to pass water, before finally doing so. Her urine is sometimes very light and watery in color; at other times, is very cloudy and thick looking. She also has a slight cough, especially at night; otherwise she is in good health and condition. Her urinary trouble seems to be aggravated by hard pulling, such for instance as breaking new land, which I have been doing lately.

Folkstan, Ga. C. J. C

It is probable that the bladder is partially blocked with a stone or collection of gravel or limy substance. It would not be a very difficult matter for a trained veterinarian to remove these substances by operation. He can readily determine their presence by a rectal and vaginal examination. Meanwhile dissolve a dram of boric acid in the drinking water each evening and if necessary, increase to two doses a day.

Lame Cow

I have a good cow that about a week ago went dry. I kept milking her night and morning and now she has come back to her milk about one-half. Had a good appetite all the time but seems to be sore in stomach close to the bag. What was the trouble with her? She has been on permanent meadow pasture. She has also been lame in one hind foot for some time.

Libertytown, Md. E. L. B.

Shrinkage in milk secretion commonly occurs when a cow is sick or in pain and might readily occur under the conditions described. It is quite likely that she is tuberculous and to determine that you should have a qualified veterinarian test her with tuberculin by the intradermal or ophthalmic method. Scrub affected parts of skin, clean, and when dry apply once a week a solution of 4 ounces of sulphate of copper (bluestone) and 1 pint of hot water. Feed laxative rations, including wheat bran and flaxseed meal

Blind Quarters

I have a heifer just fresh, second calf, and is dry in three quarters. There is a very small bunch about half way up in the teat. The veterinarian here says she is ruined for milk. He advised me to dry up the other quarter and fit her for the butcher. He says he could open the teats, but they would not stay open and she may get blood poison from the operation. What causes the teats to close up and is there no cure?

Waupeton, Ia. L. F. B.

We thoroughly agree with the veterinarian that it would be best to fit this heifer for the butcher. As often stated here, unnoticed mammitis (garget) from sucking of the teats by other calves when young is the common cause of this condition; but it is also possible for warty or fibroid growths to form and block the ducts. The exact cause of the latter condition is unknown. It is certain, however, that calves should not be allowed to suck one another's teats.

Hump-backed Calf

Please let me know if there is anything I could do with a four-month-old calf that is getting humped back. The backbone seems to be bulging more all the time. Calf is in good health otherwise.

Boulder, Ill. F. B. S.

This is an unusual condition and if due to rickets will not be likely to respond to treatment. The only treatment we can suggest would be to thoroughly massage the back and loins two or three times daily, also pressing down upon the backbone. An old fashioned plan is to apply weight to the back, in the form of sand or grain in a sack. We fear, however, that treatment will not be likely to prove satisfactory in such a case.

SUCRENE

DAIRY FEED



COWS fed a correctly balanced ration gave 47% more milk and 39% more butter fat than cows fed the same concentrate and roughage but unbalanced.—Illinois Experiment Station.

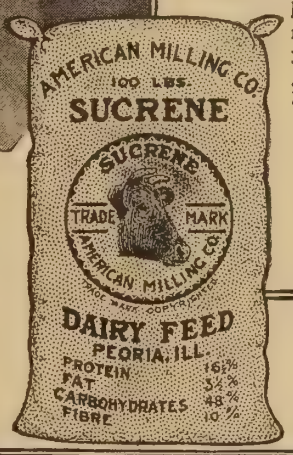
Sucrene Dairy Feed has a record of substantially increasing milk flow when substituted for ordinary rations and fed only with the usual roughage. It is strong in all the milk-making nutrients—exceptionally appetizing, enjoyed by all cows.

"I advise all dairymen, if they want rich milk and a large quantity of it, to use Sucrene Dairy Feed, for as long as it is made as it has been I will use nothing else."—David Finkenbinder, Locust Grove Dairy Farm, Carlisle, Pa.

We also manufacture Empire 20% Dairy Feed and Amco Dairy Feed (25% protein) for extra heavy milkers, or to be fed with silage or other low protein feeds grown on the farm.

Give these feeds a trial for more milk at less feed cost. Place an order with your dealer. If he cannot supply you, write us. The coupon brings you full information.

American Milling Company
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Please send illustrated literature checked:
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☐ Sucrene Poultry Feeds
☐ Amco Fat Maker for Steers
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☐ Empire 20% Dairy Feed
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ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT REGULAR BREEDERS BY



STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A. 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

Ditch Before Winter Rains





Protect your soil and your next year crop profits against injury by excessive water standing on land all winter. Can work land earlier in spring. Add 2 to 3 weeks to growing season. Do farm terracing now. Get

THE Martin Farm Ditcher, Terracer & Road Grader

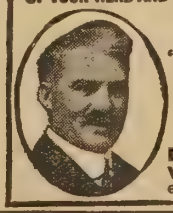
All-steel, adjustable, reversible; no wheels, levers or cogs to get out of fix. Cuts new farm ditches or cleans old ones to 4 feet deep; builds farm terraces, dykes and levees; grades roads. Does the work of 100 men. Every farm needs one. Send your name for Free Book and Special Introductory Offer.

Owensboro Ditcher & Grader Company, Inc.
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10 Days' Free Trial

Stop Losing Calves

Treat Your Herd the Roberts Way
Easy to Apply—Sure Results
Successful for 30 Years
YOU CAN
Stamp Abortion Out OF YOUR HERD AND **Keep It Out**



ASK FOR
"The Cattle Specialist"
Sent free on request. Answers every question pertaining to **Abortion in Cows.** Tells how to treat your own herd at small expense. Write

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If you wish to make yourself independent—study Veterinary Science. Write for particulars.
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America's Pioneer Dog Medicines

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Ten Reasons Why a Farmer Should Use a Silo

1. As the principal business of farming is to make money, the silo, especially on the stock farm, will best accomplish this end.

2. Corn silage is the farmer's cheapest source of digestible carbohydrates. As this is the principal food element required by our domestic animals it certainly is wise to provide it.

3. Summing up all the experiments conducted by some twenty-three different state experiment stations over a period of fifteen years, silage has proven the most economic food for the production of stock and stock products.

4. There are about one-half million silos now in use in the United States, and it is difficult to find a user who is not more than pleased with the results from his silo. Silo salesmen use as a slogan "Ask the man who has a silo".

5. The greatest expense connected with the live stock business is the cost of feeding the animals. The silo will lower this cost and therefore it should be one of the first considerations of the stock keeper.

6. The silo stands ever ready as an insurance against many of the common crop failures, especially such failures as damages from early frost, drought, and hail. Wet seasons often prevent the putting up of a crop of clover or alfalfa; this can be saved in the silo. Whatever is grown in the way of forage can be siloed and preserved for future use.

7. The silo is a labor saving equipment and it saves in storage space. Eight times more feed can be stored in the silo than in the mow. Cattle can be fed quickly and easily from the silo as it is in a condensed form close to the point of feeding and is always in condition for feeding. Many feeding arrangements require the hitching up of a team to a wagon or cart and the hauling of feed from one place to another. A silo properly placed will do away with this.

8. Silage is a succulent, grasslike feed, easily digested, and seems to stimulate digestion. It has much the same effect as grass, giving thrift to the animal; and less sickness is experienced among the stock when good silage is fed. Silage stimulates the milk flow and all milking stock should receive it. Silage is cooling and appetizing and it prevents many of the troubles resulting from the over feeding of concentrates.

9. Experiments and experience have taught that the most profitable feeding is liberal feeding, such as will supply the animal with its requirements. Quick growth is profitable growth, large production is profitable production, and the feeder of silage is more inclined to feed well, which means profitable feeding. The man with the silo is supplied with a large amount of good feed and in emergency it can be carried over for several years and still can be used with good profit.

10. Competition is keen in all lines of industry and the stock keeper with a silo has an advantage over his neighbor without one. In order to compete with the silo keeper, all stock keepers must use silos. World competition in growing stock and producing stock products will require the American farmer to use the best and most economical means. With the silo we need fear no competition from any country of the world. A. L. HAECKER.

MARKETS

CHICAGO, Sept. 2—Butter—Creamery, extras, 54½c; standards, 52¾c; dairy, firsts, 53c; seconds, 43@46c.

Eggs—Ordinary, 44@46c; firsts, 51@52c.
Cheese—Twins, 23½c; Young Americas, 25½c.

MILWAUKEE, Sept. 2—Butter—Creamery, tubs, 54c; prints, 55c; extra firsts, 52@53c; firsts, 50@51c; No. 1 packing stock, 34@35c; No. 2 do. 20@30c.

Eggs—Fresh firsts, recandled for city trade, 49@50c; current receipts, 47@48c; checks, 31@34c; dirties, 35@38c.

Cheese—Twins, 24¾c; Daisies, 26½c; Longhorns, 26c; fancy Brick, 23½c; Limburger, new, 1 lb., 27c; Limburger, new, 2 lbs., 26c.

NEW YORK, Sept. 2—Cheese—Firm; state milk, common to specials, 20@29c; skims, common to specials, 5@17½c.

Butter—Firmer; receipts, 11,042 pounds; creamery, extras, 56@56½c; state dairy, tubs, 46@55½c; imitation creamery, prints, nominal.

Eggs—Firm; receipts, 18,073 pkgs.; nearby white fancy, 73@75c; nearby mixed fancy, 48@68c; fresh firsts, 53@61c.

Public Auction
September 15
120-Acre Farm

Soil, black loam, clay subsoil. Hipped roof barn, nine-room house with furnace, cement silo, milk house, granary, garage, corn crib, cattle shed, machine shed, chicken coops, good fences, good orchard. Personal property: 14 cows, 40 hogs, 20 pure-bred Durocs, farm machinery. Located four miles north and east of Clinton Junction, Wis., on the town line road. Will meet anyone at Hotel Sylvian.

F. F. Rockwell, Route 34, Clinton Jct., Wis.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

WANTED

We are in the market for 8 or 10 well bred, registered Holstein heifers due to freshen this fall and winter. Bred to a good bull.
ELMHURST FARMS, Unity, Wis.

DAIRY CATTLE CONGRESS

International
Belgian Horse Show

INDUSTRIAL EXPOSITION

Bigger, better, more interesting in every phase than ever before! Talk about competition—it will be the real kind this year! And the exhibits of dairy supplies, dairy machinery, labor saving devices, etc., will be wonderfully attractive. High class amusement programs in the large Hippodrome. Come, bring the whole family if possible. Waterloo is easily reached from everywhere.

WATERLOO, IOWA
SEPT. 27 - OCT. 3

Vermont Breeders' Sale
Rutland Fair Grounds, Rutland, Vt.
150 Head—October 1 and 2—150 Head

Strictly a quality sale.
All animals federally tested and sold on a 60-day retest with proper guarantee restrictions.
17 granddaughters of King of the Pontiacs (39037).
25 daughters of Pine Cliff Pietje De Kol Serida (177041). He is one of the greatest show bulls living and ninety per cent of his get are fit for the show ring.
29 daughters of a show bull, whose dam has a year's record of 25,466 lbs. milk, 1,150.33 lbs. butter.
2 daughters of King Segis Pontiac Konigen (97988).
2 daughters of King Segis Pontiac Columbo (105152).
A fourteen months' old son of a 34-lb. three-year-old. His six nearest dams average over 34 lbs. butter.
A 21-lb. five-year-old daughter of a 31-lb. cow who in turn is from a 30-lb. cow.
Large young cows with superior type having good normal A. R. O. records.
Open heifers, just right to take home and breed to your good bull.
Heifer calves six months old, as good as ever were led into a ring.
THE ABOVE ARE A FEW OF THE MANY OFFERINGS.

Don't forget the dates, October 1st and 2d. This is a chance to buy foundation stock of the highest order. Rutland has the best of Hotel accommodations and is on the main line of travel by steam or motor cars.

Auctioneers: Col. B. V. Kelley, Robt. Haeger. Pedigree Expert: S. T. Wood

Catalogs on Request

Managers: Orin A. Thomas, Rutland, Vt., S. J. Lobdell, Wells, Vt.



THE NATIONAL DAIRYMEN'S SALE—Chicago, Oct. 13 and 14
IN CONNECTION WITH NATIONAL DAIRY SHOW

WHERE HALF A HUNDRED OF THE MOST CAPABLE BREEDERS OF THE UNITED STATES AND CANADA CONTEND FOR RECOGNITION AS CONSIGNORS OF THE BEST THE BREED CAN PRODUCE

Each consignor is supposed to bring to the sale the particular animals that in breeding and type best represent the standards of his herd. Is this going to mean the greatest array of highly bred individuals of outstanding quality ever assembled for exhibition and sale purposes?

COME AND SEE!

The National Dairymen's Sale—E. M. Hastings Co., Managers, Pulaski, New York (NOTE CHANGE OF ADDRESS)

American Farm Bureau Federation

In the effort to relieve the congested rail transportation from middle-west farms to eastern ports, the American Farm Bureau Federation has secured a cheaper rate by combination boat and rail shipment to eastern ports than by straight rail for the shipment of grain. A revision of the new rail rate schedule now going into effect makes it cheaper by 2¼ to 3¼ cents a bushel to ship by boat to Buffalo and from there on by rail. Word of this action by the Interstate Commerce Commission was received on the night of August 26.

This new schedule of rail rate increases will promote boat shipment and will relieve thousands of cars shuttling back and forth between Chicago and Buffalo for other service. To middle-west farmers it means the relief of congested rail transportation which has clogged elevators and in some cases stopped threshing rigs for lack of storage capacity, particularly on tenant farms.

Before the increases went into effect the rail rate from Chicago to Buffalo was 3 8-10 cents and from Buffalo to New York, 10 cents, in spite of the fact it is 100 miles shorter haul in the latter. This was brought out before the Interstate Commerce Commission by the American Farm Bureau. The roads were evidently losing money on their service between Chicago and Buffalo and charging exorbitant prices between Buffalo and New York to make up the difference. This made impossible for boat transportation to compete for business. Governor Harding of Iowa appearing for the Farm Bureau stated that sixty per cent of the congestion on eastern shipments is caused between Chicago and Buffalo.

This definite action accomplished by the American Farm Bureau Federation gives a chance for immediate relief of car shortage. Officials of eastern railroads meeting with the Farm Bureau at New York recognized their dependence upon the agricultural industry and their actions indicated they wanted to play square with farmers.—AMERICAN FARM BUREAU.

Jersey Cattle Notes

For week ending Aug. 27: Number of animals registered: bulls, 223; cows, 602; total, 825. Number of transfers recorded: bulls, 222; cows, 776; total 998.

If our own interest is not sufficient to make us be careful, let us think of the interest to others.—WAGNER.

BROWN SWISS



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Aqueduct Bldg., Rochester, N. Y.

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.

Pure-bred Brown Swiss

cattle for sale, consisting of

5 cows, 4 years old. 3 yearling heifers.
1 1-month-old heifer. 2 6-months-old bulls.
1 9-month-old bull. 1 1-year-old bull.

Will sell reasonable at a quick sale.

GEO. SCHUNK, R. R. 1, STANLEY, WIS.

Brown Swiss

Three young bulls, two cows and one two-year-old heifer, all pure-breds. A bargain.

Banker-Farmer Exchange
1822 Chadbourne Ave., Madison, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

JERSEYS

State Fair of Louisiana

—AND—

National Jersey Cattle Show

SHREVEPORT

October 28 to November 7, Inc.

The first **National Jersey Cattle Show** on record will be held in conjunction with the **State Fair of Louisiana.** On exhibits entered in this Show premiums totaling $6,000 are offered.

Increased Premiums on Live Stock and all other Exhibits.

Daily auction sales of Cattle and Swine.

Plenty of fun for everybody.

Reduced Railroad Rates to the Fair

FOR CATALOG WRITE

W. R. Hirsh, Secretary
Box 1100 Shreveport, La.

"It's Your Fair—So Be There."

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT. TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th o: Hood Farm. Dam, Mona's Jacoba, record 806 lbs. buttert Granddaughter Jacoba Irene, young stock; St. Lamberf breeding for sale. R. C. Green & Son, Albion, Wis.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON. - Edgerton, Wisconsin

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Cedar Crest Farms

JERSEYS

We have a few young cows and heifers for sale. Write for particulars.

J. K. Dering, Lake Villa, Ill.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.
Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.
Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.
Price, $150 f. o. b. cars our station.

Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY. BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

MERIDALE JERSEYS

ANNUAL SALE

September 17, 1920

We Shall Sell:

A Gold Medal Daughter of The Jap.
A Two-Year-Old Son of The Jap.
Daughters of Ten Register of Merit Bulls
A Long List of Register of Merit Cows—some with records close to the 1000-lb. mark.
An Imported Son of Sybil's Gamboge out of a Prize Winning Daughter of The Jap.
A Handsome String of Daughters of The Cid—a Prize Winning Grandson of The Jap.

This is Your Opportunity—for the cattle go at Buyer's Prices

FOR CATALOGUE ADDRESS

TOM DEMPSEY
SALE MANAGER
WESTERVILLE, OHIO

OR

AYER & McKINNEY
MERIDALE FARMS
MERIDALE, NEW YORK



"FOR SALE—TWO YOUNG BULLS"

They will be shown at the Wisconsin State Fair. Sired by Trial's Noble of Oakland 129364 and Eminent Rosette's Lad 149228. From R. of M. dams. If in need of a good bull, don't overlook this chance.

W. M. KNIGHT, OAK GROVE JERSEY FARM, Eagle, Waukesha Co., Wisconsin.

SECOND

Wisconsin State Sale

— OF —

Guernseys

October 13th, 1920

MADISON, WIS.

For catalogs write James H. Murphy, Delavan, Wis.

See later issues for more complete information.

Another of His Good Sons for Sale

Disturber of Prospect is a splendid individual, very well grown and ready for light service this fall.



Anton's King Confidence 43517

His dam, Sally of Prospect, made 313.48 lbs. fat as a 2-year-old on twice a day milking and ordinary herd care.

His sire, Anton's King Confidence, traces five times to May Rose 2d and is from Ma Chere Confidence, 764.65 lbs. fat in Class C.

Better write today for price and pedigree if you want him.

Hoard's Dairyman Farm, - Fort Atkinson, Wis.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL

(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

One-year-old May Rose Guernsey Bull For Sale

Edgar of Linwood—good individual, good color. A grandson of Imp. Clara's Sequel and a 740-lb. cow. Dam a 540-lb. cow, daughter Langwater Frenchman who has 12 A. R. daughters with two class leaders.

HOMER RUNDELL, - Livingston, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.

August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Guernsey Bulls

May Rose on both sides. Dams in A.R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $600. Write for particulars.

Meadowland Farms, Litchfield, Conn.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM

Ray F. Frisby, Prop., - St. Charles, Minn.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137

Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner

BURLINGTON, - - VERMONT.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4851, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

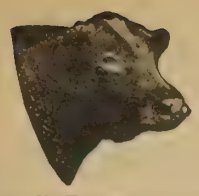
Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Keep Tab on Your Cows

Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. **Hoard's Dairyman, Fort Atkinson, Wis.**



Economy in Production ← GUERNSEYS → Quality of Products



The fair season is here. Thousands of Guernseys are being exhibited at county, state, and inter-state fairs. Do not fail to see the Guernsey cattle when you attend your local fair. Our free literature contains helpful information to carry with you. Send for it now.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 79, PETERBORO, N. H.

Timonium Pure-bred Live Stock Exchange

Will Hold a Sale September 23 at Timonium, Md., at 11 A. M.

The Guernsey Breeders of Maryland will meet at the Hotel Emerson, Baltimore, Maryland, at 7 p. m., September 22nd. Dutch Treat Supper. Every Guernsey Breeder welcome.

There will be offered about 45 high class attractively bred females and four young bulls.

The females include, a ½ sister to the record price cow of the breed by the thrice winner at the National Dairy Show, Ladysmith's Cherub, a splendid daughter of King of Chilmark.

A daughter of Lanerna's Ultra May King out of an unusually high class May Rose cow, consigned by Burnside.

One of the best daughters of May King's Vrangue of Ingleside. Five daughters of Uncle Jim. One a Mary Jane and the ninth generation bred on Gerar. Another a Cora.

Four daughters of Rutila's Patient King.

Three daughters of Irene's King of the May.

A daughter of Meadowlea (brother in blood to Langwater Stars and Stripes and Dolly Dimple's May King of Langwater).

ALL animals offered are real producers of the Right Type.

We KNOW what the Guernsey Public wants and our first sale must be a Success. For catalogues write

Louis McL. Merryman, Cockeysville, Md.



Langwater Farms

(F. LOTHROP AMES, Owner)

NORTH EASTON, MASS.

Announce an Auction Sale of

50 Selected Guernseys

TUESDAY, SEPT. 21, 1920

Langwater has long been recognized as the premier Guernsey breeding establishment. The animals to be offered represent the best efforts that have been produced in this establishment of constructive breeding.

All our famous sires will be represented, such as Imp. King of the May 9001 (A. R.) by two daughters; Langwater Warrior 26509 (A. R.) by seventeen of his get, including three of his four tested daughters; Langwater Steadfast 31672 by five of his get.

The name "Langwater" adds lustre to any pedigree

CLASS LEADERS WILL BE OFFERED

FOR CATALOG ADDRESS

LEANDER F. HERRICK

Sale Manager, 405 Main Street, Worcester, Mass.

Guernseys At Auction

Second Annual Consignment Sale

Guernsey Breeders' Ass'n of Northern Minnesota and Northern Wisconsin

Tri-State Fair Grounds, Superior, Wisconsin

Wednesday, October 6, 1920

A QUALITY SALE A GUARANTY SALE

Auctioneers: Johnson, Benjamin, McGuire

For catalogue write to

E. P. Gibson, Sales Mgr., 310 Court House, Duluth, Minnesota

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

45 Guernseys 45

At Mankato, Minn., Oct. 5, 1920

In the New Sale Pavilion

The offering will consist of 20 pure-bred cows and heifers, 6 pure-bred bulls, and about 20 splendid high grade cows and heifers, all consigned by Blue Earth County breeders. Cattle will be tuberculin tested and sold under the standard guarantees. Catalogues September 15th. Write for one to

DR. M. B. WOOD, Mankato, Minn., Manager of the Sale.

Oliver S. Johnson, Auctioneer. First Nat. Bank of Mankato, Clerk of Sale

WOODEND FARM GUERNSEYS

Bulls of serviceable age sired by May Rose Secret of Pencoyd 27844 and out of A. R. O. dams.

E. E. LePELLEY, Supt. Guernseys

Mound, - - - Minnesota

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

The Mixter Farm

325 GUERNSEYS 325

Excellent bull calves for sale at exceptionally low rates. It will pay you to visit our herd.

HARDWICK, MASSACHUSETTS.

When writing advertisers please mention Hoard's Dairyman.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd



A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals. Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.
JOHN R. VALENTINE, Prop. PHILIP C. PALMER, V. S. Mgr.



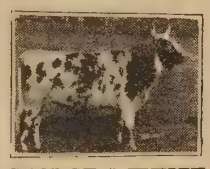
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan
Sons of
Ringmaster's Brae Burn Diplomat
For Sale
GEORGE F. WHITE, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.
L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis.



Willowmoor Miss Carston

Ravinia Ayrshires

Are the

All-Year Milking Sort

Almost any dairy cow will milk well on good pasture in spring and early summer; but the kind that pays your grocery bills and helps buy the things you want is the cow that keeps right on all through the year, especially in the winter when butterfat is high.

Our Ayrshires, led by Lily of Willowmoor, hold the world's record for the breed for two, three, four, and five consecutive years in both milk and butter production.
Write us for prices on bred cows and bull or heifer calves.

Ask, too, for "Why I Chose the Ayrshire".

GOSSARD BREEDING ESTATES
Preston, Kans. Martinsville, Ind. Axial, Colo.

ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Middlesex Meadows Ayrshires

No matron stays in the herd that does not make an A. R. record of 10,000 lbs. or better. Most of them have records far exceeding this standard. Their bull calves by our herd sires are for sale.

A. Henry Higginson
SOUTH LINCOLN, MASS.

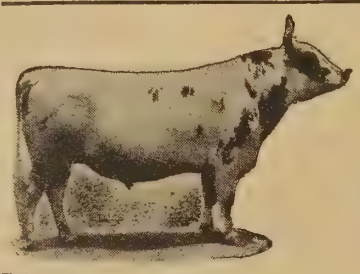
Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

Ayrshire Bull For Sale

READY FOR SERVICE

Sire, a brother of Otterkill Roseleaf, $2,550 at National Sale. Dam, a Silver Medal Winner; both grandams in A. R.; great grandam 5 A. R. records. Traces 11 times to A. R. sires, 12 to dams. 2 sisters of dam under R. of M. test ahead of champions, another in second place.

Sears & Howell, Blooming Grove, N. Y.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

Adulterated and Misbranded Seeds

For some years the Agricultural Appropriation Act has carried authority to purchase forage plant seeds in the open market, examine them to detect misbranding or the presence of adulterants, and to publish the analyses and names of seed dealers from whom purchased, when misbranding or adulteration was found.

Before this authority was given, it was not uncommon to find cases where one kind of seed was sold under the name of another, or where one kind of seed was adulterated with varying proportions of seed of lower price, but of somewhat similar appearance.

In carrying on this work seeds of most of the commoner forage plants have been collected, and, during the first years, large numbers of adulterated and misbranded lots were found. Red clover and alfalfa were adulterated with yellow trefoil, alfalfa with sweet clover, and sweet clover with alfalfa, according to relative price, orchard grass with ryegrass and meadow fescue, redtop with timothy; Canada bluegrass was used as an adulterant of or sold as Kentucky bluegrass; winter rape was adulterated with varieties of no forage value, and the hardy hairy vetch seed often was adulterated with or replaced by spring vetch, which is not winter hardy, or by worthless varieties.

The amount of adulteration and misbranding has decreased in successive years until very few cases are found at the present time.—By E. B. BROWN, U. S. Department of Agriculture.

When writing advertisers please mention Hoard's Dairyman.

Swollen Glands

My herd sire has a swelling on both sides of his throat just back of his lower jaw-bones which seem to be a source of trouble in breathing as the animal makes a gurgling noise when he is feeding. He is 21 months old, and has been used for service last spring, and has been on green pasture since spring.

Fond du Lac, Wis. J. P. K.

Tuberculosis of the glands of the throat in all probability causes all of the symptoms described, and for that reason you should at once have the tuberculin test applied by the intradermal or ophthalmic method. Retest if the bull was tested more than three months ago. Actinomycosis (lump jaw) would be the other possible cause, and it may prove curable by external applicatcns of tincture of iodin and internal administration of iodide of potash.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

HOLSTEINS

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Sons of a 37-Lb. Ormsby Bull

whose dam, full sister, three-fourths sister and maternal sister have all held state records. Herd under Federal supervision.

BLUEBELL FARM. RICEVILLE, IOWA.

Grandsons and Granddaughters of Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

When You Buy A Herd Sire

Think First Of

King Pietertje Ormsby Piebe

Recognized As One Of

The Greatest of Present Day Sires.

We Have For Sale

A Very Few Of His Sons

From Well Bred Cows

With Good 7-day and Year Records.

Hargrove & Arnold Holstein Co., Norwalk, Iowa.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

A Real Dairy Dispersal Sale

At Cloverland Farms

G. H. HORRELL, PROPRIETOR

Humbird, Wis., Wednesday, Sept. 22

Proprietor is retiring from active farming. Offers for sale about 75 Head of Good, Dairy Cattle.

About 30 Head of Pure-bred Holsteins, including one of the Best Individual 2-year-old Bulls you ever saw, Traverse Kaastra Ryma, a 29.996-lb. son of Traverse Prince Inka Lad. He's a Real One and just past 2 years. A Number of Heavy Springers in calf to this Wonderful Bull.

Nearly 20 Head of Pure-bred Jerseys. A Very Choice Lot, including some with Official Records and some for which Mr. Horrell paid a long price. Bred to a Yearling Bull who will also be sold.

A Dandy Bunch of Grade Holsteins, All Young, Mostly 2nd calf Heifers, and bred to a Registered Holstein Bull. These heifers are clean cut, choice dairy heifers.

12 Grade Holstein Heifer Calves, Worth Good Money.

About 10 Grade Jerseys and Guernseys, bred to a Registered Jersey bull.

Sold subject to a Re-test.

Sale will be held at 10:30 Sharp, at Cloverland Farms, ¾ mile north of Humbird. Humbird is in Clark Co., on the Main C. & N. W. line, 6 miles north of Merrillan, 35 miles southeast of Eau Claire.

Conveyance to Farm. Lunch at Noon.

J. E. MACK, Auctioneer. F. H. EVERSON, Sale Manager.

FOR CATALOGUE WRITE

F. H. Everson, Lake Mills, Wis. or G. H. Horrell, Humbird, Wis.

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb.4-5; Apr.1-2; June3-4; Aug.5-6; Oct.7-8; Dec.2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of Americ*

Address The Purebred Live Stock Sales Compan,.

When writing advertisers please mention Hoard's Dairyman.



Facts in BLACK & WHITE

Bankers Buy Purebred Holstein Cattle

To promote general prosperity and their own business, bankers in many parts of the country are buying purebred Holsteins by the carload and selling them on time to the farmers of the community.

Every year it becomes clearer that with large yield cows the cost of milk and butter production can be brought down to a point that makes dairying profitable.

A herd of purebred Holsteins is an investment that combines safety with large dividends.

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

October 5, 1920 **October 5, 1920**

HALL BROS.

— A Dissolution and Dispersion Sale of —

150 Head of Registered Holstein-Friesian Cows, Heifers and Bulls

at their Western Holstein Farm, 5½ Miles Southwest of Denver
On the Morrison Road

After twenty-three years of agreeable partnership of the brothers —Carlos W. and Storrs H. Hall, by their mutual agreement they have decided to close their partnership in this very successful business, and are offering at public sale one of the great herds of the day.

The foundation blood upon which this herd was established was of the best of the breed, and under the guidance of the Hall Bros. has increased in quality, and is today recognized from coast to coast as one of the great herds of America, and its breeding is the standard of excellence in the nation's greatest live stock exhibitions and sales, and in official testing.

The herd is composed entirely of animals of correct conformation and great milk and butter-yielding qualities. The herd is healthy and high class in every way. It was established with the view in mind of creating a herd of this breed in Colorado to supply foundation stock of this breed to the fast-growing dairy interests of the Rocky Mountain States. The Hall Bros. are, in live stock circles, well known men and highly respected. After years of successful operation in the dairy interests of Denver, the Western Holstein Farm and its herd of registered Holstein cattle, the owners believe a lightening up of their responsibilities of their large business should be observed, and hence this sale.

Just once in a great while does an apportunity present itself to buy your own selection of real foundation breeding blood of any blood of the various breeds, at your own price, and you should, those who are interested in this great breed, avail yourself of this great opportunity. *Remember the date, Tuesday, October 5, 1920.*

HALL BROS., Prop., WESTERN HOLSTEIN FARM
DENVER, COLO., South Denver Station

Catalogs ready September 1, 1920. Sale at the Farm.

COL. G. M. BANKS, Auctioneer, 709 E. 11th Ave., DENVER, COLO.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois

BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

Combining Type, Size, Constitution and Production.

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

Now Is the Time

To select your bull for next winter's use.

Select a son from Woodcrest Pietje Clyde, our herd sire.

7 days	365 days
33.07 butter	970.48 butter
523 milk	22,558.40 milk

He has 4 20-lb. Junior 2-year-olds including one 26.58-lb. Illinois State Champion. They are from *A. R. O. Dams* up to 27 lbs. butter and 636 lbs. milk. Prices reasonable.

JOHN SEXAUER & SONS
BELVIDERE, ILL.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

FOR SALE

Bull Calf born Sept. 16, 1919

From a granddaughter of King Korndyke Sadie Vale. He is a bargain at $150. Also some bull calves at $50.

Write for pedigree to

J. A. HOPPER, - SINCLAIR, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

I Want a Heifer

Pure-bred Holstein

2 years or less, backed by type and production.

John P. Algie, - Como, Montana

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed 1 have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

HOLSTEINS AND GUERNSEYS

Why not buy your cattle from a reliable firm established in the cattle and dairy business for twenty-five years? We can fill your order for any number, pure-bred or high grade, any age desired from four weeks up. Give us your mail order to insure satisfaction.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

ORMSBY BULL - Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year. He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

2500 Healthy Holsteins 2500 Dodge County Wisconsin

Only breeders with clean herds admitted to our association. Every pure-bred animal sold subject to a 60-DAY TUBERCULIN RETEST. Good railroad connections—14 trains daily.

Dodge County Holstein Breeders' Association, Hazen T. Canniff, Secretary, Juneau, Wis

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.

S. T. JONES, - R. 8, Watertown, Wis.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

JOHANNA BOY TWISK

heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. Nothing for sale at present.

T. W. LUCK, R. 1, HORICON, WIS.

LEVEL-LAY FARM HERD

headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.

E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

7-MONTH-OLD BULL—$150.

Marked more white than black. 27-lb. sire. Dam a 1700-lb. cow. Will be tested when she freshens in January. Rich in Homestead Breeding. Herd tuberculin tested annually. Check or bond takes him. **Chic Dairy Farm, - - Juneau, Wis.**

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. CHRIS. INDERMUEHLE, R. 1, Juneau, Wis.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs. Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.



W. J. Gillett & Sons, Rosendale, Wis.



A Son of Sir Bess Ormsby Fobes

The $30,000 Son of S. P. O. M. 37th, Ureeka Sir Bess Ormsby, is ready for heavy service. He is well grown—a good individual of just the type you want.

His dam, an 18-lb. 3-yr.-old, is one of our good producers that will certainly make a good year record.

Better write at once for complete information if you're interested.

UREEKA STOCK FARM
Otto W. Schinke, R. 1, - Jefferson, Wisconsin

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

An Excellent Young Bull—$425

Individually he's a dandy—absolutely straight, ¾ white, and guaranteed absolutely right.

Sire:—King Segis Pontiac De Kol Clorinda, one of the best sons of King Segis Pontiac. Dam:—Elm Leaf Farm Kate Pietje, a daughter of Woodcrest Pietje Clyde. She is 4½ years old and a fine, large, straight individual. Tested under most adverse conditions during the hottest part of June without proper fitting she made 24.48 lbs. butter from 526 lbs. milk. She will be given a real chance for both 7 days and a year at her next freshening.

This ad appears but once. The price changes Sept. 30th. Write

BRIGHT SIDE STOCK FARM, R. 2, Box 34, BRISTOL, WIS.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly.

S. A. BAIRD & SON, WAUKESHA, WIS.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

F. H. HEMBROOK Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9th, 1920

Sale will start at 10:30 A. M.

Oconomowoc, Waukesha County, Wis.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

A Son of this Cow for Sale

Born December 25, 1919



GLEN CANARY ORMSBY MERCEDES

Butter 365 days at 5 yrs.	722.60
Butter 7 days	27.94
Butter 365 days at 2 yrs.	550.86
Butter 7 days	20.71

She is a full sister to Glen Canary De Kol 2d, the junior four-year-old that last year made 1,323 lbs. butter for the year. She is sired by Sir Pietertje Ormsby Mercedes, the greatest sire of yearly producers and show ring winners in the world. Her dam is Glen Canary De Kol, former world's champion with 34.59 lbs. butter in 7 days and 139 lbs. in 30 days. She is by Sir Johanna Canary De Kol and from the grand champion, Glen De Kol Artis 3d, a daughter of Homestead Jr. De Kol.

THE SIRE OF THE CALF

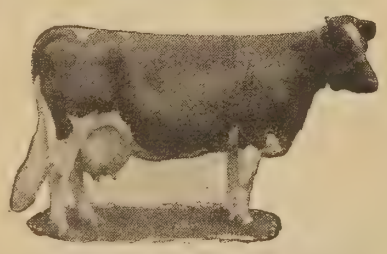
is Uneeda King Alcartra. He is from a 33-lb. daughter of Johanna McKinley Segis, the only 40-lb. son of King Segis. His sire is the $50,000 bull, King Segis Pontiac Alcartra, a son of King Segis Pontiac and from a world's record daughter of King of the Pontiacs.

Price on this Calf is $1000.00

E. C. SCHROEDER FARMS,

Moorhead *(A Federal Accredited Herd)* **Minnesota.**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

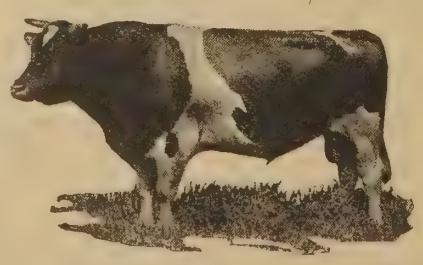
Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

FOR SALE

8 Registered H. F. Cows

your pick out of 16, all priced. Granddaughters of King Korndyke Colantha Ormsby. No sire has more World's Champion blood close up in his pedigree than Wisconsin Fobes, a 26-lb. cow. 3 bull calves from 4 to 7 months old. Sired by a 20-lb. grandson of Miss Korndyke Maid Ormsby. Price $75, $100 and $150. Cows bred to Grandson of Sir P. O. M. Age 2 to 8 years.

WM. SAARI, R. 1, Phone 316, Finlayson, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

In Our Bull Circular

are listed sons of King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired", from large record cows and heifers of high individual excellence. If you want this blood better write today for the circular.

FLECKS FARMS, Faribault, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm

William Schmidt, Prop. St. Peter, Minn.

FOR SALE!

Segis Pontiac Black Hawk

BORN FEBRUARY 7, 1918

A son of a 29-lb. sire and from a 24-lb. cow. A grandson of the "marvel of all sires", KING SEGIS PONTIAC COUNT. The daughters of the latter hold more World's records, (6) in the regular divisions than those of any other two sires. He already has (6) daughters with year butter records above 1,000 lbs. and is the only sire to have all daughters with year milk records above 20,000 lbs. Write us for pedigree and price.

Lake Meadow Farm, - Wayzata, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**

H. R. Searles, Mgr. Rochester, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - - E. GRAND FORKS, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Minnesota's First Fall Sale

THE DAIRY CENTER SALE

WILL BE HELD

October 1-2, at Northfield, Minn.

130 QUALITY HOLSTEINS 130

Have Been Consigned by Fifty-five Breeders From Eight Southern Minnesota Counties

Every animal was selected by the sale committee and in every case **type** was the prime requisite, not one with poor type being included.

Of course, in so far as it was possible, entries with good 7-day and long-time records were selected, but **type** was the **first** qualification and the lack of big records did not bar the animal of first class type and good breeding.

This makes the Dairy Center Sale particularly attractive to breeders large and small. Those men who want type and breeding but cannot afford to pay extremely long prices for high record stock, will find here, just what they want. There will also be entries to suit buyers who want good females that have already been developed—females with both 7-day and year records.

Remember this sale has the indorsement and is under the management of the Minnesota Holstein-Friesian Breeders' Association. You are assured that the cattle will be exactly as represented, the best that could be selected from the herds of southern Minnesota. They are guaranteed healthy.

Write today for a catalog and see for yourself just what is offered.

Minnesota Holstein-Friesian Breeders' Association

406 Market Bank Building MINNEAPOLIS, MINNESOTA

The sale will be held in comfortable quarters at the Rice County Fair Grounds

---

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

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6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn,

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

When Writing to Advertisers, Mention Hoard's Dairyman

TOYON FARM ASSOCIATION

Mills Building San Francisco

AMERICA'S ONLY HERD OWNING EXCLUSIVELY TWO SONS OF SIR PIETERTJE ORMSBY MERCEDES

SIR PIETERTJE ORMSBY MERCEDES 43d
Dam's record 1250.35 lbs.

SIR PIETERTJE ORMSBY CANARY
Dam's record, 3½ yrs. - 862.88 lbs.
Dam's dam's record - 1009.87 lbs.

SIR AAGGIE MEAD
His 5 nearest dams average 1177 lbs.

350 HEALTHY HOLSTEINS—UNDER FEDERAL SUPERVISION

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

Dispersion Sale

October 15, Rockport, Ind.

55 Registered Holsteins
24 High Grade Holsteins

This is a complete dispersion of my herd. It includes some well-bred heavy producers that will please you.

Every animal over 6 months tuberculin tested. Write for catalog.

Louis P. Eigenmann, Rockport, Ind.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.-072. Sire of calf *Sir Ona Clothilde De Kol No. 241466*. His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

---

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write C. I. Reamer, North Liberty, Ind.

---

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.



Dairy Farmers Find Them Most Dependable *and* Economical

A TYPICAL example of the performance of White Trucks in the service of Dairymen owners is furnished by C. W. Bolswiler, of Bethlehem, Pa.

"Our White Truck has been in service for 27 months continuously during which time it has covered 46,440 miles," says Mr. Bolswiler. "It is used principally in hauling milk to the city. We produce most of the milk on our own farm and we haul feed and supplies from the city every day, thus always carrying a full load. We have never lost a day on account of motor trouble or any fault of the truck."

White Trucks stand up and keep going day in and day out, year after year, carrying full loads over all kinds of roads. Owners' records show that Whites not only do the most work, but they do it for the least money.

THE WHITE COMPANY
CLEVELAND

White Trucks

4 C - 20 July 20

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX FORT ATKINSON, WIS., SEPTEMBER 17, 1920. Number 9

Municipalization of Milk in New Zealand

J. S. DUNNET, AUSTRALIA

WELLINGTON, the capital city of New Zealand, is making a bold attempt to settle the problem of a milk supply by municipalization. So far the best results have been secured. The facts are interesting.

The Council awoke to the necessity of doing the thing well, so it acquired a large milk distributing company's premises, fitted up a first class plant, leased a dairy factory, improved its machinery and equipment, and bought lorries for conveying milk from the railway stations and other points, a capital outlay of £36,000. Before the city became a factor in the milk business, as a monopoly on the wholesale side, things were going from bad to worse. Factory suppliers work a good deal harder for their cheques than the man who lumps the butter-boxes on the wharves, and they are glad of the few months' interval in the winter when the factory closes, so that they can do useful work on their fences and other improvements on the farm. But the farmer supplying milk to a city has to keep the business going all the year round. There is no rest for him, and the winter is the hardest trial of all. Farmers who supply for human consumption have to submit to frequent and drastic regulation and inspection. It came to a point, under private enterprise with Board of Trade interference with prices, when the farmers practically gave an ultimatum that they would cease to supply. The multitude of private venders were practically unable to deal adequately with the position, so the City Council stepped in. The scheme has so stabilized the business from the farmer's point of view that it is a distinct advantage. The farmer sells to one customer who is able to pay promptly on the tenth of each month. That customer, having in view the public interest, has provided direct encouragements to winter milking.

It is worth while quoting fully from the agreement as to price which the city makes with the farmer. It reads:—"The price to be paid shall, subject to the restrictions hereinafter set forth, be 11d per gallon of 10½ lbs. weight for milk supplied daily up to 50 per cent over and above the average daily supply during the months of June and July, and for the balance of milk supplied daily 2d per gallon less than such price any or substituted price hereinafter fixed.

"Such price shall be varied; (a) So that the supplier shall receive at least such sum as will equal the price obtained for milk or butterfat values obtaining in any three butter or cheese factories within a radius of 70 miles from Wellington, and in addition freight and extra labor caused by supplying the city instead of a factory; and (b) so that for the winter period, being a period of at least twelve weeks, to be hereinafter agreed upon, the price shall be fixed by agreement, according to extra cost of production, but shall not be less than 5d per gallon more than the average price paid during the preceding months of October, November, December, and January.

"Rail borne milk shall be delivered free of all charges, including freight, to the Corporation at Lambton station or Thorndon station, in the city of Wellington.

"Road borne milk shall be delivered at the municipal milk depot, in Dixon street, free of all charges, but the freight charged against the supplier shall not exceed the freight, payable for carriage of the milk from the station nearest the supplier's premises to Wellington."

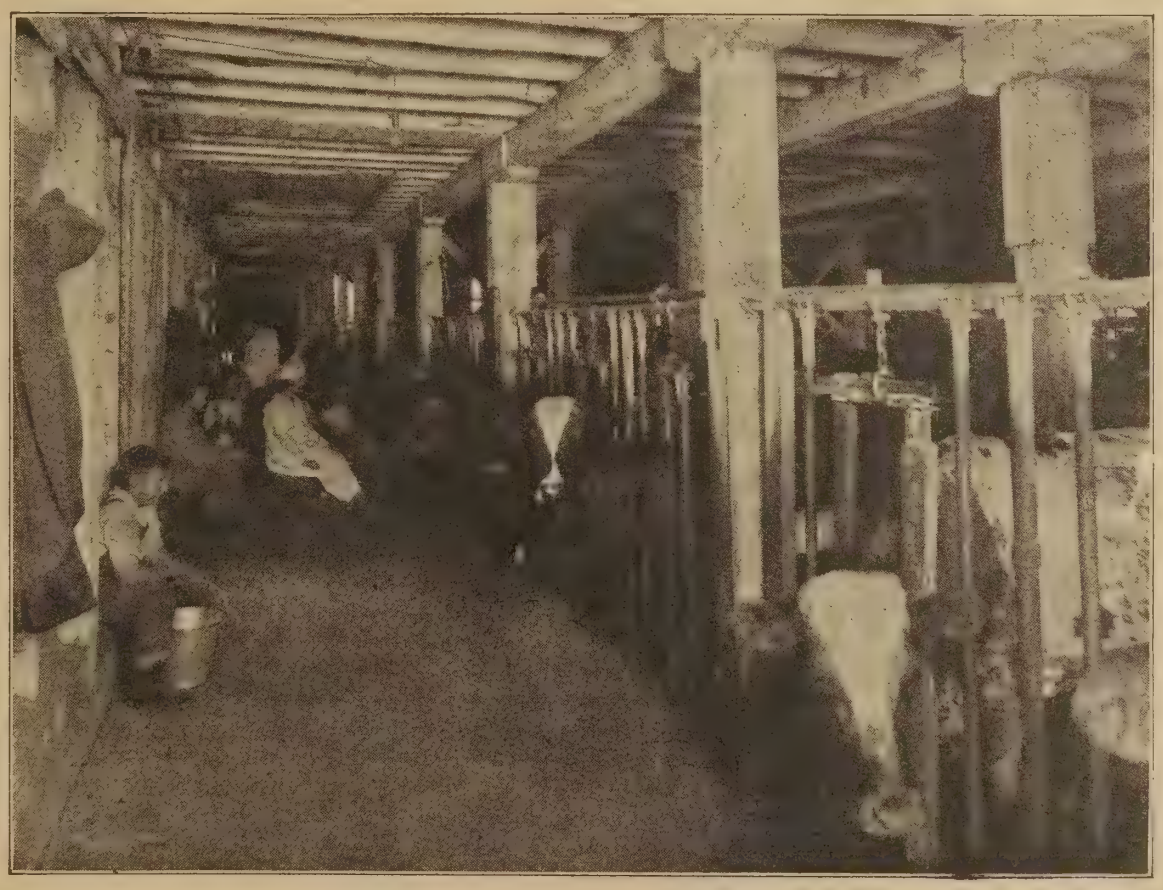
The system of payment is this: "We guarantee to take and pay the full price for 50 per cent of the summer supply in excess of the winter supply. We take the whole output of the farmer, and we pay him full butterfat rates for the quantity in excess of 50 per cent over his winter supply."

Compare this with the price obtained from the supplying factories. The latest report on factory returns from 58 cheese factories throughout New Zealand showed a return of 23.63d per pound of butterfat, equivalent to 9.89d per gallon of 10½ lb. This is the net return from the factory, but the value of by-products must be also allowed for, and this brings the net price per gallon up to 11d during the nine months of the season.

Under the Wellington agreement city suppliers are directly interested in maintaining a supply in winter, because the farmer who fails to supply during the difficult twelve winter weeks gets 2d less per gallon for his summer supply. A farmer who supplies, say, 50 gallons per day during winter is able to obtain full price in summer for 75 gallons 2d per gallon more than the summer milker. The agreement provides for taking the farmer's whole output, therefore the leasing of a dairy factory at Otaki was an important element in the scheme, as this is used as a regulator. This factory has the combined butter and cheese making plant and it is intended to market municipal butter shortly.

The whole milk supply comes to the city centre (according to the New Zealand Farmer). On arrival the cans are sent by lift to the top of the building, where the landing is similar to that seen at any well planned dairy factory. On either hand are the weighing vats, the scales in this instance being graduated to show gallons, instead of weight. Two expert tippers, who have had factory experience, handle the cans systematically. Each supplier has a number, and the labels for night and morning milk are of dif-

(Continued on page 340)



MILKING TIME ON AMES FARM, MINNESOTA

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
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We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Land Bank Sound

"The Federal Land Banks are financially stronger today than at any time since their organization, and their net earnings for the month of July—$257,000—were the largest for any month in their history" was the statement made by the Federal Farm Loan Board today. This statement was prompted by the suggestion that in some quarters an effort was being made to create the impression that pending litigation, which has temporarily suspended the loaning operations of the banks, was otherwise impairing the Farm Loan System. Commenting further, members of the Board stated:

"To understand this readily, it should be borne in mind that the earnings of a Federal Land Bank do not, like those of a Commercial Bank, depend upon their current transactions. The loans of the Federal Land Banks are made for a long term of years—mostly 34½ years. On the unpaid balance of these loans each bank has an annual income of from one-half of one per cent to one per cent. This earning is fixed and certain regardless of new business. As the total amount of loans now in force is $344,475,709, the extent and stability of this income can readily be seen. The increase in net income for July is explained by the fact that, while the fixed gross income was substantially the same, the several land banks, because of the halting in their loan operations, have reduced their operating expenses, thus increasing the net income. Dividends have been paid and will be paid as usual. Funds are accumulating for the payment of November interest, which will be paid promptly. So far as bondholders and stockholders are concerned, the banks are functioning normally. Persons wishing to avail themselves of the benefits of the system must, of course, for the time being be disappointed, which is much regretted but can not be helped. While the banks have reduced their personnel and consequently their current expenses, this has not been done at a point that would interfere with the prompt resumption of their loaning activities."—Federal Farm Loan Bureau.

Condensed Milk Market

Condensed and evaporated milk manufacturers apparently are confronted with a trying situation. During July, prices to producers for 3.5 per cent milk were advanced to an average of 18 cents per 100 pounds, and producers' prices for August averaged $3.22 or 24 cents above those of July. Notwithstanding these advances in prices paid producers, the prices of manufactured products were advanced only 2 cents per case for sweetened condensed and 32 cents for evaporated.

Stocks on Hand Large

The tightening of loans and the large increase in stocks in hands of manufacturers has forced some manufacturers to liquidate their stocks on the open market since August 1, resulting in considerable stock being offered at considerably lower prices.

Stocks of both condensed and evaporated milk in the hands of manufacturers on August 1 had increased 9.5 per cent and 7 per cent, respectively, over the July 1 stocks and the amount of unsold stocks increased 34.5 per cent and 59.5 per cent, respectively. The increase in these stocks in New York City is interesting as condensed case increased 10 per cent and condensed bulk 49.6 per cent; the latter increasing from 211,500 pounds on July 1 to 1,261,000 on August 1. The August 1, 1920, stocks compared with the August 1, 1919, showed an increase of 75 per cent in condensed case, a decrease of 7 per cent in condensed bulk, an increase of 79 per cent in evaporated case, and a decrease of 41 per cent in evaporated bulk.

Heavy Accumulations in New York

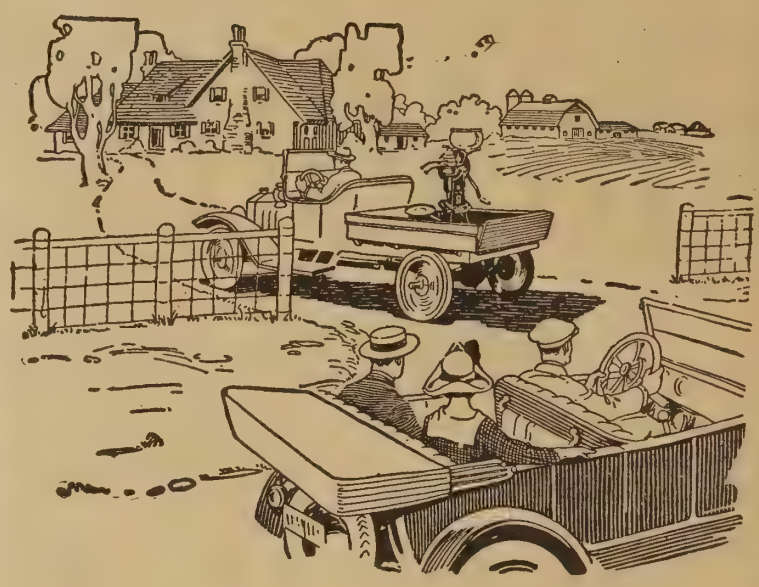
The increase of unsold stocks at the port of New York from which heavy export shipments are made regularly is of special interest since these stocks naturally must have considerable affect on the open market price for both domestic and export trade. On August 1, 1920, the unsold stocks of condensed case goods in New York City were 32,546,000 pounds compared with 4,177,358 on August 1, 1919. The unsold stocks of evaporated case goods in New York City on August 1, 1920, were 33,572,400 compared with 4,319,817 pounds on August 1, 1919. Comparative percentages of unsold stocks and unfilled orders for the two years show a much better situation than the report of total stocks.

Export Slump Adds to Stocks

The slump in exports in July undoubtedly contributed to an increase in the August 1 stocks. Over one-half of the condensed milk exported went to the United Kingdom, France, and Cuba, the rest being shipments of less than 500,000 pounds each to many countries.

Unless conditions have improved somewhat during August, and it is rather doubtful that they have, the condensed and evaporated milk industry stands to take losses on high-costing milk unless the export demand increases soon and domestic outlets take larger quantities. The recent drop in sugar prices is helping the condensed-milk interests materially, but in general the market at present is weak for both condensed and evaporated products.

It's a New De Laval



Many new De Lavals have been delivered to farmers this summer, and they will soon pay for themselves.

In fact, De Laval Separators pay for themselves many times over; and as the number of cows increases, it pays to buy a new, up-to-date De Laval of larger capacity.

The local De Laval agent will gladly take a new separator out to your place, set it up, and let it prove by its performance that it skims clean and is easy to turn and easy to clean, even under unfavorable conditions.

A new De Laval will pay for itself in a few months because of the cream it saves — and besides it saves labor and time.

If a demonstration is wanted, call the local De Laval agent. If you do not know him, write nearest office.

The De Laval Separator Co.

165 Broadway, New York — 29 East Madison Street, Chicago — 61 Beale Street, San Francisco

Converting Corn Into Milk and Meat

C. A. LE CLAIR, WISCONSIN

LAST year, in the corn crop alone, there was an opportunity to add a billion dollars to the returns from the harvest. King corn, to whom more acres are devoted than to any other two crops put together, responds royally to good treatment. It pays us more in ready cash and gives a greater number of food units than any other crop, and yet there are many farmers who miss out on opportunity to realize on it to the fullest.

About eighty-one per cent of the corn grown in this country is matured for grain. Of the close on to three billion bushels annually grown, not over seven per cent is exported from the farms and used as a food for man. All the rest is used for live stock feeding. It is high time, therefore, that more thought be given to the matter of using easier and more profitable methods to convert this corn into meat and milk.

Observations by the Bureau of Crop Estimates on 1913 reveal the fact that 57.7 per cent of all the corn grown for grain is snapped in the field and the stalks allowed to remain standing. Nutrition experts tell us that about one-third of the digestible nutrients of the corn plant are to be found in the stalks. In the face of this fact, it is almost impossible to believe that, with rough cattle feeds possessing the high market value they now do, only a little over half of the eighty-one millions of acres of stover raised is made use of as animal food. Worse



FILLED SILOS TIDE OVER THE DROUGHTS OF SUMMER AND PROVIDE SUCCULENT FEED DURING THE FROSTY WEEKS OF WINTER.

than that, over four and one-half millions of acres are yearly burned over, making a loss from this source alone of three millions of dollars. Three times this amount of forage or material valued at nearly a billion dollars, is annually lost by plowing under of the stalks of unpastured fields.

This spring I happened to be traveling through a section of the country where this practice of plowing under seemed to be prevalent. A western stockman in the seat beside me turned to me with an exclamation of disgust. "Isn't that a crime?" he cried. "On the range there are cattle starving to death and here you see people burying food! Of course these farmers console themselves with the thought that they are plowing under more fertility,—but if they only knew! How much more economical it would be if they would only feed this roughage and return the plant food to the soil in the form of manure."

I quite agreed with him that it would be vastly better if the roughage were fed, but I think that if I could have then informed him that, as I have since figured out, when a hundred acres of cornstalks are burned up, $2,400 worth of digestible nutrients go up in smoke, his wrath would have sent him straight through the window on an immediate message of reform.



IT IS NOT A PLEASANT JOB NOR DOES IT PAY TO CHOP SLEET COVERED FODDER OUT OF THE ICE AND SNOW

Feeding for Greatest Profit

Three-fourths of all the corn grown in America is fed on the same farm upon which it is grown. How many of us find ourselves devoting needless time and energy playing waiter to our farm animals when they might far easier go out into the fields and serve themselves? Tests run on 200 farms seem to indicate that we are wasting our time in thus coddling our animals. On these farms, all in a typical corn belt state, experiments with steers and hogs showed that the fattening went on just as speedily and economically when the corn was "hogged off" as when it was hand served in the barns. Since a third of the thirty dollars an acre it costs to grow corn is represented in the labor of harvesting, what better way could be used to gather the crop? Could cheaper labor be found anywhere? Here we have our hogs and cattle doing the work of the harvest and paying well for the privilege. Despite the very evident efficiency of "hogging down", however, only three per cent of the corn grown in the United States is handled in this manner. Fortunately it is a practice that is yearly growing in favor. In speaking of the virtues of the system, Mr. A. Roberts, an enthusiastic advocate from Iowa County, Wisconsin, says:

"I get the best results from "hogging down" corn when rye, rape, hairy vetch, soybeans, or pumpkins are grown with the corn. The soybeans can be planted at the same time as the corn, while the other companion crops, when used, may be sown after the last cutivation. I find that it is well to feed some nitrogen concentrates, such as skimmed milk, wheat middlings, or linseed meal in conjunction with the field roughage. If confined to limited areas, spring shoats, followed later by old sows with a fall litter of pigs, will clean up the field as thoroughly as if it were hand harvested. Woven wire tied to the cornstalks can be used to limit the range of the animals. If the weather is dry, and the stock cannot puddle the ground, the system works at its best. In favorable seasons I can let the animals work in the corn fields for from two to three weeks. Farther south, I understand, the pasturing season is still longer."

The Cost of Shocked Corn

Fully one-fourth of all the corn grown in the United States is cut and shocked in the field at harvest. Those who handle the crop in this way usually feed the stover. Although more of the feeding value of the stalks is retained in well shocked corn than when the ears are simply snapped and the cattle turned in to graze on the stalks, the fact remains that even in the shocked corn there is a loss of nutrients through fermentation and leaching. This loss of valuable food is particularly marked in the corn belt proper and to the South, where the shocks seem almost to melt away as the season progresses. Probably $250,000,000 worth of digestible nutrients leaches away each season from the corn shocks of the United States. Quite a bit worth saving, wouldn't you say?

Aside from the tremendous loss of food in the stover of shocked corn, it must be admitted that one of the most disagreeable, tedious, and costly jobs on the farm is to go into the field in winter to chop the frozen stalks out of the ground. Did you ever try it? Remember the last time you had to cut a road through the snow and the crust was so thick and sharp that it made the hocks of your horses bleed? Can't you just feel now how cheerful you were when you reached the first shock and it was time to pull off your coat to load the frozen, sleet covered bundles on to the sled? How could you hope to get the best out of your cows if they are served iced fodder in zero weather?

Even if the fodder is stacked in the barnyard before snow flies, conditions are not much better, for, as a northern corn belt farmer recently said to me:

"The snow piles up around the shocks in our country until they are often completely buried. I have to haul away the snow before I can get at the corn, and with five feet on the ground and more on the way, it is no fun to have to cart away two loads of snow to get one of corn."

The custom of shocking corn and hauling it in any time before spring is a custom surviving the days when roughage was cheap. The most satisfactory way of handling corn for profit, next to "hogging" or "steering" it down in the field, is to cut and haul it to the barn where it can be husked, and the stover, either cut or shredded stalks, used for dry feed, or, better still, both the stalks and the ears put into the silo. About one-tenth of all the corn we grow is still handled in the former manner.

If the stover is cared for under shelter, twenty-five to fifty per cent of the dry matter and protein which may be lost in the exposed shocks can be saved. However, fermentation causes as high as twenty per cent loss even in the sheltered corn. Since stover must be well cured before it can be stacked or stored, there is always some additional, unavoidable loss in the curing process. Farmers who husk shocked corn by machinery and then either feed it with the cut or shredded stover, find that if this method is used, the animals leave less waste, and what they do waste makes better bedding and manure than when the corn with uncut stover is fed directly from the shocks.

Store Corn in Silos

By far the best way of getting the most out of corn when it is cut for subsequent feeding is to put it in a silo. Ensiled crops bear the same relation to fresh crops as canned fruit does to the fresh product. As compared to the shocking of corn in the field to be fed later, the use of the silo in making silage for the same purpose has many distinct advantages. The truth of this statement is very evident from the fact that since the first silo was built in Massachusetts forty years ago thousands more have been erected. At present there are about 500,000 silos on the farms of this country and the number is being increased at the rate of about ten per cent a year.

The invention of the silo has practically revolutionized the dairy industry. In leading dairy states like Wisconsin and New York there are today silos on each farm in every four. In 1919 Wisconsin alone had something like 70,000 silos, the yearly increase now being about 5,000. Although an appreciation of the advantages of the silo has been growing rapidly, some of the other states, where as many cows

(Continued on page 348)



THE WASTE OF PEA CANNERIES MAKES EXCELLENT SILAGE

Deserted Farms are Not Found on Paved Roads

H. COLIN CAMPBELL, ILLINOIS

MUD roads have had much to do with making it hard to keep farm owners on their land, not to mention the farm help. When the business head deserts the enterprise, one can hardly expect that the assistants will stay with the ship.

There is nothing startling in the statement that improved highways make rural life more inviting as well as more profitable. Good roads are time savers, which is the same thing as saying they are money makers. And while paved roads will not lift barren lands out of the depths of unproductiveness and put them among prize winners, they will do much to help make the former poor paying agricultural venture break even if not show a profit. So many instances have been cited of what good roads have done for farming communities that nearly every new instance may be shown to be parallel to some other example. However, they each have a lesson of their own and there is no harm in driving these lessons home.

Shortage of farm labor in the face of an insistent demand for increased production of products of the soil gives the good road a strategic position in helping to meet this demand. An instance has just been brought to the writer's attention of a farming community in Ohio where last February 88 farmers sold out because of competition of industry bidding for farm labor. An investigation of the situation showed, however, that of the farms for sale very few were on or near enough to improved roads to profit from them. L. W. Alber, an Ohio farmer living in a county where there are many miles of concrete roads although some of the stretches are not yet connected to make a real county system, says that in spite of these missing links the 50 miles of concrete pavement on his county's highways make farming both a delight and a profitable enterprise. A distant market no longer is distant when the concrete road usable every day in the year and the farm operated motor truck reduce miles to minutes. Mr. Alber raises wheat, oats, live stock, potatoes, apples, and other miscellaneous products and also markets milk, eggs, and poultry either in Akron or Cleveland, Ohio, depending on which market looks best to him on the day in question. Sometimes it is not necessary for him to go to town as the paved roads bring many auto tourists past his door where a wayside stand or sign tells those who can read that some of the things they want for the dinner table may be had just inside the farm gate. This farm is 20 miles from Cleveland and 15 miles from Akron by the most direct route. Milk from a herd of 25 Holsteins is trucked daily into Akron. In spite of the fact, however, that the 15 miles to Akron must be done by covering 30 miles, time is saved in making the latter distance because of the fact that the 15-mile stretch is ordinary earth road, frequently impassable. The trip to Akron, 30 miles and back, is made every day by a two-ton truck that picks up milk from farms along the route.



MUD HOLE IN EARTH ROAD ON ONE ROUTE

It used to be a considerable job to transfer live stock in the days before motor trucks could be operated, but now the farmers throughout Medina County operate trucks with detachable bodies especially adapted for handling live stock. Whether the trip made is for the purpose of taking cows to the farm or fattened stock to market, the time required is relatively so short that the animals arrive in the best condition. Mr. Alber says that before roads were paved it took as long to take 100 bushels of grain to Akron as it now takes to deliver 500 bushels. Various missing links in what will be a continuous system are now under contract and before the end of the year it is likely that this part of the country will be served by every-day-in-the-year roads.

As an example of what roads may do in enhancing land values, Mr. Alber states the two farms he owns contain 93 and 76 acres. Both are well improved and the value of improvements spread over the total acreage in each case is about the same. Both are approximately the same distance from the local markets and have practically identical soil. Dealers in farm land tell Mr. Alber that if he wants to sell the 76-acre farm he can readily get $175 an acre for it. This is situated one mile from the paved highway. The 93-acre farm fronts a concrete road and $250 is stated as the easily obtained market price. It is evident, therefore, that the few dollars per acre which the farm owner must pay as his contribution to permanently paving the highway along his farm represents a very profitable investment even in the face of present costs of modern highways.

Last spring many of the macadam roads in Medina County were so badly broken up by traffic when frost was coming out of the ground that for days at a time farmers were practically isolated from the county seat unless they were fortunate enough to reside on one of the concrete roads. As much as $30,000 is estimated necessary to put 20 miles of these roads into usable shape again and even then it will be only temporary repair. In two or three years these macadam roads will have to be entirely rebuilt at more than their original cost because of the increased cost of highway construction. It is for that reason that farmers like Mr. Alber are in favor of building permanently, because the greater initial cost soon becomes insignificant in the face of greatly reduced maintenance expenditures which also keep the permanently paved road in condition equal to new.



HAULING MILK OVER ONE-TRACK CONCRETE ROAD

THE INDEPENDENT FARMER'S WIFE

AGRICULTURE ever since the war has been coming in for the belated publicity so dear to the hearts of all professions and industries when things strangely stop coming their way. Not that the horny-handed son of toil and his calloused-palmed partner had ever particularly sought or received the limelight prior to 1914. But war changed matters with a vengeance. The food producer really came into his own and for five years the world has anxiously been feeling his pulse and taking his temperature and praying at his bedside—not that our hero has shown signs of lying down on his job or of taking up the role of invalid, but the world and his wife got wise to the terrible consequences such a possible catastrophe might mean during the past few seascns—and all know that an ounce of prevention is worth many pounds of cure.

So, when it came to pass that in the present year of grace 40,000 disgruntled members of our great Nature union told the curious post office investigators that life on the farm was just one darned thing after another, the world was instantly scared stiff and learned gentlemen and ladies here and there who had never been nearer the country than the adjoining golf links, vouchsafed reasons, causes, remedies, and recipes for those sick and ailing patients which, if they had all been practical or even reasonable, would surely have killed or cured without delay.

Yes, the good Americans who have been accustomed to eat three squares a day since the time they entered this vale of tears and the high cost of living, and who depend on the unassuming farmer to deliver the raw article, were quite disturbed about the minority-farmer's complaints, and all allowed that something had surely got to be done about it, by the other fellow. And then, the other day, to add insult to injury, what should the Department of Agriculture do but send broadcast the startling and disagreeable news that life down on the farm as Mrs. Farmer lives it is mainly to blame for the recent grand exodus to our thriving cities—and, until she has been appeased and pampered a little and conditions fixed more to her liking, the world stands an excellent chance of worrying for its tomorrow's dinner—for the farmer's wife, says the knowing Department, is strictly fed up on old fashioned wells and romantic oaken buckets and outside non-conveniences of a by-

(Continued on page 356)

Tillamook Cheese and Co-operation

E. B. FITTS, Oregon College of Agriculture

TILLAMOOK County, Oregon, is novel among dairy counties of the United States in that all the milk produced within the county is manufactured into one product—cheese—and all the cheese sold through one organization—the Tillamook County Creamery Association.

There are twenty-five cheese factories in the county, members of the central organization. The cheese in these factories is manufactured under uniform rules and regulations and the cheesemakers are under the general supervision of an inspector who regularly visits all the factories and grades all cheese made. The quality of the cheese is kept at a high level by painstaking manufacture and a careful inspection of all milk received.

The county employs a herd inspector who visits all herds in the county and suggests, and assists in putting into effect, changes in stables and in handling the herd and the milk that will insure the delivery of a high quality of milk to the factory. He is a frequent visitor to the factories during the time milk is being received and through sediment tests and examination of the milk there keeps posted as to the quality of the milk delivered by each of the many patrons. Cases of "off flavor" are followed back to the farms from which they come and assistance given the dairymen in locating the cause. The herd inspector has been deputized by the State Dairy and Food Commissioner and has authority to secure the enforcement of the dairy laws of the state, so far as they apply to his line of work. A real spirit of co-operation, however, exists throughout the entire organization, and dairymen and cheesemakers alike are interested in ever improving the quality of the cheese.

The county also employs a veterinarian who regularly tests all the cows in the county for tuberculosis. This man is deputized by the state veterinarian and works under his general direction.



THIS CHEESE FACTORY, IN TILLAMOOK COUNTY, OREGON, IS BUILT OF TILE AND IS STRICTLY MODERN IN EVERY RESPECT. MOST OF THE MILK USED IS FROM HOLSTEIN COWS



THIS IS ONE OF THE 25 CHEESE FACTORIES THAT CONSTITUTE THE TILLAMOOK COUNTY, OREGON, CREAMERY ASSOCIATION

Visitors to the factories are always welcome and the clean white uniforms of the cheesemaker and his assistants and the evident careful observation of sanitary methods cannot help but increase one's appetite for good cheese.

As a result of this careful inspection and manufacture there is being produced in Tillamook County what is probably the largest volume of uniform quality of cheese of any similar section in the United States, if not in the world. The demand is greater than the supply and prices are maintained at a high level. All first grade cheese (and there are but very few seconds) carry the famous Tillamook brand which is so stamped on the rind of every cheese that the purchaser of even a half pound has the name Tillamook on the wedge he carries home. An extensive advertising campaign has educated the consumer to look for "Tillamook on the rind", and the name is coming to be associated with good cheese in the minds of hosts of people along the western coast all the way from Mexico to Alaska.

Tillamook County dairymen are prosperous. The cool, moist climate and mild winters are favorable to the growth of grass and succulent feeds, and pasturage is good during eight months of the year. The factories are operated on a strictly co-operative basis, the farmers receiving the entire amount realized for their product, less the necessary cost of manufacturing and marketing.

The average price received by the farmers for their milk during 1919 was $3.31 per hundred pounds. The success of the Tillamook dairymen can be attributed to their consistent co-operation and the organizing ability and qualities of leadership exercised by the general manager, Mr. Carl Habberlach, who has been in charge since the association was organized more than ten years ago.

With the improvements in the methods of manufacturing and marketing the cheese have come improvements in the quality of the dairy cattle. There are active Guernsey, Holstein, and Jersey breeders' associations at work in the county and under the efficient leadership of Mr. Roy C. Jones, the county agent, a campaign is being waged to eliminate all scrub bulls from within the county lines.

WHERE DID QUALITY GO?

LUMAN W. COLTON, ILLINOIS

BROOKS was a plain, everyday farmer, with a fair education and an alert, inquisitive mind. He always wanted to know the cause of everything, and had a mania for getting to the bottom of things. One day during the year 1919 while tearing up some old fence early in the season, he kicked hard with his heel against where the woven wire was stuck into the ground. It was not an unreasonable sort of kick, nor one that should have hurt a properly built shoe that was as new as the one Brooks had on, but this particular shoe ripped open up the entire back, and Brooks had to go to the house and put on other foot-wear to finish his job.

It was a little thing, but it set Brooks to thinking. That was a five-dollar pair of shoes that he had worn only two months, and they had been inside of good high-topped overshoes nearly all of that time, so that they had not been exposed to wet or manure acids or the other things about the farm that wear out shoes. He had figured on getting six months wear out of those shoes, but if one of them would go all to pieces at the end of two months over a little thing that he was apt to do any day, where was six months of service to come from without a repair bill as high as the original cost of the shoes?

The incident was a last straw to him. Somehow the thought of it irritated him all the rest of the day. Anything might happen once, but Brooks recounted similar instances in his own very recent experience where quality and service in the things that he had bought and paid big money for, were sadly lacking, There was that last $45 made-to-measure suit that had ripped out in a side seam the first time he wore it, causing him considerable embarrassment while on the train, not enough cloth put into it to make a decent seam. After being returned to the tailors and certain measurements on it made larger it had done the same thing in another place, and after being returned a second time it was developing still another loose seam in lining. He recalled the price he had paid for his last winter's overcoat, and how little warmth it had, made as they all were, without lining, excepting across the shoulders. His socks could only be washed once before they had great holes in them, making his wife mend and darn them continually. Some furniture he had just bought for the spare bedroom was so cheaply put together that he had to go all over it after a very careful moving of it out from town. They had shown him signs pasted on the dresser mirrors by the manufacturers that they would not guarantee those mirrors or replace them if they broke under ordi-

(Continued on page 341)



BARN ON CRANBERRY RUN FARM, OHIO, OWNED BY HUGH W. BONNELL

The insert is Mr. Bonnell's Jersey cow, Hope You'll Do, long distance Jersey champion of Ohio. In four tests, the first begun at 2 years, 3 months, she has produced 49,065 lbs. milk containing 2,286.7 lbs. fat. Her last record is 17,193.3 lbs. milk, 770.9 lbs. fat.

During Hope You'll Do's last record she was fed a ration of 14 lbs. grain, 12 lbs. silage, 12 lbs. beets, beet pulp, steamed and dry alfalfa hay, and some mixed hay. The cost of this feed was $400. She is charged $300 for the labor of caring for her during the year, $50 for veterinary care, and $50 for insurance, making the total for the year $800. Within the year she produced 8,000 quarts of milk which gives her a total credit of $1,440 and leaves a satisfying net profit of $640 for the twelve months.

Every Farmer Needs This Kind of Saw



OUT in the woods, in the logging camps, the real worth of a man—and a saw—is proved.

The experienced lumberman knows that Disston Cross-Cut Saws are right for the gruelling job of cutting through tough, live logs that ruin cheaper saws. The new "hand" soon learns why the experts use Disston Saws.

Get a Disston Cross-Cut. Good hardware dealers everywhere sell them.

Send for free booklet, "Disston Saws and Tools for the Farm."

HENRY DISSTON & SONS, Inc.
General Offices: Philadelphia, U. S. A.

DISSTON
SAWS AND TOOLS



Clay Steel Stall —Only 3 Parts

Contented Cows Give More Milk

The dairy cow is "temperamental." No farm animal responds more generously to good treatment. None is so quickly and adversely affected by anger, fright or discomfort. That's why safety, orderly handling and pasture comfort in the dairy barn insure more milk and greater profit. These necessary features, with economy and convenience, are provided by

CLAY Sanitary Cow Stalls

Bolting only 3 parts together completes a **permanent** stall of smooth, strong steel tubing. No dangerous corners. No cumbersome castings. Easily kept clean. CLAY 2-Way Stanchion is instantly closed or opened **both ways** with **one hand.** Adjustable to any size cow or heifer. No sure-stops needed. Cow-proof lock. Users say CLAY Equipment quickly pays for itself. **Reasonably Priced.** Fully guaranteed. **Sold on 30 days' trial.**

FREE BARN PLAN SERVICE. CLAY architects will plan your alterations or new buildings FREE. Ask for catalog and Free Barn Plan Blank.



Clay 2-Way One-Hand Stanchion

IOWA GATE CO., 101 Clay St., Cedar Falls, Ia.

Never Take Chances on Butter Color

When you use Butter Color bearing the Dandelion Trade Mark you are getting the benefit of our experience of almost 40 years of Butter Color making—and experience does count.

Dandelion Brand Butter Color—Standard of the World

Over 90 per cent of all the successful buttermakers in the United States use Dandelion Brand, and that is one reason why they *are* successful. Better join this band. Ask your Jobber for latest price of "Dandelion Brand Butter Color."





We guarantee that Dandelion Brand Butter Color is PURELY VEGETABLE and that it meets the FULL REQUIREMENTS OF ALL FOOD LAWS—State and National.

WELLS & RICHARDSON CO., Inc., Burlington, Vermont.
Manufacturers of

Dandelion Brand Butter Color
The color with the golden shade

Grade Jersey Sets New Indiana Association Record

Just plain Blackie, with a record of 707.7 pounds of butterfat, is the name of the first cow in the state of Indiana to produce over seven hundred pounds of butterfat in a year in a regular cow testing association. This cow, a grade Jersey, owned by Bruce Brothers, was nine years old when she made her record and at no time during the year was she milked more than twice a day or given any special attention in the way of extra care or feed. Freshening about the middle of December, 1918, this cow was placed on test in January, 1919, and for the entire twelve months she was kept going at full speed. During these twelve months her ration consisted of alfalfa hay, corn silage, and a grain mixture composed of four parts corn, two parts oats, and one part cottonseed meal. During the early summer months she had free access to good pasture and in the late fall months rye pasture was used and with excellent production results for the entire herd.

Blackie, although not eligible for registration, is the result of a very constructive breeding program which has been carried on by the Bruce family for several years in their entire herd and just how well they have succeeded is shown by the exceptional high herd average of 392.4 pounds of butterfat for 14 cows. For years and years Mr. Bruce has used nothing but a pure-bred sire and a little over a year ago the boys started in to get some pure-bred cows with the result that three of the fourteen cows were pure-bred. Today over half of the herd is made up of pure-bred cows and the Bruces have gone into Register of Merit testing work and are making some very creditable records for their initial attempt.

Indiana. C. GEORGE.



BLACKIE, GRADE JERSEY COW WITH A RECORD OF 707.7 LBS. FAT IN ONE YEAR
OWNED BY BRUCE BROTHERS, INDIANA

Obtaining Farm Labor

HOARD'S DAIRYMAN:—Farm wages have more than doubled in recent years, but the problem of obtaining help has not improved. This indicates that something besides money is necessary to correct the difficulty.

Many of the things that make a good environment for hired help are under the farm operator's control. It is these factors that cause most of the trouble with hired help. These many small matters are not costly to correct but require some careful thought and observation. A man employed on a farm has a right to expect wages equal to those received by his friends engaged at other work requiring as much training and experience. In comparing farm wages to wages paid in the city allowance must be made for board and lodging at their true value.

The lodging a first class farm laborer deserves after a day's work and the lodging he gets are sometimes two quite different things. The interest and depreciation on good furnishings for a farm laborer's room do not amount to much. They look considerably better than do dry goods boxes for furniture and encourage better work. An individual bed, with a good mattress and springs, and enough blankets to keep warm are first in importance. A good place to keep his clothes and a table to write on are next in importance. A man rendering satisfactory service has a right to expect an orderly room and the use of a bath tub or shower.

Farm help is obtained in several ways. Lucky is he who can operate his farm with his own boys. The neighbor's boys are the next choice. Sometimes, for help in the rush season, the local daily papers will bring results. This is especially true if one is located near a city and is looking for boys during vacation. The local daily papers do not very often locate men looking for steady employment on the farm. Here the farm papers do their good work. This is particularly true of Hoard's Dairyman. If good labor advertisements were used more extensively, they would get more square pegs in square holes and round pegs in round holes.

To get results from labor advertisements, care must be used in the wording of the advertisement and in the writing of the first letter. The man one is trying to reach has nothing else to judge from. Repeated advertisements, continued for a long time, do anything but get results. If one is constantly in need of help, the fact should not be advertised with the same advertisement inserted week after week. It will do better work if the wording is changed and the farm address is omitted.

The letter of a man to an employer should give his experience, some of his past employers, his age, weight, education, wages expected, when avail-



"Customers, gladly pay more for butter they know is as perfect as when it first comes from the churn.

"That's why I wrap my butter in

Paterson Pioneer Parchment Paper

"Keeps it clean—sweet—pure. Makes my butter *worth* more and *sell* for more. Yet, the small cost of this Parchment Paper isn't worth considering when compared with my extra profit."

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The "Jim Dandy" is absolutely the lowest priced good concrete mixer on the market. It is specially designed and built for farm use and you'll find that it is exactly the mixer you've been waiting for.

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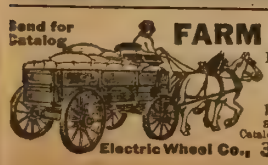
Send us just $20 cash now; we will ship the mixer all ready for business—when it comes, use it FIVE DAYS and if you are not satisfied that it is all O. K. and decide not to keep it, write us and we will send your $20 back and tell you where to ship the machine.

Write today

Drop us a postal asking for our circular illustrating and describing the four models in which this Jim Dandy Mixer is built and giving complete details of our easy payment plans and the free trial proposition.

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FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 31 Elm St., Quincy, Ill.

able, and anything requested in the advertisement he is answering. A picture of himself, if included in the letter, will give an employer more true material from which to form his opinions.

An employer's letter to a man he expects to hire should contain a brief description of his farm. This should include the size of the farm, the number of acres under cultivation, the crops raised, the breed and number of live stock kept, the labor saving machinery and equipment in use, a description of the buildings, and the distance from a railroad, church, and nearest town. Nothing of particular interest or convenience to men should be omitted. If some pictures of the stock or buildings are included with the letter, they will add much to its descriptive value. No man can afford to spend considerable railroad fare and go to a new job blindly.

The way a new man is received influences his first impression of a new job. If all the advertising has been done to hire a hobo, treat the new man as one. However, if one is expecting a man of some culture and education, treat him differently. It pays to treat a laborer fair. In no business are employer and employee in closer relation to each other than on the farm, and therefore it is well to consider a man as a companion as well as a laborer. A well kept set of buildings and good machinery in repair mean efficient days, a contented boss, and a satisfied laborer.

Some time is always lost in teaching a man a new job. This may vary from a fraction of a day to several days, or until a man is able to learn things by himself, which continues until he leaves his job. This makes a man most valuable when he leaves. Insisting on many petty, non-essential details bores a new man and will do so every time those jobs have to be repeated.

The length of time a man works at one place depends largely on his motive in working, and is usually in accordance to the care used in hiring him. A laborer that is not interested in farming, except for his wages, cannot be depended on as being a steady worker. This is not true of a man who is interested in his work and intends to operate a farm of his own some day. The first month of employment is the most expensive. In time a man becomes a "cog in the wheel" because he learns to know the live stock as individuals, and the peculiarities of the machines and the equipment.

Few men seeking experience expect to spend all their time working out on one farm. Many leave even before the above reason would necessitate a change. Some leave because they are inclined to wander. Others because they find themselves a round peg in a square hole or have a better position in view. Young men away from their homes become restless, if the home conditions are poor, or if social functions, or means of getting to them, are lacking. A daily work schedule with long, drawn-out work days breeds discontent. Lower wages than the average for the community arouse a desire for a change.

The personality of the boss is a big factor in getting results from hired help. It may even outweigh all the other factors. A man who has served a good apprenticeship working out and has learned to understand men can get results with them if he is not afraid to show his appreciation of good work.

Wisconsin. E. C. VOLLMER.

Exposure to weather often causes greater destruction to farm implements than using them. Avoid this loss by storing all machinery and tools properly under shelter before winter sets in.

Eventually,

every dairy farmer will use a suction-feed separator

WASTE, in production or labor, has no place on the modern farm. Yet thousands of farmers are unconsciously permitting a waste of butterfat that can and should be stopped.

That is why we go on record in stating that eventually every dairy farmer will use a suction-feed separator. The suction-feed principle in milk separation is the only one that absolutely prevents waste of butterfat.

Only by the suction-feed method can a separator *skim clean at any speed.*

Today, the only suction-feed separator is the Sharples—protected by patents that force other manufacturers still to cling to the old fixed-feed, wasteful method.

It is logical and natural that as farmers get acquainted with the Sharples (and every year thousands are trading in their old fixed-feeds for a Sharples Suction-feed) there will be a saving of millions of pounds of butterfat every year.

It will pay *you* to replace your fixed-feed separator with a Sharples, for it costs more to operate a wasteful separator than to buy a modern, 100% efficient Sharples Suction-feed.

Beside the exclusive, clean-skimming suction-feed principle, the Sharples is the *only* separator with the knee-low supply tank, simple one-piece bowl (no discs to wash) and once-a-month automatic oiling system.

Write for illustrated booklet, describing the Sharples Suction-feed Separator. Contains letters from users whose experiences will interest you. Address nearest office. Dept. H.

New York State School of Agriculture

Canton, New York

After making several trials of running the Sharples Suction-feed Separator at different speeds, I am satisfied that the machine will do all that you claim.

(Signed)
JOHN P. PORTEOUS
Dairy Industry Department

Sharples

SUCTION-FEED CREAM SEPARATOR

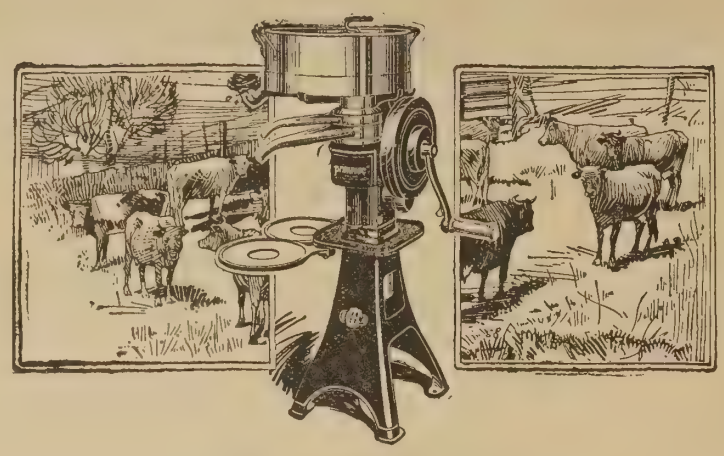
THE SHARPLES SEPARATOR COMPANY
West Chester, Pa.
Branches: Chicago San Francisco Toronto



Skims clean at any speed

DC 122

"There are no substitutes for dairy foods."



Controlling the richness of your cream—

As every dairyman knows, a slight turn of the cream screw of a separator results in a pronounced difference in the density of the cream. This is so because it acts directly on the small volume of cream—about one-ninth of the total volume of the whole milk. Because of this delicate adjustment, it is an easy matter for the average person to get the cream so rich that all of it cannot be discharged through the cream outlet. There is then but one means of escape for it—with the skimmilk.

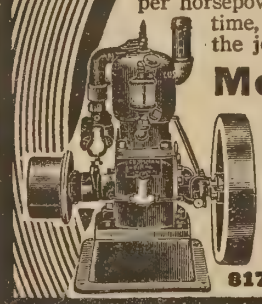
In the **Primrose Separator** the thickness of the cream is regulated by a screw in the skimmilk outlet. It works on the large volume of milk instead of the small volume of cream and is proportionately easier of adjustment. And two large cream outlets, unobstructed by a cream screw, let the cream out of the bowl.

Bear this in mind when you are ready to invest in a new separator—and consult your nearby International dealer in regard to a ***Primrose.***

INTERNATIONAL HARVESTER COMPANY
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Light Weight Farm Engines

Cushman Engines, recognized everywhere as The Original Light Weight Power, give dependable, economical service on every power job on the farm. Cushman Engines weigh only 40 to 65 pounds per horsepower. The Cushman owner saves valuable time, because he can easily move his engine to the job, instead of hauling the job to the engine.



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Cushman Engines weigh only one-third to one-fourth as much as ordinary engines, and they run much more quietly and steadily. Better design, better materials and better workmanship give the Cushman more power per pound. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump without extra charge. Send for Free Book on Light Weight Engines.

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The "STAY THERE" Aluminum Ear Markers

are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalog and prices mailed free. Ask for them.
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Ear Tags, Bull Staff and Rings.
Description and prices sent on application. 300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business.



H. A. Mayo, Syracuse, N. Y.

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Mo.	Webster County	F. M. Herman	June	431	49	78	J. D. Wilkerson
"	Webster County	Calvin C. Minor	July	477	36	90	J. D. Wilkerson
Ky.	Oldham County		June	292	8	61	C. S. Love
"	Oldham County		July	300	7	48	R. P. McMakin
"	Oldham County		Aug.	270	7	43	R. P. McMakin
"	Nelson County	Lloyd E. Cutler	"	214	2	55	J. A. Rodman
Ill.	Knox County	J. B. Countiss	"	211	22	65	Zenas Spicer
Ind.	Orleans Co-operative	M. R. McCutchan	"	435	31	67	F. D. Turner
"	Pioneer	H. C. McMurray	"	955	15	56	Stower & Son
Ind.	Porter County	A. W. Snyder	"	387	36	69	Dan Huxton
Wis.	Amherst—Nelsonville	Geo. W. Baumel	"	410	23	59	Matt Domaszek
"	Richland County	Henry Engsberg	"	500	18	55	John Babb
"	Ft. Atkinson	Wm. Seales	"	398	5	58	Frank Taylor
W.Va.	Ohio County	Luke W. Frame	"	297	48	58	Home View Farm
Pa.	Juniata County	Karl A. Fettig	July	296	11	56	G. O. McClure
Ohio	Muskingum	J. F. Martt, Sec.	"	437	63	63	J. D. Holloway

Association Notes

Nelson County, Kentucky:—Three of the poorest cows have been sold from one herd. A few dairymen who have been using commericial mixed feeds are now using home-mixed feeds instead. Some of them are also interested in the use of pure-bred sires. Several farmers in this county are expecting to go into the dairy business in the near future. Since Nelson County is naturally adapted to dairying, a profitable industry should develop. August market milk sold for $3.48 per cwt. Local feed prices are: Schumacher, $80 per ton; alfalfa, $35; shipstuff, $75; hominy meal, $62.50; cottonseed meal, $80.

Knox County, Illinois:—Four new members have been added, one of them being the owner of the high cow for August. One pure-bred bull and four pure-bred cows of excellent breeding have been purchased by members of the association. Two unprofitable cows were sent to the butcher. Four silos have been built and one milking machine installed during the month. Market milk testing 3.5% sold for $4.37 per cwt. and 2c per point above. The condensery paid 56c per lb. for fat and the creamery paid 56c. Milk retails for 15c per quart, butter for 75c per lb. Feed prices are as follows: Corn and cob meal, $2 per cwt.; oats, 65c per bushel; wheat bran, $58 per ton; oil meal, $78; cottonseed meal, $66; alfalfa hay, $36.

Fairbault, Minnesota:—Pastures are very short and feed high. It pays to feed good cows on pasture as the man having the high cow and also the high record for July fed a good grain ration to his herd. Seventy per cent made over 40 lbs. fat. Feed prices here are: Corn, $1.75 per bushel; bran, $53 per ton; oats, $70; Schumacher, $65; oil meal, $67.

Pioneer, Minnesota:—August market milk sold for $4.50 per cwt. The creamery paid 72c per lb. for fat. Milk retails for 13c per quart and butter for 62c per lb. Local feed prices are: Hay, $12 to $20 per ton; silage, $3 to $5; bran, $44 to $48; oil meal, $66 to $70; oats, $30 to $35; corn, $40 to $45.

Porter County, Indiana:—The association average has increased slightly over that of the July, due to the fact that the members are beginning to feed grain and hay instead of pasture. Four unprofitable cows were sold during August. Market milk testing 3.25% sold for $3.70 per cwt. The creamery paid 56c per lb. for fat. Milk retails for 16c per quart and butter for 58c per lb. Feed prices are: Ground corn, $72 per ton; bran, $65; corn and cob meal, $66; ground oats, $45; cottonseed meal, $78; oil meal, $82; alfalfa hay, $26; clover hay, $26; corn silage, $8; Unicorn, $68; gluten, $72.

Amherst—Nelsonville, Wisconsin:—The members of this association are buying feed co-operatively by carload lots. A number of members fed grain and silage throughout the summer and found it profitable. Three cows were sold for beef. The creamery paid 63c per lb. for fat in August. Bran is rated at $48 per ton; oats, $50; rye middlings, $55; Unicorn, $78; oil meal, $75.

Richland County, Wisconsin:—One pure-bred Guernsey bull and three pure-bred Guernsey cows were bought during August. Two unprofitable cows were sold for beef. Some of the members increased the production of their cows by feeding balanced grain rations and green clover and alfalfa. Market milk sold for $3 per cwt. and 6c per point above 4% test. The condensery paid 80c per lb. for fat, the creamery 59c, and the cheese factory 54c. Milk retails for 12c per quart, butter for 57c per lb., and cheese for 24c. Feed prices are: Oats, 75c per bushel; corn, $1.90; oil meal, $80 per ton; bran, $50; alfalfa, $30; barley, $1.20 per bushel.

Fort Atkinson, Wisconsin:—The coming season ought to be ideal for dairy production owing to the abundant yield of both roughage and grain. Commercial protein feeds are getting lower gradually. August condensery milk sold for $3.20 to $3.35 per cwt. The creamery paid 70c to 76c per lb. for fat. Feeds are rated as follows: Silage, $7 per ton; alfalfa hay, $30; bran, $50 to $58; gluten, $65; oil meal, $70; barley, $1 per bushel; oats, 72c; pasture, $3 per cow.

Ohio County, West Virginia:—In August, 3.5% milk sold for $4 per cwt. Unicorn is rated at $4.15 per cwt.; Larro, $4; Schumacher Chop, $3.90; cottonseed meal, $4; corn, $2.25 per bushel.

Juniata County, Pennsylvania:—Four more unprofitable cows were sold during July. We have purchased a carload of cottonseed meal co-operatively at a considerable saving on the price per ton. Some of our members are feeding soiling crops, thereby keeping up the production of the herd. July market milk testing 3.25% sold for $3.73 per cwt. and 4c per point above. The creamery paid 75c per lb. for fat. Milk retails for 14c per quart and butter for 70c per pound. Feed prices are: Hay, $25 per ton; green corn, $6; corn and cob meal, $53; ground oats, $66.80; bran, $65; cottonseed meal, $85 to $90; Union Grain, $82; Larro Feed, $77; Peerless Dairy Feed, $70.

Muskingum, Ohio:—For the new year beginning September 1st, at least seven herds are going to do Register of Merit and Advanced Registry work. A couple of grade sales

are to be held and in every case pure-breds are taking their places. Twenty-four pure-bred Jersey heifers have been distributed by the local Jersey Association. July market milk sold for $3.50 per cwt. The creamery paid 57c per lb. for fat. Milk retails for 14c per quart and butter for 62c per lb. Oil meal is bought for $3.85 per cwt.; cottonseed meal, $4; bran, $3; corn meal, $2; pasture, $2.50 per month.

A Herd From a $33.33 Beginning

From an investment of $33.33 for a pure-bred Holstein heifer in 1910 to the highest producing herd in the Union County Cow Testing Association in 1919 is the record of Frank Rupprecht of Ohio. Mr. Rupprecht's herd last year consisted of 11 cows,



JOHANNA CONCORDIA GILT EDGE, HIGH COW IN THE RUPPRECHT HERD

four of these milking in heifer form. The average production per cow was 11,655.6 lbs. milk, 375.76 lbs. fat. His high cow, Johanna Concordia Gilt Edge, produced 14,831 lbs. milk, 556.-2 lbs. butter. Japalar Wonder Beuzzetta Woodcrest stood second in milk production with 14,043.9 lbs. milk and 444.96 lbs. fat. She is the daughter



JAPALAR WONDER BEUZZETTA WOODCREST, SECOND HIGH COW IN THE RUPPRECHT HERD

of the $33 heifer. The average cost of feed for the 11 cows was $139.86 and the income above cost of feed, $191.12. Some official testing is done also and the best seven-day record made was 204 lbs. fat on the foundation cow purchased as a heifer at $33.33.

The records on this herd were made by Mr. Rupprecht while at the same time he was working his 150-acre farm. Other than a little oil meal and cottonseed meal these cows received nothing except home grown feeds: corn, oats, barley, alfalfa, and silage. On the Rupprecht farm the milk is separated, the butterfat sold, and the skimmilk fed to the calves and hogs. A farm electrical plant furnished the juice for lights and power to run the cream separator and other labor saving appliances.

Besides taking care of his herd and farm, Mr. Rupprecht finds time to be president of the local county Holstein Club and to do other things that help to make his county and community a better place in which to live. H. C. BARKER.

Most people will find that they can reduce their daily ration by one-third, sometimes one-half, without any inconvenience whatsoever.—DR. J. H. KELLOGG.

GMC

General Motors Trucks

Because of their speed and flexibility GMC Model 16, ¾ to 1 ton trucks are popular among dairymen for light, quick delivery.

This is the famous GMC Model standardized by the Government during the war for all work in the ¾ ton to 1 ton class, and which, in ambulance work made a record and a reputation never approached by another motor truck.

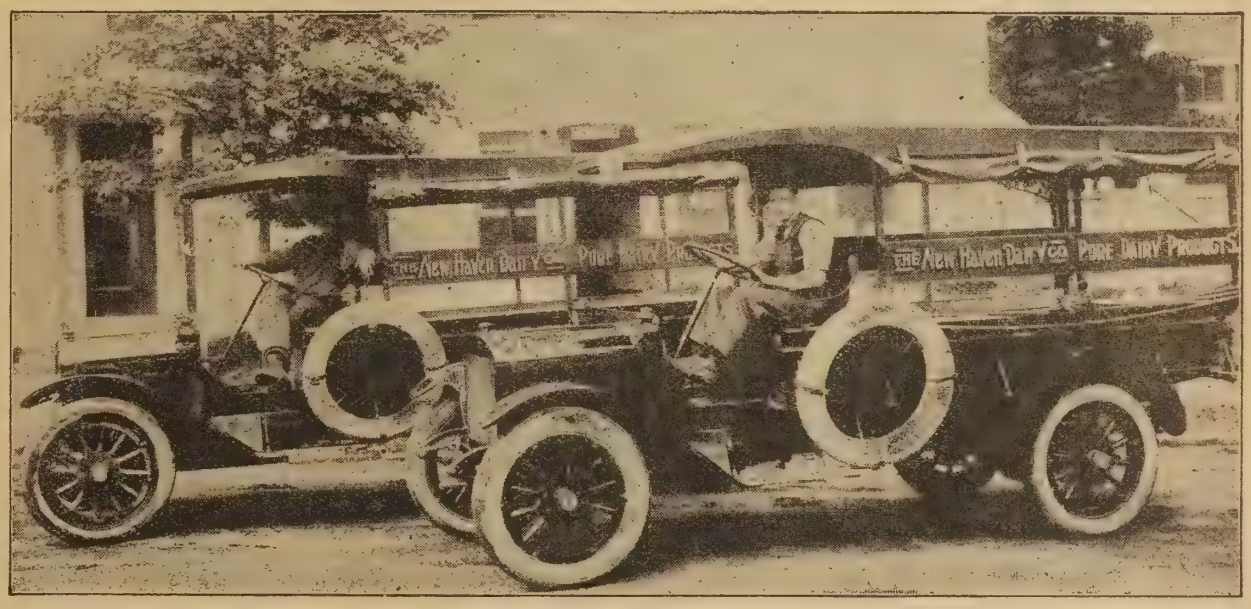
Exactly the same chassis is in Model 16. Great power is available in the fine motor, and in correct proportion, every other unit, clutch, universal joint, transmission and rear axle are built to handle that power.

Model 16 is a real truck, from the ground up, not a so-called truck built with passenger car units. Those who own this model are full of praise for its merits. Ask for book (H) "Motor Trucks On the Farm".

GENERAL MOTORS TRUCK COMPANY

Branches and Distributors in Principal Cities

PONTIAC, MICHIGAN (708)



Size of Farm Business

HOARD'S DAIRYMAN:—A Wisconsin farmer owned 80 acres of land of medium quality. All of it was under cultivation. He was engaged in general farming and, because his farm business was small, he found it difficult to make a living.

Realizing that he was farming on too small a scale, he decided to enlarge the business. That was about twelve years ago. His first move was to try to buy adjoining land, but his neighbors would not sell. Next he tried to sell his farm and buy a larger one, but he was unable to sell his farm to advantage.

Receiving no satisfactory offers for his farm, he finally decided to enlarge his business by improving the farm business he already had. He began by culling out and selling to the butcher five of his low producing cows. The scrub bull went with them. The money received from the sale was used to purchase three high-yielding grade dairy cows and to pay for a share in a good registered dairy bull.

The farmer increased his acreage of corn, bought a silo, and limed his land for clover. He also prepared a small field for alfalfa by a heavy application of lime and twelve tons of manure to the acre. The alfalfa did well from the start and yielded about twice as much hay per acre as red clover.

Corn silage and alfalfa made it possible to keep more cows, the larger number of cows improved the fertility of the soil and increased crop yields. Some concentrates were purchased for the cows, which also helped to increase soil fertility and to bring greater yields of crops. Greater crop yields, more cows, and a greater return per cow gradually increased the net income of the farm.

Progress was slow at first, as it usually is, but the business gradually became larger and with every increase of the business, the farmer acquired more working capital. Within a year or two he purchased a registered dairy cow that proved to be a high producer of milk and butterfat. The following year he bought two more. From that time on progress was rapid. The increased soil fertility made it possible to add a small acreage of potatoes as a cash crop. This crop proved to be very profitable, and the fertility removed by the potatoes was replaced by the concentrates bought and fed on the farm.

For a few years there was no income from the sale of pure-bred dairy cattle, but a valuable herd of pure-breds was being built up. Ten years from the time the farmer began to enlarge his farm business, the income from the sales of pure-bred dairy cattle greatly exceeded the former sales from the entire farm. Such sales may fairly be considered net profit because the sale of milk from the herd of high producing cows more than paid all farm and living expenses.

At the present time the farmer and his family live in a modern farm house, own a medium-priced automobile, have a fair-sized bank account, and they have not lived a life of drudgery in order to accomplish these results. Success has come to them through the intelligent management of their small farm. The farmer early realized that he must increase the farm business in order to succeed. Not being able to add to his acres, he took the only other course available to him, and increased the income from the acres he already had.

J. C. MCDOWELL.

CONTENTS

Municipilization of Milk in New Z...land 325
Land Bank Sound 326
Condensed Milk Market 326
Converting Corn into Milk and Meat 327
Deserted Farms are not Found on Paved Roads 328
The Independent Farmer's Wife 328
Tillamook Cheese and Co-operation 329
Where Did Quality Go? 329
Grade Jersey Sets New Indiana Association Record 330
Obtaining Farm Labor 330
Cow Testing Associations 332
A Herd from a $33.33 Beginning 333
Size of Farm Business 333
Sale Announcements 334
Cheese Market Output Better with Prices Rising 334
Interest Lags in Butter Trade Following Overbuying 334
Hay and Feed Prices Decline 334
Dairying Thirty Years Ago 334
Chester County Picnic 335
How Co-operative Marketing was Made a Success in California 335
Labor Saving 336
The Hog Market 336
Good Cheese 336
Farm Bureaus 336
Registering Farm Name 337
Barley Beards 337
Two-piece Stave Silo 337
Cutting Soy Beans for Hay 337
Cottonseed for Cows 337
Value of Oat Straw 337
Feeding Oat Straw 337
Trouble with Pasteurized Milk 337
Washington, D. C., Weekly News 338
Oldest Ohio Holstein Club Meets 348
Club Members Two-day Camp 352
Junior Letters 353
How Dairymen Benefit by Attending the National Dairy Show 357
Replaces Inferior Birds 357
Veterinary—Catarrh—Contagious Mammitis 360
Texas News 360
Producing Clean Milk 364
Suppression of Milk 364
Wisconsin State Fair 342
National Jersey Show 362

Coming Events

Kansas State Fair, Hutchinson, Kans., September 18—24. A. L. Sponsler, Secretary.

Eastern States Exposition, Springfield, Mass., September 19—25. J. C. Simpson, Sec.

Trenton Interstate Fair, Trenton, N. J., September 27—October 1. M. R. Margerum, Secretary.

Vermont State Fair, White River Junction, September 28—October 1. F. L. Davis, Sec.

Dairy Cattle Congress, Waterloo, Ia., September 27—October 3. E. S. Estel, Secretary.

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Ninth Annual Convention, International Association of Dairy and Milk Inspectors, National Dairy Show, Chicago, October 11, 12, and 13. Ivan C. Weld, Secretary, 1120 Connecticut Ave., Washington, D. C.

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Louisiana State Fair, Shreveport, Louisiana, October 28 to November 7. W. R. Hirsch, Secretary.

Cheese Market Output Better with Prices Rising

Report of U. S. Bureau of Markets

Further advances were registered in the cheese markets during the week ending September 4, and trading was generally on a firm basis after the trend of the market became apparent. Although a tendency to sell low cost cheese was shown by certain dealers who overestimated their needs for the immediate future and bought heavily prior to the advance in freight rates or who have experienced difficulty in securing loans, it can not be said that such a feeling was general. For the most part, a realization of the fact that cheese could not be replaced at current country prices kept markets firm. Opinion seems to be that demand will continue to improve and that buying will be more active when cooler weather arrives and after vacation periods are over.

The average wholesale prices on American cheese, style Twins, for the week ending September 4, were as follows: New York, 27.21 cents; Chicago, 25.63 cents; Boston, 27.63 cents; San Francisco, 28.54 cents; and Wisconsin primary market, 25.67 cents. The corresponding weeks of last year showed 30.75c, 29.92c, 31.80c, 31.05c, and 30c, respectively for these markets.

Country Market Movement Satisfactory

Conditions at Wisconsin primary markets were much like those in the distributing markets. Trading was good during the week and price ranges were narrowed. With a few exceptions dealers followed the advancing market, possibly taking a smaller margin of profit in some cases, but showing no inclination to cut prices. Scarcity of Twins kept prices on this style especially firm. Some other styles did not move so well, but heavier demand this week was expected to remove all possibility of any surplus. Cooler weather has resulted in further improvement of quality in current make, and from now on better cheese should appear on the markets.

Interest Lags in Butter Trade Following Overbuying

Report of U. S. Bureau of Markets

No unusual features developed in the butter markets during the week ending September 4 other than a rather sharp decline in prices the fore part of the week which was followed later by a firmer tone and gradual recovery. Out-of-town buyers had evidently bought more heavily than was generally suspected prior to the advance in freight rates, and for several days following interest was decidedly lacking in the markets.

Receipts happened to be comparatively heavy just about this time, and as there was a surplus, particularly of undergrades, prices had to go lower to start buying. The New York market led in this movement and other markets were forced to follow to keep prices between markets in their proper relation. A wide range still exists between 86 and 92 scores, as the real active demand is almost entirely for the better grades of butter. No general improvement of the market is anticipated until after the Labor Day holiday. It is reported that a good many of the mill towns in New England, which have been poor buyers lately on account of the closing down of factories, are expected to be back in the market for butter shortly, and this fact should tend to improve demand somewhat.

The average wholesale prices of 92-score butter at five of the principal markets for the week ending September 4, were as follows: New York, 57.5 cents; Chicago, 54.9 cents; Philadelphia, 58.3 cents; Boston, 57.8 cents; and San Francisco, 57.8 cents.

Lower Prices Check Foreign Importations

For the time being, at least, importations of foreign butter have been almost entirely curtailed. Danish butter was offered at New York during the week at prices ranging from 55 cents to 56 cents, duty paid, but this quotation is prohibitive in view of present domestic prices. Holders of Danish stock in storage are ready to sell, and some few lots were moved at New York at from 53 cents to 53½ cents. The total quantity cleared, however, was small.

Hay and Feed Prices Decline

The report of the U. S. Bureau of Markets for the week ending September 4 shows a slight decline in hay prices, with the receipts in slight volume. Timothy ranged from $27.75 per ton in Kansas City to $43 in New York. Mixed timothy and clover is quoted at about three dollars under this, with straight clover at about two dollars under. No. 1 alfalfa is quoted at $26 in Omaha and San Francisco, $28.50 in Kansas City, $31 in Minneapolis, $32 in Chicago and Los Angeles, $35 in Memphis, and $41 in Atlanta.

Despite higher freight rates, wheat mill feeds declined 50 cents to $1 per ton in the eastern markets, with double this in the Central West. Bran averaged $39 in Minneapolis, $44 in Chicago, $47.50 in Buffalo, and $51 in Boston and New York. Middlings range from $48 in Minneapolis to $56 in New York.

Linseed meal is quoted at $61 in Buffalo, $62 in New York, $63 in Boston and Minneapolis, and $65 in Chicago and Cincinnati. Cottonseed meal, 41 per cent protein, ranged from $57 in Kansas City to $65 in Boston, while 36% meal ranged from $52 in Los Angeles to $62 in Boston. In Chicago 43 per cent meal was quoted at $61.75 and 36 per cent meal at $58.25.

Gluten feed was quoted at $63.75 in Chicago, $64.50 in Buffalo, and $73 in New York. At San Francisco beet pulp sold for $52, a decline of two dollars from last week.

Dairying Thirty Years Ago

Notes From the Issue of Hoard's Dairyman for Sept. 19, 1890

HOARD'S DAIRYMAN: — Concerning articles in last Dairyman in regard to delivery of milk to city customers, I wish to say from experience that Mr. Wilder should not lose $600 worth of bottles in two years or three times two years. While handling milk for two years, part bottles and part cans, all bottles lost or broken I received pay for. But in the use of the bottles I did almost entirely as you suggested, emptied the bottles into vessels furnished by the customer. In several cases where bottles were exchanged, breakage or loss was paid for and no complaint on the part of the customer.

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Prices for Dairy Products

September opened with Elgin butter commanding twenty-four cents a pound; a year ago September butter brought on the average twenty-two and four-fifths cents. Cheese, of course, is influenced by the price of butter, and that, too, has advanced. For years the prediction has gone forth that dairy products would sell for less than cost of production, because farmers were turning their attention in that direction as the only seeming source of profit. The change in dairying, after all, has not been through the increase in dairy cows to any great extent, but rather in co-operation.

When we look over the field and see that a large proportion of the butter yet produced brings second- or third-rate prices, we are willing to admit that there is yet plenty of room for the dairy gospel, and to those who carry it abroad we say Godspeed.

⚜

Dr. George E. Morrow notes the following among suggested conclusions from two years' tests at the Illinois Experiment Station:

"The rate of growth of cattle, either on grass alone or with an added grain ration, is very irregular, being especially checked by either drouth or excessive rains, extreme heat or cold storms. The addition of grain or other food to the pasturage before the grass fails in the autumn is clearly advisable. The acreage of pasturage may probably be safely decreased one-third, if the steers be given a full grain ration."

Seed corn selection is important this year. Good ears that mature this season will have a real value.

Sale Announcements

Sept. 18—Guernseys. New York State Geurnsey Sale, Albany, N. Y., L. F. Herrick, Sale Mgr., Worcester, Mass.
Sept. 21—Guernseys. Langwater Farms, North Easton, Mass. L. F. Herrick, Sale Manager, Worcester, Mass.
Sept. 22—Holsteins. G. H. Horrell, Humbird, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Sept. 25—Holsteins. John Stotzer herd, Suffield, Ohio.
Sept. 27—Holsteins. Detweiler's Dispersal Sale. Illinois Holstein-Friesian Ass'n., Mgrs.
Sept. 27—Holstein bulls. Holstein Breeders' of Lake County Indiana, Crown Point, Ind. Roscoe Clark, Sale Mgr.
Sept. 29—Ayrshires. Ayrshire Dispersion of C. H. Peverill of Waterloo, Ia., at Dairy Cattle Congress, Waterloo, Ia. Amos Burhans, Sale Mgr.
Oct. 1—Jerseys. Virginia Jersey Cattle Club Sale at Fredericksburg, Va. Tom Dempsey, Sale Manager.
Oct. 1-2—Holsteins. Vermont Breeders' Sale at Rutland, Vermont.
October 1-2—Holsteins. Dairy Center Sale at Northfield, Minnesota. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 4—Holsteins. Summit Co. Holstein Breeders' Ass'n. Sale at Akron, Ohio. Wm. F. Cook, Hudson, O., Mgr.
October 5—Guernseys. Blue Earth County Breeders. Mankato, Minn. Dr. M. B. Wood, Mankato, Minnesota, Sale Manager.
Oct. 5—Holsteins. Hall Bros., South Denver Station, Denver, Colo.
October 6—Guernseys. Guernsey Breeders' Association of Northern Minnesota and Northern Wisconsin, Tristate Fair Grounds, Superior, Wisconsin. E. P. Gibson, Sale Manager, Duluth, Minnesota.
Oct. 6—Holsteins. Dispersion of H. G. Cox herd of Registered and Grade Holsteins at St. Charles, Minn.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 18—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
October 22—Holsteins. Central Pennsylvania Holstein-Friesian breeders' second annual sale at Hughesville, Pa.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Guernseys. E. J. Himmelberger's complete dispersal sale of registered Guernseys at Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Mgr.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
October 28—Guernseys. F. G. Eberhardt complete dispersal sale of registered and grade Guernseys at Mishawaka, Ind. F. E. Fox, Sales Mgr., Waukesha, Wis.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

How Co-operative Marketing Was Made a Success in California

HERMAN STEEN, ILLINOIS

"GENTLEMEN, this is what co-operative marketing has done for California." The speaker's words directed our thoughts to the valley below, where every acre seemed to be outdoing every other acre in productive activity. The dark green of the orange orchards gave way now and then to the lighter green foliage of the lemons, a color scheme that was broken occasionally by the yellow-green of Elberta peaches. Away in the background, perhaps eight or ten miles away, were vast fields of beans. Up in the valley to our right stood a forest of walnut trees. A dozen miles ahead was the Pacific ocean, behind us the Santa Ana Mountains. If there was a lazy acre anywhere between, we could not discover it.

Co-operation Built the Industry

"Not so many years ago this was all desert," continued the speaker, J. A. Campbell, president of the Orange County (California) Citrus Growers' Exchange. "The pioneers began growing oranges and the other fruits that are adapted to our conditions. It was hard to get a good market for the crops produced. Seldom did they get a fair price—more often they received only enough to eke out a miserable existence. Out of those intolerable conditions there grew up a system of co-operative marketing which not only brought fair returns to the fruit growers, but it built an industry. The uncertain returns of pioneer days gave way to a situation which seemed almost to guarantee the future. The result has been a tremendous increase in the area devoted to citrus fruits, and as fast as co-operative marketing has been applied to other products those industries also began to prosper. Co-operation has rescued California agriculture from the depths of despair and placed it upon a business basis which has been accompanied by a fair degree of prosperity."

This same story in different words was repeated to me by dozens, yes a hundred times, by people in all parts of California during the next two weeks after Campbell pointed out from the crest of Skyline Drive what co-operative marketing had done for the Santa Ana Valley. I heard it in the raisin vineyards around Fresno, in the poultry yards of Petaluma, in the rice fields of the Sacramento Valley, and in the Santa Clara prune orchards. Farmers told me stories of the old days when they and their families worked long, weary hours just for the privilege of existence; their shoulders straightened and their eyes brightened as they spoke of the square deal in business and the happiness in life that has been brought them through co-operation.

Farming on Business Basis

Co-operative marketing has been weighed in the balance by the farmers of California and not found wanting. Excepting alone the perfection of modern irrigation methods, co-operative marketing has done far more than all other factors combined to develop the industry of agriculture in California. By putting farming upon a basis where it pays dividends, it has taken a long step toward solving the questions which press the hardest upon those who till the soil.

The path of co-operation in California has not been an easy one. Its path has been covered with thorns and strewn with stones. It has been attacked by enemies from without and traitors from within. The speculative interests, always the enemies of stabilized prices for farm products, have entrenched themselves behind millions while they have resisted the advance of the co-operative idea. Upon every hand in California are the bleached bones of co-operative enterprises, yet co-operation has never permanently lost ground in its 40 years of existence there, but has made steady and consistent gains. The growth of the co-operative idea is a tribute to the courage and convictions of the farmers of the state.

Handled $225,000,000 Co-operatively

Farmers' co-operative companies last year marketed approximately $225,000,000 worth of farm products in California. This is 45 per cent of the total farm production of the state. In other words, out of every $100 worth of stuff sold from California soil, $45 has been handled through co-operative marketing associations. It is the high water mark in co-operation in America thus far, and is probably excelled only in Denmark and New Zealand in all the world.

The largest and best known co-operative marketing enterprise in California is the California Fruit Growers' Exchange. It markets 74 per cent of the citrus fruit—oranges, lemons, and grape fruit—produced in California, and during the past 12 months the volume of business handled was in excess of $57,000,000. It was formed in 1895 by the orange growers around Los Angeles because conditions governing the sale of fruit had become intolerable. Prices received were so far below the cost of production that orange groves were abandoned wholesale and many growers were bank-

(Continued on page 338)

Chester County Picnic

DANIEL J. ADAMS, PENNSYLVANIA

CHESTER County, Pennsylvania, is entitled to the banner this year for one of the greatest agricultural meetings and picnics ever held in the East. Five thousand farmers congregated at Lenape Park, near West Chester, Pa., on Monday, August 23rd, for the first big annual picnic and, during the afternoon, listened to a program of probably the greatest collection of agricultural speakers ever on one platform.

This big picnic was held in the interests of the opening of a big live stock campaign in Eastern Pennsylvania and the Chester County Live Stock Breeders' Association was joined by the Farm Bureau and Pomona Grange No. 3 in arranging for the picnic and meeting. In addition to the Chester County folks in attendance, several hundred from other counties and other states traveled to West Chester to be present and hear the nationally known speakers on the program.

Secretary of Agriculture E. T. Meredith was the principal speaker of the day and Secretary of Agriculture Frederick Rasmussen presided as chairman of the meeting. Mr. Meredith held his audience in very close attention as he told of the work of the Department of Agriculture at Washington and of the ways in which this national service could be of benefit to Chester County live stock people. He particularly emphasized the importance of a community interest in such progressive work and congratulated Chester County on being one of the foremost counties in this work in the United States today.

Secretary Rasmussen, of Pennsylvania, in his introductory remarks, said that Chester County, Pennsylvania, leads all other counties of the state in dairy production and the growing of corn and alfalfa. There are over 5,600 fine farms within the county and, during the past year, over $20,000,000 worth of farm produce came from Chester County farms. He also said that the dairy cow is the foundation of our agriculture and it is largely in the devolopment and improvement of the dairy cattle interests of the county that Pennsylvania people are most concerned.

Mr. Robert Scoville, President of the American Guernsey Cattle Club, was the next speaker on the program and prefaced his remarks on the improvement of live stock with the statement that "the scrub sire is a living reproach to American agriculture today and that it is a reproach to our agricultural people that they have been willing to accept the handicap of not using all of the brains with which they are endowed in the improvement of our live stock."

The crowd was especially pleased to hear Mr. John A. McSparren, of Lancaster County, the Master of the Pennsylvania State Grange. He assured the audience that the Grange association was ready to co-operate in every way possible in the improvement of our live stock.

The next celebrated speaker was Mr. M. D. Munn, President of the National Dairy Council and President of the American Jersey Cattle Club. Mr. Munn's address was especially timely in that he advised that this was a time for constructive effort on the part of agricultural people and he deplored the tendency of drifting and the destructive criticism that has become so prevalent. Mr. Munn was also asked for details in regard to the National Dairy Council and its work and the audience was especially interested and appeared anxious to assist in the work as being conducted by the National Dairy Council.

Hugh G. Van Pelt presented ways and means of improving our live stock.

Mr. James Watson, Secretary of the Ayrshire Breeders' Association, and Mr. James Dodge, President of the American Berkshire Swine Association, also spoke on live stock improvement.

The first step in the live stock improvement campaign will be an accurate survey of the live stock interests of the county, which is to be conducted during the month of September by a committee consisting of one man from each of the fifty-seven townships within the county. Following this survey and with the information obtained thereby, a program, consisting of the organization of calf clubs, bull clubs, and other important matters, will be immediately taken up and it is no idle boast that Chester County will prove to be one of the greatest pure-bred live stock centers of the United States within the next few years.



DISTINGUISHED SPEAKERS AT FARMERS' PICNIC, WEST CHESTER, PENNSYLVANIA

Left to right: P. M. Sharples, Pennsylvania; Congressman Thos. S. Butler; Wallace MacMonnies, New York; James E. Dodge, President Berkshire Breeders' Association; James G. Watson, Secretary Ayrshire Breeders' Association; Hugh G. Van Pelt, Editor The Dairy Farmer; Morris T. Phillips, President Chester County Live Stock Breeders' Association; Frederick Rasmussen, Pennsylvania Secretary of Agriculture; E. T. Meridith, Secretary of Agriculture; D. S. Adams, County Agent; M. D. Munn, President of the National Dairy Council and President American Jersey Cattle Club; F. P. Willitts, President Interstate Milk Producers' Association; Robert Scoville, President American Guernsey Cattle Club; Senator T. L. Eyre.

EDITORIAL COMMENT



LABOR SAVING

In reviewing the machinery exhibit at the Wisconsin State Fair, we observed a fanning mill being operated by a gasoline engine. This fanning mill had twice the capacity for cleaning grain of the fanning mill operated by hand and attached to it was a little elevator which conducted the clean grain into sacks.

We can well remember when it required a man to run the fanning mill, another to keep the hopper filled and to shovel the cleaned grain into a sack held by a boy usually. Here was required the time of at least two men and a boy to do not more than one-half the work that one man will do with the improved fanning mill with the assistance of a gasoline engine.

Those who are lamenting that many boys have left the farm for the city fail to appreciate that many of them are engaged in the manufacture of machinery for farm use and in this way are rendering a greater service to agriculture than they would by remaining on the farm. Economic conditions regulate the flow of people from one industry to another and no amount of preaching, regulation, or pleading will change this condition.

This fanning mill well exemplifies many other machines which have been improved, making farm work easier and requiring less labor. We do not believe we are in a serious condition when those who leave the farm are able to provide machinery which will require the work of only one man where the old machine required three and, further, which will do as much as six did with the old machine.

Our reasoning is often superficial and to come to a sane, sensible conclusion regarding agricultural conditions we must take into account the constant changes that are taking place and the improvements that are being made, requiring less people for the production of both food and clothing. The less people required in these occupations, the more there will be to provide luxuries and other useful commodities which make life more attractive and pleasant.

THE HOG MARKET

If we review the hog market for a period of 50 or more years we will find the prices fluctuating very materially. First, the farmer is selling his hogs above the cost of production and then below the cost. The farmer who raises hogs appreciates this condition in a practical way for the statement is made that if farmers will raise hogs and make a business of it there is money to be made from them, but going into hogs when they are high in price and selling out when they are low invariably leads to heavy losses.

The prolificacy of swine makes it comparatively easy to grow a large number in a short time. When the food administration urged that more pork be produced, inside of a year there was a large over-production of pork and prices declined below cost of production. That is, if we calculate that it requires twelve bushels of corn to produce one hundred pounds of pork; but we do not consider this sound economics. If corn sells for $1.50 per bushel then it is estimated, on the basis of twelve bushels for one hundred pounds of pork, that it costs $18 to produce the pork. Dairymen have by-products, such as milk and whey, which are admirable supplements to corn and barley for the growth of pork, but they do not have a market value unless live stock is kept. Further, there are certain pieces of land where hogs can be pastured and cared for at a very small expense. In this way the farmer lessens the cost of pork production. Even one hundred pounds of pork will not bring the equivalent in return for 12 bushels of corn. Hogs raised on by-products, pasture, unmarketable feeds, etc., will return some profit.

Attempt is now being made to stabilize the hog market to prevent wide fluctuations in prices and to assure the hog raiser a constant profit. This will be a most difficult thing to do. It is only the far-sighted hog raiser who appreciates that to get a profit out of swine he must continue in the business and use by-products. Stabilizing the prices of hogs would be advantageous to farmers, but it is most difficult to get all farmers to act in unison.

GOOD CHEESE

The producers and manufacturers of dairy products as a whole do not appreciate that quality is a large factor in the amount of dairy products consumed.

At the Wisconsin State Fair this year about 10,000 cheese sandwiches were given away daily. The cheese for these sandwiches was carefully selected and of high quality. It was contributed by cheese manufacturers for free distribution at the fair because they know the advantage to the cheese industry of Wisconsin in acquainting the consumer with a good quality of cheese. Dairy and Food Commissioner Weigle conceived the idea and handled the work, even to the handing out of sandwiches. As the people ate these sandwiches remarks were heard, as "My, I wish we could buy such cheese at our stores." "Why can't we buy such cheese at our stores?"

During the last few years cheese manufacturers have tried to produce a large overrun and in so doing produced a whey soaked cheese. It is easier for the cheesemaker to make this kind of cheese; his hours of work are shorter and the larger overrun has temporarily brought a larger return, but it has injured our cheese industry. These men who secured excessive overrun and who have put cheese on the market which contains too much whey are not deceiving the consumer but are camouflaging themselves.

Eight people at their noon luncheon at the Wisconsin Fair consumed two pounds of good cheese. We dare say this was more cheese than most of them had eaten in a month. Every one of these people desired to purchase some cheese just like that which they had been served. The cheese they ate was of high quality and that was the secret of its being so toothsome and their desire to purchase some just like it.

Prices for good cheese must be increased and for poor cheese they must be decreased. There must be a hearty co-operative effort between all the dairy forces in cheese producing states to improve the quality and to acquaint the consumer with the nourishing property of cheese if the cheese industry is to be enlarged and the prices secured for cheese in keeping with its food value.

FARM BUREAUS

No national movement to organize the farmers ever made faster progress or received more hearty approval from every source than has the farm bureau. The world's war revealed to the people a new understanding of agriculture and for the first time in the history of our country were we concerned about our food supply. Our conditions brought forth effort to stimulate the production of agricultural products, and in countries where there were no agricultural agents food emergency agents were placed to assist and to direct the production and handling of various agricultural products.

In our country a number of farm bureaus existed, some of which were entirely supported by the farmers, others by business men and farmers. It was soon found that in counties where there were successful farm bureaus, agricultural problems could be handled with dispatch and efficiency. This condition brought to the attention of the leading farmers the necessity of furthering this form of agricultural organization and, particularly, at the close of the war when agriculture had to be adjusted to new conditions.

It had also been shown that through organized effort and intelligent direction it was possible to increase the production of the crops most needed. For example, the acreage of wheat was materially increased and so was the production of pork. In this work the leading farmers saw how essential it is to have agriculture organized and served by agents similar to those the business man has employed for years. The outcome has been that many farm bureaus have been organized in this country. In Iowa and New York every county has a farm bureau and some other states are nearly 100%. In all there are over 800 county farm bureaus and 31 states have federated and these are organized into what is known as the American Farm Bureau Federation. This organization has made unusual progress because it is a form of organization in keeping with our form of government and American institutions, and it is organized from the bottom up and not from the top down. The farmers, themselves, are the ones forming these bureaus and the only persons who can become members are bona-fide farmers.

The American Farm Bureau Federation is rapidly perfecting its program. It will not confine all its efforts to the business side of agriculture, but will attempt to develop a better social life in the rural communities. The only danger we see is that some of its members and, perhaps, its officers will be too ambitious and attempt to carry into effect the reforms that are impossible or some of its members may become impatient because the evils that have crept into our economic system are not corrected as rapidly as they would desire.

It should be remembered that the American Farm Bureau Federation is not the first national organization which has tried to improve the social and economic conditions of the farmers. The problems which are now confronting us are not new. If we should read the history of the various national farm organizations we would find that they had in view correcting and improving about the same things that confront the farm bureau at present.

The farm bureau can do much to improve our present marketing system, to assist in securing better laws, in bringing about a better system of transportation, rural education, etc., all of which will contribute to the healthful development of agriculture. Its members must never lose sight of the fact, however, that notwithstanding the opportunity to improve our present condition and to eliminate men and agencies that contribute nothing either to the producer or consumer, the greatest factors for progress and profit in agriculture lie in the hands of the men who operate the farms. The largest toll today upon the average farm in America is revealed by the poor methods of farming, the keeping of poor cows, indifferent care to their products, improper feeding, lack of understanding of what is essential to the proper treatment of the soils and indifference to the value of co-operative effort.

Only a short time ago we found farmers selling butterfat for 5c less per pound than the local farmers' co-operative creamery was paying because they could receive cash from the other institution. We were amazed at the action of these farmers, their indifference to the co-operative creamery, and their willingness to sell butterfat at a reduced price for cash.

It is not our purpose to point out in an editorial all the opportunities to improve agricultural practices, but we do desire to call attention to the fact that if every farmer will put forth his best efforts to keep his soil fertile, to select the best producing animals, to produce a high quality of product, to co-operate with his neighbor, and otherwise show discretion in his business affairs, that his returns will be larger for such efforts than he can hope to gain through any organization or improvement in marketing system or laws which might be passed to his benefit. The destiny of most any individual is more largely under his control than under the control of others. We would not care to have it inferred that the farm bureau has not a large service to render, for it brings the farmers together for the discussion of their problems and it can be a tremendous force in correcting our economic evils and improving the social conditions, all of which are highly desirable and will be a tremendous help in the promotion of agriculture.

Registering Farm Name

We understand that there is a register in which record is kept of names of farmsteads. Would you please inform us where a copy of such might be obtained?

Valders, Wis. A. W. J.

The procedure for registering farm names in Wisconsin is very simple. The name is merely reported to the County Register of Deeds. If no other farm in the county has previously selected the same name, the name of the farm will be registered by him and no other farm in the county will be registered under the same name. The fee for this registration is 25 cents.

Barley Beards

Is there any danger to stock from the beards in feeding barley straw? I had a thin stand of barley this year and a great deal of red top came in so that it is nearly half red top. As the hay crop was light I would like to feed the straw if it can be done with safety. Would it be better to feed it to horses or cattle?

Camden, N. Y. J. B. G.

There is little danger in feeding barley straw to live stock. Occasionally the beards of the barley have produced sore mouths and in such cases there has been found a considerable number of beards under the tongue or at the sides of the cheek which the animal has been unable to masticate, but these can be easily removed and the trouble will disappear.

For cattle not producing milk, straw can be used to good advantage, as it will produce some heat. For the milking cows, however, we would not advocate the use of very much straw, if any, for it furnishes very little nutrients for the manufacture of milk. We prefer to feed horses straw, when not at labor, rather than dairy cows.

Two-piece Stave Silo

We are thinking of buying a two-piece stave silo, but fear it may warp and spread. Have any complaints on this score been received? What is your opinion as to Washington fir as a silo wood?

Milwaukee, Wis. W. L.

We have never had any complaints as to difficulty with the two-piece stave silo. Indeed we see no reason why there should be any complaint if these are properly erected and joints are broken between staves.

Fir is an excellent silo wood and should give very good satisfaction. According to the best information available, the best wood for the silo is edge grain selected from heart wood. The best varieties are, in the order given: Red wood, cypress, Oregon or Douglas fir, southern yellow pine, tamarack, white pine, hemlock, and Norway pine. Washington fir, which is practically identical with Oregon fir, is the most commonly used silo wood. It can be obtained in long lengths, is usually free from knots and sap, and is very durable.

Cutting Soy Beans for Hay

I have a field of soy beans which I intend to cut for hay. Will you kindly advise the best time to cut this to feed dairy cows? In another field I have some sowed corn. I have no silo, so will you also advise what is the best way to feed this and if it isn't advisable to shock in the field and let it cure as fodder? Have a field of rye and vetch. Is this a good dairy feed?

Chevy Chase, Md. J. B. W.

If cut too early, the stems and leaves of soy beans are too succulent to cure readily, while too late cutting means coarse, woody hay, much of which will be wasted in the manger. Just at the time that pods are forming gives the best results from the standpoint of high quality and ease in curing.

It is almost necessary that soy bean hay be cured in the cock. It should be allowed to wilt about a day in the swath and then raked up and built into small cocks to prevent too much heating. In good curing weather, it should be ready to haul in a week or less time. Before hauling the cocks should be opened up and allowed to dry out for a few hours.

If by "sowed corn" is meant corn that has been drilled in similar to the manner in which grain is seeded, probably the best method of handling is to cut and cure it as hay is cured. If this corn is drilled in rows about three feet apart, then the better way of handling it is to cut and cure it as shocked corn. Information as to handling of the crop in this manner appeared, in reply to a similar inquiry, in these columns a few weeks ago.

Rye and vetch will make a good grade of hay and should prove a good feed for dairy cattle. This will hold particularly true if the rye is cut when in the bloom and before it has fully matured and become dry and strawy. Such hay should be equal in feeding value to mixed timothy and clover, and if the vetch is in considerable quantity, it will possibly be equal to either clover or alfalfa hay. However, much will depend upon the time at which cut and the method of curing and handling the hay so as to make it most palatable and nutritious.

Cotton Seed for Cows

Cotton seed costs $23 per ton. Please tell me how much whole cotton seed it is safe to feed to young Jersey cows that have alfalfa hay and Bermuda grass pasture to run on. I am now feeding 30 to 35, per day, to 20 cows. How much should they have, in cold weather, when fed 30 lbs. of sorghum ensilage per cow per day?

Holtville, Calif. J. P. D.

Just how much whole cotton seed can be safely fed to young Jersey cows, we are unable to say. We appreciate that in the South as high as five and six pounds and, sometimes, more of cottonseed meal, is fed daily per animal, and cases have been reported to us where seven to eight pounds of cottonseed meal have been fed per steer per day. We are sure that better results can be obtained if less cottonseed meal is fed.

In making mixtures for rations we dislike to suggest more than two pounds of cotton seed per day and we would say that, on the whole, three pounds of cotton seed would be quite within the safe limits of feeding. We are strongly of the opinion that if cotton seed is fed that other meal should be mixed with it.

Alfalfa hay is rich in protein and so is cotton seed. In view of this, it would be better, if possible, to secure some ground barley to mix with the cotton seed. Sorghum silage will supplement the cotton seed pretty well, as it is rich in carbohydrates, but we would not consider it a good practice to feed just cotton seed in connection with it. If no other feed can be obtained, we believe it would be safe to give each cow daily as high as five or six pounds, gradually bringing the cow to this amount.

Value of Oat Straw

What is the value of oat hay for dairy cows? Is it superior to timothy? At what stage must it be cut to obtain best results?

Cle Elum, Wash. C. B.

According to average analyses, 100 pounds of oat hay will contain the following digestible nutrients: 4.5 pounds of protein, 38.1 pounds of carbohydrates, and 1.7 pounds of fat; or a total of 46.4 pounds digestible nutrients. This hay will be superior to timothy for feeding dairy cows because it contains over one-third more protein. This will hold particularly true where protein feeds are high in price and difficult to secure. Ordinarily carbohydrate feeds, such as corn and barley, are relatively cheaper in price than protein feeds, such as gluten and oil meal, which are necessary to supplement rations of corn silage and timothy hay.

Clover and alfalfa hay are superior to oat hay, but mixed timothy and clover is practically the same in feeding value as oat hay.

To obtain the best quality of hay, the oats should be cut when in the flower or when the grain is in the early milk stage. If left until a later stage, the stems and leaves become somewhat more indigestible and are less palatable. Also the protein content is somewhat less where the grain is allowed to practically reach maturity.

Feeding Oat Straw

What do you think of feeding oat straw as a roughage to milk cows this winter? When we threshed we had the straw blown into the barn. It is a fine straw, not coarse like some, and in good condition.

Mulberry Grove, Ill. C. E. T.

When oats are cut rather green, oat straw has feeding value. We would not, however, recommend its use to cows giving milk unless there was a decided shortage of hay, especially clover or alfalfa.

Good oat straw is nearly as good a feed as timothy hay provided the oats were cut early and the timothy hay late. Ordinary oat straw requires nearly as much energy to digest and assimilate it as it will furnish to the cow. In view of this, we do not believe it is wise for the person trying to produce milk to feed very much of it. A little for variety's sake, especially if there is a shortage of clover and alfalfa, may be in order.

It should be remembered that in the ripening process grain locks up the nutrients in the straw. The tender twigs of trees can be used by the animal and considerable nourishment gained from them, but when they ripen their nutrients become less available to the animal. In the ripening process the straw of the oats passes through a similar stage. Therefore, we do not recommend the feeding of oat straw except when there is a shortage of good clover or alfalfa or some other kind of legume.

Trouble With Pasteurized Milk

Six weeks ago I installed a pasteurizer (300 gallons capacity) and ever since have been having trouble with sour milk. Have been selling raw milk for years and never did have so much trouble. I was told to hold the milk at 145 degrees for 30 minutes but find out the cream will not raise at that temperature, so I have been holding at 142 degrees for 35 minutes. I cool with well water to 70 degrees which takes 25 minutes, then with brine to 50 degrees, temperature in ice box 50-58 degrees. Can you tell me my trouble? I always thought pasteurized milk would not sour very quickly.

Connersville, Ind. B. T. D.

Some twenty years ago, experiments were made at the Dairy Department of the University of Wisconsin to observe the effect of heating milk to a temperature of 140 degrees F. on the destruction of bacteria and on the cream line which will appear when such heated milk has been cooled and bottled.

These experiments were made in a closed pasteurizer where the conditions of heating were similar to those in the pasteurizer mentioned by the writer of this inquiry. The results of these trials showed that heating to 140 degrees F. for ten minutes in a closed pasteurizer was sufficient to destroy the vitality of the tubercle organism and further, that milk heated to 140 degrees F. for periods varying from fifteen to sixty minutes, then cooled and treated as bottled pasteurized milk is usually handled, showed a cream line and as thick a layer of cream as was noticed on the raw milk.

It was further noticed that milk heated to this temperature of 140 degrees F. kept sweet for at least six days, which is a sufficient length of time for all practical purposes.

A bacteriological examination of these milks showed that 99.8 per cent of the bacteria were destroyed.

From these experiments it was concluded that milk pasteurized by heating to a temperature of 140 degrees F. for not less than fifteen minutes would show a good cream line when bottled and the keeping quality was entirely satisfactory.

It has not been noticed before this, that if milk was heated to a higher temperature, say 145 degrees F. and above for a period of time for fifteen minutes or longer, this interfered considerably with the raising of the cream in the bottles and on that account made such bottled pasteurized milk unsatisfactory to the consumer.

Some of the essential points in successful pasteurization of milk which is to be bottled and delivered to the consumer are first, sweet milk. It is not possible to overcome any slightly developed acidity in milk by pasteurizing it, but the milk should be both clean and sweet, containing less than .2 per cent acidity when it is pasteurized.

Second, the pasteurizer must be absolutely clean and sterilized before the milk is placed in it.

Third, the milk must be heated to a temperature of 140 degrees F. and held at this temperature for at least fifteen minutes. The temperature of each lot of milk heated should be carefullly watched to be sure that 140 degrees F. is reached but not exceeded and a tolerably accurate thermometer should be used for this purpose.

Fourth, after the heating period, the milk should be cooled as rapidly as possible to at least 50 degrees F. and if the milk is bottled at this temperature, these bottles should be placed in a refrigerator or packed in boxes with ice so that the temperature does not exceed 50 degrees F. at any time until it is delivered to the consumer. A still colder temperature than 50 degrees F. aids both in obtaining a satisfactory cream line and in preventing the milk from souring.

I judge from the letter of your correspondent that the keeping quality of his milk will be improved if he will cool the milk to about 40 degrees F. instead of 50 degrees F. and hold it at this temperature until it is delivered to the consumer.

It hardly seems necessary to state that pasteurized milk should always be filled into bottles that are thoroughly washed and completely sterilized, as pasteurized milk may be easily seeded with germs which will cause it to sour if the bottles are not clean and sterile every time they are filled.

E. H. FARRINGTON.

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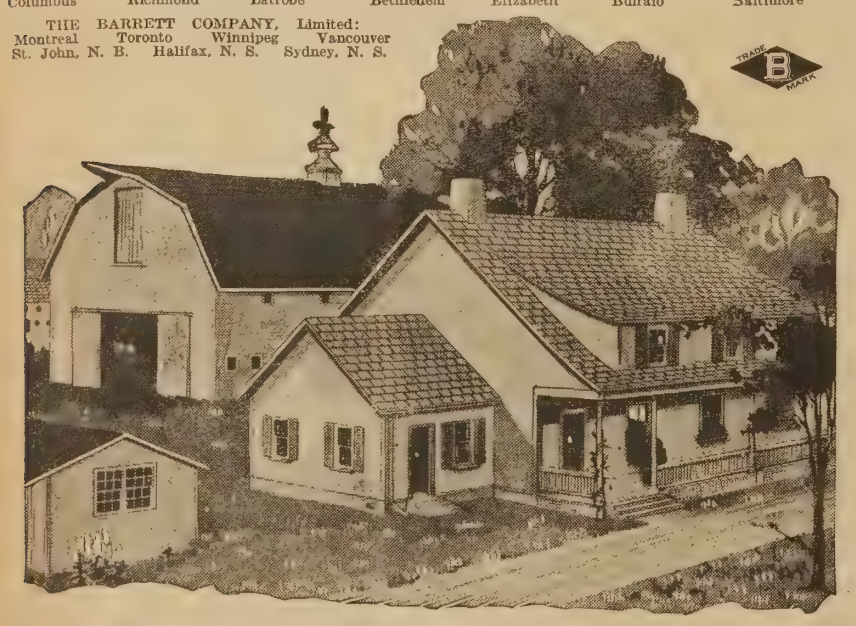
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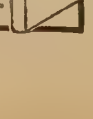
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Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, SEPT. 6—The Washington office of the National Dairy Union has undertaken an inspection of the leading text books used in the graded and high schools for instruction in food values to determine just how far the propaganda for margarine has found its way into these books. Numerous instances have been reported where other forms of margarine propaganda have been found in the schools, especially the motion pictures used to advertise some of the leading makes of imitation butter. How far this is getting into text books is not known but will be determined, if possible, by this survey. The officers of the National Dairy Union would be glad to have reported any specific cases where text books misrepresent the real facts as to the superiority of butter as a vital human food, so they may be looked up in Congressional Library and, if verified, given proper attention with publishers and school officials.

⚜

Attorneys for the five packers appeared in Federal District Court here on Tuesday last, and filed the plan for the disposal of the stock yards in accordance with the so-called "divorcement" decree entered into by the packers and the Department of Justice last spring. Selling the stock yards was one of the principal items in that agreement. The "plan" filed provides for the sale of the yards to a holding company under the name of F. H. Prince & Co., which is to take over the big yards but not the smaller ones at Newark, Jersey City, Portland, and Cleveland. F. H. Prince is said to be a Boston banker. The plan provides for the taking of stock in the holding company up to 49 per cent of its capital as part of the payment for the yards, said to be valued at upwards of $30,000,000. The holding company agrees to maintain them in their present position and condition for ten years. The Department of Justice is given until October 7 to file objections to this deal. An affidavit filed with these documents states that "it is inexpedient to attempt a piecemeal sale of the yards at this time owing to the financial uncertainties".

⚜

Mention was made in this letter recently of the stringent action taken by Secretary of Agriculture Meredith, in deciding that the proposed commission charged by live stock commission houses in the packer centers for so-called "plural ownership cars" was unjust, unfair, and discriminatory, and fixing a new and much lower schedule of commissions. The commissioner was served this week with injunction papers, secured by Kansas City dealers, restraining him temporarily from enforcing his order. He has asked representatives of agricultural and live stock produce associations to join him in opposing the demand of the commission firms to have this injunction made permanent, the hearing to be held September 16 in Federal District Court, Kansas City.

⚜

The current issue of the Market Reporter has an unusually interesting list of items of interest to dairymen. The first, and perhaps the most important, except the actual record of butter market prices and movements, is a review of the condensed milk market. This situation is far from satisfactory, the monthly report showing a marked decline in exports, a large increase in domestic stocks, a general advance in milk prices, and no corresponding increase in domestic prices. The tightening loans and large stocks on hand have forced the liquidation of stocks in the open market resulting in considerably lowered prices. The review concludes with the warning that unless conditions have improved, which seems unlikely, "The condensed and evaporated milk industry stands to take losses on high costing milk, unless the export demand increases soon and the domestic outlets take larger quantities." In the face of this showing, import records show almost doubled imports of condensed milk for July over July last year, and fully 50 per cent increase for the first seven months, 1920, over the same period in 1919.

However, both butter and cheese markets showed material strength and improvement in the period reported on. One shipment of 1900 casks of Danish butter came in. The supply as indicated by reports from the big centralizers and the arrivals at chief markets show a steady falling off both as compared with last year and as compared with previous weeks this year. So also butter in storage, while it increased last week by a trifle over a million pounds, is still far short of the 1919 figures, with about 67 million pounds reported as against 83 million a year ago. The current receipts in the chief markets were 10,707,000 pounds, as against considerably over twelve and a half million the same week last year. Strong consumptive demand for better grades of current make butter is reported. In the cheese side of the market, storage is more nearly normal, and a shortage of space is reported in some markets, especially Philadelphia. The better price seems to be due to seasonal decline in production, and in sympathy with the rising butter market.

The import figures call for some attention. Eight and a third million pounds of butter were imported in July, mostly from Holland and Denmark, with about a million and a half pounds from Canada.

How Co-operative Marketing Was Made a Success in California

(Continued from page 335)

rupt. By eliminating speculators and reducing distributing costs, this organization has been able to secure prices for oranges and lemons that are well above the cost of production at least five years out of six, and the thriving condition of the industry is a monument to the effective work done by the exchange.

Saved the Raisin Industry

The second largest co-operative marketing association in California is the California Associated Raisin Company, which last year handled over $38,000,000 of raisins and whose business during the next 12 months will probably exceed $60,000,000. This organization came into existence in 1913 because of the fact that practically all of the profits in the raisin business for years before had gone into speculators' pockets, and the industry was on the decline. The raisin company markets 87 per cent of the raisin crop of California, this being tied up over a period of years by an ironclad contract which binds raisin producers to sell their product through the organization.

The California Prune and Apricot Growers, Inc., is the third and young-



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est of the Big Three of California co-operative marketing agencies. It began operations in 1917, and its organization resulted from almost identically the same conditions which forced the raisin and orange growers to organize. It now has over 8,000 members and markets over 70 per cent of the prunes and apricots produced in California. The general effects upon the industry have been almost exactly the same as with the other organizations—prices have been stabilized and farmers given a fair price for their products, speculators have been eliminated, the industry has been stimulated and largely increased production has resulted.

The smaller marketing organizations are about 30 in number, some of them being "small" only in comparison with the gigantic size of the Big Three. They include associations which market beans, almonds, berries, peaches, pears, honey, canned goods, dairy products, eggs, and various other products of the farm. It is interesting to note that every one of these associations was forced into existence because of the fact that these products were usually produced at a loss. The producers were literally forced to organize to keep out of the poorhouses. They have succeeded, often beyond the fondest dreams of those who backed them faithfully, and practically all of them now market two-thirds or more of the crop of the state in its particular industry.

Four Fundamental Principles

After two weeks of careful study of these enterprises in California, it seems to me that there are four fundamental things of outstanding importance in practically every one of these co-operative marketing enterprises. These are:

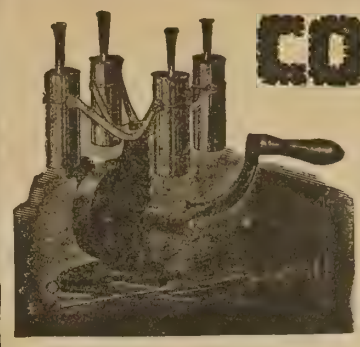
1. *These marketing associations are organized by commodity, and not by locality.* Peach growers and orange growers and bean growers may live in the same community, but they market their product through different co-operative associations. One man may sell different crops through three or four different commodity associations. All leaders in co-operative work in California, no matter how much they differ on other points, are agreed that this is an absolute essential.

2. *The associations have an absolute binding contract with every producer who belongs, requiring him to market all his products through the association over a period of years.* A California co-operative organization would no more think of starting now without this provision than it would of leaving its safe unlocked at night. The wisdom of years of experience in co-operation in California has burned the necessity of this provision into the very soul of co-operative enterprises.

3. *Crops are handled on the pool basis, thereby giving every producer the same price for the same quality product, no matter when sold.* This rule, with little variation, is in effect in practically every co-operative organization in California. It is the basis of true co-operation, and the wisdom and fairness of this provision have been proven through the years.

4. *Organizations are without capital stock and operate on the non-profit plan.* Most of the California co-operative associations are operating under the non-profit plan with no capital stock, and the others are rapidly changing to this plan or are endeavoring to do so.

In subsequent articles, I will discuss these principles in detail, and in telling how they were arrived at, will tell the story of the development of certain of the important co-operative enterprises in California.—Copyright 1920 Standard Farm Papers Inc.



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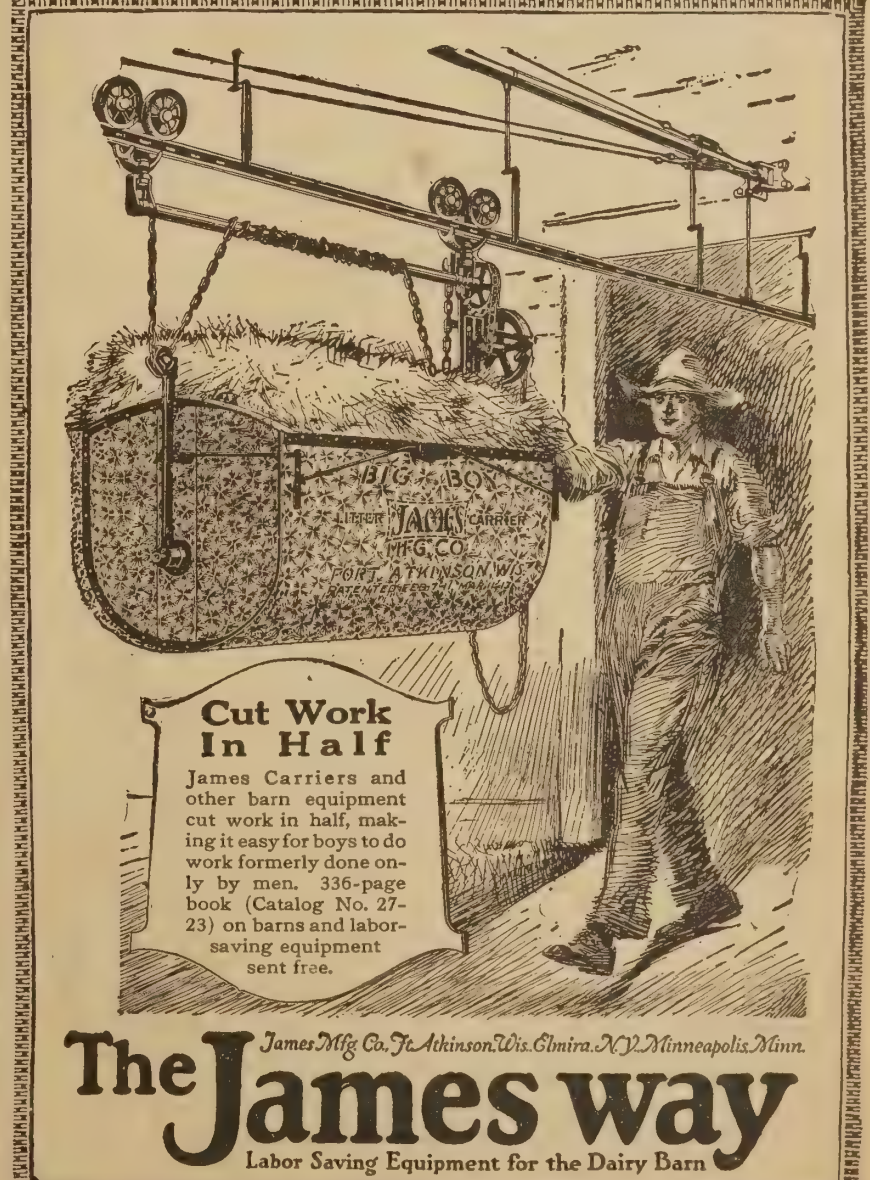
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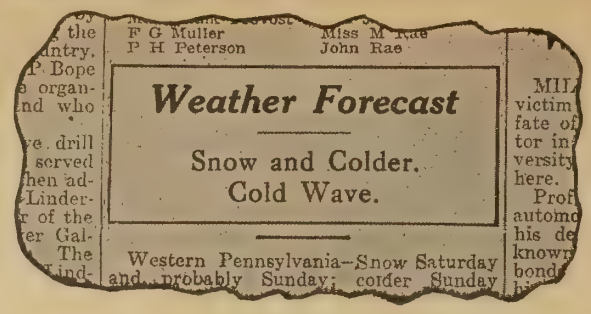
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Now, how about those cows you depend on for so much milk per day? They have bedding. Sure they have—loose bedding that they push aside. Most of the time some part of the body, probably the tenderest part, is right on the concrete. They can't help getting chilled, and getting chilled means lower milk production, if not actual sickness.

If you want to get results from your cows, keep them warm, comfortable and contented. Circle A Cork Brick floors will keep your cows warm. They are nonconductors of heat. The warm body that lies on Circle A Cork Brick stays warm because the heat can't get through them. No chilled udders, lowered production or sickness due to cold with cork brick floors.

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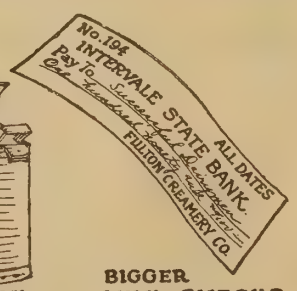
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Order a trial ton from your dealer right now. It is guaranteed to make good for you. Have your cows in fine fettle and at tiptop production when pasturage fails. Two extra quarts of milk daily from each cow will make the trial worth while. Write us if there is no International dealer in your town.



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Municipalization of Milk in New Zealand

(Continued from first page.)

ferent colors for the sake of quick identification. The big lorries arrive from the railway station, and the word comes up from the weighing floor, "Twenty of number 50." The tippers wait until the whole consignment of Farmer 50 is on the tip landing, and they then make a quick examination, as they take off the lids, to ascertain if the milk appears to be sweet. If it passes this test the milk is tipped and weighed, and a bulk sample taken for the daily laboratory test. The empty cans go down a conveyor, on the endless belt principle, to the washing floor.

To follow the course of the milk one has to descend from this, the highest part of the factory, to the next floor, to which the fluid has gravitated to the pasteurizer. There are two Sharples clarifiers of 1,000 gallons capacity installed for the effective cleaning of the milk. The presence of these up-to-date machines shows the anxiety of the city council to provide the very best that can be obtained in order to ensure a perfectly clean product for the city consumer. The pasteurizer has a capacity of 2,500 gallons per hour. From this the milk rises into a large vat, divided into four compartments. An ingenious arrangement enables the milk to flow from each compartment into the next at the bottom. It passes through the whole series in about twenty minutes, during which time it has been subjected to a temperature of 145 to 150 degrees F., sufficiently long to decide the fate of all dangerous germs. The cooling process following is gradual. First, the milk goes over the water-cooler, then over a large cooler, the top half of which is cooled by water, and the lower half by a brine. Finally it is further reduced by a brine cooler, and is now ready to be drawn off into the milk vendor's cans at the basement. Here we find an excellent quick-service device under which a tank is filled from the cooler, automatically weighed (in gallons), and run off into six cans simultaneously. The entrance to the cool chamber is close at hand, enabling the purified cool milk to be placed in a temperature of 40 degrees until it can be delivered to the vendors.

An important provision is that under which no vendor is permitted to carry over until next day any of his unsold supply. It is returned to the depot, tested for quality, and an allowance of full value made.

At present the cans undergo the familiar cleansing process of rinsing and steaming, but the depot will shortly have in operation an American machine cleanser capable of dealing effectively with three hundred cans per hour. They go in at one side, travel round a large circle, and during this rotation are successively rinsed with cold water, then with warm water, soda solution, steamed, and finally dried by hot air. The depot undertakes the cleansing of all suppliers' cans, as well as these used by the vendors, and at present handles 1,400 per day.

The erratic nature of the demand for cream is usually the despair of the milk distributor. One of the most prominent men in the business in Wellington, replying to public criticism of the milk supply, plaintively asked why the public expected the unfortunate cow to give six times more cream on Saturdays than any other day in the week. The only resource of the average vendor was to build up his cream supply for Sunday's demand by preservative "dope". This is now taboo, but city enterprise has come to his aid. He can get what he wants, in any quantity, and quite fresh, for the depot equipment includes a complete cream separating and pasteurizing plant. Even now, the business is full of surprises. The luscious strawberry might be cheap and plentiful, but a "southerly buster" on Saturday will put cooling dishes out of the question on Sunday, and prospective orders drop to a fraction. Now the depot can turn the surplus cream into butter, and nobody loses.

A small laboratory staff keeps careful records of the condition of the milk when it arrives, and when it is bulked for the city supply. The test bottles constitute a check on the farmer, and also a safeguard. In the old days of unrestricted private enterprise prosecutions for below-standard and impure milk were frequent, and the vendor often endeavored to shoulder the blame onto the farmer. And now the vendor gets a supply which has been tested from the bulked milk in the cooler, where it

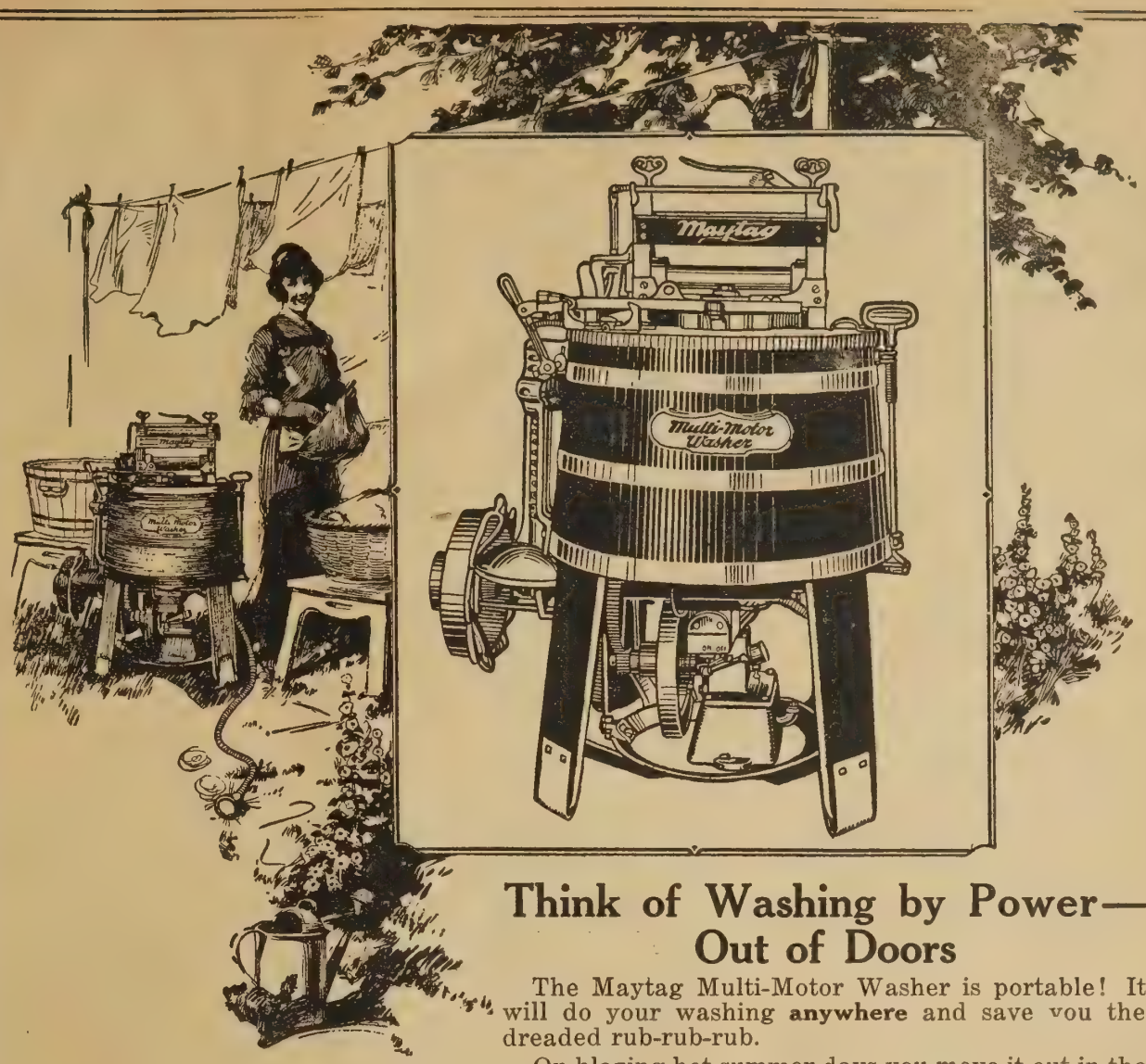


JEAN OF CRESTMONT, AYRSHIRE COW OWNED BY CRESTMONT FARM, PENNSYLVANIA

Her junior two-year record is 9,057 lbs. of 4.04 per cent milk. She has milked 50 lbs. per day as a three-year-old.

awaits delivery to him. He cannot impugn the honesty of the farmer if he is caught with adulterated milk. The farmer's test bottles go daily to the laboratory, where the Gerber test for butterfat content is applied. A fermentation test gives an indication as to the cleanliness of the consignment, and there are other checks upon the quality of the individual consignment. The Government minimum of 3.25 butterfat content is easily exceeded, even in winter, and the current test works out for bulk supply at 3.85.

Turning now to the retail distribution of the milk. There is in it a whole set of entirely different problems—not all yet solved to the satisfaction of the consumer. Wellington people are satisfied about the quality of the milk as it leaves the depot, but as it then goes into private hands, they realize that there is some risks of tampering. The vendors, however, have shown a good record on the whole, but complete confidence will only come when the city delivers the milk into the consumer's jug or preferably adopts the container system of distribution, which is now being investigated. The milk costs the city 11d per gallon. It is sold to the vendor at 1-5, and to the consumer at 2-. What is the reason for the big difference between the cost price, and that charged to the vendor? Herein lies an important part of the whole scheme. There was the utmost difficulty in getting the scores of milk vendors to adopt the block system of delivery. As sensible men, they realized that it would mean an enormous saving of labor and expense, but as individual business men, they were unable to concede this restriction on their enterprise. Faced with the early prospect of being superseded by the municipal competitor, they agreed to form companies in four groups, which included the whole of the vendors, and to serve separate districts having a consumption approximating to their former sales. This blocking of the city was achieved in a very creditable manner, and agreements were entered into with the four distributing concerns under which they undertake to charge the same price for milk summer or winter. There is admittedly high profit, especially when the savings of the block system are considered, and the scheme also involves overcharging the consumer in the summer, though he gets something back in the assured supply at the flat rate in winter. However, the difference between the depot price of 1-5 and the retail figure of 2- represents the concession which the city is making to the vendors for the right to take over their businesses without payment of good will in three years' time. The block system came into operation on July 8 last, and is working well, though there are occasional troubles due to the fact that customers with a grievance have no competitive vendor to whom their support can be transferred. But those who remember the serious evils of the old distributing system, it's danger to the public health, anl also have in mind the more assured and better paid position of the suppliers, admit that today's troubles are trifling compared with what used to prevail.



Think of Washing by Power—Out of Doors

The Maytag Multi-Motor Washer is portable! It will do your washing **anywhere** and save you the dreaded rub-rub-rub.

On blazing hot summer days you move it out in the cool shade of a tree or on the porch where delightful breezes blow. In winter you move it wherever it is most convenient—into the shed—the warm cellar—or the kitchen.

Handles biggest washings with ease. Will not harm most delicate things. It's a wonder. Comes equipped with reversible, adjustable, three-way power wringer.

Costs little. Does a big wash on a few pennies' worth of gasoline.

Go see the local Maytag dealer. Write for free copy of our "Household Manual".

THE MAYTAG COMPANY, Dept. 105, Newton, Ia.

Branches at Philadelphia, Pa.; Indianapolis, Ind.; Minneapolis, Minn.; Kansas City, Mo.; Atlanta, Ga.; Portland, Ore.; Winnipeg, Man., Can., and The Maytag Company of England, 323 Caledonian Road, King's Cross, London.

Makers of Maytag Multi-Motor, Electric, Belt and Hand Power Washers

Maytag
Multi-Motor Washer
With Built-In Gasoline Engine

76 B

Where Did Quality Go?

(Continued from page 329)

nary handling, as they had always been willing to do in the past.

Brooks was working hard. His hired man, whom he had counted on for all season, had just left because he had a good offer from the factory in a nearby town. All the arguments that Brooks could put up to him about the high living expense in town and his better chance to lay up money on the farm, as well as being better for his health and future plans, were of no avail. The hours were shorter in town and there was more going on, he said. Things were too quiet around that farm, anyway. So Brooks was doing two men's work until he could persuade someone else to try it in the lonely country for a time.

Brooks was fair minded enough not to complain unduly about the high prices of things that he had to buy, even though everything was double or treble what it had been three years before. But the thought that he could not get reconciled to was that no matter how much one now paid for many things, it was impossible to get articles that had the goods and would give reasonable service. It was not so long ago that one could get real quality by buying the best on the market, and he had always bought the best. What then had made this change in things all over the country in such a few months? For he knew that his experience was the same as that of others all around him and in all other parts of the country.

These things were on his mind so that he dreamed of them that night. It seemed as though he started out to find that elusive thing called quality, the thing that had been so sadly lacking in nearly everything that he had bought recently. He stopped first in his home town with his implement dealer. The wagon box that he had bought of him the fall before was giving out in several places, made of inferior wood.

"Come along with me," said Brooks, "and we'll see if we can locate the trouble. And you come, and you, and you," as he passed the grocer's, the clothier's, and the furniture store. "You may be responsible for some of the extra price tucked upon the things I have bought of you, but you did not manufacture them, and cannot be to blame for their poor quality. Let us see the wholesaler and the manufacturer."

So they took the train to the city and started on their rounds. The big wholesale houses were their first objective.

"What can I do for you, gentlemen?" asked the suave dealer whom they first accosted.

"We want to know why we can't get anything decent for our money any more," began the retail furniture dealer. The last shipment of stuff I got from you was almost junk when it reached me, and if I do sell it, the chances are that it will be brought

(Continued on page 344)

Wisconsin State Fair



IMP. ITCHEN MAY KING, SENIOR AND GRAND CHAMPION GUERNSEY BULL AT WISCONSIN STATE FAIR
OWNED BY FOX, KINGSTON & SON, WISCONSIN

"WE are gratified wth the attendance and growth of the Wisconsin State Fair," remarked Secretary Remey as we talked in his office on the great day of this year when for the first time in its history over a hundred thousand people passed through the gates. "I feel good over this," continued Mr. Remey, "not just because the attendance is large but because of an increase of from 25 to 35% or more in all the agricultural exhibits. That is what interests us. The free attractions and the races are a necessary part, but our increased exhibits and attendance will enable us next year to offer larger premiums and permit us to make it a larger and better agricultural fair. The cattle exhibit is increasing and we need more buildings to house them and to house our other agricultural exhibits. We have been assured of the co-operation of farm organizations in making this possible."

We have known Secretary Remey for many years, and it has been his aspiration and his constant effort to build an agricultural fair that will not only be a proper representation of the biggest dairy state in the Union, but one that will be of large and increasing service to the farmers of the state. He has sought to make it a clean fair and has worked in season and out of season to make it a real agricultural show rather than a carnival of extravagance.

⚜

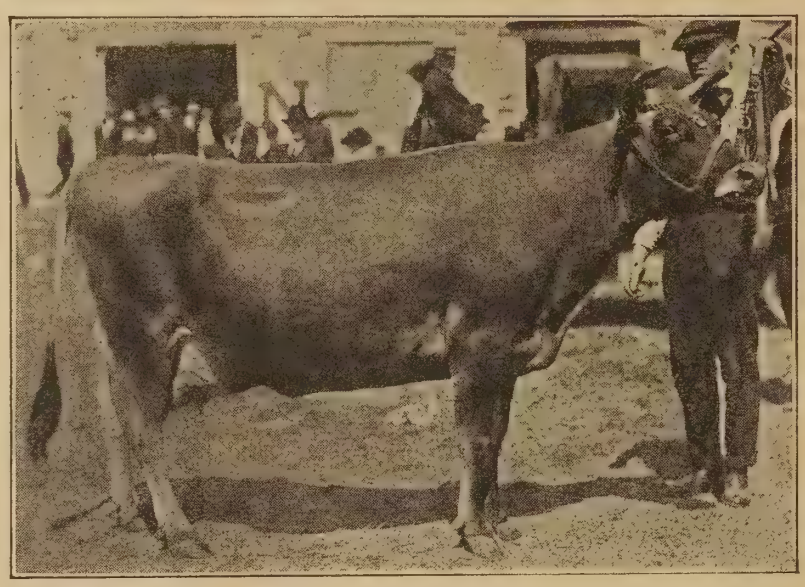
Tired and disgusted with the weather given the state fairs of the past, Commissioner Norgord and Secretary Remey took up the weather reports for the past thirty years to find the dates when Milwaukee was most free from rain and storm. When they discovered the latter part of August to give the most ideal fair weather, they took that period for the fair of this year. Their judgment proved good, with the result that never before have such crowds visited the State Fair and never have the gate receipts been so plentiful and satisfactory. During the week 325,702 people passed through the turnstiles as compared with 242,095 for the biggest year ever before experienced, while the total gate receipts were $247,245.60 as against $196,810 for 1919, the largest receipts to that time.

The fair management is to be congratulated on its success in securing a large attendance and in presenting to Wisconsin the best fair of its history. The amusement program was excellent, the opportunity to spend money for every unnecessary object met the needs of the most extravagant, and the exhibits were of a character and number never before approached.

⚜

In the grand stand gathered immense crowds of sight-seers, but in the upper rooms were to be found the boys' and girls' clubs earnestly competing for the honor of representing their state at the Sioux City Fair. They were an interesting lot of youngsters and their parents and friends came in from all over the state to see their favorites demonstrate. The Fort Atkinson team, consisting of Russell Parks, Wilbur Glover, and Lester Daugs, secured the high score and were declared the state champions.

Up near the cattle barns was found the junior live stock exhibit and here were gathered the prize dairy and beef calves raised by the boys and girls of Wisconsin. The proud owners of these calves showed their devotion and they were good showmen even when the awards did not come their way. It seems too bad that all could not win, for all had given of their best. Several won prizes in the open classes, winning out against the serious competition of the well seasoned and veteran breeders and showmen.



WESTFIELD GIRL, SENIOR AND GRAND CHAMPION JERSEY COW AT WISCONSIN STATE FAIR
OWNED BY A. M. MCCLENAHAN, COLORADO

But of all this, the junior editor will tell in an early issue.

⚜

The horticultural exhibit was, perhaps, scarcely representative, but it could scarcely be expected with the fair held before fruit was ripe and showable. In the agricultural building there were many good exhibits and splendid grain was shown. Oconto County took first place with its attractive exhibit and display.

The immigration section of the state department of agriculture ran a moving picture show of why men come to Wisconsin to farm and told of the yet undeveloped empire in the North. This department has done much to advertise the state and stands ready to assist in advising where land can be purchased and what the prospective farmer may expect. Other exhibits by the department showed the extent of its disease control work and told something of the fearful toll of tuberculosis. The Bureau of Markets illustrated the service it stood ready to render farmers and it is to be hoped that the present political struggle in the state will not result in dislodging its efficient and fair-minded chief, Ed. Nordman.

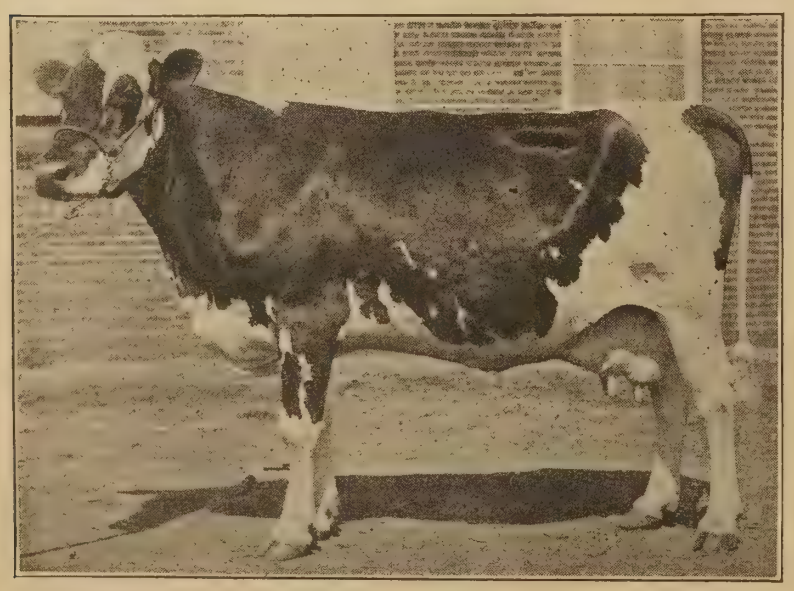
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The dairy building is scarcely commensurate with the importance of the industry in Wisconsin and could well be enlarged and made a more important center of interest around which to consolidate the various dairy manufacturers. The butter, cheese, and milk exhibits numbered 424, outranking those of previous years by over 50 per cent and were a credit to Messrs. Dodge and Sammis, who were in charge. The winners of first place in the several classes were as follows:

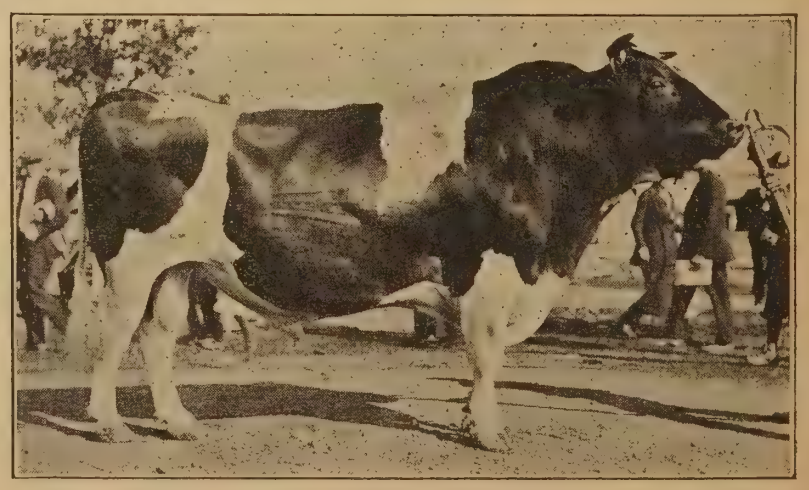
Cheddar Cheese, W. H. Thurk of Sugar Bush; Longhorns, etc., Emil Goull of Granton; Drum Swiss, Gottfried Rufenacht of Darlington; Block Swiss, Ernest Wuethrich of Bruce; Limburger, Arnold Widmer of Monticello; Brick cheese, Oswald Schneider of Appleton; creamery butter, Rudolph Else of Johnson Creek; dairy butter, J. H. Pilgrim of North Milwaukee; market milk, Bernard Hafemann of Wauwatosa; pasteurized milk, Blochowiak Dairy Co., of Milwaukee; pasteurized cream, Layton Park Dairy Co. of Milwaukee; certified milk, F. R. Whitcomb of Whitefish Bay; creamery milk, Schreiner Bros. of Thiensville; junior market milk, Floyd Klink of Cedarburg; market cream, F. S. Underwood of Wauwatosa.

⚜

Ten thousand cheese and butter sandwiches were given away daily at the booth presided over by Dairy Commissioner Weigle and the pretty girls from his office. As we stopped there for a few minutes, we heard the constant refrain: "Can I buy some



DOETJE NELLIE CONCORDIA, SENIOR AND GRAND CHAMPION HOLSTEIN COW AT WISCONSIN STATE FAIR
OWNED BY AITKEN BROS., WISCONSIN



CEDAR LAWN CANARY PAUL, SENIOR AND GRAND CHAMPION HOLSTEIN BULL AT WISCONSIN STATE FAIR
OWNED BY BAIRD BROS., WISCONSIN

of this cheese?" Next year it is probable cheese dealers will see the desirability of meeting this demand, but above all else how are Wisconsin cheesemen to answer the accompanying complaint, "I can't get cheese like this at my grocery." Here in a nutshell is the cheese marketing problem. Improve the cheese sold over the counter and the demand will increase with leaps and bounds regardless of advancing prices. How long, how long before the industry will be able to so organize itself as to make this possible?

The Wisconsin Dairy Council distributed a large quantity of literature and had an attractive exhibit showing the value of milk and its products. It was also responsible for attractive signs and posters that appeared in appropriate spaces in the large glass refrigerator that held the butter and cheese exhibits.

⚜

Hogs, sheep, and poultry are found on most dairy farms, and there was a representative display in all departments. They are excellently housed and it is a pleasure to pass up the aisles in comfort and to be able to find the exhibits without the aid of a detective or a policeman. The live stock arena is convenient and accessible, but lack of space to properly house the cattle and enable them to be segregated in departments is an ever increasing shame to a state whose fame resides so largely in her cattle. The cattle were there in large numbers, but to find them and compare them was difficult. The fair management would improve this condition, but it needs an awakened interest on the part of the breeder in order to present properly this need to the state legislature.

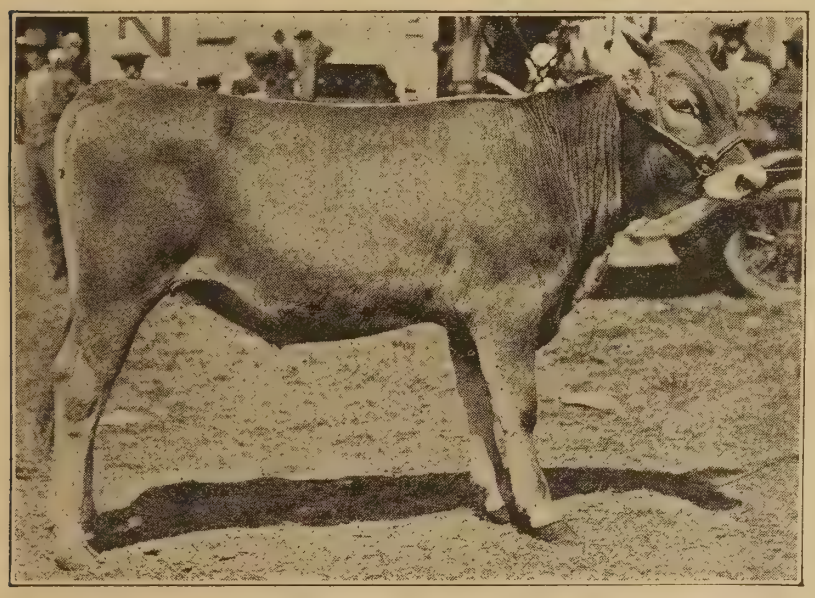
The cow test barn was crowded at all times with farmers who came to learn and who know that "knowing" pays dividends in interest in the job as well as in money. Cramer, Searles, and Sutton presented their subject well and are to be congratulated on the discussion and interest aroused. A further discussion of this valuable part of the fair will appear in an early issue, where it can be given the prominence it deserves.

The Dairy Cattle

Wisconsin has for some years been ranked as the leading dairy state, but its state fair did not, for a good many years, boast of a really creditable exhibit of Wisconsin dairy cattle. There has, however, been a noticeable change during the past two years, a change which this year culminated in what was one of the best if not the best showing of dairy cattle ever made at any state fair. Approximately 850 entries passed through the rings, a very large majority of them Wisconsin owned cattle.

Such showings should be encouraged in every way possible and surely one of the first things needed is a suitable barn or barns for housing the live stock entries. Present accommodations are entirely inadequate and definite steps should be taken to remedy the difficulty before another fair season approaches.

One of the best features of the cattle exhibit this year was the showing made by boys' and girls' calf clubs. Starting with a half dozen entries two or three years ago, this department has grown to a point where it is a real feature. This year these junior stock men exhibited 141 calves, 97 Holsteins, 21 Jerseys, 16 Guernseys, 4 Brown Swiss, and 3 Ayrshires. They did not confine their entries to the junior classes, either. A score or more entered the open classes, several placed in the money, and one or two carried away blue ribbons in the face of stiff competition from their elders.



HELENA OF WALHALLA, JUNIOR AND GRAND CHAMPION BROWN SWISS COW AT WISCONSIN STATE FAIR
OWNED BY E. W. WILSON, ILLINOIS

Holsteins

The Black and White showing this year was not only the largest and best in the history of Wisconsin State Fairs, but it was a different kind of showing than at previous fairs. Heretofore the entries were largely members of a few fairly complete show herds, but this year the 472 head were representative of at least 60 different herds. The small breeder has apparently come into his own so far as showing is concerned, something for which the county herd idea is largely responsible.

Marlow and Randall of Minnesota brought the only out-of-state herd.

The quality of most of the entries was well above the usual standard although, of course, there were some misfits as there will always be in a good sized show.

The aged cow class was one of the two classes of females that stood out well above anything else. There were 26 entries and when Judge Moscrip had finally lined up the best ones the four leaders were outstanding good ones. Three of these were from the herd of Aitken Bros. and one was owned by Baird Bros., both Waukesha County breeders.

Doetje Nellie Concordia and Doetje Nellie, first and second respectively and incidentally dam and daughter, were Aitken entries as was Hulda Segis Koroba, fourth in the line. It is in-

(Continued on page 346)



Indoors
It's warm as toast

The porch thermometer says zero, all through the house, 70°. The reason for the difference is in the cellar—a New-Idea Pipeless Furnace. It took only a day to install this furnace because there were no alterations to make—just a hole to cut in the lower floor to take the one big dust and gas-tight register of the

NEW-IDEA
Pipeless Furnace

"The one you've heard so much about"

Any fuel can be burned in the patented non-clinker grate. Soft coal, hard coal, wood or natural gas. The heating costs much less than when stoves were used, and there is no longer the trouble and muss of carrying coal and ashes through the house.

Heats All Rooms Evenly

Now, instead of baking in one room and freezing in another, every room is kept comfortably warm in all weathers, the warm air that is kept circulating is clean, free from all gas and cellar odors and moist, so that it does not dry the throat and nose and make one feel "stuffy".

You ought to have the comforts of the New-Idea in your home. There's a New-Idea dealer in your neighborhood. Ask him to show you the money-back written guarantee of satisfaction that goes with every New-Idea Furnace. Read it before you place your order.

Write for Catalog, and name of New-Idea dealer in your neighborhood. Expert advice on all heating problems sent free.

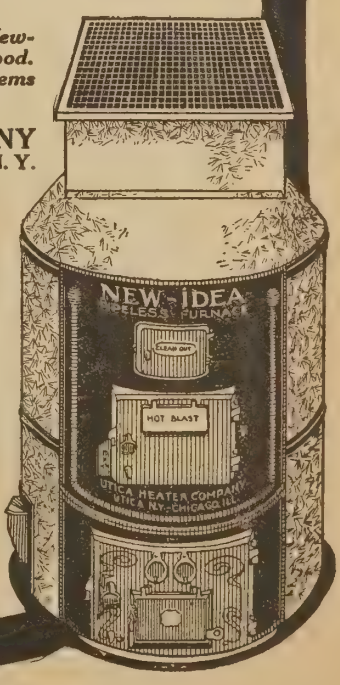
UTICA HEATER COMPANY
Box No. 25 Utica, N. Y.

Also manufacturers of "Superior" WarmAir Furnaces and "Imperial" Steam and Hot Water Boilers

How much do you earn?
Make more money in your spare time selling the New-Idea Pipeless Furnace in your neighborhood. You can easily turn idle hours into dollars while helping your neighbors to have more comfortable homes. We offer exclusive territory to the right men. Write us for full details of our proposition to agents.

Excellent proposition for the right kind of Hardware Dealers, Implement Men, etc. New Idea dealers everywhere are "making good."

20-5





Some truck owners equip their trucks with Kelly Caterpillars because Caterpillars enable them to operate the trucks without chains.

Others put them on because they cushion the truck.

For whichever reason they are bought, the owner gets not only the particular feature or features that appealed to him, but mileage such as he cannot get from any other type of tire, pneumatic or solid.

KELLY-SPRINGFIELD TIRE CO.

GENERAL SALES DEPARTMENT

1710 BROADWAY NEW YORK

Where Did Quality Go?

(Continued from page 341)

back to me or else I will never hear the last of the complaints about it. I have a good local trade that I have built up through long years of good service, and my customers know that I always have stood ready to make good anything that goes wrong with what I sell. But to do that now will soon put me out of business. Isn't it so, Dunn?"

"Yes," replied Dunn, the implement dealer, "I hate to handle the stuff that I do now, for I know machinery well enough to foresee all the trouble that will result when these cheaply made and put together implements that I am selling now have seen a little wear. But what can I do? I buy from the same houses that have always sent me good stuff before the war."

"And I," continued Harkness, the grocer, "can't complain so much of the poorer quality of things in my line as I can of the prices on some things being away out of proportion to those of other things. I have been scored for my price of sugar until I wish I would never have to weigh out another pound. But what can I do when the salesman tells me that my next order will cost me 28c a pound wholesale? I'm not making as much clear money as I was when things sold for one-half or one-third as much, for I can't increase my margins enough to cover the higher wages I have to pay and make up for the poorer class of help that I get."

"I think that you are on the right track now," returned the wholesaler, "when you speak of the poorer service that your help gives you. If you will look into this matter carefully enough I think that you will find that a whole lot of this high price and poor quality business hinges around the work that is done, or rather not done, by those who are drawing our high wages today. Our operating expense has done more than anything else to shove up our prices, for every way we turn it costs us more to handle our stuff, and it is hard to impress conservation now that the war is over. The way that our stuff is handled and balled up on the railroads now is something terrible. When such things come to be an everyday occurence, as they are now, we simply have to put our prices high enough to allow us to keep in the business. That is all that I can say to help you, gentlemen, so good-day." And he went over to where a bunch of teamsters were having an argument over who had to take a certain commodity on his load.

"Well," said Brooks, "he warded us off after a fashion, but we are far from getting satisfaction yet. Let us visit some of the big factories and manufacturing plants." And they did. There they found many excuses offered for the higher prices of things, raw materials were out of sight, they were told, help was high and hard to get, and taxes were burdensome, but little light was shed on the poorer quality of things. Some even insisted that their product was as good as ever, but Brooks laughed them to scorn. He knew better. "The farmer alone has no come-back," he finally told one of the manufacturers. "He is putting out just as good stuff as before the war or any other time. His cows give just as rich milk and his pork and beef are just as solid as they ever were. Yet he has to take whatever price he can get for his product, and buy back the manufactured article in an inferior form. He always has been the goat, and I guess will be, for some time to come. We give quality, but we do not receive the same quality in return. Where has quality gone, anyway? Where has it all leaked away to in the last two or three years? Do our animals grow poor hides now, so that they are responsible for a pair of shoes going to pieces inside of two months?"

The manufacturer gave no answer, and they went on their way. They passed many idle people on the streets, while "Help Wanted" signs stuck out everywhere. The theaters seemed to be drawing their usual large crowds, however. "Some of the many strikers, I suppose," said Brooks, as they passed knots of workmen smoking and talking on the streets. "After their dollar an hour, probably. They may need it all right by the time they get back to work. I wonder what would happen if the farmers went on a strike for a couple of weeks? There'd be a lot of cold-storage eggs and condensed milk used, eh Dunn? And it would give the railroads a chance to move some of the things that are piled up from weeks back, during the switchmen's strike. I have a fine chance of doing better farming when the grass seed I ordered early in the spring, which was shipped immediately, isn't here yet, and most of my small grain is already in the ground without it!"

"Yes, and we have a hard time to keep enough of many necessary things in stock," said the implement dealer. "For with most of the big manufacturing concerns making war munitions for two years, and machinery on the farm being used up just the same, we cannot get enough to go around now. The prices paid munition workers were so attractive that they hate to work for any less now, and the owners can't run their plants at even normal pre-war capacity in some places, I hear."

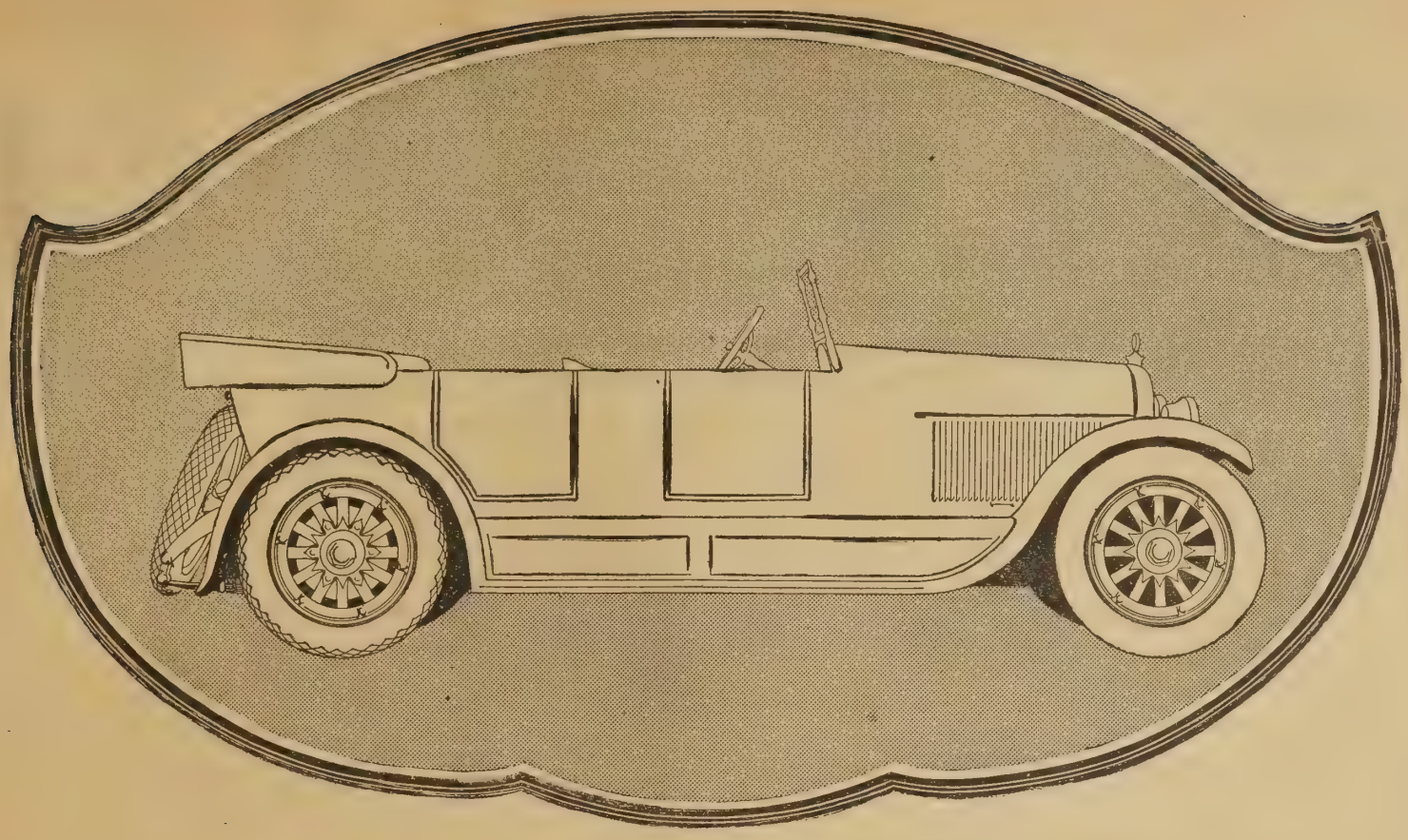
"Beats all," muttered Brooks. "It beats all that we can't locate the trouble exactly and put our finger on it. If there were only some way of making people over, so that they would be more conscientious, and do as they would be done by. If every person who has to do with the making of some thing would only picture the ultimate consumer or user of that article, and try to put their best into it, so that it would give real service. But the main idea with those selling the things that we farmers have to buy today is simply to make a sale, and the sooner the thing gives out, the sooner they can sell another."

Suddenly Harkness gripped him by the arm and pointed up an alley-way they were passing. "What is that, Brooks?" he asked, "That queer figure up there?"

"I mean to find out," answered Brooks, half way to the spot before the words were well out of his mouth. But the thing that he was after floated up in the air away from him and hovered a few feet up out of reach. And a mocking voice came down from the figure, which was that of a man clad in the best of all-wool clothing and stout shoes, smoking a cigarette, and waving a poster that said, "Not over six hours work a day, and not less than $1 an hour," saying "I am that illusive element, Quality, that you have been hunting for all of this fine day. I won't come back to earth until your next president is elected. I am having too good a time up here, living on the wages I received as a munition worker and wearing the clothes I had made out of the government cloth I got away with." And waving a tiny red flag that he pulled out of his shirt, this man drifted away on the breeze to new scenes, the embodiment of this restless age.

And Brooks awoke to put on his torn shoe and ponder over his dream.

When you burn the trash after the picnic is over, keep a close watch against starting a bad fire.



The JORDAN Silhouette

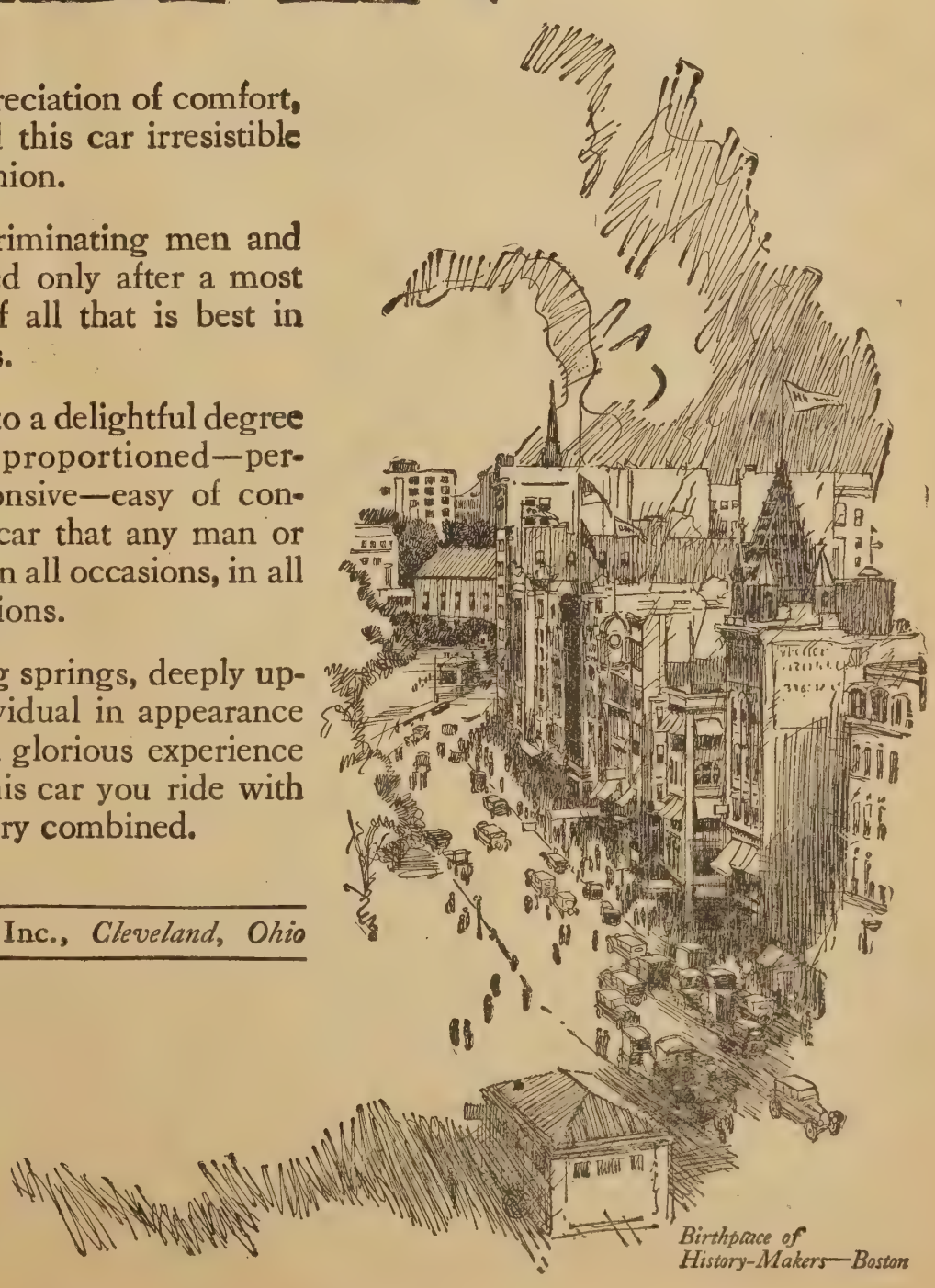
WOMEN, with a natural appreciation of comfort, atmosphere and poise, find this car irresistible in its compelling colors and fashion.

To satisfy the needs of discriminating men and women the Jordan was developed only after a most exhaustive and careful study of all that is best in American and foreign built cars.

The result is a car comfortable to a delightful degree—graceful of line—correctly proportioned—perfectly balanced—instantly responsive—easy of control—quick-about. In fact, a car that any man or woman may be proud to drive on all occasions, in all circumstances, under all conditions.

Hammock swung, on extra long springs, deeply upholstered and so rich and individual in appearance that driving a Jordan becomes a glorious experience of which one never tires. In this car you ride with an ease that is comfort and luxury combined.

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Faster, Deeper Plowing!

THREE miles per hour, with the pull of a dozen-odd horses ***concentrated*** at the draw-bar---all under easy, quick control of one operator. ("5 Ton"—40—25 H.P., 4 plow), ("10-Ton"—60—40 H.P., 6 plow). Power to leave deep, even furrows in stiffest sod or stubble; to pull a big load of harrows or seeders on the ***mellowest*** seed bed. ***No*** slipping and ***no*** fuel waste. ***No*** packing so cannot injure any soil.

Holt patented steel tracks—heat treated for long service by our own process—have carried business farmers and road makers through season after season of hard work.

The "Caterpillar" will fit every power job on your farm—belt, field and road and turn you a real profit by ***year 'round service and satisfaction.***

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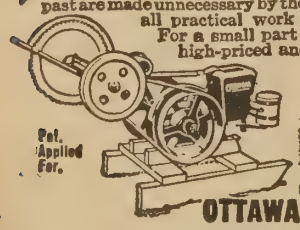


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A Newly Invented SAW RIG

WILL saw your winter's wood in a few hours and then you can make money sawing for others. Many users say they make upwards of $11.00 a day cutting wood for neighbors. Expensive cumbersome rigs used in the past are made unnecessary by the Ottawa Saw Rig. Does all practical work any other saw rig can. For a small part of the cost of one of these high-priced and obsolete rigs you can now own the

LOW INTRODUCTORY OFFER



Pat. Applied For.

OTTAWA SAW RIG

Strictly a one man outfit. Easy to operate, light to move, simple to handle. Powerful 4-cycle motor that drives any belt machinery when not sawing. It will pay for itself in cash in two weeks, just cutting wood for neighbors. 30 Days' Trial; 10 Year Guarantee. Let the Ottawa work a month for you to prove our claims. Write for FREE BOOK TODAY.

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We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.

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Insure Against Loss

You can't afford to lose one of your valuable dairy cows by neglecting to mark your herd with Perfect Ear Tags.

They are made of light weight aluminum, non-poisonous and non-corrosive. Easy to attach in single operation.

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Increase Your Milk Flow



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AUTOMATIC CONTROL—FRESH SUPPLY AT EVERY DRINK

Write for Circular and Prices
For Sale by Dealers Everywhere
JOHN W. LADD CO. Detroit—Cleveland



Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

Wisconsin State Fair

(Continued from page 343)

teresting to note that numbers two and four are both daughters of the same sire, Terracelawn Hengerveld Segis. Aaggie Nephele Hengerveld, Baird Bros.' third prize cow, is a very good one, carrying an especially well shaped udder, but she lacked a little of the splendid type and quality of the first two. Both of these were nearly ideal types of Holsteins, with number two not quite so good over the hips and lacking just a little of the scale possessed by the winner.

Doetje Nellie Concordia was an easy senior and grand champion in spite of the fact that the junior champion female, Princess Beauty Calamo, was one of the best junior yearlings that ever stood in a Wisconsin ring.

The largest class of the show, the senior heifer calves, was, we believe, the largest class of any age ever seen in a dairy cattle ring anywhere. When Mr. Moscrip was called to begin the class, 76 calves confronted him. It was a task to make any judge stop and think, but we know of no one who could have handled it better or with more dispatch than did Moscrip.

Baird Bros.' Cedar Lawn Canary Paul and Harvest Sir Ormsby owned by the Harvest Farms Co. were easy winners in an aged bull class with 12 entries. Of the two Baird Bros.' entry possessed the better body and rump and showed to just a little better advantage throughout. He was later senior and grand champion.

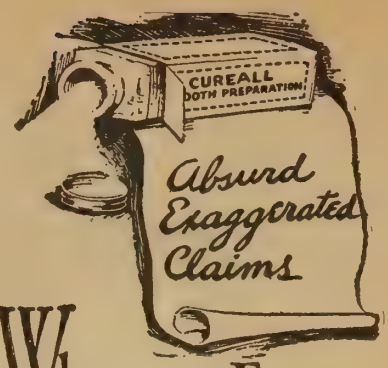
Carnation Stock Farm showed the junior champion, Matador Segis Walker Piebe, an excellent junior yearling. His strongest competitor was the senior yearling, a son of Iowana Sir Ollie shown by Wm. O'Leary.

When the county herds (10 animals to a herd) lined up for the special prizes offered in that class, Waukesha County was an easy first, followed in turn by Jefferson, Waupaca, and Wood. In the county calf herds, Green County took the lead, followed by Sheboygan, Jefferson, and Waukesha.

Complete awards follow:

Bull 3 years or over—1, Baird Bros. on Cedar Lawn Canary Paul; 2, Harvest Farms Co. on Harvest Sir Ormsby; 3, Hetts on King Fan Segis; 4, Kirkpatrick Bros. on Senator Johanna White; 5, Marlow and Randall on Pietertje Star Mercedes; 6, Winkler and Wiffenbach on King Pontiac Boon Artis; 7, Rust Bros. on Daisy Johanna 5th. Bull 2 years and under 3—1, Hetts on Julianna Lyon De Kol; 2, Marlow and Randall on Mankato Pietertje Ormsby Mercedes; 3, Martin and Son on Pabst Korndyke Bruno; 4, Rust Bros. on Hengerveld De Kol Beets 8th; 5, Fisher on Ashburne Sir Pietertje Segis. Senior yearling bull—1, O'Leary on East Troy Sir Ollie; 2, Bonair Farm on Hartog Gerben Colantha; 3, Garvens on Nockdair King Superba Supreme. Junior yearling bull—1, Carnation Stock Farm on Matador Segis Walker Piebe; 2, Marlow and Randall on Mankato Pietertje De Kol Orsmby; 3, Edgewood Farms on M. M. Agnes Pontiac Fobes Longfield; 4, Simons on Sir Ormsby Segis Pontiac Pietertje; 5, Harvest Farms Co. on Harvest Matador Segis; 6, Mann & Son on King Prilly Segis Alcartra. Senior bull calf—1, Wiffenbach on King Pontiac Salma; 2 and 5, Kirkpatrick Bros. on Champion Johanna Piebe and Canary Homestead De Kol; 3, Stevens, Jr. on ———; 4, Nicolai on ———; 6, Claflin Bros. on ———; 7, Becker on ———; 8, Cook on Walcowis Ollie Skylark. Junior bull calf—1, Kelley on King Bevo Ormsby; 2, McDowell on Junior Colantha Johanna Champion; 3, Hare on ———; 4, Fisher on King Segis Pontiac Pledge; 5, Cosgrove on ———; 6, Meissner on Bairdland Sir Perfection Jasper; 7, Howell on Brookvale Perfection Ben; 8, Raisler on ———.

Cow 4 years or over—1, 2, and 4, Aitken Bros. on Doetje Nellie Concordia, Doetje Nellie, and Hulda Segis Koroba; 3, Baird Bros. on Aaggie Nephele Hengerveld; 5, Rust Bros. on Ida Lotta 5th; 6, Schroeder and Sons on Huldah Soldene Princess. Cow 3 years and under 4—1, Aitken Bros. on Johanna Fern Cliff McKinley; 2, Christenson Bros. on Loretta Ormsby Mercedes; 3, Raisler on Star Netherland Johanna Bonney; 4, Marshall on Johanna Sarcastic Ormsby 4th; 5, Rust Bros. on Aaltje Salo Rosella Daisy; 6, Wiffenbach on Wisconsin Piebe Oak De Kol Watson. Heifer 2 years and under 3—1, Royce on Dinale Veeman Colantha; 2, Gafke on Jewel Posch Segis; 3, Barte on Kilka Jewel Fayne; 4, Aitken Bros. on Queen Keyes Ormsby; 5, Marlow and Randall on Edenvale Aaltje



When you Expect a Dentifrice to be a "Cure-all", you are taking too great a Risk

STRONG chemicals may make the mouth *feel* clean, but a dentist or physician will tell you that just such drugs may also harm the delicate membranes of your mouth.

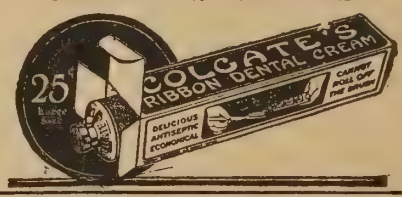
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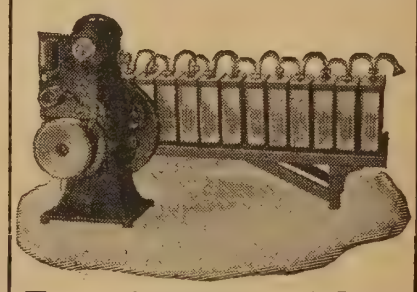
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Farm Lighting Plant

A ¾ k.w. generator directly connected with a 2 H. P. air cooled motor. Capacity 45 20-watt lamps. Willard storage battery. Dealers wanted. Write for particulars.

REGAL GASOLINE ENGINE CO.
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Mercedes; 6, Fisher on K. P. H. E. Dorothy Columbia Ormsby. Senior yearling heifer—1, Fisher on Buttercup Repeater; 2, Trieloff Bros. on Tressie Gem Homestead; 3, 5, and 6, Marlow and Randall on Mank. Ormsby Pietertje, Mank. Allie Pietertje Ormsby, and Mank. Ormsby Maid; 4, Winkler on Nockdair Superba Prize Flower; 7, Smith on White Star Lily 3rd; 8, Baird Bros. on Nockdair Superba Gladice. Junior yearling heifer—1 and 2, Jefferson County Asylum on Princess Beauty Calamo and Tuka Calamo Beauty; 3, Simons on Ella Homestead Pontiac; 4, Fisher on Inka Pet Repeater Pontiac; 5, Marlow and Randall on Mankato Ormsby De Kol; 6, Christenson Bros. on ———; 7, Hackbarth on Pietertje Myrtle of Rock; 8, Garvens on Garvendale De Kol Beets Coronis. Senior heifer calf—1, Baird Bros. on Nockdair Canary Parthenia; 2, Bonair Farm on Bonair Princette Ormsby; 3, Schinke on Ureeka Mantal Bess; 4, Keopp Bros. on ———; 5, Gurr on Blue Eye Lady Johanna De Kol; 6, Kaye on Kayewood Iola Walker; 7, Halbach & Sons on Alice Hengerveld Bess Ormsby; 8, Hackbarth on———. Junior heifer calf—1, Holloway on ———; 2, Halback & Sons on Esther Bess Pietertje; 3, Calder on Willowcreek Nellie De Kol; 4, Pelz on ———; 5, Simons on ———; 6, Harvest Farms Co. on Harvest Lakeview Lass; 7, Crosby on ———.

Senior and grand champion male—Cedar Lawn Canary Paul. Junior champion male—Matador Segis Walker Piebe. Senior and grand champion female—Doetje Nellie Concordia. Junior champion female—Princess Beauty Calamo.

Aged herd—1, Baird Bros.; 2, Marlow & Randall; 3, Christenson Bros.; 4, Fisher; 5, Schroeder & Son; 6, Rust Bros. Young herd—1, Marlow & Randall; 2, Harvest Farms Co.; 3, Simons; 4, Fisher; 5, Garvens; 6, Rust Bros. Calf herd—1, Bonair Farm; 2, Simons; 3, Harvest Farms Co.; 4, Fisher; 5, Lindsay & Sons; 6, Garvens. Get of sire—1, Aitken Bros.; 2, Bonair Farms; 3, Marlow & Randall; 4, Gafke; 5, Schinke; 6, Wiffenbach. Produce of cow—1, Aitken Bros.; 2, Marlow & Randall; 3, Harvest Farms Co.; 4, Christenson Bros.; 5, Anthes. Cows in milk—1, Aitken Bros.; 2, Baird Bros.; 3, Rust Bros.; 4, Fisher. County herd—1, Waukesha; 2, Jefferson; 3, Waupaca; 4, Wood. Calf herd—1, Green; 2, Sheboygan; 3, Jefferson; 4, Waukesha.

The Guernseys

The Guernsey showing this year included 164 entries from about 30 different herds, Axel Hansen of Minnesota judging.

There was just one out-of-state herd represented, Folly Farm of Illinois. Among the Wisconsin entrants, Jones & McKerrow and G. Kingston & Son, both of Waukesha County, were the largest exhibitors. Theirs were, in fact, the only two individually owned show herds from the state and they were by far the heaviest winners. Jones & McKerrow succeeded in winning nine firsts and two championships, while Kingston took six blue ribbons and two championships, the grand championship placings being equally divided. These two herds are, we understand, out to complete the big circuit and should prove a splendid advertisement for Wisconsin Guernseys.

A good aged bull class is always interesting and that this year was one of the most interesting ones of the Guernsey showing. Eight entries, including Imp. Itchen May King owned by Fox, Kingston & Son, Bonnie Boy of Riverside and Chene King from the Jones & McKerrow herd, and Hopeful of Edgemoor owned by Kingston & Son were lined up for Judge Hansen's inspection. Itchen May King, veteran of many shows and always a strong contender, was showing in form that made him a good first. Bonnie Boy of Riverside, second in line, was good, but appeared a little too full in the thighs and lacked a little of the winner's length and dairy quality. Kingston & Son's Hopeful of Edgemoor, a son of the leader, did not show sufficient body to put him above third place. Chene King, that placed fourth, a 3-year-old, had to show to a disadvantage in aged competition but promises with two or three years more to his credit to make any of those that beat him look to their laurels.

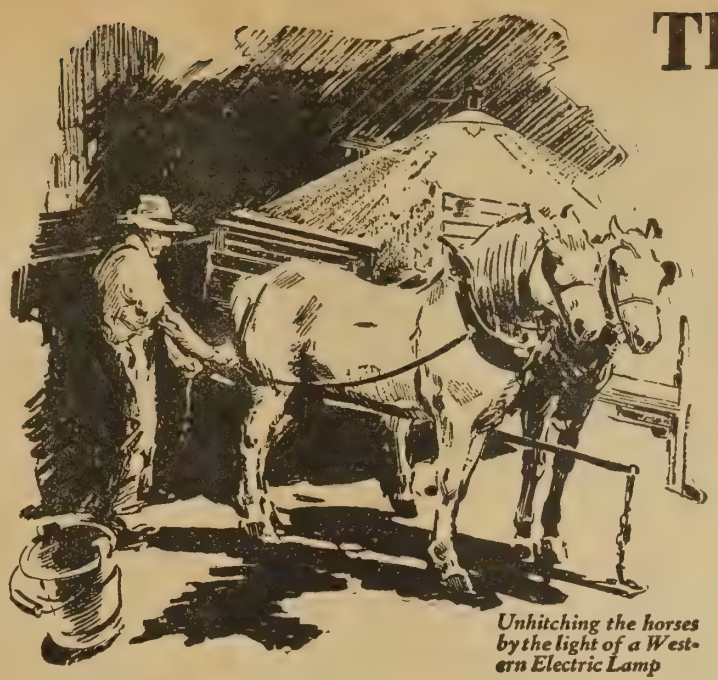
The aged bull was senior champion and an easy grand champion over Jones & McKerrow's Navigator of Edgemoor, the winning senior calf. The latter was not an outstanding individual and the junior championship could, we believe, have better gone to Kingston's junior calf or Hoard's junior yearling.

Imp. Mildred 2nd of Les Godaines, owned by Jones & McKerrow, was an outstanding winner among 17 aged cows. She possesses the size, type, and quality that would command attention in any ring and will, we believe, be a strong contender for high honors at the National. She was a popular senior and grand champion, defeating Kingston's senior calf, Hopeful's Miss of Sunny Slope, for final honors.

Complete awards follow:

Bull 3 years or over—1, Fox, Kingston & Son on Imp. Itchen May King; 2, Jones & McKerrow on Bonnie Boy of Riverside; 3, Kingston & Son on Hopeful of Edgemoor; 4, Jones & McKerrow on Chene King; 5, Folly Farm on Allenwood King Regent; 6, Plowman on Pencoyd Autocrat. Bull 2 years and under 3—1, C. J. & W. A. Connell on Bolgrade of Beaver Ridge; 2, Claffey & Son on Dairymaid's Prince of Fox Valley; 3, Gordon, Jr., on Gold Allie's Secret; 4, Ridge and Sons on Lady's Hambro; 5, Onstad on Warcry of Edgemoor. Senior yearling bull—1, Folly Farm on Folly Noble; 2, Gordon, Jr., on Cora's Cherub of Shorewood; 3, Clark on May King's Goldseek of A. D. F. Junior yearling bull—1, Hoard on King B of Koshkonong Place; 2, Fisher on Victor's Duke of Thornhill; 3, Stark on Quaker of Koshkonong Place; 4, Jones & McKerrow on Dora's King; 5, Thielke & Son on Beauty Eagle's Prince; 6, Clark on Nelly's Goldseek the Great of A. D. F. Senior bull calf—1, 4, 5 and 6, Jones & McKerrow on

(Continued on page 350)



Unhitching the horses by the light of a Western Electric Lamp

There was once a man called "farmhand"

"If farmhands grow much scarcer, we will soon forget what the word means. Help is certainly hard to get. But I have found help in another form—an electric power and light outfit. I want to tell you what these plants can do for you, and some of the things they can't do."

H. J. Bowman

Editor's Note: *Mr. Bowman's farm is located near Ames, Oklahoma.*

"NOT being able to get any steady help, I have been doing most of my work myself. It worried me to think that every hour I spent milking cows, turning a grindstone or chopping wood was just so much time taken away from necessary work in the fields.

"Last spring I became interested in the question of a farm plant. But I delayed buying one, because those I first saw were not much more than lighting plants. They didn't show up well in a power test for heavy work.

"Now my idea of a piece of farm machinery is that it must be useful first of all.

An outfit that does a man's work

"I kept on looking till I found the plant that came nearest to satisfying my need for power — A Western Electric Power and Light Outfit. I'm not saying that this outfit can mow the hay or do any plowing. But it certainly is doing some real, honest-to-goodness work for me, saving time and labor.

"In the first place the Western Electric Outfit has an engine that can operate pretty near all the machinery on the average farm. It runs my fanning-mill, feed-mixer and milking machine.



Carry the motor right to the job you want done

"Then with the generator and batteries in action—or the batteries alone—I let electricity milk the cows. The utility motor, which I can carry around and connect to any lamp socket, is mighty handy for such jobs as running the churn or the grindstone, or in fact, turning any machine I used to turn by hand.

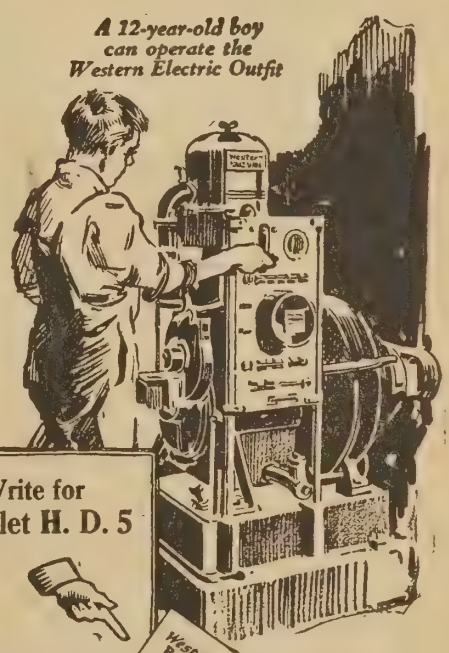
"All this means time saved—and time is money when a man is in the middle of his planting or harvesting."

Long life to your battery

You may be interested to know that the engine to which Mr. Bowman refers is of the dependable valve-in-head, air-cooled type, burning gasoline or kerosene.

The battery lasts long because of the famous "tapering charge", a Western Electric feature. An automatic control very gradually decreases the rate of flow as the battery fills, till the current stops gently by itself. This takes all strain off the battery.

A 12-year-old boy can operate the Western Electric Outfit



How to save time and labor

Booklet H. D. 5 gives some facts and figures on how the Western Electric Power and Light Outfit helps solve the farm labor problem. For your copy write to the Western Electric Company at Chicago, or 195 Broadway, New York.

Some good territory still available for live-wire representatives

Write for Booklet H. D. 5



Western Electric Power & Light

Makes the battery last longer



Examining the tire layers after 15,000 miles

Tread Patented

Center tread smooth with suction cups, to firmly grasp wet asphalt. *Geared-to-the-Road* side treads mesh like cogs in dirt.

Tire Mileage Doubled

Costs us $150 for each added mile

Miller Tire experts, in the past five years, have doubled their average tire mileage. They have cut the cost-per-mile in two. That will save Miller users this year some $50,000,000.

The cost of these betterments, on the Cord type alone, has been $1,136,419. Just the laboratory and testing expense last year averaged $10,000 monthly. These thousands of added miles have cost us about $150 each.

New-Grade Tires

The result is a new-grade tire. To hundreds of thousands it has brought a new conception of good tires.

Now Miller Tires are everywhere discussed. They are used exclusively in some of the hardest services. The demand in five years has multiplied 20-fold.

Costly Methods

We keep 250 tires constantly running under observation. We destroy 1,000 tires yearly to learn how to improve them.

We separate tires after long, hard use to watch the effects on layers.

We spend $1,000 daily just to watch and test tires and materials. We sign every tire, so each returned tire teaches us its lessons.

Now Millers offer mileage which a few years ago was undreamed of. And they offer treads which, by countless tests, outlast the best of others by 25%.

You owe yourself a test. Learn what this doubled mileage means on your car. Compare the Miller Tire with others. Let the figures tell you which tire to adopt.

A maker who has made good tires twice better deserves a trial from you.

From California

Gilman Bros., of San Jose, sold 1,200 Miller Cords in nine and a half months, have only made one adjustment. One of these tires went 53,000 miles on a heavy stage. Another 49,987. And a third 38,000 and still running.

From Colorado

The La Junta Motors Corporation, La Junta, report that Millers average 15,000. They have not had one adjustment in two years.

From Florida

W. R. Link, tire dealer, of Orlando, reports four tires going over 28,000 miles on a car owned by the Hutchins Realty Company.

THE MILLER RUBBER COMPANY, Akron, O.

Also makers of Miller Inner Tubes, built layer-on-layer. Based on 24 years of fine-rubber experience. Red or Gray.

Miller Tires

CORDS Geared-to-the-Road *Reg. U. S. Patent Office* **FABRICS**

The Supreme Attainments

Converting Corn Into Meat and Milk

(Continued from page 327)

and even more cattle are fed, have been too slow in falling into line. Some states having a similar live stock population and practically the same climatic conditions as Wisconsin can boast of only one-half as many silos.

When it becomes more generally understood that silage furnishes the cheapest available kind of succulence, every farmer who keeps more than half a dozen head of cattle will feel he cannot worry along without a silo. As a supplement to the grain ration for dairy cows, silage makes possible an increase in the milk flow frequently as much as fifteen per cent or more.

A neighbor of mine in the cutover country recently built a silo where it seemed that other repairs and improvements were even more badly needed. When I asked him why he had placed the importance of the silo before everything else, he smiled.

"Well, do you know, I believe it is almost a superstition with me. Did you ever see a settler in this country fail if he had a silo? I haven't. Did you ever see an abandoned farm where there was evidence of a silo in good repair? I never have. There must be a reason. If the silo did nothing more than make easy my winter feeding, it would be worth while."

Silage has fully as an important a place in the feeding of beef cattle and sheep as in the dairy ration. Nevertheless, no more than enough silage is annually made in this country than would supply our live stock with succulent food for more than one month of the year. Disregarding the possibilities of sugar beet tops, canning factory refuse and other silage producing crops, the corn crop alone is capable of producing silage for all our live stock the whole year round, and this, too, without greatly reducing the acreage of ear corn for human consumption and for fattening cattle.

Ensiled corn provides a high quality, succulent feed for any season. In the curing process, a minimum of nutrients is lost. Whereas in the form of fodder, as much as a third of the dry feed is lost, silage is so relished that almost none is wasted. The silo permits harvesting of a crop in any weather and storage in a minimum of space. It also provides succulent feed to tide over summer droughts.

From the standpoint of economy in labor, it should be recognized that crops put into the silo are handled but once, and then under the most favorable conditions. Where a medium sized silo is being filled and the work runs smoothly, it is possible to put up from ten to fifteen tons of silage per hour. There is really no easier or better way of preserving corn for feed. Where help is limited and there is no heavy motive power available to operate the large blowers, a small cutter with an elevator chain can serve for the work. Such an equipment can be secured for half the cost of a larger outfit and it has the advantage of being successfully operated with a seven to ten horse power engine. Under good management, silage can be made for two dollars a ton and it is worth at present eight and ten times this amount of feed.

The silo also permits the full utilization of a crop of corn that has been hit by drought or frost. Again, there is hardly a season of the year in which some farmers do not find themselves with silos uncompleted when it is filling time. In these instances, in order to prevent their corn from becoming too ripe, they cut and shock it, and later put it into the silo.

Ordinarily silage settles about one-fourth when the silo is filled rapidly. It is economy, therefore, to refill the silo after the settling has occurred. For this purpose, shocked corn may be used. It pays well to put it into the silo as late as February. It costs a bit more to ensile the shocked corn than the fresh fodder, but it pays nevertheless. As is the case when ensiling drought stricken or frosted corn, water must be added in sufficient quantity to make the material pack well. To be effective, the water must be properly applied. Where running water under pressure is available, this is most easily done. In order to get the corn well wetted, a part of the water should be applied through the blower and the remainder sprayed over the material as it is packed in the silo.

For dairy cattle, corn silage should be cut when the ears are just beginning to dent. For beef cattle, it is preferred that the ears be more fully mature. In order to prevent the material from decaying, particular care should be taken to pack it firmly, especially around the edges of the silo. Since the object of the packing is to exclude air, the silage must necessarily be slightly moist.

In a well balanced ration, the use of silage as the main roughage for steers makes them gain rapidly and reach a high finish with a minimum outlay for expensive concentrates. When stockmen of the great cattle and sheep states of the West learn how to fully appreciate the value of silage for feed, they will in many cases be able to make their cattle put on gains during the winter months and seasons of short pasture.

Where hogs are allowed to follow cattle it has been found that the returns from silage are 50% more than when the same amount of corn in shocked corn is fed. Since putting corn in a silo doubles its feeding value and permits comfort instead of drudgery in winter feeding, is it any wonder that more and more farmers are canning the crop rather than handling it from the shock?

Oldest Ohio Holstein Club Meets

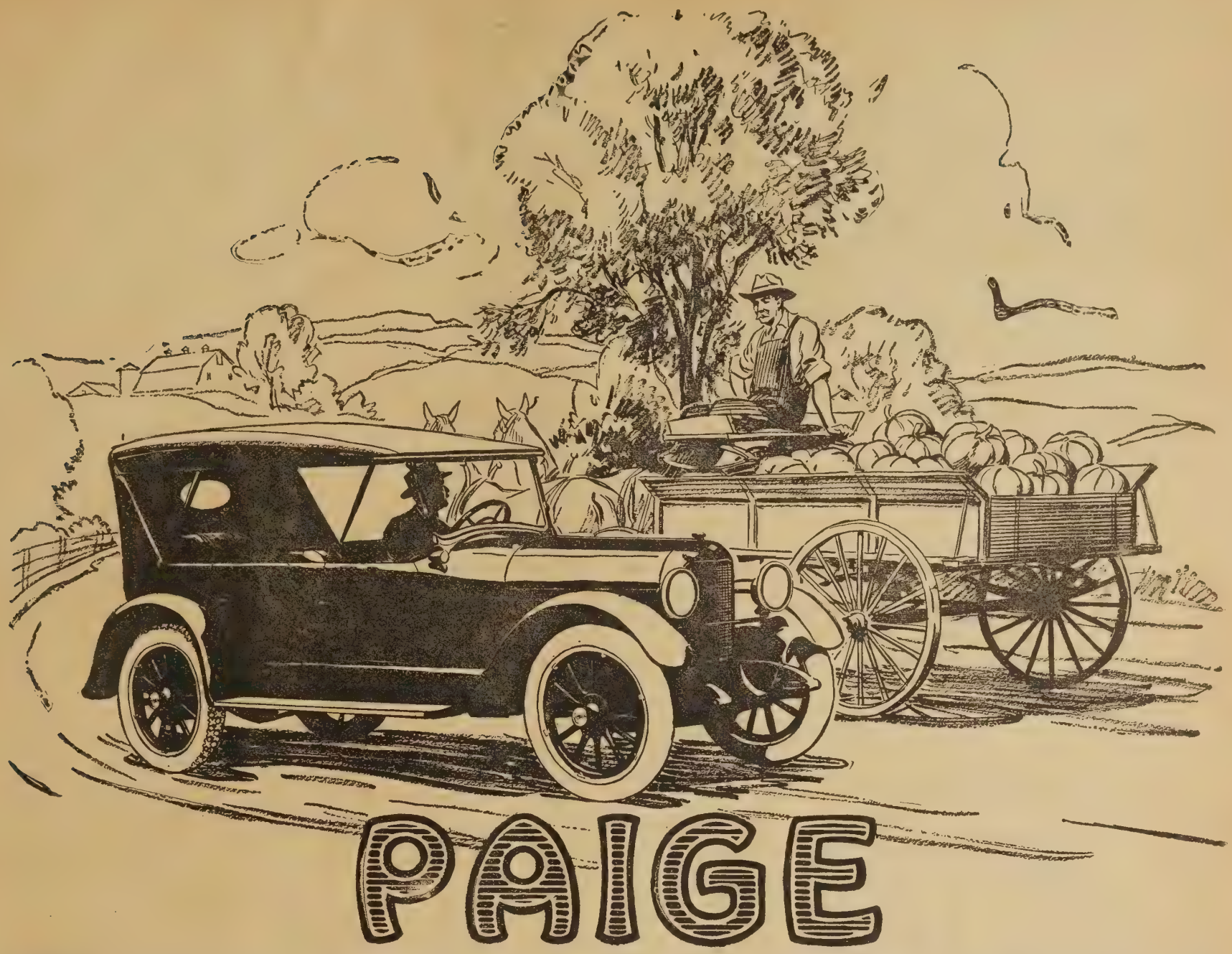
The oldest county Holstein-Friesian Club in Ohio had its annual meeting July 30 at Burton and in spite of the fact that threshing and oats cutting were in full swing there was a large attendance of breeders and their families. The meeting was held at the home of Howard Ensign. Ivan McKillip of Ohio State University in charge of cow testing associations was present and after explaining the importance and value of Geauga County sending its 10 high cows to the cow testing association demonstration at the Ohio State Fair, he helped the members pick their cattle for the exhibit.

The demand for the signs "Holstein-Friesians on this Farm" was more than 100%. It is the desire of the club to have one of these signs on every Holstein farm in Geauga County. H. C. BARKER.



WALTER TOMLINSON, PRESIDENT OF THE WILLIAMS COUNTY HOLSTEIN CLUB OF OHIO

He is 77 years young and one of the livest breeders in the county. He was recently on an all-day tour with the Holstein breeders of the county when six herds were visited.



PAIGE

THE MOST BEAUTIFUL CAR IN AMERICA

IT is a matter of common knowledge that our sturdy Paige Glenbrook model marks a distinct advance in the building of light sixes. Scientifically considered, it stands as the embodiment of an entirely new conception of mechanical excellence in a car of five-passenger size.

The Paige Glenbrook, it must be remembered, is distinctively a product of the war period. Three years of constant research and ceaseless experiment were devoted to it by Paige engineers before it was ultimately perfected.

Its six-cylinder motor is a product of unusually high refinement, reflecting in every particular the standards of precision and accuracy developed by the war. And, in body and chassis also, it is a striking example of twentieth century progress in both design and construction.

The Paige Glenbrook is, therefore, in every sense of the word, a strictly modern achievement representing the best that automotive engineering has ever produced in the building of light sixes.

We ask that you give this due consideration before deciding upon your next motor car purchase. If you value true efficiency and dependability in a motor car, your choice will undoubtedly be a Light Six Paige.

PAIGE-DETROIT MOTOR CAR COMPANY, DETROIT, *Michigan*

Manufacturers of Paige Motor Cars and Motor Trucks

HUDSON SUPER SIX

Why Are Hudson Owners Indifferent to Other Cars?

Isn't It Because Contentment In Hudson Ended Inquiry Into Others?

Thousands of Hudson owners know no other make of car. Their satisfaction in the Super-Six leaves nothing to tempt them to experiment elsewhere.

Our experience gives confidence to count every Hudson purchaser as a permanent owner.

Naturally we expect men of wide motor knowledge to select Hudson. But isn't it a revelation of the convincing way Super-Six performance overshadows the field, that thousands who profess little mechanical knowledge are just as unerring in their choice?

Can Any Endorsement Rival This?

For nearly five years Hudson has outsold all the world's fine cars. And today its distinction is so wanted that we see no curb to sales except the production limitations that fine, accurate building imposes.

More than 100,000 Super-Sixes are in service. That exceeds the output of any car in its price range by many thousands.

It is a verdict—100,000 strong—for qualities and abilities no other car can share. It fixes the specific reason for dominance of a type, unlike any other car.

This chief issue is Hudson endurance. And it is exclusive, because it results from a patented principle. Others cannot use this invention, which by reducing vibration to within 10% of vanishing, made Hudson's unequalled reliability marks possible.

Its Endurance Limits Still Undiscovered

Years must elapse before we know the final limit of Super-Six endurance. We tried to establish those limits by test. Speedway trials, a double transcontinental run that no other car ever endured to finish, and the abuse of high-speed racing, failed to reveal the point at which Hudson endurance would yield. But they did establish that the Super-Six possessed greater durability than any other car ever proved.

The earliest Super-Sixes, built nearly five years ago, and still serving with undiminished satisfaction, testify how car life is practically doubled through this invention.

Hudson Motor Car Company, Detroit, Michigan

(4005)

Wisconsin State Fair

(Continued from page 347)

Navigator of Edgemoor, Coral Jerry King, Coral Tom King, and Ultra's Proud King; 2, Fisher on Proud King of the Loop; 3, Ridge & Sons on Lady's Hambro of Ridge Lawn. Junior bull calf—1 and 2, Kingston & Son on Aristocrat of Muskego and Warrior of Muskego; 3, Main on ————; 4, Becker on ————; 5, Clark on Grassmere's Victor Sequel; 6, Folly Farm on Folly Jupiter; 7, Young on ————.

Cow 2 years old or over—1, 3 and 4—Jones & McKerrow on Imp. Mildred 2nd of Les Godaines, Imp. Governor's Ella of McKerrow Farms, Imp. Bordeaux of Courtil Bree; 2, Ridge & Sons on Pet's Golden Beauty; 5, Gordon, Jr., on Juanita of Nelsonville; 6, Kingston & Son on Imp. Violet of Tol Val; 7, Plowman on Dawn of Lake View. Cow 3 years and under 4—1, Jones & McKerrow on Kate of Aurelian Farms; 2, Kingston & Son on Raider's Surprise of Muskego; 3, Thielke & Son on Violet of Louis Corner's; 4, Gordon, Jr., on Friskey of Gordondale; 5, Plowman on Glenwood's Lassie. Heifer 2 years and under 3—1, Jones & McKerrow on Century Girl of Edgemoor; 2, Kingston & Son on Itchen Queen of Edgemoor; 3, Thielke & Son on Evelyn of Louis Corners; 4, Ridge & Sons on Bob's Leuinna; 5, Hoard on Joan of K. P. Senior yearling heifer—1, Jones & McKerrow on Eidelweiss of Edgemoor; 2, Kingston & Son on Lillian of Edgemoor; 3 and 4, Thielke & Son on Hattie of Louis Corners and Beauty's Grace of Louis Corners; 5, Gordon, Jr., on Phoebe of Gordondale. Junior yearling heifer—1, 4, and 6, Jones & McKerrow on Spring Maid of Edgemoor; Dancing Girl of Edgemoor; and Ultra Governess Chene; 2, Kingston & Son on Wonder Girl of Muskego; 3, Ridge & Sons on Hambor's Nina May; 6, Tratt on Bob's Melurose. Senior heifer calf—1, 5, and 7, Kingston & Son on Hopeful's Miss of Sunny Slope, Polly of Shady Gulch 3rd, and Mary Suniac of Edgemoor; 2, 3, 4, and 6, Jones & McKerrow on Ultra Rosie, Topsy's Ultra Lily, Ultra Pearly, Ultra's Elizabeth Beauty. Junior heifer calf—1 and 4, Jones & McKerrow on Chene King Northern Lady and McKerrow Ultra's Lass; 2 and 3, Kingston & Son on Wonderful Girl of Muskego and Dome of Muskego; 5, Plowman on Marcella's Miata; 6, Tratt on Bob's H. C. Lily.

Senior and grand champion bull—Imp. Itchen May King. Junior champion bull—Victor's Duke of Thornhill Senior and grand champion female—Imp. Mildred 2nd of Les Godaines. Junior champion female—Hopeful's Miss of Sunny Slope.

Aged herd—1, Jones & McKerrow; 2, Kingston & Son; 3, Ridge & Sons; 4, Gordon, Jr. Young herd—1, Thielke & Son; 2, Tratt; 3, Gordon, Jr.; 4, Folly Farm. Calf herd—1, Kingston & Son; 2 and 3, Jones & McKerrow; 4, Tratt. Get of sire—1, Kingston & Son; 2 and 3, Jones & McKerrow; 4, Gordon, Jr. Produce of cow—1 and 3, Jones & McKerrow; 2, Kingston & Son; 4, Gordon, Jr. Cows in milk—1, Kingston & Son; 2, Plowman; 3, Bean.

Jerseys

As at the two or three earlier shows, the Jersey exhibit was not quite up to the standard size of former years. There were only 120 shown, 21 of them calf club entries.

Two good out-of-state herds, that of W. A. Brewerton of Illinois and A. M. McClenahan's from Colorado, furnished Wisconsin Jersey exhibitors with hard competition and succeeded in winning eleven firsts as well as all championships.

Dixon, showing for McClenahan, won senior championship on the two-year-old, Majesty's Feather Lad, but was beaten for grand championship by Brewerton's junior champion, Raleigh's King Thornbury, an outstanding senior yearling.

McClenahan more than evened up when the female championships were placed, by taking them all. His aged cow, Westfield Girl, with a very well shaped, splendidly veined udder, was senior and grand champion. Majesty's Finance Oxford, a senior yearling from the same herd, was junior champion.

Hugh G. Van Pelt of Iowa did the judging. Complete awards follow:

Bull 3 years or over—1, Wyatt on Harbinger's Chief; 2, Underwood on Primrose's Raleigh's Lad; 3, Douglas & Son on Merry Lad's You'll Do. Bull 2 years and under 3—1, McClenahan on Majesty's Feather Lad; 2, Underwood on Fewacres Oxford Majesty. Bull, senior yearling—1, Knight on Majesty's Ixia's Gamboge; 2, Brewerton on Jap's Prince Thornbury; 3, Rasch on Rena's Knight. Bull, junior yearling—1, Brewerton on Raleigh's King Thornbury; 2, Wyatt on ————; 3 and 4, McClenahan on Financial Dainty Prince and Majesty's Defiant Count; 5, Douglas & Son on Douglas Royal Majesty. Senior bull calf—1, Melrose on Ethelwold Warder; 2 and 3, Knight on Eminent Rossette's Lad 2nd and Noble's King's Son's Lad; 4, McClenahan on Majesty's Feather Lad's Boy; 5, Rasch on Ruth's Noble Raleigh; 6, Douglas & Son on ————. Junior bull calf—1, McClenahan on Bosnian's Shy Duke; 2, Brewerton on T. N. T.; 3, Hill & Son on Rosette Ty cow; 4, Knight on Gamboge's Silver Majesty; 5, Underwood on ——; 6, Wyatt on ——.

Cow 4 years or over—1 and 3, McClenahan on Westfield Girl and Gray Cannoness; 2, 4, and 5, Underwood on Clara's Primrose, Noble's Lady Campanile, and Noble's Majestic Beauty. Cow 3 years and under 4—1 and 3, McClenahan on Western King's Flora Dora and Ruby's Financial Girl; 2, Underwood on Rivinia's Pet Imp.; 4, Knight on Oxford's Arina; 5 and 6, Hill & Son on Illinois Oxford Tosia and Oxford Houssa. Heifer 2 years and under 3—1, Knight on Eminent's Safety's Cupid; 2, McClenahan on Jubilee Oxie; 3 and 5, Hill & Son on Emmet Kathern 2nd and ————; 4, Underwood on Cid's New Year. Senior heifer yearling—1, 3, and 6, McClenahan on Majesty's Finance Oxford, Rambler's Crimson Rose, and Princely's Sweet Star; 2, Knight on Trial's Blue Bell; 4 and 5, Wyatt on Beauty and Marrburn. Junior yearling heifer—1 Brewerton on Raleigh's Bessie Thornbury; 2, Knight on Trial's Buttercup; 3, McClenahan on Princely's Sweet Rose; 4, Underwood on Fewacres Majesty Pearl; 5 and 6, Wyatt on Viscount's Fairy and Harbinger Lilly Loos. Senior heifer calf—1 and 2,—Brewerton on Miss Pennilthorpe Thornbury and Jap's Constance Thornbury; 3, Dillon on ————; 4, Houser on Ethelwold Blossom; 5, McClenahan on Majesty Cowslip Feather; 6, Knight on Majesty's Safety Belle. Junior heifer calf—1, Seyforth on ————; 2 and 7, McClenahan on Majesty's Feather Lad's Fodor and Majesty's Feather Lad's Fiz; 3, Wyatt on ————; 4, Knight on Cowslip's Golden Lucy; 5, Brewerton on Jap's Ophelia Thornbury; 6, Houser on Ethelwood Mary.

Senior champion bull—Majesty's Feather Lad. Junior and grand champion bull—Raleigh's King Thornbury. Senior and grand champion female—Westfield Girl. Junior champion female—Majesty's Finance Oxford.

Aged herd—1, McClenahan; 2, Underwood; 3, Douglas & Son. Young herd—1, McClenahan; 2, Brewerton; 3, Knight; 4, Douglas & Son. Calf herd—1, McClenahan; 2, Wyatt; 3, Brewerton; 4, Knight; 5, Douglas & Son. Get of 1 sire—1, Underwood; 2, McClenahan; 3, Wyatt; 4, Knight. Produce of cow—1, McClenahan; 2, Knight; 3, Wyatt; 4, Underwood.

Ayrshires

There are two good Ayrshire herds that one can always depend upon will be represented at the Wisconsin State Fair, that of B. B. Simmons & Son and the herd of Adam Seitz & Sons. They were the only ones this year and while Seitz succeeded in taking all of the blues, the showing was much more interesting than might have been expected considering the fact that the Seitz herd has for years been a consistent winner on the big circuit, whereas Wisconsin is practically the only state fair at which Simmons & Son have shown.

Seitz's Cavalier's Lord Rosebury, veteran of three seasons on the circuit, was senior champion and later grand champion over Cavalier's Sherry Redman, the winning senior calf, from the same herd. Their aged cow, Beuchan Lady Lifty, although dry and at a consequent disadvantage, shows as a real dairy cow and was an easy first and grand champion. Junior

championship went to Cavalier's Ella, also owned by Seitz.

Hugh G. Van Pelt placed the ribbons.

Complete awards follow:

Bull 3 years or over—1, Seitz on Cavalier's Lord Rosebury; 2, Simmons & Son on Cavalier's Gold Finder. Bull 2 years and under 3, 1, Seitz on Cavalier's Silver Mint. Junior yearling bull—1, Seitz on Cavalier's Wonder Boy. Senior bull calf—1 and 2, Seitz on Cavalier's Sherry Redman and Cavalier's Cupbeam; 3, Wilson on Oterkill Duke; 4, Simmons & Son on Cavalier's Jerry of Ayrcroft. Junior bull calf—1, Seitz on Cavalier's Ping Pong; 2, Simmons & Son on Ayrcroft White Robin.

Cow 4 years or over—1, Seitz on Beuchan Lady Lifty; 2 and 3, Simmons & Son on Cavalier's Snow Storm and Tossy of Pewaukee. Cow 3 years and under 4—1 and 2, Seitz on Barclay's Nightingale and Howie's Glen of Valley View. Heifer 2 years and under 3—1 and 2, Seitz on Cavalier's Silver Actress and Cavalier's Silver Queen; 3, Simmons & Son on Cavalier's Nancy of Pewaukee. Senior yearling heifer—1, Seitz on Cavalier's Creampot 2nd; 2, Simmons & Son on Cavalier's Snow Ball. Junior yearling heifer—1 and 2, Seitz on Netherhall Kathleen and Cavalier's Queen; 3, Simmons & Son on Cavalier's Nancy 7th. Senior heifer calf—1 and 2, Seitz on Cavalier's Dorothy and Cavalier's Lila Lee: 3, Simmons & Son on Cavalier's Snow Drop of Ayrcroft. Junior heifer calf—1, 2, and 3, Seitz on Cavalier's Ella, Cavalier's Lady Bountiful, and Cavalier's Messaliers; 4, Simmons & Son on Cavalier's Nancy 8th.

Senior and grand champion male—Cavalier's Lord Rosebury. Junior champion male—Cavalier's Sherry Redman. Senior and grand champion female—Beuchan Lady Lifty. Junior champion female—Cavalier's Ella.

Aged Herd—1 and 2, Seitz; 3, Simmons & Son. Young Herd—1, Seitz; 2. Simmons & Son. Calf Herd—1 and 2, Seitz; 3, Simmons & Son. Four animals, get of one sire—1 and 2, Seitz; 3, Simmons & Son. Two animals, produce of one cow—1 and 2, Seitz; 3 and 4, Simmons & Son.

Brown Swiss

Illinois entered the lists again among the Brown Swiss, E. W. Wilson of that state winning his share of the firsts and both grand championships. Showing against him was Wilmer Drollinger and Leonard Kimball of Wisconsin. The latter had but three entries.

Axel Hansen of Minnesota, doing the judging, gave senior championship to Drollinger on his Ethelmilitor, the only aged bull shown. Wilson's senior yearling, Milo of Walhalow, was junior and grand champion.

The best exhibits of the show were in the junior female classes and Wilson's senior calf was a popular junior and grand champion, defeating Drollinger's aged cow, Nestet, in the final competition.

Complete awards follow:

Bull 3 years or over—1, Drollinger on Ethelmilitor. Bull 2 years and under 3—1, Wilson on La France of Swiss Summit. Senior yearling bull—1, Wilson on Milo of Walhalow. Junior yearling bull—1, Wilson on Edred of Wahalow. Senior bull calf—1, Kimball on ——————; 2, Wilson on Jubilee Prince. Junior bull calf—1, Kimball on unnamed; 2 and 3, Wilson on Jubilee Trumpeter and Jubilee Victor; 4 and 5, Drellinger on ——— and ———.

Cow, 4 years or over—1, Drollinger on Nestet; 2 and 3, Wilson on Queen's Daughter and Penelope. Cow 3 years and under 4—1 and 3, Drollinger on Alta Rose and Sue's Alice; 2, Wilson on Aimee. Heifer 2 years and under 3—1 and 3, Drollinger on Valley Girl 8th Minnie and Belle's Beauty Tiny; 2, Wilson on Francis of Walhalow. Senior yearling heifer—1 and 4, Wilson on Trilba of Jubilee and Uhleen of Jubilee; 2 and 3, Drollinger on Militor's Nestet and Miss Taylor. Junior yearling heifer—1 and 2, Wilson on Elenor of Walhalow and Kathryn of Walhalow. Senior heifer calf—1 and 3, Wilson on Helena of Walhalla and Retha of Jubilee; 2, Kimball on ——————. Junior heifer calf—1 and 2, Wilson on Woodland Gird 2nd and Aimee 2nd Jubilee; 3, Drollinger on Molly of Auburndale.

Senior champion male—Ethelmilitor. Junior and grand champion male—Milo of Walhalow. Senior champion female—Nestet. Junior and grand champion female—Helena or Walhalla.

Aged Herd—1, Wilson; 2, Drollinger. Young herd—1, Wilson. Calf herd—1, Wilson. Get of sire—1, Wilson. Two animals, produce of one cow—1, Wilson; 2 and 3, Drollinger. Cows in milk—1, Drollinger.

Whether the moon has any effect on farming has nothing to do with the fact that potatoes should be dug on a clear day when the soil is fairly dry.

Those who live for gain don't have nearly as good a time as those who live for service.



HINKLEY
HEAVY DUTY AUTOMOTIVE
ENGINES

Within the short space of a single year, the performance of Hinkley-Engined Trucks has built up an enthusiastic, nation-wide Consumer Acceptance of Hinkley Heavy-Duty Automotive Engines, and a public Good Will toward this young Company shown most strikingly in new Offered Outlets for our Product.

We are surrounding this Good Will with every Possible Protection.

It is our steadfast purpose to supply these Engines only to Truck Manufacturers of high ideals and sincere desire to produce the maximum in Swift and Efficient Mechanical Transport.

HINKLEY MOTORS CORPORATION
DETROIT, MICHIGAN

COMPARE
—Then Buy

Play safe. Compare several of the leading makes of cream separators, point for point—before you act. Any dairyman can choose right if he follows this plan. The danger comes in accepting **claims** which do not "square up" with performance.

If you start in to seriously consider comparisons, here are **some** of the commanding features that you'll quickly note about the United States—the separator that holds and sustains the world's record for close separation:

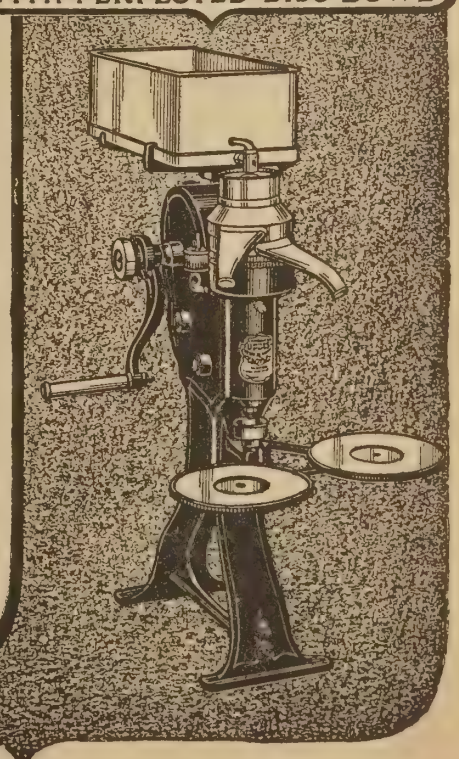
1—Perfected Disc Bowl a marvel of close skimming, easy cleaning and assembling.
2—Crank or power can be attached on either side.
3—Fewer revolutions of crank make turning easy.
4—The only practical and reliable Bell Speed Indicator.

Be your own judge and jury—you are the one who pays. We'll be glad to send you all of our booklets; write

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UNITED STATES
CREAM SEPARATOR
WITH PERFECTED DISC BOWL



HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

CLUB MEMBERS' TWO-DAY CAMP

Conducted in connection with Upper Peninsula Farmers' Round-up at Chatham, Michigan. Total attendance of farmers was 3,400, while 73 club members from thirteen of the fifteen counties of the Upper Peninsula were encamped on the grounds of the state experiment farm. Aside from the regular program and demonstration for farmers and club members, the junior live stock judging contests aroused great interest. First place went to Carl Johnson on dairy cattle, to Theodore Jarvinen on swine, and to Lawrence McNamara on sheep. The Gogebic County team, consisting of Carl Johnson, Leonard Nylund, and Luther Olsen, won first place in judging all three classes and will represent the Upper Peninsula at the State Fair.

















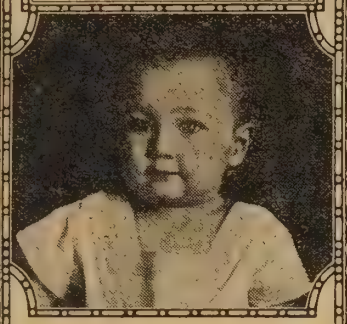
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Mellin's Food Babies



Georgia W. Bedinger, Butler, Mo.

Jules E. Nogle, San Angelo, Tex.



Send today for a trial size bottle of Mellin's Food, together with our book, "The Care and Feeding of Infants."

Mellin's Food Company

Boston, Mass.



FREEDOM

is the Starched collar model men will choose this season. Like all

SLIDEWELL KAHN COLLARS

made with the patented features that save your tie, time and temper.

Hall, Hartwell & Co., *Makers*, Troy, N. Y.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,

POUGHKEEPSIE, N. Y.

Junior Letters

Hoard's Dairyman Juniors:—I have a calf nine weeks old. I put her out on grass about four o'clock and put her in about seven. It is too hot until about four o'clock in the afternoon. In the evening the mosquitoes and flies bother her.

If we stay on the farm my father will buy me a registered Holstein calf. My sister and I are going to high school this fall. She will be in the 10th grade and I in the 9th. Our teacher for our district school this year will be Elsie Rogers. My sister and I both graduated from the same teacher. Her name was Margaret Wegner.

We have 87 swarms of bees. They are not doing well. My mother, father, and I work the bees. We have two yards. My father works in the yard and mother caps honey and I extract it. We've had a couple of little showers this week which have helped us a little. Our corn is doing well for the rain that we've had.

I must close, wishing all the juniors good luck.

Ladysmith, Wis. Helen Ambrose.

Hoard's Dairyman Juniors:—Received my fob, button, and creed, and am greatly pleased with them. I am going to have the creed framed.

I am 10 years old and am in the 5th grade at school. I live on a farm of 172½ acres. We have 30 head of Holstein cattle, 21 of which we are milking. We also have 2 sheep, one lamb, and 4 horses. Their names are Fanny, Jenny, Nelly, and Blossom. We have 7 little white rabbits.

I will close wishing the juniors success. If any of the juniors wish to write to me my address is R. 1, Little Valley, New York.

Gerhard Gold.

Hoard's Dairyman Juniors:—Received my fob, button, and creed and think them fine.

My father owns a farm of 423 acres and has 35 head of stock. They are mostly Holsteins and Ayrshires with a few Guernseys and Jerseys. We have 2 pure-bred Ayrshire bulls, 2 pure-bred Ayrshire cows, and 2 pure-bred Ayrshire heifers. One of the bulls is mine. He is only about a year old. We bought him from Alta Crest farm as we did the cows, but the heifers we raised ourselves. We have also a pure-bred Holstein cow. We milk 28 cows. My father, brother, and I do all the milking as we do not hire any men.

We have 27 shoats and four sows. The shoats crossed between a Tamworth and a Chester White. They made a fair cross with the exception of one litter.

About two weeks ago there were ten cows found dead in a pasture in a neighboring town from blackleg. Blackleg is hardly ever found in the East.

I would like to have some one interested in Ayrshires write me. My address is Whittemore St., Leicester, Mass. G. T. Johnson.

Hoard's Dairyman Juniors:—I have been reading the junior letters and find them very interesting.

I will go to high school next year. We are on a farm with 150 acres of land. We have 20 milking cows, 2 pure-bred; a bull,; 2 pure-bred heifers; and four grade Holstein-Friesian calves; all of our stock is Holstein. I am milking four cows and we got four horses. I belong to the Norwich pure-bred calf club. My heifers cost $143.27.

I wish all the juniors good luck. I would like to hear from some of the juniors. My address is R. F. D. 2, Guilford, New York.

Charles Butts.

Hoard's Dairyman Juniors:—I received my fob and creed and was very glad to get them.

I live on a farm of 130 acres. We are all alone this year to do the work.

I am 11 years old and will be in the 6th grade when school starts.

I think we will have the threshers next week if the weather is nice. We are going to blow most of our straw in the barn.

We have 18 fine young pigs and 3 sows. We had 4 sows but we sold one to our neighbor with 9 pigs for $75.

This forenoon mother and I went and cut a patch of Canada thistles.

I will close for this time wishing the juniors good luck.

Capron, Ill. Eric Fors.

Hoard's Dairyman Juniors:—I found a little calf in the pasture yesterday when I went to get the cows up to milk. This makes us 5 calves. My doe I spoke of which I thought was going to have young, now has seven little rabbits. This makes 15 young rabbits and the doe.

My sister and I sold $11 worth of our ducks.

You said you thought the juniors would be interested in my goats especially and would like me to tell about the ones I have. My goats stay in the woods and pasture with our cows. They are sprout killers. They eat all the bark and leaves off the sprouts sometimes. I don't have to feed them in the summer because they live readily on the pasture and sprout leaves. I feed them in winter on hay, sometimes corn or fodder but they get some of their feed themselves such as tender twigs and bark. They sure love bark; I have seen them eat all the bark off trees as far up as they can reach it. Sometimes I see them stand on their hind feet and straddle bushes and bend them down so they can get the leaves. I ride my Billy sometimes. He is mean and tries to get me off his back. They are great jumpers. They jump upon our rail fence and walk on top of it. I forgot to tell about part of my eggs getting chilled and that is why they didn't hatch any better.

I will close, juniors. Write me. Address R. 2, Equality, Ill. Robert Blackman.

Hoard's Dairyman Juniors:—I should like to join the juniors' club. Although I live in a suburban town where dairying is not practiced I am learning it at the high school. Instead of caring for a cow like the others I am raising 60 pullets and also a garden. I started in April with 200 incubator chicks bought from a reliable breeder. I had to buy all necessary equipment such as a colony brooder. I made all feed appliances. Raised 170 from the 200 and at the present have about 60 good pullets, 10 capons, 10 small pullets and 30 cockerels. I sold 65 cockerels for 55c per pound. I did the caponizing myself under the instruction of two poultry instructors.

I have had a garden of one-fourth acre since 1917 and have been very successful. In addition to the one-fourth acre this year, I hired a plot of ground 1¼ acres in which I planted sweet corn and potatoes. I shall dispose of the corn at the summer resorts in this town at better than retail prices. They are more than glad to get fresh corn. My potatoes are doing fair considering the weeds, bugs, and lice. I expect to make a profit of $350 over and above labor cost from my garden.

I raised a pig in 1917, winning second prize in the town contest, another in 1918 for which I won a trip to Amherst, which is the county prize. In 1919 I raised two pigs and my records have been sent to be judged with 12 others for state prize.

I am a student in the Weymouth Department of the Norfolk County Agricultural School of the class of 1921. My age is 16.

It is my ambition to own a farm where I can go into the commercial poultry and fruit business with a few cows for a sideline.

Massachusetts. Herbert P. Keene.

Hoard's Dairyman Juniors:—I received the fob, button, and creed. I think they are fine.

My father owns 120 acres. For pets I have rabbits. I have 20 of them. One doe has 10 young about 5 weeks old. The rest are all old rabbits. I want to sell if I can.

My father has 14 head of cattle. We milk 8 cows. I milk 3 of them. We have 18 hogs and 7 horses.

I am 14 years old. Our school will begin the 6th of September.

Why don't the juniors put riddles at the end of their letters? Here is one: What is the difference between a piano, a bank, and a beehive? I will put the answer in my next letter. My address is R. R. 1, Box 37, Sherwood, Ohio.

Christian Bontrager.

Hoard's Dairyman Juniors:—Well, I received your letter quite a while ago. You asked me if I help with the feeding or the milking. During the summer there is no feeding to do, (that is, not the cattle), but I help milk and do the rest of the chores. In the winter I help with all the chores.

Well, I do not expect to go to school next winter, so I will have more time to myself.

Our barn is all cemented now, and I assure you it makes the chores much easier. Of course we are not through improving yet, as we have much more cement work to do.

The threshing outfits are working pretty steady now. Our grain turned out pretty good this year. I may travel with the threshing crew later on, when the blower-tender quits his job to go to school.

We sold two good heifers today, as we have more cattle than we have room for in the barn.

One junior by the name of George Austin answered my last letter which was published. I wish some of the juniors would write to me this time too. My address is R. R. 1, Box 83, Ripon, Wisconsin. Herbert Goeden.

Hoard's Dairyman Juniors:—This is my first time to write as I am a new member but I hope it will not be the last time. I live on a 64-acre farm. It is a good grazing farm. We milk five cows but they are not pure-bred. We expect to get pure-bred ones after a while. We have two horses and two mules. I own a horse and a cow which I think lots of. I have one brother who is a cripple so he and I go in as partners. I have in about an acre of tobacco. It is looking fine.

I like farm work. I like to read good books. I like to read the letters of Jimmy Greene and Bob Ramsay.

I passed the eighth grade with a good average. I expect to take up high school work this fall.

I guess I had better close for I will write too much if I don't. Wishing good luck to the juniors.

Kentucky. Voyd Jones.

Hoard's Dairyman Juniors:—I have one-tenth acre of potatoes this year. They are doing fine so far. Only the lice are on some of them but we had a rain and it killed most of them.

I am just starting to train my calf to lead and she is beginning to lead a little. After she learns to lead I am going to try to train her to drive.

I am working on our farm this year. We have about 50 acres under cultivation and about 50 more are woods. We are milking about 20 cows with a milker.

Massachusetts. Harry L. Wright.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

PUBLIC SALE

Summit County Breeders' First Annual Consignment of

95 Holstein-Friesian Cows 95

Akron, Ohio, Oct. 4th, 1920

Commencing at 10 o'clock prompt

Sale will consist of all fresh or close up springers, positively the finest lot of cows that has been offered. Search the country over and you will not find another such a bunch of cattle to choose from. When it comes to large cows with straight tops, square udders and lots of capacity this sale will be in a class by itself. The only way that you can appreciate the good things in this sale is to get on our mailing list and look over the breeding, and plan now to be with us Oct. 4th. If you want eight months credit bring your bank reference.

All cattle sold on a 60- or 90-day retest.

SALE MANAGER
W. F. Cook, Hudson, Ohio

AUCTIONEERS:
Kelley, Hess and Hammond — S. T. Wood in the Box

"COMING?"

Buy Your Ticket Now for the Great

Dairy Cattle Congress

Industrial Exposition

"Take it in", by all means. Rub elbows with your brother dairymen at this "greater than ever before" show. Your breed, all breeds of cattle, will be present in numbers never reached at any previous show. See the wonderful displays of all devices pertaining to the great dairy industry.

All Aboard for Waterloo!

SEPT. 27 TO OCT. 3

WATERLOO-IOWA

MORE and BETTER MILK

In Return for Peace and Comfort

Convenience, cleanliness and comfort in the dairy barn save feed, time and labor and make the milk checks bigger. Give your cows safety and quiet, with pasture ease standing or lying, by installing Clay Sanitary Steel Stalls and Clay One-Hand 2-Way Stanchions. Better for the herd, for you and for your bank account.

CLAY Dairy Barn Equipment



makes dairying pleasant and more profitable. **Permanent construction** cuts up-keep costs. Strong, simple steel tubing—no dangerous corners. Easily cleaned. Stanchion closed or opened both ways by one hand. Fits any size animal. Hangs in center of stall—no sure-stops needed. Lock warranted cow-proof. All CLAY Equipment fully guaranteed.



FREE Barn Plans Our architects will plan your alterations or new buildings FREE. Let us help you make more money. Send name today—postal will do—for big catalog and Free Barn Plan Blank.

IOWA GATE CO., 201 Clay St., Cedar Falls, Iowa.

Pabst Stock Farm

First Semi-Annual Sale 40 Young Holstein Bulls Oct. 9th

Since June 15th, not an animal has been sold from Pabst Stock Farm at private sale. Hereafter, the surplus, both male and female, will be disposed of through the medium of the semi-annual sales. Such a sale necessarily means the offering of the very best calves we raise as well as calves of more than average quality, thus offering a wide range to buyers. Bulls of the very highest individual quality from dams that have been bred for two, three and sometimes four generations on Pabst Stock Farm. We want buyers to come to this sale with the belief they will be able to buy as good animals as Pabst Stock Farm ever bred, and we are going to make that belief a realization.



Our First Sale Will Include:

- 12 Sons of Creator
- 12 Sons of Woodcrest Clyde
- 1 Son of Korndyke Segis Johanna
- 2 Sons of King Pontiac Champion
- 3 Sons of Pabst King Pontiac Lad

These young bulls are from dams with records up to over 34 lbs. in 7 days and in some instances are backed by two generations of 30-lb. dams. The accompanying illustration is just a sample of the young bulls that will be sold.

THERE IS NOT A HERD IN THIS COUNTRY, EITHER LARGE OR SMALL, THAT COULD NOT BE BENEFITED BY THE SELECTION OF ONE OF THESE ANIMALS. They are some of the best ever born on Pabst Stock Farm.

Sale will be held at the farm on Saturday, October 9th, and will start promptly at 10:30 A. M. Send now for descriptive circular. Catalog will be furnished at the ring side.

PABST STOCK FARM OCONOMOWOC WISCONSIN

Peverill's Ayrshire Dispersion

Sale Pavilion During the 1920 Waterloo Dairy Cattle Congress

WATERLOO, IOWA
Wednesday, Sept. 29, 1920

A Genuine Dispersion of this Prize-Winning and Milk and Butter Bred Herd! Every Animal Goes!

Fifty Head This dispersion includes the entire string of winners at the Missouri, Illinois, Iowa, Nebraska and Kansas State Fairs, the Kansas Free Fair, Topeka, and Waterloo Dairy Cattle Congress—a total of over fifty head of Ayrshires of the choicest breeding and individuality! **Fifty Head**

At the Iowa State Fair, 1920, this herd won the following championships, grand championships, and other prizes:

Champion two-year-old bull and grand champion bull of any age—Cavalier's Choice Goods;
Champion under two-year-old bull—Rosebud Buster;
First and second prize two-year-old bulls—Cavalier's Choice Goods and Cavalier's Fashion Plate;
First and second prize senior bull calves—Rosebud Carl and Rosebud Bill;
Second and third prize aged cows—Enid Lessnessock and Sylvia Good Gift;
First prize three-year-old cow—Beauty of Cloverdale;
Second and third prize two-year-old heifers—Bess Garland and Cherry Good Gift;
First and second prize senior yearling heifers—Rosebud Nellie Carlton and Rosebud Stonehouse Lucy;
Third prize junior yearling—Rosebud Financier's Violet;
Second and fourth prize senior heifer calves—Rosebud Fair Beauty and Rosebud Cherry Blossom;
Second and third prize junior heifer calves—Rosebud Nona and Bess' Pride;

Every one of these winners goes into this dispersion and sells to the highest bidder! If you want Ayrshires of quality buy at this disperison!

In this dispersion will be included the following well known young bulls:

Cavalier's Fashion Plate by Cavalier's Lord Roseberry; Rosebud Carl, sire Willowmoor Robin Hood 19th; Cavalier's Choice Goods, also sired by Cavalier's Lord Roseberry by the great Bargenoch Gay Cavalier Imp.; Rosebud Lassie Boy sired by Rosebud's Pride; Prince of Bellwood by Harperland Chief of Bonnie Brae; practically all of the bulls offered are winners at the leading state fairs the past few seasons;

In mature cows and heifers no offering in the corn belt will eclipse this dispersion. The following exceptional females are included in the offering;

Beauty of Cloverdale sired by Lessnessock's Dave, a four-year-old, who was senior and grand champion of Iowa and Minnesota State Fairs 1919; Value's Pride of Oak Valley sired by Value of Avon, with a record of 10,000 lbs. of milk; Rosebud Nellie Carlton, sired by Yankee Doodle by King of Saranac, and out of the show cow Lessnessock Carlton; Bertha Carlton sired by Willowmoor Peter Pan 26th, also out of Lessnessock Carlton, a three-year-old cow, now milking 40 lbs. a day; Sylvia Good Gift by Auchenbrain Good Gift; Lessnessock Carlton, sired by Lessnessock First Choice Imp.; first prize A. R. O. cow at Waterloo Dairy Show 1918 and 1919.

These are only a few of the choice females offered in this dispersion. There are a number of choice young heifers sired by Cavalier's Fashion Plate; Yankee Doodle by King of Saranac; Rosebud's Pride by Willowmoor Peter Pan 26th; Robert's Cavalier by Bargenoch Gay Cavalier; Dalpeddar Good Gift by Auchenbrain Good Gift; Harperland Chief of Bonnie Brae; Cyrus of Genoa; Willowmoor Robin Hood 19th.

No old worn out cattle, no defective cows, everything federal tested and guaranteed for re-test;

If you breed Ayrshires, if you need Ayrshires, if you want to strengthen your show herd, if you need milk and butter bred cattle, if you want to found a good young herd, this is the premier Ayrshire buying opportunity of the season! Positively nothing reserved.

Add winning blood to your herd! Build your new herd on winning blood! This is the corn belt Ayrshire buying opportunity—the only Ayrshire buying opportunity in which you can buy this quality of cattle!

Auctioneers: Geo. W. Baxter, Elmira, New York, assisted by Tromenhauser and Pashby of Waterloo, Iowa.

Rosebud Ayrshire Farms, C. H. Peverill, Prop., Waterloo, Iowa

For Catalogs Address: Amos Burhans, Sale Manager, Waterloo, Iowa.

Guaranteed and subject to 60-day retest

DETWEILER'S Dispersal Sale

Management Illinois Holstein-Friesian Association

50 Head Pure-bred Holsteins including his select breeding herd, also his show herd of champions and grand champion

Dixon Sale Pavilion, Dixon, Illinois

Monday, Sept. 27, 1920

Mr. Detweiler finding himself at the necessity of remodeling his cattle barn and building a hog house for his herd of 250 registered Durocs, (with the prevailing labor conditions being so unreliable) has felt compelled to disperse his entire *Show Herd* and all of his *Breeding Herd* except Rag Apple Korndyke 8th and three or four partnership cows.

The Show Herd The Show Herd includes Prilly Clothilde De Kol, a consistent winner at the Illinois and New York State Fairs and the National Dairy show, standing second to Minerva Beets—isn't that enough, since no cow ever stood higher?

Also Lady Calamo Hengerveld, the wonderful daughter of Paul Calamo Korndyke who began winning firsts as a calf and has won consistently at Illinois, New York and the National Dairy Show ever since. Also K. S. P. Nancy Pontiac, daughter of King Segis Pontiac out of a daughter of Paul Calamo Korndyke, that won first at Illinois and Danville, etc., etc. This herd just showed twice this year and brought back 21 ribbons from Springfield and 19 from Danville, including 5 championships and Grand Championships, 9 firsts, 12 seconds and 9 thirds.

From the Standpoint of Production From the standpoint of production, there's a 31-lb. cow, a 30-lb. cow, 2 26-lb. cows, a 26-lb. 3-year-old, a 20-lb. 2-year-old, a 17-lb. 2-year-old and so on.

When it comes to breeding, you have the blood of Rag Apple Korndyke 8th, whose sire and sire's dam were by Pontiac Korndyke and whose dam and dam's dam were by Pontiac Korndyke, his sire's sire, Rag Apple Korndyke, being out of the famous former world's record cow, Pontiac Rag Apple, 31 lbs., a full sister to Pontiac Clothilde De Kol 2nd; also a former world's record cow with 37 lbs. in 7 days and 1,257 lbs. in 365 days. Furthermore Rag Apple Korndyke 8th has already 56 A. R. O. daughters, 22 being 2-year-olds that average over 21 lbs., 5 3-year-olds that average 25.7 lbs. and 5 4- and 5-year-olds that average 28.07 lbs. (leaving out the 42-lb. record). You also have daughters of Paul Calamo Korndyke, the famous show bull, winning 16 championships in one year, the only bull that won three grand championships at the National Dairy Show being a son of the renowned Korndyke Abbekerk who was by Pontiac Korndyke and out of the famous old Pontiac Abbekerk, daughter of Hengerveld De Kol, also daughters of King Segis Pontiac Alcartra, and Mr. Detweiler's former herd sire, Woodlawn Hengerveld Segis.

For Example For example—A daughter of Rag Apple Korndyke 8th out of a 31-lb. cow.

A son of Rag Apple Korndyke 8th out of a 30-lb. cow.

A 30-lb. show cow (springing) bred to Paul Calamo Korndyke.

A son and a daughter of Woodlawn Hengerveld Segis out of a 26-lb. junior 4-year-old cow.

A daughter of King Segis Pontiac bred to Rag Apple Korndyke 8th.

If breeding, records or show yard type interest you for foundation stuff, you ought to find this sale an opportunity. Everything Guaranteed and subject to a 60-day retest under management of:

Remember the Date and Come

Illinois Holstein-Friesian Association

R. N. THOMPSON, Field Secretary

130 North Wells Street Chicago, Illinois

Telephone Franklin 5326

Write, wire or phone for any information

How SWP cuts Painting Cost



The way to buy paint economically is to forget gallon price and figure costs by area covered and years of service. The first cost of good paint is its final cost, but cheap paint must be re-bought so often that the purchase price is only the beginning of its expense.

SWP—Sherwin-Williams Paint

covers a third more area than cheap paint, lasts twice as long without re-painting and cuts costs for material and labor in half. It gives property better protection and better appearance from the day it is applied until the end of its long term of service. So forget gallon price and think in terms of years when you buy house paint. S W P has been the leading prepared house paint for half a century.

***S-W* Commonwealth Barn Paint**
is a bright, handsome red or gray which dries with a fine appearance. Works easily with free flow, giving unusual cover even on rough lumber. Ammonia-proof, durable, economical.

***S-W* Wagon and Implement Paint**
is a thoroughly tested practical implement paint of rich, permanent colors. Brushes on easily and dries with bright gloss. Tough, water-proof, keeps farm tools efficiently protected.

***S-W* EBONOL ROOF PAINT**
A coal-tar paint with unusual covering capacity. Heavy bodied, very elastic, won't crack or run. Sticks tight on all roofing materials, seals leaks, waterproofs, is *fire retardant*.

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COVER THE EARTH

Go to the Sherwin-Williams Dealer in your town. If he cannot supply all your needs with S-W Products, write us for booklets, etc., on your requirements. Address—
The Sherwin-Williams Co., 606 Canal Road, N. W., Cleveland, O.

PAINTS and VARNISHES
Insecticides, Disinfectants
Wood Preservatives
and Cattle Dips

S-W Fly Spray protects cattle and horses from flies. Apply with spray or sponge. F-20

The Independent Farmer's Wife

(Continued from page 328)

gone day. She allows, with her better half, that these, among other things, won't go any more and henceforth she'll leave her share of the chores and endless work in the lurch and beat it to the places where even a woman can demand and get a king's ransom for a few hours' congenial labor in an attractive shop or factory—provided her man should be one of the rare and unfortunate few who couldn't pull down enough of the long green in one day in any average American city to keep him and a large family in luxury and plenty for at least the remainder of that week.

So says the Department of Agriculture as regards its mighty feminine half who have labored so faithfully and hard down the years; but wait! It cannot be possible, can it, that the great Department has been just a little misled and, even as the 40,000 farmers stirred up such a commotion for our industry, has perhaps taken the shadow for the substance and so mistakenly assumes that 40,000 farmers' wives, more or less, represent us all?

When I was a little girl in school, each morning found me marching upstairs to the main auditorium where chapel exercises were held. We used to sing lustily out of a gay red song book and in that book were songs which I liked and which I disliked with a singular intensity. Among these latter was a long-winded, two-paged relic entitled "The Independent Farmer", which went on at length to picture the delights of those who remain true to the soil and who voluntarily choose the rake and hoe instead of the quill or the cap. I was not a farmer's child at that tender time but, somehow, from instinct or something, that song didn't ring true and I sternly refrained from joining in the droning chorus. But The Independent Farmer was a prime favorite with our teachers—like the rest of the world, they instinctively felt the high moral tone which mention of the farm always inspires in those who believe in letting George do it—and at least once a week we impressionable youngsters were directed to page 100 and thereupon proceeded to render the Independent one his due.

Since my school yesterdays and after nearly ten years of honest to goodness farm life, I know that the old song at the time it was written and for long years following was indeed a snare and delusion and, in so far as the grand average went, had no basis on fact. For back as far as five years ago, farmers were neither independent nor to be envied, take them by and large, and I contend with the skeptical little girl I was that the author of it was only trying by false pretenses and mixed motives, even as his descendants do today, to lure young converts into the once forbidding farm fold—in other words, to get innocent Georges to do it so that the greedy old world could turn with clear mind to more lucrative and congenial tasks.

But five years have witnessed changes on the farm which ordinarily might well have required fifty to secure. The Independent Farmer is now a fact instead of a fable in ninety cases out of a hundred, and I would like to point out that there are without doubt ninety independent wives of independent farmers today where but yesterday the ratio was but twenty or thirty out of a hundred.

The 40,000 complaining farmers made a noise out of all proportion to their size. We can admit that the hue and cry didn't hurt farming any—that is, if all of us agree that there are quite enough of us on the job, in spite of outside propaganda, to profitably feed the world—but in the case of the discontented farm women, such charges, unless absolutely backed up by facts country-wide, would seem all wrong to give out.

Out in the big West, nine farm women out of ten for several years have known the delights and rights of nice homes which compare most favorably with city ones. Farmers in the virgin West made and make more money accordingly than we of the land-worn East, and naturally the western home has reflected this rightful and moderate prosperity before it was possible for country dwellers in some other sections to enjoy it. But it would be unfair and untrue to assert that a farmer, because he lives West, is invariably successful, for all of us have read of or experienced the lean years undergone by such families when drouths, insects, tornadoes, and so on lay low the crops and labor of a year, and the question is to beg or borrow enough to tide over disaster until the recuperation.

But if the western farm woman has known a modern home for a few more years than her average eastern sister, the latter is now rapidly catching up and in five years has really made gigantic strides in the enjoyment of improved houses and all-round living conditions. She and her husband have been receiving fair prices for all they could produce, and the limit was up to them. It is inspiring and quite remarkable to ride through our eastern highways and byways today and note the homes equipped with garages first, closely followed by electric lighting plants, new verandas, cared-for grounds, and well-kept and painted buildings. I cannot believe, in the face of this local evidence and the facts and statistics submitted from other sources, that the American farm woman is going to leave the farm en masse because she thinks it holds no future for her and her children. Instead, it would seem that ninety of her out of every hundred is in a fair way to live as ideal a life from now on as is granted to the average mortal, for wise folk know that plenty of work and responsibility is a blessing, not a curse, and while the farmer's wife will continue to the end of the chapter to be busy and fully occupied, no one in his right mind could wish her a new and unnatural life of idleness and folded hands—both of which are responsible for more unhappiness and discontent in our prosperous cities, as far as many women are concerned, than work was ever responsible for on our farms.

The farmer is truly independent today where he never was yesterday, and his wife enjoys the same privilege, or rather right. But here and there one runs across a couple who have made "Blessed Be Nothing" their hopeless slogan—and they either won't or can't get out of the rut of other years and seize opportunity before she has a chance to change her mind about knocking.

I have been criticized very bitterly after the printing of various articles in this and other papers for daring to intimate that the majority of self-confessed farm failures have only themselves to blame for their inability to share in the general looking-up of agriculture. They won't have it that farming has looked up or that any of us can or should make legitimate profits today after lean, hard years of denial and hope almost lost. But it is because we have worked our passage here on one farm that I am so sure that it can be done, given the will to do in spite of discouraging handicaps. Similarly, I believe that the farmer's wife holds their united fate in her own hands in a great measure, and as she keeps up her courage and holds fast to her faith, and uses her brains and when necessary her brawn to help bring prosperity to pass, before she realizes it—today—

she will be proudly numbered among those ninety successful farmers and their wives out of every hundred, instead of deploring and questioning the "luck" which dogs the footsteps of the remaining ten who cannot cope with Nature and win out.

It goes without saying that good farms adjacent to good markets do not labor under the handicaps which are the portion of those far removed from improved roads and the demanding consumer, but such farms are not going to shut up shop just yet, nevertheless, and here it is that the farmers' wife can help doubly in thoughtful plans to circumvent those handicaps and raise crops and stock most profitable to their conditions. Such women, capable and smart, refuse to bow to a so-called fate which places them with unfertile land, perhaps, with no natural advantages, or too far from town to attract any but the naturally contented, and so they strive with every waking hour to encourage their husbands to get out of the old profitless ways and into better ones—even in the back hills—for today good crops well raised command their own price, and a producer situated far from the crowd but who gets a reputation for prize potatoes or cabbage or wheat will surely become independent, and his wife, if she was his loyal and clever adviser and partner, will deserve and reap this coveted farm independence, too.

In five years average farm conditions have jumped from bad to near-enviable and this does not mean that the farmer has been a profiteer and has waxed fat and greedy on ill-gotten gains, either. It simply means that he has discovered that he is a perfectly good citizen of the United States, even as other men, and as much entitled to ordinary profits as is federated labor—and he has gone out after them and from now on will probably be busily and withal hopefully engaged in bringing them home to his good wife and the kiddies. And as for the farmer's wife, and she numbers seven million in all, I believe that she is peering carefully into the future and that she sees there a life well worth the living—busy, of course, but full of bigness and brightness on the whole, with comfortable, modern homes, fast motors to take her away for needed recreation, and, best of all, wide spaces everywhere in which to breathe and bring up young America as the latter deserves to be brought up. The 40,000 discontented farmers were not representative. I believe that the Department of Agriculture's findings as to the work-worn wives of some farmers are not representative of the rank and file of us, and although such conditions were once the rule instead of the exception, such is no longer the case and the independent farmer and the farmer's independent wife today are in the grand majority. For the world does move, even the agricultural world.

How Dairymen Benefit By Attending the National Dairy Show

When men nationally known as breeders of the best dairy cattle or as leading manufacturers of butter or ice cream, and men from the ranks of milk producers, milk dealers, and manufacturers of the leading lines of machinery stand up and give testimony of the actual money they have made by visiting the annual National Dairy Show, as some ten men recently did at a luncheon in Chicago, then we must concede that the Show is functioning. All that is needed is to spread its gospel, that more and more dairy people may each year arrange to get its benefits.

One ice cream and creamery man from California said of the last Show, that he had met one man, and had seen one machine that would enable him to go home and solve a problem that would net him thousands of dollars in one year, and that he would come back in 1920 with a lot of the dairy people from the Pacific Coast. We understand that a couple of car loads of people are already booked for the trip from California points, so he is making good.

An agricultural publication with wide circulation, interested in forwarding the best possible work for dairying, recently assigned one of its best writers to meet and talk with the leaders of the various branches of dairying, to get their views on the influence of the Dairy Show on dairy agriculture. The group of men brought together for this purpose told in turn what each branch was getting from these annual exhibits and reunions, showing conclusively that giant strides have been made in the industry in the last decade, through inspiration, enthusiasm, and knowledge gained at the great show.

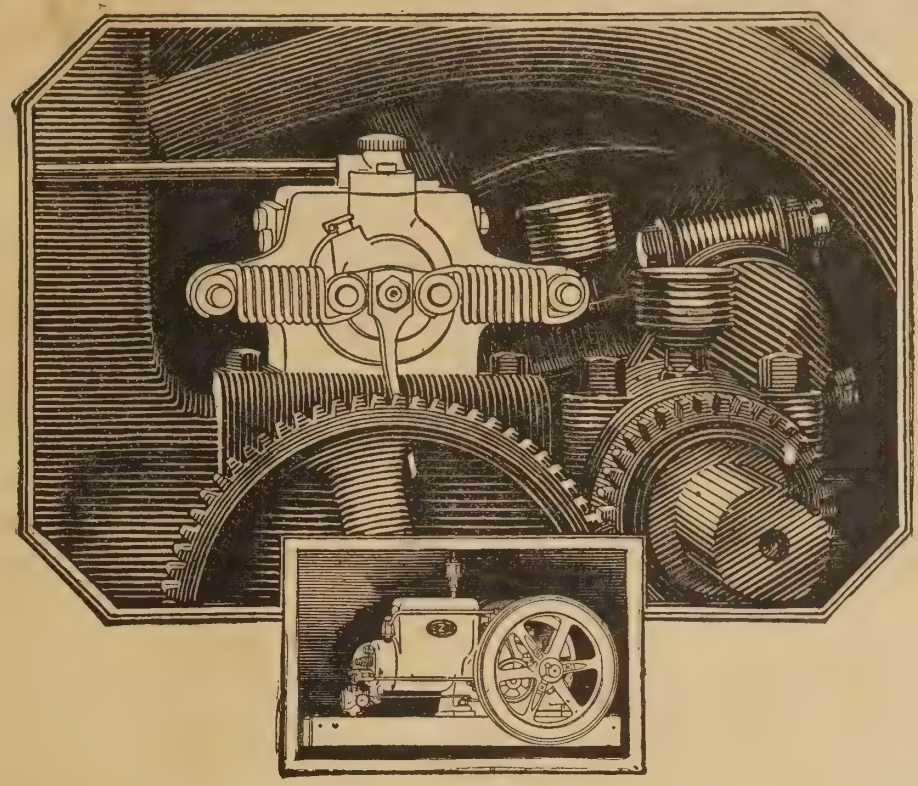
The various organizations for the purpose of promoting and developing the branch of the industry to which they pertain, the dairy educational work of the Agricultural Colleges and the Extension Service of the different cattle breeds, and the constant pounding of the press, all render a powerful service each year. When this service is supplemented by the rounding up of all activities of the industry for the year, and, adding to that a real view of what the genius of man has perfected in machinery and equipment, one can get a slight glance of what is to be gained by a ten days' gathering of this sort; but no one can get the full benefit of all this endless work unless he makes it a rule to make an annual visit to this great show, October 7th to 16th, 1920, Chicago.—Publicity Department.

Replaces Inferior Birds

"I sold my inferior sires last year. They don't pay."

With this explanation a poultryman in Marion County, Ill., enrolled his poultry in the "Better Sires—Better Stock" movement. The entire flock of 210 birds is of pure breeding.

FAIRBANKS-MORSE "Z" FARM ENGINES



Built-In Bosch Magneto Insures Hot Spark

"Z" Engine ignition—positive—from Bosch high tension magneto, built into every "Z" Engine, insures intense hot spark that gives utmost power from fuel.

The high tension system is simple — just a high tension magneto with spark plug—no complications—no moving parts. Magneto is high grade—has interchangeable parts—is as accurately made as a fine watch. It gives the "Z" added power — quick starting — smooth, steady operation.

Other "Z" features are: Runs on kerosene as well as gasoline; more than rated power; parts interchangeable; clean-cut design; long life.

Call on your nearby dealer today and he will show you why you should have a "Z."

PRICES { 1½ H. P. ..... $ 85.00 / 3 H. P. ..... 135.00 / 6 H. P. ..... 220.00 } All F. O. B. Factory

FAIRBANKS-MORSE QUALITY F M 100%

FAIRBANKS, MORSE & CO.

MANUFACTURERS — CHICAGO

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CONE-SHAPE GRINDERS

It PAYS to GRIND ALL GRAINS

Look to the Grinders. They do the work! Bowsher's Cone-Shape grinders are the correct principle in Feed Mill construction. They mean larger grinding surface close to center of Shaft; thus More Capacity, Lighter Draft, Longer Life.

"Desire to express my appreciation of the long-lasting, trouble-proof Bowsher. Have used a No. 4 ten years with less than One Dollar per year for repairs." *R.W. Watt, Jacobsburg, O.*

10 sizes; 2 to 25 H. P. Write for free catalogue.

N. P. D. BOWSHER CO., SOUTH BEND, IND.

NOTICE THE POINT

IT'S A NEW FEATURE

Found only in The PIERCEASY Bull Ring

No more tearing of the nostrils, because it is now so simple and easy. Just pass the ring thru the nostril, put in one small screw and the work is done quickly, making a clean hole thru the nostril.

CUTS A CLEAN HOLE

Made of a SPECIALLY PREPARED METAL and in SEVERAL SIZES

The Pierceasy Bull Ring is the latest and most durable ring on the market. More simple and efficient than the old style bull ring and many times more practical.

Buy them from your dealer or send $2.00 for No. R.B.3, which is our large size, postpaid.

Wagner Specialty Company

Dept. W. Burlington, Wisconsin



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 5-6

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

Holstein bull, Ormsby, 2 years old. Excellent individuality and backing. $250 for quick sale. C. J. WILL, Waukesha, Wis. 7-3

For Sale—26 Holstein heifers 2 and 3 years old, to freshen this fall and winter, at $90.00 per head. WILL H. GIBSON, Brodhead, Wis. 8-4

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

For Bargains in registered and high grade Holsteins try us. LOVELAND FARM, Holland, Ind. 9-3

Pure-bred registered Holstein bulls, two to four months old; high producing ancestors; $40 to $60. Return privilege. WALNUT HALL FARM, Carrollton, Illinois.

Herd Headers—Ready for service. King Korndyke Sadie Vale, King Segis Pontiac, King Model Blood. Forty-pound breeding close up. $75 to $200. JOHNSON COUNTY HOLSTEIN CO., Warrensburg, Mo. 9-2

22 High grade Holstein cows three to seven years. Good condition. Due to calf within 60 days. Tested and loaded at $145.00 per head. F. G. KNAPP, Hudson, Michigan.

For Sale—8 head high grade Holstein cows. Some have Cow Testing Association records as high as 10,499 lbs. milk in 10 months. Would like to sell whole herd to same party. Have been tested for tuberculosis every year. Will sacrifice for quick sale. J. A. HOPPER, Sinclair, Illinois. 9-2

$165 buys an exceptionally well bred yearling bull. 15 nearest dams all over 19 lbs. Good individuat, well marked. W. HOSTROP, Fonda, Iowa.

For Sale—My registered herd of 8 cows and fine bull. Best blood, good producers, prices right. FRANK STONE, 1020 Kent St., Kewanee, Illinois.

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

For Sale—A carload of high grade Guernsey cows made up from the pick of Polk County Guernsey herds. What you want in grades. Polk County Guernsey Breeders' Association, J. H. STEWART, Sec., Clear Lake, Wis. 8*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

STOCK FOR SALE

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

For Sale—Pure-bred Guernsey bull, one and two-thirds years old, with papers and pedigree. Well marked, guaranteed breeder, good individual. JOS A. TRAXEL, Route 4, Almond, Wis. 8-4

For Sale—Twenty head high grade, tuberculin tested Guernsey heifers and young cows, nearly all bred at this time to pure-bred Guernsey bulls. If interested address A. W. BROWN, Rhinelander, Wisconsin. 8-4

Guernsey bull for Sale—Emery of Linwood, 11 months old, good individual, good color. Grandson of Imp. Clara's Sequel who has 30 A. R. 500-lb. daughters. His dam has 515 lbs. fat A. R. and she is a daughter of Governor of the Chene who has over 100 A. R. daughters. HOMER F. RUNDELL, Livingston, Wisconsin.

For Sale—A carload high grade Guernseys. Will freshen coming fall and winter. HEINRICH BROS., Route 3, Fond du Lac, Wisconsin.

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Federally tested Brown Swiss bulls. A. W. WILLMANN, Hawkeye, Iowa. 9-4

For Sale—Complete dairy equipment; including 44 head of pure-bred registered Jersey cattle. Milk is retailing at 25c per quart. Located near Tulsa, Oklahoma, the best market in the world for dairy products. Will sell any animal, or all of them. Address: J. M. SPRINGER, Box 11, Tulsa, Okla. 7-3

For Sale—Some good quality registered Jersey cows, newly freshened. PARKER DOW, Whitewater, Wisconsin. 8-4

Grade Jersey cows for sale in carlots. Prices reasonable. TRIMBLE BROTHERS, Trimble, Ill. 8-4

Sophie Tormentor Jersey bull calves 6 to 8 months old, 75 per cent Hood Farm blood. ROY J. GUYER, Linneus, Missouri. 9-3

STOCK WANTED

Wanted to buy for October delivery pure-bred Guernsey cows and heifers that will freshen in early winter. GEO. M. NEWLIN, Hutchinson, Kansas.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

SWINE

Hampshires. Registered stock, either sex, all ages. State fair winners. GLEN EYRIE FARM, Delavan, Wis. 7-5

For Sale—Eight-week-old pigs. Reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 8-3

For Sale—Some Duroc spring boars. Sired by the world's greatest boars and out of the largest and best sows in the state. Several by Pathfinder that sure are killers. BRIAN L. RUNDELL, Livingston, Wis. 5-spl

Large Yorkshires. Fine March boars at $30.00, yearling boar at $50.00. Certificates furnished. M. O. LARSEN & SON, Colfax, Wisconsin. 9-2

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Ill. 8-4

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

Shropshire rams of best breeding, also few Oxfords. GEO. McKERROW, Pewaukee, Wisconsin. 9-3

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

New Zealand Reds—For food, fur, pleasure or profit. Every family should have a trio at least to reduce the H. C. L. Two to three months old $5.00 pair, $7.00 trio. Add $1.00 pair for each month older. All thoroughbreds. FULLER'S RABBITRY, Fort Atkinson, Wisconsin. 7-4

For Sale—Belgian Hares, New Zealand Reds, Flemish Giants, three to six months. Two to five dollars each. Pedigrees furnished. CECIL ELMER, Lomira, Wisconsin.

SALESMAN WANTED

Salesman wanted—High grade salesman to sell molasses dairy feed, cattle fattner and chicken feeds. In Wisconsin, Iowa, Illinois, and Indiana, by a new mill with large capacity, and producing a high grade line of feeds. To the right salesman with experience and intiiative we can offer an attractive proposition. In answering give full particulars as to your experience and state territory you have covered. BROOKS ELEVATOR COMPANY, Minneapolis, Minn. 9-2

FEED BAGS

We pay 14c for best pulp bags. Proportionate prices for other sizes. Better write for price list now. LARIMER BAG COMPANY, Washington, D. C. 19-spl

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

We buy burlap bags at their market value. We pay half the freight. CATLIN BAG & BURLAP CO., Catlin, Illinois.

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

BEES

Italian Bees $12.00 colony. Queens $2.00 each. $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MACHINERY

For Sale—We offer the following 2nd hand gasoline engines and silo fillers, all in good running order, at bargain prices. 1 12-horse portable Fairbanks-Morse engine in first class condition Screen cooled, 1 8-horse portable Fuller and Johnson engine in good condition, Lopper cooled, 1 20-horse portable Stover Diesel engine in good condition, 1 20-horse Titan tractor in good condition, 1 8-horse portable Lawson engine Hopper cooled good condition, 1 8-horse Fairbanks-Morse engine good condition Tank cooled, 1 12-Rowell Well Line Ensilage cutter with carrier. 1 13-in. Rowell ensilage cutter with blower, 1 11-in. Freeman ensilage cutter with carrier, 1 12-Eagle ensilage cutter used very little. A. KRAMP CO., Watertown, Wis.

For Sale—Empire Milking Machine, two single units, complete pipe line, vacuum tank and pump. Price to quick buyer $200.00. A bargain. Good reason for selling. H. M. SPAHR, Woodsboro, Maryland. 7-3

For Sale—One 12—20 Eagle tractor. In good mechanical condition. Also one 10-foot double disc used one season. E. E. RANDALL & SON, Watertown, Wisconsin. 9-2

For Sale—10 20-horse power Titan tractor in good condition for $500.00. ROY SUCKON, care Elmwood Farm, Neillsville, Wisconsin.

For Sale—Small "Minnetonna" churn and butter worker combined. Like new. Capacity 80 lbs. cream. Increasing business reason for selling. G. P. SAUER, 1053 So. Howland Ave., Kenosha, Wisconsin.

For Sale—Two Burt Labeling Machines, one Eureka Bolter. THE CHARLES E. HIRES CO., 206 So. 24th St., Philadelphia, Pennsylvania.

For Sale—Aspinwall potato digger nearly new, only used in digging 18 acres in 2 seasons. At a fair price. Address A. H. KAYSER, Phone Badger 2635, or NUSS IMPLEMENT CO., Phone Fairchild 438, Madison, Wisconsin.

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Agents—Mason sold 18 sprayers and auto-washers one Saturday; profits $2.50 each; square deal. Particulars free. RUSLER COMPANY, Johnstown, Ohio. 25-spl

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.

Mill with established business, 45-horse power water wheel. Fine 3-story mill building, equipped for grist work, creamery, and cider pressing. Excellent 8-room dwelling, barn, 11 acres ground with railroad siding. Price, $12,000. Buildings alone worth $20,000. N. KRAUTWURST, Annandale, N. J.

MILK PLANTS

For Sale—Best equipped bottled milk plant in the city of Moline, Illinois, handling 150 to 200 gallons milk daily. For particulars address DAIRY, 404 4th Ave., Moline, Illinois.

Attention—Farmers and Commercial Clubs, creameries and milk plants. If you are interested in securing a dry milk plant or dry milk machinery, write us fully about your community. Have leading business men of your town write us regarding your location. Address H. R. FRANZEN, Milk Expert, Room 1611, 20 Broad St., New York, N. Y.

DAIRIES

For Sale—Fine dairy, 3½ miles from Texarkana, Ark.,—Tex., a town of 20,000; stocked with choice Jersey and Holstein milk herd. 130 acres of land. 17 acres artificial lake stocked with fish. Improvement made for dairy, hog and chicken farm with every necessary equipment. If interested write for particulars. A bargain. J. D. COOK, Texarkana, Arkansas.

DAIRY FOR RENT

For Rent—Three hundred-acre dairy farm with two brick silos and large buildings near Burlington, Wisconsin. Only a worthy, capable dairyman is wanted on share proposition. Farm is good and has never been rented. H. W. AYERS, Box 72, Honey Creek, Wisconsin. 6-4

PARTNER WANTED

Dairy Partner Wanted—1,000 acres good land, 3 miles from town, pike road. Will sell third to half interest to good man for $5,000 to $10,000. You manage dairy, I run farm. A. R. WILD, Fort Deposit, Alabama. 7-3

Experienced Dairyman—Would there be any profit for you to furnish all the labor and one-half of the cows for a 30-cow dairy on 140 acres good producing land for corn and clover on 50-50 basis. Ten cents quart for bottled milk at the farm. Correspondence solicited. Address N. A. W., South Erie Office, Erie, Pennsylvania. 9-2

Partner wanted to buy half interest in one of the best pure-bred Holstein herds in New England. Must be thoroughly experienced. Fine farm and buildings; good location and outlet for milk and stock. BOX 367, care Hoard's Dairyman.

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

For Rent—Do you want chance make money while you enjoy life in delightful, healthy climate? Will rent my rich, exceedingly productive stock farm to experienced dairyman with sufficient capital on very attractive basis. Plant corn January to June. Located near church and school. Also near Ft. Lauderdale and Miami, Florida. Write C. OAKES, 3702 Fall Creek Boulevard, Indianapolis, Ind.

WANT TO RENT

Fully equipped dairy farm with retail milk trade and hog side line on shares. Experienced and can furnish A-1 references. Address BOX 366, care Hoard's Dairyman.

My present farm having been sold, would like to rent grain or dairy farm for a term of years. Can give reference, also equipment for dairy. J. A. GUNDY, Route 1, Bloomington, Illinois.

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

Farms in Wisconsin. Send for new free list. Liberal terms. LOEB-HAMMEL REALTY CO., (Not Inc.) Medford, Wis. 7-4

Are you looking for good farm land? We are offering real bargains in Aitkin County, "The County of Land Opportunity". This big railroad wants new settlers and for that reason can offer you a real bargain in a farm for a small down payment and on easy terms. Write today and we will send you free information on how to get one of these farms. L. B. ARNOLD, Land Agent, Rock Island Railroad, 154 Wolvin Bldg., Duluth, Minn. 7-4

Alfalfa farm for sale of 100 acres on good road 2 miles east of the beautiful village of Cazenovia, N. Y. 20 miles from Syracuse on good road. 12-room house with light, also 8-room house, new outbuildings in A-1 condition, plenty of good water and shade. Will sell with or without stock, tools and crops. Reason for selling is ill health. Possession any time. R. D. LEE, Cazenovia, N. Y. 8-2

High Class Virginia Bluegrass stock, grain and dairy farms. Near Washington and best markets. Mild climate. Write for free booklet. CAVINESS REALTY CO., Leesburg, Virginia. 8-5

100-acre alfalfa farm 3 miles from Cazenovia village. Seven miles from state school, buildings in good repair, plenty of running water. R. D. LEE, Cazenovia, N. Y. 8-2

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

Dairy Farm. 189 acres partly in town of Spring Grove, McHenry County, Illinois, 60 miles from Chicago. Buildings half mile from P. O. Good 9-room house, barn for thirty head cows, ten head horses. Silo, new hog house. Electricity available if desired. $175 acre, half cash, balance 5 years 5½ per cent. H. B. COLBURN, Burns, Wyoming. 8-2

Would you like $1,000 monthly milk check from 230-acre farm, modern buildings, priced $10,000? Come East! Write NEW YORK FARM AGENCY, Westfield, New York. 9-spl

Buy Farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and service. Offices throughout the state. Write the CENTRAL OFFICE at Oneida, N. Y., for a brief list and state your requirements. 8-spl

Farm Bargains—60 miles Twin Cities. Free list, man. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

For Sale—Fine 500-acre improved farm by owner at bargain, in finest farming and live stock section of South. Residence, 3 farm houses, 3 barns, silo, out houses, tractor, truck, live stock, implements, 7 miles new wire fencing, 32 head registered cattle, growing crops. Located 16 miles from city on U. S. Government pike, near railway station. A wonderful opportunity for live and progressive farmers to supply South with pure-bred live stock. Terms. No agents. Address L. M. H., care 675 McCallie Ave., Chattanooga, Tenn.

300-acre farm, well improved, 6 miles from Madill, Okla. 200 in cultivation. Rich bottom land, 40 acres in alfalfa. Terms. Address BOX 247, Madill, Oklahoma. 9-2

South Dakota—If you have $2,000.00 to put into a farm come to South Dakota where land is still selling at low price. You can own your own farm. The State will loan you money at low rates to help you stock your farm. Write for information. DEPARTMENT OF IMMIGRATION, Capitol F-15, Pierre, South Dakota.

Wanted to sell all or half interest in a large farm (nearly 500 acres) in St. Croix county, Wisconsin. A show farm beautifully located, fully equipped with modern buildings, and stocked with registered Holstein cattle. The soil is clay with clay subsoil, very productive and under a good state of cultivation. Walking distance to accredited high school and shopping district of live little city. A splendid opportunity for a progressive farmer of high character who will take over the active management. For full particulars address BOX 364, care Hoard's Dairyman, Ft. Atkinson, Wis. 9-2

Must sell 70-acre farm adjoining city limits with all personal property, $16,000. Further particulars, write WM. ALBRECHT, JR., Wausau, Wisconsin. 9-4

Oklahoma farms, write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla.

Just out Strout's Fall Catalog fully equipped farms. Everything included with practically every one of the money-making farms in best farming sections 33 states and three Canadian provinces described in big illustrated 100-page book. Chance of your life to get the farm you want with horses, cows, hogs, poultry, wagons, implements, tools, hay and grain for stock, vegetables and fruit for your family, household furniture and fitted wood; big winter income from valuable woodlots; low prices for quick settlement estates, etc. See page 26, 368-acre farm with horses, 17 cattle, crops, equipment, fine buildings, close to world's greatest markets, for $8,400, with only $3,000 cash required; wonderful bargain page 6 of 150 acres with cows, produce, 450 fruit trees, good buildings, all for $1,800, only $500 cash; or page 34, cozy equipped near-village farm for $800. Hundreds others, all sizes, all prices, almost anywhere. More than a million farm buyers will read this big new catalog. Get yours now and have first choice. Call or write today for your free copy of this book of wonderful bargains. STROUT FARM AGENCY, D L 150 Nassau Street, New York City.

Marathon County eighty-acre quality farm, with buildings, stock, machinery, crops. GEORGE GINTZ, Route 2, Edgar, Wisconsin.

For Sale—Good, productive dairy farm, 180 acres. Central New York. Monthly milk check $650 to $700. Write EDWARD WENGERT, Boonville, N. Y.

Good dairy farms in the fertile Mohawk Valley section, from 20 to 350 acres, some with or without equipment. P. E. TURTLELOT, Frankfort, N. Y. 9-2

240 acres, mostly alfalfa, plenty of water, buildings in good repair, a bargain if taken at once. Possession to suit the buyer. Want to sell direct and save middleman's profit. Do not write, but come. I mean business. R. D. LEE, Cazenovia, N. Y. 8-2

FARMS WANTED

Farm Wanted—Have $15,000 second mortgage to pay down. Two banks for reference. ELLIS WADE, Waterville, Iowa. 8-2

SEEDS

Wisconsin Pedigree Rye, Rosen Rye, and Pedigree Winter Wheat. Highest yielding strains grown. NOYES RAESSLER, Beloit, Wis. 7-3

Wisconsin grown winter sand vetch. VAN LOON, La Crosse, Wis. 8*

Guaranteed Seeds—High germinating alfalfa $12.00 bu.; red clover, $25.00; sweet clover, $15.00; timothy, 5.00; rye, $2.25; sugar, $17.50 cwt. Bonds accepted. MEIER SEED COMPANY, Russell, Kansas. 7-3

Winter Vetch and Rosen Rye mixed ready for sowing. $5.00 per bushel. BOLLERUD & BOLLERUD, Hollandale, Wisconsin. 8-2

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 7-5

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Young single man as assistant herdsman. Registered Guernseys doing A. R. work. Modern improvements. Close to good city. Steady work. Give all particulars in first letter. E. S. PERSON, Minot, N. D. 6-4

Carpenter and General Farm Mechanic, wanted—Rock River Farms has a place for a steady man, married or single, who can do satisfactory work in the following lines or as many of them as possible. Plain carpentry and painting, steam boilers and plumbing, electric motors and wiring, farm machinery, repairing, including tractors and autos. State qualifications, wages expected, and furnish references in first letter. H. W. ALLYN, Byron, Ill. 6-4

Wanted—A man, experienced in making A. R. O. records, to take charge of our testing cows. UNION COLLEGE, College View, Nebr. 7-3

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 8-4

Wanted—Man for general dairy work. Please state age, nationality, experience, and wages first letter. S. J. BURGESS, Helena, Montana. 8-2

Wanted—A young married man with some dairy experience, also knowledge of other stock and general farming on an improved road, good house and good equipment. Good opportunity for a young man wanting to get a start. Address BOX 353, care Hoard's Dairyman. 8-3

Wanted—Married herdsman for semi work. State records you have made in first letter. W. B. BARNEY & SONS, Chapin, Iowa. 8-4

Wanted—Married man, preferably without children, to work Virginia farm of from 150 to 200 acres on shares. 50-50 basis. February possession. Address FLOYD STARR, Albion, Michigan. 9-2

Single herdsman wanted to take charge of small pure-bred Holstein herd near Chicago where Advance Registry Official work is done. Good opportunity with excellent living connections for energetic, ambitious man. Address ROOM 1005, 112 West Adams St., Chicago, Illinois. 9*

Wanted—Single man for general farm work. Must be good dry milker. State age and wages expected. H. H. WEBB, Route 1, Mulkeytown, Ill.

Wanted—A man for milk route work on The Dougan Guernsey Farm, Beloit, Wisconsin. Must be able to drive and care for a Ford truck. Good pay and a good home. W. J. DOUGAN, Prop.

Wanted—A single man to do four times a day milking. Must be a good milker. State wages and experience. PINEHURST FARMS CO., Sheboygan Falls, Wisconsin. 9-2

Man and wife without children for 46-acre farm. Wife to do cooking only, man for outside work. Two cows, three horses, chickens, garden, etc. All the year job. Steam heated room. Electricity and private bath. Write giving experience. C. E. WARNER, Chagrin Falls, Ohio. Bell Phone Chagrin 25U.

Herdsman wanted—To take charge of about 80 head Holstein cattle (about 20 registered) and help on a general plan to have all registered stock. Fair wages and a good per cent of the farm profits. THOMAS A. SOPER, 2516 Wabash Ave., Chicago, Ill. 9-3

Wanted—Girl or middle-aged woman for house work on farm. Good place, modern conveniences. State wages and send references. Address BOX 368, care Hoard's Dairyman.

Wanted—Man to operate my 200-acre farm situated near Oshkosh, Wis., on interurban road. Must thoroughly understand soils, rotation of crops and the care of a first-class dairy herd. A splendid opportunity for the right man as there is great activity in this county with pure-bred stock and pedigreed seeds. Address BOX 363, care Hoard's Dairyman. 9-3

Wanted—Single man for general farm work. Good place to work. State wages and experience. Address BOX 356, care Hoard's Dairyman. 8*

Wanted—Married man to milk and be assistant herdsman for herd of registered Jerseys. Must be clean and alive. Register of Merit work and certified milk. Give qualifications and experience. J. E. WHERRELL, 1581 Sedgwich St., Riverside, Calif.

Wanted at once—Single young man of good habits to do farm and dairy work on Holstein farm. Yearly employment and good wages. Write stating terms. JOHN H. PESTER, Whitewater, Wisconsin. 9-2

Wanted—Single man, good dry hand milker, with good habits. Give reference and past experience in first letter. Good salary for right party. PERGUE FARM, Streator, Illinois. 9-2

Wanted to Hire—A good man to take care of and milk herd of cows. A. H. KAYSER, Madison, Wis.

Wanted—Experienced, single man, Protestant (Scotchman preferred) for general farm work and to assist with milking, must understand all farm machinery and care of horses, for farm near Chicago. State full particulars and salary wanted in first letter. LEASKDALE FARM, Wheaton, Illinois.

Wanted at Once—Married couple without children, man for general farm work and woman to board help, with everything furnished, or assist with housework. Modern conveniences. State full particulars and wages. CLOVERCREST FARM, Amboy, Minn.

Wanted—March 1st next. Married man to operate farm, fifty acres work land, thirty acres timber pasture; good house, new tile barn, twenty-four stanchions; on electric car line one mile from town eight thousand; fine wholesale market for milk. Will hire for cash or rent on shares. CHAS. GURLER, De Kalb, Illinois.

POSITIONS WANTED

Wanted—Position as farm manager where big results are expected. Wide experience, University education. F. B. HYATT, 27 N. Butler, Madison, Wis. 7-3

Wanted—Position in charge dairy herd. Qualifications right. Southern location preferred. Address BOX No. 369, care Hoard's Dairyman, Ft. Atkinson, Wisconsin.

Two young men, Hollanders, single, want positions on dairy farm to work in cow barn or field. Good milkers. State wages in first letter. Address BOX 360, care Hoard's Dairyman. 8-5

Opportunity to take entire charge of well equipped dairy farm, stocked with registered cattle, wanted by married man, former professor in Agricultural College and with much practical experience. Good living conditions essential. In writing outline proposition and give locality. Address BOX 365, care Hoard's Dairyman.

Position wanted by single man with Holstein herd on short or long time test, where good results will be appreciated. State wages, particulars first letter. Address BOX 372, care Hoard's Dairyman.

Wanted—Position as housekeeper on farm. Address MRS. M. S. CLIVER, Jobstown, N. J.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Manager experienced in all lines of stock and farm work desires a position with a party wanting first class results. WILLIAM R. EASTWOOD, Weldon, Pennsylvania.

Wanted—Position as herdsman or manager. Practical experience all branches farming. Have done A. R. O. work, reared on farm, college training. Good references, north preferred. Address BOX 373, care Hoard's Dairyman.

Hog man with energy and proven ability, desires position on modern farm where hard work and results will be appreciated. Capable of taking charge of herd or willing to work as assistant. Prefer Western State location. Excellent references furnished. Address BOX 370, care Hoard's Dairyman.

Wanted—Position as managing herdsman by first class married man, 28 years old. Broad experience in breeding Holsteins, and Advanced Registry feeding. College training. Highly recommended. BOX 374, care Hoard's Dairyman. 9-2

Correspondence invited with parties wishing a practical manager and herdsman combined. Will run upon shares from next spring. Agricultural college training, Swede, married, best references. Address BOX 375, care Hoard's Dairyman.

Wanted—Position as creameryman. Bottling milk, separating, pasteurizing and manufacturing dairy products. Address BOX 371, care Hoard's Dairyman. 9-2





MARKETS

CHICAGO, Sept. 11—Butter—Creamery, extras, 56c; standards, 53¼c; dairy, firsts, 54½c; seconds, 46½c.

Eggs—Ordinary, 46@47½c; firsts, 51½@52½c.

Cheese—Twins, 24¾c; Young Americas, 26c.

MILWAUKEE, Wis., Sept. 11—Butter—Creamery, tubs, 56c; prints, 57c; extra firsts, 54c; firsts, 50@51c; No. 1 packing stock, 34@35c; No. 2 do, 20@30c.

Eggs—Fresh firsts, recandled for city trade, 55@56c; current receipts, country candled, 49@50c; checks, 31@34c; dirties, 35@38c.

Cheese—Twins, 24¾c; Daisies, 26½c; Longhorns, 25½c; fancy Brick, 25c; Limburger, new, 1 lb., 25½c; Limburger, new 2 lbs., 24½c.

NEW YORK, Sept. 11—Cheese—Firm; state milk, common to specials, 20@29c; skims, common to specials, 5@17c.

Butter—Firmer; receipts, 7,339 packages; creamery, extras, 58@58½c; state dairy, tubs, 45@57½c; imitation creamery, prints, nominal.

Eggs—Receipts, 22,641 cases; nearby white fancy, 76@78c; nearby mixed fancy, 51@70c; fresh firsts, 55@63c.

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FARMS HANDLED

Farms of 400 to 600 acres wanted. Need only be part under plow with good buildings and fully stocked.

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(60 Miles East of Los Angeles)

October 19-20-21, 1920



KING PONTIAC NETHERLAND SEGIS 3D
27 A. R. O. daughters. By a son of King of the Pontiacs and out of a twice 34-lb. daughter of Sir Skylark Ormsby Hengerveld.



SIR ORMSBY SKYLARK RAUWERD
By Sir Ormsby Skylark and out of a 34-lb. daughter of Prince Segis Korndyke, second dam a 29-lb. cow.

Because of the ill health of the managing owner, Mr. A. J. Stalder, one of California's greatest Holstein breeding herds and properties go under the auctioneer's hammer in this sale, in the following order:

9 A. M. OCTOBER 19—235 acres on which are more than $50,000.00 worth of improvements, figuring on normal cost when built. This is without question one of the foremost breeding plants in the West. Another parcel of 397 acres adjoining, without buildings, will be sold immediately after. Following the sale of the ranch there will be sold 50 registered Duroc Jersey hogs, 16 registered Percheron mares and stallions, 1,800 White Leghorn hens, a small herd of grade dairy cattle, all of the implements and tools, and a quantity of hay.

OCTOBER 20 and 21—These two days will be devoted to the dispersal of the splendid herd of 150 registered Holsteins, one of the choicest collections of the breed in the West, most of them bred in this herd. This herd contains more Ormsby blood than any other in the West, including females with records up to over 34 lbs. butter in 7 days, and about 25 are now on yearly test. The two herd bulls, pictured above, are high class in every respect. Every animal is positively guaranteed to be a breeder; every animal over six months old tuberculin tested and sold subject to retest by the buyer.

For further information or catalog of sale address the sale managers.

California Breeders' Sales and Pedigree Co.

C. L. Hughes, Sales Manager **Sacramento, California**

AUCTIONEER — Col. Ben A. Rhoades, Los Angeles



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He's throwing stones at your barn too
What are you doing about it?

Day and night, the year around, Old Father Time throws stones at your barn. Every stone he throws, hits it fairly and squarely *everywhere*. First thing you know, you'll find a rotten board where some of his stones have hit. Then you'll wake up to the fact, that everywhere the building shows Time's wear and tear.

When you think what barns cost to build these days, it makes a cold chill run up your back. Happily for you, however, you can protect your barn from the biggest stones the old man wants to throw.

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Have An Engine On Your Farm



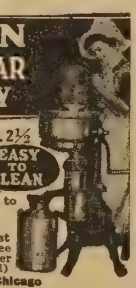
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NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on

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and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (21)

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VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Catarrh

Kindly tell me if raw linseed oil is better as a purgative for cows than Epsom salt. If not please tell me in which case raw linseed oil is to be given and in which the Epsom salt. Does it hurt or benefit cows to receive a drench of Epsom salts once in a while? Our cows dispell from their nostrils a yellowish mucous-like discharge, early mornings, which, in this country are, on account of its high altitude, cool.

Taos, N. M. R. C. P.

Epsom or Glauber salt is the standard physic for cattle. Raw linseed oil is most suitable when there is impaction of the paunch or bowels. In such a condition one first gives fluid extract of nux vomica and salol in dram doses, along with small dose of raw linseed oil every three or four hours until the cow starts belching or chewing her cud, then a full dose of Epsom or Glauber salt may be given in warm water as a drench. As the cows have a catarrhal discharge it would be well to have them tested with tuberculin, as tuberculosis could be a possible cause and is incurable. If that disease is not present the condition in all probability is induced by dust or may be incidental to the altitude of the location in which the cows are kept. That, however, would be a matter for investigation by an expert.

Contagious Mammitis

I have a herd of pure-bred Holsteins that are valuable. We have had a great deal of trouble with garget or caked bags this summer. Have lost the quarters on some of our best cows. I have used every precaution and have used poke root and vaccines without result. I have been very careful in handling the cows affected and in spite of all every now and then a cow comes to the barn in great distress with one quarter all caked up.

Randall, Ia. E. E.

Germ infection is the undoubted cause of such cases and the infection is carried from cow to cow by the milkers' hands or cups of the miking machine. It may also be contracted from floors or other places contaminated by milk or purulent discharge from affected quarters. In some instances the cows contract the disease from lying upon filth or infected ground or standing or wading in stagnant water.

Immediately isolate the affected cows and milk them last or have them milked by one who does not handle the other cows. As there is no remedy for the spoiled quarters, all such cows had better be fitted for the butcher, or they may be used for breeding, if kept apart from the other cows and allowed to raise their calves. Sometimes, however, milk from affected udders proves poisonous to sucking calves. Cleanse, disinfect, and whitewash the cow stables including the floors. Keep cows and heifers out of places such as we have mentioned. Do not let calves suck one another's teats. Treat starting cases as often advised here and the attending veterinarian also should use mastitis bacterin.

Texas News

The Galveston Co-operative Stores, Inc., of Galveston has under consideration plans for the construction of a creamery. G. A. Knapp is chairman of the committee appointed to investigate the practicability of the proposition.

The Port Arthur Dairy Farmers' Co-operative Society has been incorporated at Port Arthur, Texas, with no capital stock. The incorporators are N. L. Logan, E. T. Smith, and Edward Rake. W. D. HORNADAY.

Clean Out Abortion

From Your Herd With

Hood Farm Abortion Remedy

and

Hood Farm Breeding Powder

Hundreds of breeders have saved valuable cows and their calves by giving the Abortion Remedy promptly and freely on the first sign of abortion. Its success has been remarkable.

Injection with Hood Farm Breeding Powder every day for 21 days before service, then every day for 21 days after service, destroys abortion germs, disinfects the organs and keeps cows in a normal, healthy breeding condition.

PRICES: Abortion Remedy, prepaid, $1.25, $2.75, and $9. Breeding Powder, $1.15, $2.75, and $5. Injection Tube, by mail, 90 cents. One medium Breeding Powder, one medium Abortion Remedy, one Tube, prepaid, $5.75.

C. I. HOOD CO., Lowell, Mass.

A Guaranteed Remedy for

Contagious ABORTION

Are you letting this scourge cost you calves, milk and cows? If your cows are affected, stamp it out.

ABORNO

the guaranteed treatment for Abortion, has been successful on thousands of cows. Give it a chance in your herd. Easily administered by hypodermic syringe—acts rapidly on germs in the blood. Can't harm the cow.



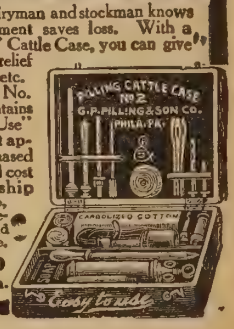
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"First Aid" for Cows

EVERY farmer, dairyman and stockman knows that prompt treatment saves loss. With a Pilling "Easy-to-Use" Cattle Case, you can give an animal immediate relief from milk fever, bloat, etc.

Pilling Cattle Case No. 2, shown here, contains high-grade "Easy-to-Use" instruments of the latest approved designs. Purchased separately, they would cost $18.00. But we ship complete set, in oak case, with "Easy-to-Use" directions, only $12.50, postpaid Order today. Booklet free.



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Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

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America's Pioneer Dog Medicines

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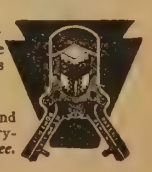


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kills every fly it strikes, also destroys lice on animals and poultry. If your dealer won't supply you send direct. Sent prepaid on receipt of price. ½ gal., 90c; 1 gal., $1.50; 5 gals., $6. Salesmen and agents wanted.

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Dehorn your cattle in the modern humane way. No crushing—a single stroke does the work quickly when you use a

KEYSTONE DEHORNER

We also make Keystone Bull Staffs and other appliances for cattlemen and dairymen—all sold on *money-back guarantee.* Write for circular. It pays to dehorn.

JAS. SCULLY, Box 109, Pomeroy, Pa.



A good bull is more than half the herd
A scrub bull is mighty near all of it

Start right - put an
AYRSHIRE BULL
at the head of your herd

No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS' last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!

Start right – put an
AYRSHIRE BULL
at the head of your herd



A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals.

Choice Bull Calves always on hand.

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Sons of
Ringmaster's Brae Burn Diplomat
For Sale

GEORGE F. WHITE, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

5 Ayrshire Cows Fresh 5

and Service Bull of the best blood lines. Priced for quick sale.

L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

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Middlesex Meadows Ayrshires

No matron stays in the herd that does not make an A. R. record of 10,000 lbs. or better. Most of them have records far exceeding this standard. Their bull calves by our herd sires are for sale.

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Choice Stock For Sale

RACINE, - - WISCONSIN.

Union Valley Farm Ayrshires

A few finely marked and bred for production heifers; also some well marked bull calves for sale. Herd headed by Midland General No. 17404. R. R. Chicago, Milwaukee and St. Paul.

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Herd Sire Norah's Netherton No. 19427

Dam's 4-yr.-old record 12,364 lbs. milk, 517 lbs. butter. Young stock of both sexes for sale.

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Herd headed by Cavalier Beuchan Lindsey and Star of Silver Pet, bred for production, both sexes for sale.

J. A. Dalton, - Oconomowoc, Wis.

EDELWEISS FARMS AYRSHIRES

Young stock for sale. Our aim is breeding for production. Fred Tschudy & Sons, Monroe, Wis.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

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We specialize in furnishing complete foundation herds of Ayrshires and Berkshires skillfully selected and mated by experts. The Gossard herds are built on superior, practical milk and pork producing qualities bred into the stock for generations. Isn't that the kind you want? Write us for details.

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Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.

Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

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Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
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MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

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Aldebaran Farms

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ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

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Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

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"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

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WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

When writing advertisers please mention Hoard's Dairyman.

National Jersey Show

With entries already coming in, the indications several weeks before the opening of the big exposition point to a record-breaking number of exhibits in the National Jersey Cattle Show to be held in conjunction with the State Fair of Louisiana, October 28 to November 7, inclusive.

The initial batch of entries, numbering thirty-five, was sent in by Ed. C. Lasater, of Falfurrias, Texas. Mr. Lasater has made the State Fair of Louisiana before, but not on the tremendously important scale that he will be represented at the 1920 exhibition, judging by the interest he is already manifesting in the national contest.

Louisiana. D. G. FRENTZ.

So few birds are harmful that when one has doubts, it is better to protect them all.

SWINE

REGISTERED DUROC-JERSEYS

We are offering **For Sale** until **October 1st**, Spring **Duroc Gilts** and **Boars**, a number of Fall gilts and a number of brood sows including sows from **King Orion** and boars and gilts from **Crimson Orion Cherry King 2nd.** No better **Duroc** blood to be obtained. We will book orders now for pigs that will be farrowed in August. Satisfaction guaranteed on our **Durocs.**

EDGEWATER STOCK FARM, Ft. Atkinson, Wis.



Green Valley Cherry King 2nd No. 260435n.

Why Take Chances?

when you can see our DUROCS on your own farm before you pay. Everything in the Duroc line. Write for Catalog and price-list.

We deliver the Hogs before you pay.
GREEN VALLEY STOCK FARM
BOX 6, LOUISVILLE, ILLINOIS

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

BROWN SWISS

JUBILEE FARM

Brown Swiss Cattle

Our cattle carry the finest blood lines in the country. Young stock for sale.

Box 747 Peoria, Illinois.

Brown Swiss Cattle

Stock For Sale

Correspondence Solicited

HULL BROS., Painesville, Ohio



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.

IRA INMAN, Secretary Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

JERSEYS

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves

Rich in the high producing and reproducing Sophie Tormentor blood. Prices $300 and up. Some with quite a lot of white markings at $150 to $200. Write for pedigree and description to

HOOD FARM, Inc.,
Lowell, - - Mass.

N. B. It will help us to assist you, if you will state in your inquiry size of herd, production of same and price you wish to pay.

Fairview Farm Jerseys

"Production" our Watchword.

BULL FOR SALE

No. 411—Dropped Feb. 4th, 1920, is very slightly broken color with black tongue and switch.

Sire: Lou's Torono 106614, sire of 9 in the R. of M. including Victoria of Fairview Farm 324039—815 lbs. 85% butter from 14,525.2 lbs. milk, at 3 yrs. 5 mos. of age. His dam and grandams have an average record of 966 lbs. 13 ozs. 85% butter from 14,261 lbs. milk.

Dam: Laddie's Alpha 292074, a good type dairy animal, with good big body, good udder and excellent teats. Her sire is of Golden Lad breeding.

Price, $150 f. o. b. cars our station.

Fairview Farms, Inc., Vaudelt, Georgia
R. L. Pike, General Manager.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Cedar Crest Farms

Offer a Bull

Sired by Fairy's Duchess Chief 173902 out of Yolande's Fairy 275996; entered Register of Merit Class AA at 4 years, 6 months, producing 7,815 lbs. of milk, 478.04 lbs. of 85% butter.

First $150.00 takes him.

J. K. Dering, Lake Villa, Ill.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY. BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.

Address: **J. Q. Emery & Son, Edgerton, Wis.**

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. buttert Granddaughter Jacoba Irene, young stock; St. Lamberf breeding for sale. **R. C. Green & Son, Albion, Wis.**

GUERNSEYS

Appletree Point Farms

HERD SIRES:

Pencoyd's Secret Marose 48332
Rose's Golden Cherub 48137

Bull calves from May Rose, Ne Plus Ultra, Hayes Cherub II and Glenwood cows. Herd under Government supervision for tuberculosis.

U. A. WOODBURY II, Owner
BURLINGTON, - - VERMONT.

For Sale

The last son of Imp. Spotswood Sequel A. R. Dam, full sister and two sisters of dam average 630 lbs. fat. Very choice individual. Also two sons and two daughters of May Rose Noble of Jean Du Luth, prize winning son of May King of Linda Vista. For further particulars and bargain prices write to

Paul Love, St. Austell Farms, - Jackson, Mich.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price—May Rose and Glenwood strains—write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd. **August Ziesing, Deerfield, Ill.**

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $[illegible].00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

All ages sired by Caribou Gold's King and Rosewood of Briarcombe; out of dams who are daughters of Governor of the Chene 1297 P. S., Langwater Raritan, Prince Charming, Violet of the Forgettees and others. Write for prices.

PETER SIMON, - ALTURA, MINN.

WOODEND FARM GUERNSEYS

Bulls of serviceable age sired by May Rose Secret of Pencoyd 27844 and out of A. R. O. dams.

E. E. LePELLEY, Supt. Guernseys
Mound, - - - Minnesota

CLELAND FARMS GUERNSEYS

We always have a few good females in both bred heifers and cows in milk to offer.

At this time we can offer two choicely Golden Secret bred bulls most ready for service.

CLELAND FARMS, Chagrin Falls, O.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $600. Write for particulars.

Meadowland Farms, Litchfield, Conn.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr.**

Choice Breeding

I have six choicely bred Guernsey bull calves ranging in age from one to eighteen months, mostly out of Advanced Registry cows, which I will sell at very reasonable prices, from $75.00 up to $250.00.

L. S. Meyer, - Springfield, Mo.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Registered Bulls — $100 and Up

West View Farm offers registered Jersey bull calf, born April 15th, 1920, solid color and a good one. Dam now on test and making a good record. Double grandam made 609 lbs. butter in one year. Price $100.00 f. o. b. here. Also other bulls one to nineteen months old. Good ones priced right.

Registered Berkshire pigs eight to ten weeks old. $15.00 either sex. Also yearling sows. For size, type, and prolificacy you can't do better.

W. C. BROOKOVER, Route No. 1, Chandlersville, Ohio.



Economy in Production ← GUERNSEYS → Quality of Products



Some dairy cows produce large quantities of milk which is low in food value. Others produce small quantities of rich milk. The Guernsey is the only breed that combines quality and quantity. Send for our booklet, "The Story of the Guernsey." It's free.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 82, PETERBORO, N. H.

Another of His Good Sons for Sale

Disturber of Prospect is a splendid individual, very well grown and ready for light service this fall.

His dam, Sally of Prospect, made 313.48 lbs. fat as a 2-year-old on twice a day milking and ordinary herd care.

His sire, Anton's King Confidence, traces five times to May Rose 2d and is from Ma Chere Confidence, 764.65 lbs. fat in Class C.



Anton's King Confidence 43517

Better write today for price and pedigree if you want him.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) **W. S. KERR, Manager.**

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.

Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN.

45 Guernseys 45

At Mankato, Minn., Oct. 5, 1920

In the New Sale Pavilion

The offering will consist of 20 pure-bred cows and heifers, 6 pure-bred bulls, and about 20 splendid high grade cows and heifers, all consigned by Blue Earth County breeders. Cattle will be tuberculin tested and sold under the standard guarantees. Catalogues September 15th. Write for one to

DR. M. B. WOOD, Mankato, Minn., Manager of the Sale.

Oliver S. Johnson, Auctioneer. First Nat. Bank of Mankato, Clerk of Sale

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Guernseys At Auction

Second Annual Consignment Sale

Guernsey Breeders' Ass'n of Northern Minnesota and Northern Wisconsin

Tri-State Fair Grounds, Superior, Wisconsin
Wednesday, October 6, 1920

A QUALITY SALE A GUARANTY SALE

Auctioneers: Johnson, Benjamin, McGuire

For catalogue write to

E. P. Gibson, Sales Mgr., 310 Court House, Duluth, Minnesota

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Guernsey Bull For Sale

Emery of Linwood, 11 months old, good individual, good color. Grandson of Imp. Clara's Sequel who has 30 A. R. 500-lb. daughters. His dam has 515 lbs. fat A. R. and she is a daughter of Governor of the Chene who has over 100 A. R. daughters.

Homer F. Rundell, Livingston, Wis.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.

Send for sale list.

M. L. Welles, Rosendale, Wis.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM

Ray F. Frisby, Prop., - St. Charles, Minn.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Tristram Farm Guernseys

Herd Bull: Dairymaid's Glenwood of Pinehurst 3d whose two nearest dams average over 715 lbs. B. F. and whose daughters are proven producers.

Several young bull calves from one to six months of age for sale.

Federal Accredited Herd

Tristram Farm Co., Eau Claire, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, - Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

Producing Clean Milk

The following suggestions for producing clear milk are taken from the monthly letter of the Flint, Michigan, Health Department to the milk producers of that section:

"You are engaged in an occupation which carries with it more or less responsibility which should be borne in mind by your employees as well as yourself. Babies and children unknowingly rely on you to produce an article which is perfectly pure and safe at all times. The ten suggestions found below are given to assist you to assume that responsibility:

"1. Keep the cow's flanks and udder free from dirt and manure. This is probably the most important single precaution that you can take. More dirt gets into milk from this source than from all other sources combined.

"2. Wipe the udder with a moist cloth before milking. This little chore will take about ten seconds of time to each animal but the difference in the quality of milk produced is more than sufficient to pay for the time spent.

"3. Use a small-top milk pail. The importance of the small-top pail cannot be over-estimated. It has been tried and proven satisfactory and practical.

"4. Use outing flannel or a cotton pad strainer. The use of cheese-cloth or a wire mesh strainer is a mistake and a false security, which should and can be remedied at once.

"5. Sterilize all milk utensils with scalding water or steam. Invert them on racks or stakes when not in use. Rinse with clean water before using. Proper care of milk utensils is necessary to insure a grade of milk which is acceptable to the market milk trade.

"6. Dispose of all tuberculous cattle. Figures collected from all over the United States show that from 5 to 30 per cent of all dairy cattle are afflicted with tuberculosis. Have you any tuberculous cattle in your herd?

"7. Keep your stable clean. It should be whitewashed and the ceiling tight fitting and kept well brushed. Don't allow manure to accumulate. It is impossible to produce clean milk in a dirty stable. That fact is plainly evident to anybody who has ever worked on a dairy farm.

"8. Milk with clean hands. Soap, water, and a towel should be convenient to the milkers.

"9. Avoid wetting the hands while milking. Wet hand milking is a filthy habit which should be discouraged. It also causes sore and chapped teats with a resulting irritation and partial loss of milk flow.

"10. Cool the milk to 60° or below immediately after milking. A tank or aerator is best suited for this purpose. The use of a dairy thermometer in this connection is advisable. The "wash tub method" of cooling is absolutely inadequate and sooner or later will cause financial loss.

"You will notice, Mr. Milk Producer, that most of the points mentioned above concern methods which require no money expenditure but can be adopted immediately. We urge you, for the sake of hundreds of babies and children, to carefully consider and then adopt them."

Suppression of Milk

I have a Jersey cow 5 years old with third calf and fresh 6 days, but she hardly gives enough milk to feed calf. I am feeding kale, green corn, and mill run and have been feeding one tablespoonful of Kow Kure twice daily. She seems to be in good health, eats and drinks well, bowels are in good shape. Please tell me the cause of trouble and give me a remedy for it.

Portland, Ore. W. W. F.

A chill at calving time is a common cause of such suppression of milk, or the lessened yield may have been induced by milking too long without rest before calving, or by an unnoticed attack of subacute mammitis after weaning a calf, or drying off the milk flow. Milk her three times daily, massaging the udder thoroughly each time and add wheat bran, dried brewers grains, gluten meal, and oil meal, or similar milk flow encouraging feeds to the ration. Medicine will not be likely to help.

HOLSTEINS

WANTED

We are in the market for 8 or 10 well bred, registered Holstein heifers due to freshen this fall and winter. Bred to a good bull.
ELMHURST FARMS, Unity, Wis.

1000---HERD---1000
Quality Holsteins
GRADES AND PURE-BREDS
Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.
Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

King Waldrof Pietje Echo
Jr. Herd Sire
His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.
Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

King Segis Johanna Ormsby
heads our herd of
Registered Holstein-Friesians
Write for description of young stock for Sale.
EZRA BLUMER, MONROE, WISCONSIN

Consignment Sale, Oct. 6-7
of Registered and A. R. O. Holstein-Friesian Cattle, at the
Hornless Holstein Farms, Clarks Summit, Pa.
10 Miles North of Scranton, Penna., on the D. L. & W. Railroad and Northern Electric Ry.
— ABOUT 100 HEAD —
Many of them sired by the BEST DAMMED BULL of the breed, a son of the WORLD'S RECORD SENIOR 4-YEAR-OLD, KEYSTONE BEAUTY PLUM JOHANNA, with 25,787.5 lbs. of milk, 1,294.7 lbs. of butter, strictly official in a year, 4% IN LONG TIME TEST. Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30-lb. cows; son of a cow with 1,056 lbs. in semi-official test. 35 animals from herds under Federal supervision. Some of the consignments sold on a 60-day re-test. Many animals NATURALLY HORNLESS.
GEORGE E. STEVENSON, SCRANTON, PA.

Grandsons of S. P. O. M. and K. K. S. V.

SIRED BY



SIR PIETERTJE ORMSBY MERCEDES 41ST
The $65,000 bull that has more 1,000-lb. sisters than any other bull of the breed. He is the only son of Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke, "the greatest mother of the breed".

THESE YOUNG BULLS 4 TO 11 Months Old ARE FOR SALE

Sons of "41st"

1—A splendid young bull out of Bonny Johanna Mooie De Kol, see lower left illustration. This is one of our good foundation females that will have another and better chance on year test. The calf was born May 9.

2—Summit Alma Mercedes; born May 1, out of A. W. P. Alma Coin that made 16.48 lbs. butter and 307.3 lbs. milk in 7 days at 27 months.

3—A son of Summit Ormsby Colantha Maid, a very good prospect at her next freshening. Born May 8.

SIRED BY



KING PONTIAC ARTIS SADIE VALE
He is a 34-lb. son of the great King Korndyke Sadie Vale. His 3 nearest dams average 37.48 lbs. He already has 3 A. R. O. daughters and we have a large number of young heifers by him that will be retained in our herd and tested.



BONNY JOHANNA MOOIE DE KOL
A splendid 29.64-lb. cow that has a 305-day record of 694 lbs. butter from 18,124.8 lbs. milk. She will be tested again.

Sons of "King"

1—A 6 months' old son of Mary Segis Beets; see lower right illustration. This youngster is a splendid prospect for a real herd bull.

2—*Summit Fyke De Kol.* Born Oct. 10, '19. From Circe Fyke Canary De Kol, 16.86 lbs. butter, 424.7 lbs. milk in 7 days as a 3-yr.-old. Just finishing year test. In 262 days she had produced 16,329.5 lbs. milk and about 650 lbs. butter.

3—*Summit Rag Artis.* Born Oct. 25, '19. From Queen Rag Apple Colantha, 16.3 lbs. butter from 401.9 lbs. milk in 7 days. Now on year test as a 2-year-old and had 10,294.5 lbs. milk and about 400 lbs. butter in 212 days.

4—*Summit Korndyke Lad.* Born Oct. 25, '19. From Lady Ormsby Pietertje Paul, just finishing year test with a very creditable record.



MARY SEGIS BEETS
One of our good foundation cows. She made 32.22 lbs. butter from 684 lbs. milk in 7 days, is now on yearly test and in 4 months produced 11,854 lbs. milk.

GUSTAVE PABST, Owner, HOLLYHOCK FARMS
DOUSMAN, Fred Southcott, Mgr. WISCONSIN

Facts in BLACK & WHITE



Large Profits From Pure-bred Holstein Cattle

In the production of milk and butter the larger the cow the larger the profit, other things being equal. This principle has been established through the investigations of government experts and is generally recognized.

When a cow's milking days are over, size is still an important factor. The big Holstein-Friesian, weighing anywhere from 1,000 to 1,800 lbs. with her clean white fat well distributed through her muscular system, proves a most profitable dairy beef animal.

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

October 5, 1920 October 5, 1920

HALL BROS.

— A Dissolution and Dispersion Sale of —

150 Head of Registered Holstein-Friesian Cows, Heifers and Bulls

at their Western Holstein Farm, 5½ Miles Southwest of Denver
On the Morrison Road

After twenty-three years of agreeable partnership of the brothers —Carlos W. and Storrs H. Hall, by their mutual agreement they have decided to close their partnership in this very successful business, and are offering at public sale one of the great herds of the day.

The foundation blood upon which this herd was established was of the best of the breed, and under the guidance of the Hall Bros. has increased in quality, and is today recognized from coast to coast as one of the great herds of America, and its breeding is the standard of excellence in the nation's greatest live stock exhibitions and sales, and in official testing.

The herd is composed entirely of animals of correct conformation and great milk and butter-yielding qualities. The herd is healthy and high class in every way. It was established with the view in mind of creating a herd of this breed in Colorado to supply foundation stock of this breed to the fast-growing dairy interests of the Rocky Mountain States. The Hall Bros. are, in live stock circles, well known men and highly respected. After years of successful operation in the dairy interests of Denver, the Western Holstein Farm and its herd of registered Holstein cattle, the owners believe a lightening up of their responsibilities of their large business should be observed, and hence this sale.

Just once in a great while does an apportunity present itself to buy your own selection of real foundation breeding blood of any blood of the various breeds, at your own price, and you should, those who are interested in this great breed, avail yourself of this great opportunity. *Remember the date, Tuesday, October 5, 1920.*

HALL BROS., Prop., WESTERN HOLSTEIN FARM
DENVER, COLO., South Denver Station

Catalogs ready September 1, 1920. Sale at the Farm.

COL. G. M. BANKS, Auctioneer, 709 E. 11th Ave., DENVER, COLO.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

Now Is the Time

To select your bull for next winter's use.

Select a son from Woodcrest Pietje Clyde, our herd sire.

7 days	365 days
33.07 butter	970.48 butter
523 milk	22,558.40 milk

He has 4 20-lb. Junior 2-year-olds including one 26.58-lb. Illinois State Champion. They are from *A. R. O. Dams* up to 27 lbs. butter and 636 lbs. milk. Prices reasonable.

JOHN SEXAUER & SONS
BELVIDERE, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

FOR SALE

Bull Calf born Sept. 16, 1919

From a granddaughter of King Korndyke Sadie Vale. He is a bargain at $150. Also some bull calves at $50.

Write for pedigree to

J. A. HOPPER, - SINCLAIR, ILL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont**, the **First Tuesday and Wednesday of every other month**, Feb. 4-5; Apr. 1-2; June 3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.072. Sire of calf *Sir Ona Clothilde De Kol No. 241466.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS



Here's Your Herd Sire

KING HOPE HENGERVELD SEGIS

Ear tag 591. Born December 17th, 1919

He is sired by BEAVER DAM KING MAMIE, a 30-lb. sire and a grandson of the great King Segis.

His dam, HOPE HENGERVELD DE KOL SWEETHEART, is a 22-lb. 3-yr.-old daughter of a 30-lb. cow. She is straight on the back and a good individual.

Write for photo and pedigree. Price $250. If you see him at Oconomowoc Farm you will take him home with you.

Eastern Office: 911 Consumers Bldg., Chicago, Ill.
Western Office: 911 Stuart Bldg., Seattle, Wash.

Carnation Stock Farms

FARMS
Washington Farm. Near Seattle, Wash.
Eastern Farm, Oconomowoc, Wis.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 to 9-month-old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

7-MONTH-OLD BULL—$150.

Marked more white than black. 27-lb. sire. Dam a 1700-lb. cow. Will be tested when she freshens in January. Rich in Homestead Breeding. Herd tuberculin tested annually. Check or bond takes him. **Chic Dairy Farm, - - Juneau, Wis.**

HORICON BELLE HOLSTEINS

Herd headed by Pabst Korndyke Baldwin, a son of Korndyke Segis Johanna and from a 32-lb. granddaughter of King Pontiac Champion. Five females in my herd average 24.12 lbs. butter as 2-yr.-olds.

E. F. KUEHN, - - HORICON, WIS.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager, - - - - - - - Burnett, Wisconsin.

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.

If you want one, write at once. We don't have them long.



W. J. Gillett & Sons, Rosendale, Wis.

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY

WISCONSIN

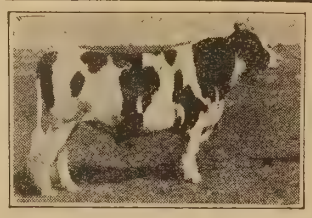
Send for list of 40 bulls in service in Waukesha County whose dams have records of over 30 lbs. of butter in 7 days or 1000 lbs. of butter in 365 days.

When in the market for Holstein Cattle for foundation stock, grades or pure-breds, buy them in Waukesha County. If you want a bull, reasonably priced, send for list.

Tuberculin tested herds—State and Federal.

Individuality Short and long time production records.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin Office 254 Broadway



A Son of Sir Bess Ormsby Fobes

the 30,000 Son of S. P. O. M. 37th. Ureeka Sir Bess Ormsby, is ready for heavy service. He is well grown—a good individual of just the type you want.

His dam, an 18-lb. 3-yr.-old, is one of our good producers that will certainly make a good year record.

Better write at once for complete information if you're interested.

UREEKA STOCK FARM
Otto W. Schinke, R. 1, - Jefferson, Wisconsin

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly.

S. A. BAIRD & SON, WAUKESHA, WIS.

Head Your Herd With a Bull!

Get a son of King Superba out of one of our good cows. King Superba's offspring won first and second in get-of-sire and calf herd at the Wisconsin State Fair, 1918. His four daughters sold in the Waukesha Sale, Nov. 1919, averaged $959. King Superba's dam was the first cow to be strictly officially tested for the entire year. She produced 1231 lbs. butter, 26,433 lbs. milk as a four-year-old. She has twice produced over 33 lbs. butter in 7 days. If you wish to combine individuality and production, head your herd with a Son of King Superba. We now offer a number of his choice sons, serviceable age and younger, out of dams with records up to 24 lbs. Several of the dams are on yearly test. Don't wait. Come and see them now.

BAIRD BROTHERS, WAUKESHA, WISCONSIN.



One of the sons of King Superba. They are all excellent individuals.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke age over 37 lbs. butter in 7 days. Come

WISCONSIN STAR STOCK FARM,

dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams aver- and see them or write to

ED. M. SHULTZ, HARTFORD, WIS.

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9th, 1920

Sale will start at 10:30 A. M.

Oconomowoc, Waukesha County, Wis.

Central Wisconsin Holstein Breeders' Association

Consignment Sale

70—Head—70

Quality Registered Holsteins

60 young Cows and Heifers. 10 Bulls —ages from 3 months to 3 years. Good enough to head any herd in the world.

Sale Pavilion, Fair Grounds

Marshfield, Wisconsin

October 7th, 1920

We have picked the best individuals from the herds of the best breeders of Marathon, Clark, Taylor, and Wood Counties. Some of these animals will be bred to King Pietertje Ormsby Piebe 10th, a 1200-lb. sire, and others equally good.

One daughter of a 35-lb. sire and out of a 30-lb. cow, bred to a 30-lb. sire.

One yearling daughter of a 37-lb. sire, King Sadie Vale Hengerveld.

One daughter from a 22-lb. four-year-old, bred to a 37-lb. bull.

The Master Ormsby bull, 4 months old. His dam is a 28-lb. heifer by Prince Hengerveld Fayne.

BREEDING AND QUALITY—OUR WATCH-WORD

A real chance to get Foundation Stock for your herd. Come to this sale. Bring your wife and daughters as well as the boys.

We will make this sale amusing, interesting, and instructive. You can't afford to miss it. Remember the date—October 7th, 1920.

Marshfield, Wisconsin

LET'S ALL GO

Auctioneers: Heintz, Krause, Ebbe. Pedigree Man: Arthur Imig.

For Sale Catalogs address
J. P. Heintz, Sale Manager,
Box 17 H, Hewitt, Wis.

Dinner served in large dining hall on grounds, by Ladies' Aid, at 11 A. M.
Sale starts at 12 o'clock sharp.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed to have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

HOLSTEINS AND GUERNSEYS

Why not buy your cattle from a reliable firm established in the cattle and dairy business for twenty-five years? We can fill your order for any number, pure-bred or high grade, any age desired from four weeks up. Give us your mail order to insure satisfaction.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Triomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

We are now offering two sons of

King Pietertje Ormsby Piebe

One of the Breed's Greatest Young Sires

King Pietertje Ormsby Piebe 22nd is 4 months old and light in color. His dam, Kirby Martha 2d, as a senior 4-year-old, made 32.36 lbs. butter from 560 lbs. milk in 7 days and 978 lbs. butter, 18,347 lbs. milk in a year. Moreover, she has several year-record sisters including one above 1,000 lbs.

King Pietertje Ormsby Piebe 25th was born June 7. His dam has a year record of 1,039 lbs. butter from 20,237 lbs. milk as well as a 30.47-lb. 7-day record, both made as a four-year-old. She is one of the best individual cows we have.

Write or wire at once if you are interested.

Hargrove & Arnold Holstein Co., Norwalk, Iowa.

Ready For Service

Iowana Pontiac Homestead 267584, a son of OAK DE KOL OLLIE HOMESTEAD 85529, and therefore a brother to Piebe Laura Ollie Homestead King, (5 20,000-pound two-year-old daughters). His dam, Iowana Aaggie Pontiac Fayne, is a daughter of SIR JOHANNA FAYNE 42147, (8 20,000-pound daughters) has a record of 22.9 pounds in seven days as a four-year-old and is now doing well on yearly test. Her dam is a great foundation cow with over 750 pounds butter in a year. Buy him now as he will undoubtedly be worth more money when his dam finishes her year. Price $750; send for pedigree and photo.

Our herd is under Federal Supervision.

IOWANA FARMS, - DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind —and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG
Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Wayside Lawn Farms

offer

Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 3 to 9 months old. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

Grandson of Sir Pietertje Ormsby Mercedes 37th

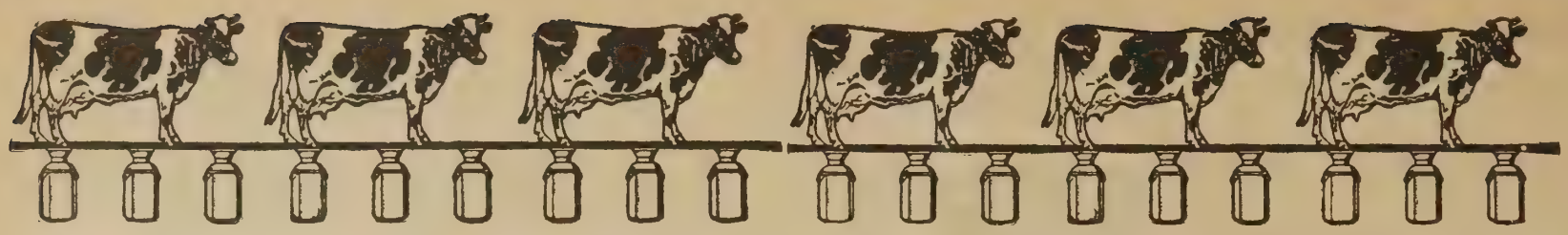
Born May 15, 1920, out of a daughter of Sir P. O. M. 44th. This royally bred calf is a fine individual and priced right for the farmer or small breeder. Let us tell you about him.

CERRO GORDO FARMS, Mason City, Iowa

Sons of a 37-Lb. Ormsby Bull

whose dam, full sister, three-fourths sister and maternal sister have all held state records. Herd under Federal supervision.

BLUEBELL FARM. RICEVILLE, IOWA.



THE NATIONAL DAIRYMEN'S SALE—Chicago, Oct. 13 and 14

IN CONNECTION WITH THE NATIONAL DAIRY SHOW

Two Junior Two-Year-Olds From California

Just Completing Year's Records of Over 20,000 Lbs. Milk Each!

THESE EXTRAORDINARY HEIFERS consigned by the Toyon Farms Association indicate the character of the California shipment, in which leading breeders of the Coast are uniting for a World's Record consignment. Carnation Stock Farms will send four of the best from its Seattle herd.

THE PACIFIC COAST is setting a swift pace for the rest of America, but the breeders of the East and of the Middle West are coming strong!

THE NATIONAL DAIRYMEN'S SALE this year, judged by the present outlook is bound to outclass all previous sales in the high average character of its entries.

THE NATIONAL DAIRYMEN'S SALE—E. M. Hastings Co., Managers, Pulaski, New York

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly

ANTRIM FARMS, - SYRACUSE, NEW YORK.

Maaikenshof Holsteins

We are now offering for sale some very choice sons of *Dutchland Creamelle Colantha 230137.* Colantha breeding is prominent in these calves. *Dutchland Creamelle Colantha* is out of Dutchland Colantha Denver, the highest record daughter of Colantha Johanna Lad in both 7-day and yearly tests. Her records are 7-day, 36.25 butter, 702.30 milk; year, 1,315.15 butter, 25,431 milk.

If you want a future sire of this excellent breeding write us immediately as we have priced these calves to sell in quick order.

We are pleased to send out our circulars if you are interested.

MAAIKENSHOF, R. E. Buell, Supt.
Bedford Hills, N. Y.

M&P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN.

A Rare Opportunity

to establish a herd.

15 A. R. O. cows in calf to a double 30-lb. son of King Segis Pontiac Alcartra. freshen fall and early winter.

4 heifers son ready to breed.

1 18-month-old son of King Lyons, out of Julia Lyons Pontiac, ¾ white, his seven nearest dams average 30.10. Alone worth $1,000. Not related to any of the females.

These 20 head for $5,000. Federally Accredited Herd.

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This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

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Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra.*

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

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Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk;* (*4.02%*) *1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk;* (*3.94%*) *1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

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Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

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25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.

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44 Registered Holstein Bulls

at

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We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

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Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **C. I. Reamer, North Liberty, Ind.**

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

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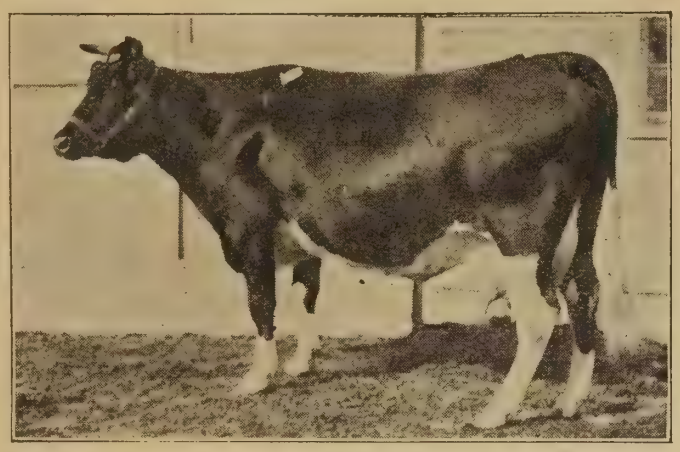
Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

A Son of this Cow for Sale

Born December 25, 1919



GLEN CANARY ORMSBY MERCEDES

Butter 365 days at 5 yrs.	722.60
Butter 7 days	27.94
Butter 365 days at 2 yrs.	550.86
Butter 7 days	20.71

She is a full sister to Glen Canary De Kol 2d, the junior four-year-old that last year made 1,323 lbs. butter for the year. She is sired by Sir Pietertje Ormsby Mercedes, the greatest sire of yearly producers and show ring winners in the world. Her dam is Glen Canary De Kol, former world's champion with 34.59 lbs. butter in 7 days and 139 lbs. in 30 days. She is by Sir Johanna Canary De Kol and from the grand champion, Glen De Kol Artis 3d, a daughter of Homestead Jr. De Kol.

THE SIRE OF THE CALF

is Uneeda King Alcartra. He is from a 33-lb. daughter of Johanna McKinley Segis, the only 40-lb. son of King Segis. His sire is the $50,000 bull, King Segis Pontiac Alcartra, a son of King Segis Pontiac and from a world's record daughter of King of the Pontiacs.

Price on this Calf is $1000.00

E. C. SCHROEDER FARMS,

Moorhead (*A Federal Accredited Herd*) **Minnesota.**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

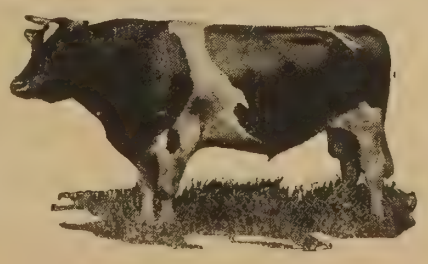
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John B. Irwin, Station F,
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Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

FOR SALE

8 Registered Holstein-Friesian Cows

Your pick of 16, all priced. They are granddaughters of Wisconsin Fobes, a 26-lb. cow, and King Korndyke Colantha Ormsby, no sire has more World's Champion blood close up in his pedigree. Cows are bred to Grandson of Sir P. O. M. Age 2 to 8 years, price $250 to $600.

3 bull calves 4 to 7 months old, sired by 20-lb. Grandson of Miss Korndyke Maid Ormsby. Price $75, $100, and $150.

WM. SAARI, - Finlayson, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

A son of King Segis Pontiac Fayne Star

"The best individual King Segis Pontiac Count ever sired", will put quality into your herd. If you want one of his good sons from a high record cow or heifer it will pay you to send for our bull circular today.

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Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

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for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm

William Schmidt, Prop. St. Peter, Minn.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.

Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**

H. R. Searles, Mgr. Rochester, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

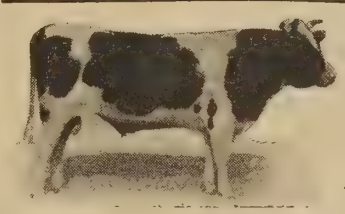
E. J. OPPLIGER, Box 20, Forest Lake, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - E. GRAND FORKS, MINN

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Wright County Holstein Breeders

Will Hold Their

First Consignment Sale

October 5

at Howard Lake. Minn.

This is their First Sale. On it they are building their reputation for future sales, so you may be very sure that the 50 registered Holsteins that they offer will be good ones, far better ones than could be purchased at private sale in the same county.

Every animal sold will be straight and right and will be sold with a health guarantee.

The very fact that the state association has undertaken the management of it is proof of the character of the sale. Plan now to attend.

For catalogs write

The Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Building Minneapolis, Minnesota

The Mower County Breeders' Sale

Austin, Minn.

Oct. 7

Will include 50 high class, healthy, registered Holsteins.

We are not offering our highest record, most valuable females but we have consigned the kind that we are proud to offer as representative of our herds. They are good individuals, well bred, with creditable records, and backed by creditable records, many of them in calf to some of the best bulls in the state.

This is a sale where every animal will be exactly as represented and where nothing will be left undone to insure you a square deal.

Plan now to come. You will be welcome whether you come as a buyer or only to get acquainted.

Write for your catalog to Sec. Scott of

The Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Building Minneapolis, Minnesota

This Daughter of S. P. O. M.

— WILL BE SOLD AT

The Dairy Center Sale



GLEN DE KOL MERCEDES

We Have Consigned this splendid daughter of Sir Pietertje Ormsby Mercedes to the Dairy Center Sale, October 1-2 at Northfield, Minnesota. She is out of Glen De Kol Artis 3rd, grand champion female at the 1913 Minnesota State Fair, she a daughter of Homestead Jr. De Kol.

Glen De Kol Mercedes is a full sister to Lady Glen Artis Ormsby, highest priced female at the 1920 Minnesota state sale. She has a 22-lb. junior 4-year-old record and is now making a splendid year record. She will be bred to our Piebe Laura Ollie Homestead King.

We Are Also Consigning Her Son, Glen Pontiac Mercedes Homestead, born June 10, '20, and sired by Lola Segis Pontiac Homestead, a 34-lb. 1,000-lb. son of Piebe and grandson of "Count". This calf is a splendid individual and combines as closely as possible the blood of S. P. O. M., King Segis Pontiac Count, and Piebe Laura Ollie Homestead King, Minnesota's 3 greatest long distance sires.

Look for them in your catalog and write us for more complete information.

Minnesota Holstein Co.

V. S. Culver, Sec. and Mgr. AUSTIN, MINN.

South Dakota Holsteins

Watertown, S. Dak.

Monday, October 4th, 1920

Second Annual South Dakota State

HOLSTEIN SALE

70 Head of South Dakota Holsteins **70**
60 FEMALES — 10 MALES

Granddaughters of the Famous Sires:
Sir Pietertje Ormsby Mercedes and King Segis Pontiac Count.

Bred to Sons of:
"King of The Ormsbys",
Ormsby Korndyke Lad,
College Belle Wayne,
Sir Pietertje Ormsby Mercedes and the famous "King Segis".

A GREAT SALE of large, typy, producing cows. Every animal guaranteed right. 90-day retests.

Sale under management of

South Dakota Holstein-Friesian Breeders' Association

T. E. GAGE, Secretary, GROTON, S. D.



Individuality--

the Combination of Type, Size and Quality---was the *Outstanding Requirement* of the Sales Committee.

Not an Animal was Accepted, Regardless of its Breeding or of its A R O Records, that was lacking as an Individual.

Sir Pietertje Ormsby Mercedes, Piebe Laura Ollie Homestead King, Sir Walker Segis Homestead, Sir Johanna Glen Ormsby and other of Minnesota's most famous Sires are represented not because their names were wanted for advertising purposes; but because the Animals representing them combine those qualities *essential to foundation stock,* Type, Size, Constitution and Quality.

The One Hundred and Thirty Five Entries are of Southern Minnesota's Best--- Drafted from Sixty Herds of Eight Leading Holstein Counties.

The Second Annual
Dairy Center Holstein Sale

Northfield, Minnesota -- October First and Second

For Catalogs Address

The Minnesota Holstein Friesian Breeders Association

406 Market Bank Bldg Minneapolis



Fall Days

with their chilly winds offer a mighty good reason for giving special attention to the feed of Dairy Cows.

Start your winter program of feeding early.

Do not let any other farm work interfere with this important need.

Even though the cows may be dry, they need a concentrate to balance their ration. This prepares them for the next period of lactation.

True Value Dairy Feed

is the best feed for Dairy Cows because it produces the greatest returns for the money invested.

The actual increase of the amount of milk is only one of the returns from feeding True Value Dairy Feed.

True Value Dairy Feed also repairs the broken-down tissues of the animal's body and maintains the *vital energy*.
Our chemists are experts on the subject of animal nutrition. They are at work continually in our modern laboratory testing and examining the ingredients of our feed. We are able to absolutely guarantee the following analysis, which shows available, not total nutrients:

Protein	(Minimum)—24%
Fat	(Minimum)— 5%
Carbohydrates	(Minimum)—52%
Fibre	(Maximum)—10%

A trial will convince you that our feed will produce more and better results than any other on the market.

If your dealer does not carry True Value Feeds, write us and we will see that you are supplied.

LADISH MILLING COMPANY

MILWAUKEE Dept. B WISCONSIN

Try a sack of Ladish Quality Flour. It makes more and better loaves of bread

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., SEPTEMBER 24, 1920. | Number 10

How One Co-operative Creamery Made Good

"It Can't Be Done, Yet We Go Ahead And Do It"

JOHN BOWER, MINNESOTA

IT is a far cry from a wage of $50 to $60 a month to a salary of $3200 a year. The writer refers to the wages offered a few years ago, and salaries paid now for competent buttermakers. There are still buttermakers getting only a little more than the above wage, and there are many who are getting more than the salary mentioned; and yet, anyone who has given the matter the least consideration must concede that there is not only a potential difference in the value of the buttermaker, but a real value as well.

Given a good location and fair management with a reasonably large make, a creamery may run for years. Give that creamery the intense enveloping competition of a well managed centralized or private owned enterprise and, to use a slang expression, "it is a horse of a different color". The make is cut down, increasing costs; quality is affected because the local creamery has no longer a monopoly and the decision as to what is to be received; cash is paid on delivery; and, in general, competition is right aggressive.

The writer can recall when the farmer measured the buttermaker's value by his own. If he was better off, or if he gave any appearance of being so he was getting too much wage. One of the writer's early acquaintances was a man who had made a financial success in his business because, as he said, he never exhibited any of that wealth. He enjoyed a large patronage because his patrons felt assured he was not doing any better than they. Surely this is a very poor way to measure a man and especially now when they, the buttermakers or cheesemakers, are handling a product of so high a value.

It was therefore an agreeable surprise when, on giving a talk before an audience of farmers, they gave approval to a statement that the centralizer, and the private owned concerns, well managed, have contributed not a little to the success of the co-operative creamery. At that town they were receiving a splendid return for butterfat and the reason seemed to be that a privately owned and a co-operative creamery were engaged in a rivalry for the patronage of the district. It was a struggle of the giants, a battle royal for business.



A DAIRY FARM IN SOUTHERN WISCONSIN

Quite a number of years ago this creamery, one of the first of the state, was running along with incompetent buttermakers and still more incompetent management. Echoes of that mismanagement may be heard to this day. One of the farmers present declared that in those days his milk test did not vary from one year's end to the other. No doubt, there were other grievances which were equally unfair, and which even yet contribute to the distrust of some who once patronized the co-operative creamery. It was even declared that the directors of the creamery were given advantages in tests and weights. This was untrue, but it added to the difficulties the later management met. No doubt this same early management when it desired a buttermaker advertised, offering the munificent wage of $70 a month. Now they pay $3200 a year. What brought about the change?

How it was Done

It happened in this way. A dairy company seeing the condition of this sick creamery and wishing to establish a produce company including dairy products offered to buy the co-operative creamery. They had won over the directors who thought there was not a chance against these fellows who showed evidence of having the means of doing what they said they would do, put the co-operative out of business. A meeting was called. The offer of the new company was made and after some debate it seemed as if the deal would go through. At the crucial moment a farmer sitting in the back of the audience came to his feet. His appearance was not such as might be found in a New York fashionable restaurant, but evidently he was a man of character. As soon as he could get the chairman's attention he in a quiet way said: "I move you, gentlemen, that we run this creamery ourselves or bust." It was not what he said so much as the way he said it, but immediately the audience was on fire. His motion was seconded and carried, and the fight was on.

Advantage of Quantity and Price of Raw Material

The history of the following years need not be given here. For a time things looked blue for the co-operative. The produce company played the game fair, but they played it with sagacity. They established skimming stations in outlying districts which ate into the co-operative territory; they fought for quality in so far as it was required to maintain their premium product. They centralized somewhat and paid less at outlying stations. Later they made skimmilk powder, and bought all the milk as delivered.

But the co-operative was not idle. They changed buttermakers; they changed directors. They got some fighters on the board, but best of all they got men with some business ability. One of them, Mr. B——, was a little fellow, but a whirlwind. By appealing to the loyalty of the co-operative patrons he managed to keep the patronage, even when the produce company paid a few more cents than they. He hired one of the best buttermakers in the state. But when the competing company commenced to buy the whole milk it looked as if the

(Continued on page 392)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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Entered at Fort Atkinson, Wis., as second class matter.

Los Angeles Milk Scores

The Department of Health for Los Angeles, Calif., maintains a corps of nine milk inspectors who make systematic monthly visits of dairies supplying the city with milk. In connection with the regular inspection, a milk scoring contest is carried on over a period of four months.

For the contest ending July 31, the Adohr Stock Farms took first on certified milk with a score of 98.3. In Los Angeles the requirement for this grade of milk is that its bacteria limit must not exceed 10,000 per cubic centimeter.

Guaranteed milk is raw milk having not to exceed 25,000 bacteria per c. c. The Elliott—Brant Rancho took first place in this class with a score of 98.3.

Grade A raw milk is that produced by tuberculin tested cows, the number of bacteria not to exceed 100,000 per c. c. Out of 46 contestants, the Williams Dairy took first place with a score of 98.7.

Grade A pasteurized milk is milk that has been heated to a temperature of 142 degrees Fahrenheit and held for about 25 minutes, then rapidly cooled to below 50 degrees. The bacteria limit must not exceed 15,000 per c. c. after pasteurization and 200,000 per c. c. before. Out of 16 contestants, the Crescent Creamery took first place with a score of 96.5.

Grade B milk in Los Angeles is milk put out in cans for sale to the restaurant and wholesale trade. It must contain less than one million bacteria per c. c. before pasteurization and less than 50,000 per c. c. after pasteurization. In this class there were six entries, the Hansen Dairy scoring highest with 86.6 points.

Goat milk is sold by three concerns, the bacteria requirements being the same as for Grade A raw milk. Goat 'Airy ranked first with a total of 98.4 points.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

One Autumn Regret

Autumn is fast approaching,
The time of red leaves
And slow decay of the last flowers,
And the requiem of the final crops.
It is a beautiful season,
Perfumed with the incense.
Of burning brush and leaves,
And freshened by cool winds
That herald snow.
Pumpkins gleam yellow.
Across there in the hushed fields,
And the feet of the small boy
Make music amongst the dead leaves.
Little piles of summer's raiment,
Set blazing,
Burn like altar fires, here and there
Around the farm.
But I,
I have one great regret,
That somehow spoils it all
For me.
I remember that this same season
Opens the door to winter
And shuts it upon clover
And fresh, sweet grass,
And the beauties of the meadow.
And the herd
Must remain indoors.
You see, I am thinking
Of my pals, my friends,
My companions, the cows!

⚜

A lot of boys that were born on farms may leave them behind, but before long their hearts and thoughts go back, anyhow.

⚜

The Color of Gold

It is the time of year when fields,
Are plumed with yellow goldenrod,
And miles of it, like scattered wealth,
Upon the hills and roadsides nod.
The harvest days, the treasure days,
The days of hushed and baited breath
While summer dies, and autumn feels
The chill and sudden pall of death.

It is the time of year when leaves
Turn dusky, crimson, crisp, and gold,
Each tree a torch against the sky;
And oaks seem strangely sad and old.
The stacked-up cornstalks, here and there
Like bonfires burn along the way,
The grain is gold, the stubble, too,
And all the wood is weirdly gay!

It is the time of year when globes
Of yellow orange dot the field.
When pumpkins ripen, plump and fair,
And promise pies of extra yield.
The golden time, the restful time,
The time of crops and coming play—
The time when we begin to think
Of turkey and Thanksgiving Day.

⚜

You may have thought that an old fashioned circus calliope was right musical, but a much sweeter music is the clank and clatter of milk cans in a dairy farm truck, homeward bound.

⚜

Some Record

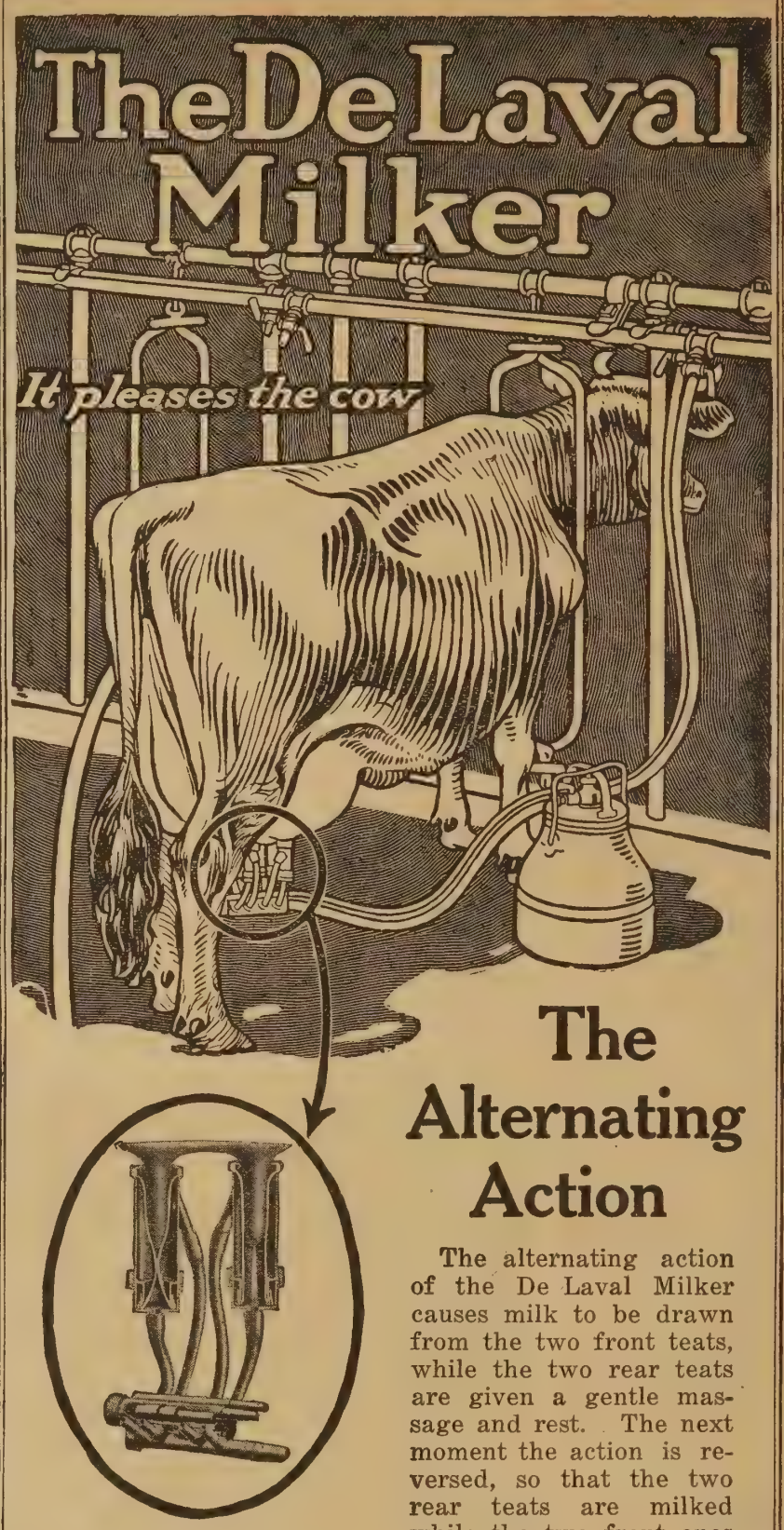
Ottawa seems to hold the record for egg laying. And we are going to be nice about it and believe every word she says. A record yet to be beaten in continuous egg laying has, according to F. C. Elford, Dominion poultry husbandman, been made by a barred rock pullet at the Experimental Farm at Kentville, N. S. This pullet has laid 104 eggs in 104 days. As a rule, a hen lays two or three eggs and then misses a day, and some are known to have laid four or five or even six dozen without a break, but never before, in the knowledge of the Dominion Poultry Department, has a hen laid 104 eggs without a miss.

Who said production was not speeding up?

⚜

Next to seeing a new church go up, the best sight is a new silo.

The De Laval Milker



The Alternating Action

The alternating action of the De Laval Milker causes milk to be drawn from the two front teats, while the two rear teats are given a gentle massage and rest. The next moment the action is reversed, so that the two rear teats are milked while the two front ones are massaged.

In this manner an even and continuous flow of milk is drawn from the udder, harmonizing with the milk secretion process which is also continuous; and the De Laval alternating action is as uniform and positive as the power which operates the Pulso-Pump.

The De Laval Milker has a pleasing, soothing effect on the cow, causing her to give down her milk freely and quickly.

The De Laval Milker is a distinctly different type of machine, both as to design and operation, positive and uniform in action from day to day; and faster, more economical and more reliable than any other method of milking. The sanitary features are of special importance and will be much appreciated by dairymen in their efforts to produce milk having the highest market value.

An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway, New York
29 East Madison Street, Chicago
61 Beale Street, San Francisco

Cribbing Corn The Old Way And the New

ORIN CROOKER, ILLINOIS

WITHIN the past year an agricultural writer reports having seen on a single Indiana farm no less than sixty-eight corn cribs built of old time fence rails. Each of these cribs were filled with half-moldy, rat-befouled corn. Allowing 300 bushels of grain to each crib, there must have been, in this instance alone, something over 20,000 bushels of corn going to waste. If this 20,000 bushels of corn were all the corn so cribbed at any particular moment the fact would be worth scant attention. But the sorry truth is that indifferent, wasteful cribbing is common enough in any part of the country.

Out on the Iowa prairies there are no fence rails with which to fashion make-shift cribs. Farmers of the make-shift variety, however, hew to the line by resorting to the use of wire fencing in cribbing corn. So far as appearances go, very attractive results sometimes attend their efforts. Great circular stacks of golden grain may be seen here and there, mute evidence of nature's bounty and man's thriftlessness. In many instances of recent years the corn crop has overtaxed the capacity of farms in the way of storage. Temporary arrangements have had to be made. But this is not always to be advanced as a valid excuse for indifferent methods of cribbing. Six thousand bushels of the 1918 corn crop were found stacked in the dooryard of an Iowa farm in August of last summer by the writer.

Storage in the way of regular cribs on this place appeared limited to a couple of thousand bushels at best. It seemed evident that when the crop exceeded storage capacity the surplus on this farm was held for long periods in make-shift cribs.

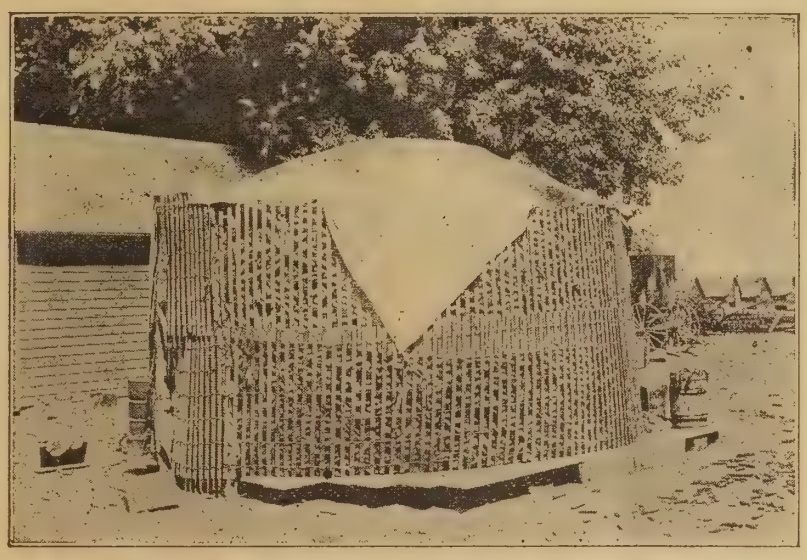
The loss that is involved when corn is improperly cribbed, taken the country over, would stagger most of us if any way of getting at the actual figures were to be had. There have been plenty of estimates but such figures are perhaps under rather than over the mark and based on the value of the corn without taking into account what moldy corn may mean in other ways. The contents of the 68 cribs, of which mention has been made, were probably disposed of in some way. If unfit to command a market it is not unlikely the corn was fed to hogs, since it is a common expression that when foodstuffs get beyond the pale of respectability the hog route may be followed in reclaiming values. However, rat infested corn is often a source of porcine ills. The spread of hog cholera may well be due in many instances to these rodents carrying infection from farm to farm. As the rats visit the corn and the corn goes to the hogs the transmission of the infection is apt to be both speedy and direct.



THE NEW TYPE OF TILE CRIB CONTAINING A GRANARY IN UPPER PORTION

It is often possible on midwest farms to measure real thrift in terms of corn cribs. In days when corn was worth but fifteen or twenty cents there was scant incentive to make provision for storage of a kind such as present prices make imperative. As the price of corn moved upward, more and more of the thrift impulse was responsible for better handling of the corn crop in this particular. Of late years the necessity of providing better cribbing facilities has taken a firm hold of many farmers who had been hitherto quite indifferent in this matter.

The writer came across one farmer in western Illinois this past summer whose experience, perhaps, has been typical of many. He is a feeder, both of cattle and hogs. Side by side on his place stand the old fashioned corn cribs and a modern, permanent crib of tile. The former afford protection against the weather but make no provision against rats or fire. The new structure is of concrete and tile, circular in form and typical of the very best in modern cribs. We will let this farmer tell his story in his own words:



ONE OF MANY MAKE-SHIFT CRIBS ON AN IOWA FARM

"We never thought much about careful cribbing," he said, "until prices began to soar. Corn was the one thing of which we had the most and its market price was not such as to stir us to give it more than ordinary care after we had harvested it. But when prices went up and the state of the world became such as to indicate higher prices in the future than in the past we began to see that boarding rats and mice was an expensive business. Then, too, the factor of fire began to take hold of us. We have never lost corn in this way but a neighbor has. I never realized what a nice, hot fire good, dry corn can make until I warmed myself that cold winter's night by the blaze of his burning crib. Farmers, you know, are poorly protected against fire. If one gets started about all one can do is to stand by and watch it burn. A few thousand bushels of corn at present prices makes quite a hole in the bank account if it happens to go up in smoke. So we built the crib which you see. It is fireproof—save for the shingle roof. If I were to do it over I'd have that of metal or tile. It is moistureproof, ratproof, windproof—practically foolproof, for when the corn is once in it there is scant harm that can befall it. It holds 5,000 bushels and cost me at the time a little over 30 cents a bushel to put it up. I figure it has paid for itself already and from now on will cost me nothing for upkeep save to reshingle."

These modern cribs of circular form will become, we anticipate, quite common in the near future. Middle west farms will always produce corn. It is the staple crop like cotton in the South. Permanent storage will be counted essential. And at anywhere near present prices the cost of storage will be saved in a few years' time. The wooden crib, even when properly built, has only a temporary period of usefulness compared to the enduring crib of concrete and tile. In the case of the former the floors seem to be the first thing to give trouble. The boards become loose and decayed. Nail heads protrude and make shoveling difficult. No building made of wood can be ratproof, and when once the rodents get a foothold inside it is all but impossible to get rid of them. Someone has stated that rats consume two dollars' worth of grain each per year. They are prolific breeders. There are more profitable ways of feeding corn on the farm than by keeping a boarding house for rats.

In the construction of these permanent cribs various sorts of cellular tile are utilized. Sometimes the entire crib is walled with them. In other instances the cellular tile is alternated with tile of solid outer face. Concrete flooring is the rule. Moldy corn is unknown in this form of crib. Being regarded as permanent improvements, destined to serve for a long period, it is common to install elevating equipment in this style of crib. It becomes virtually a farm elevator, especially if a grain bin is combined with the corn storage as is often the case. Where permanent interior elevating machinery is not installed the usual outside elevator of moveable type is employed. A sheller trench is built in the base of the structure. Rats are eliminated by the installation of fine mesh wire around the base of the crib.



METAL CRIBS ARE WEATHER-PROOF, RAT-PROOF, AND FIRE-PROOF

Serving the same general purpose as the tile cribs mentioned are those made of concrete blocks or of sheet metal. Naturally, the use of concrete results in a most substantial structure but the cost is heavier than where tile is used. The various sheet metal cribs are effective and make ample provision for dry storage of corn under ratproof and fireproof conditions. The small metal crib can be had in any number of sections desired—consequently of any capacity. These cribs meet a need on many farms, especially where small amounts of corn are to be stored. Like other forms of permanent cribs they are being adopted in increasing numbers every year.

Now Comes the Traveling Dairy

HOARD'S DAIRYMAN:—The camping season in California brings about many new innovations every year. When hundreds of thousands of families pile into their Fords, or automobiles, as the case may be, with their blankets and skillets and spend a few weeks by some fishing stream far up in the mountains or deep in the redwood forests, it is to be expected that human ingenuity will devise many ways of adding to the camper's comfort. But this year marks the coming of the traveling dairy.

Families with small children have found it very difficult in these out of the way places to obtain milk suitable for children. The canned variety does well enough if the child has been inured to it by previous applications; but when the youngster has been accustomed to fresh milk he is apt to balk at using the canned cow every day during the camping trip. Small dairies in the neighborhood of the camping ground reap rich harvests every summer selling milk to the campers; but many who have found themselves at the mercy of the camp milk peddler declare that twenty-five cents a quart is quite a price to pay for spring water to which a quantity of milk has been added.

This year many a California family built a basket-shaped contraption, chucked the family goat into it, and fastened the whole thing on the running board. Arrived at the camp, friend goat is staked out to browse. She gets fat on camp scraps and hill grass and furnishes an abundant supply of milk. When the vacation is over, they put the goat in the basket again and drive home.

At least one western camper went a step farther this season and took along the family cow. When traveling, the cow rides in the trailer. Automobile dealers and dairymen predict a sharp demand for trailers and Jerseys next season.

California. L. L. D.

IOWA STATE FAIR

THE sixty-sixth Iowa Fair held August 25 to September 3 further establishes the Hawkeye state's claim to the nation's premier agricultural exposition. In the character of attendance, the quality and scope of the exhibits, and in the service to the man on the farm, "Iowa's Annual Outing" is unexcelled. Unfavorable weather kept the gate receipts below the record set last year but the 1920 offering on the fair grounds has not been surpassed.

The greatest improvement made since 1919 is the completion of the largest cattle barn on any fair grounds in America. This new structure cost $200,000 and will stall 1,600 cattle. It is in keeping with the standard and size of the cattle show, particularly of the beef breeds. It matches the immense swine barn which covered a record exhibit this year, including the largest Duroc-Jersey show ever held.

Cow Testing Association Exhibit

Garaghty and Sons furnished ten cows which enabled C. L. Blackman to bring the benefits of cow testing associations very clearly before those who visited the new cattle barn. The Garaghty herd has been built up from two cows owned in 1912, one cow in the exhibit being shown with three daughters. The Garaghty success with cows repeats the story enacted everywhere dairying is made profitable—that liberal feeding pays. An increase of thirty dollars worth of feed per cow in the testing year ending in 1920 over the cost in 1919 raised the butterfat production an average of 114 lbs. and the returns above feed cost, $88. In 1919 silage, mixed hay, and oats were fed; in 1920 the total of silage was increased 1,000 lbs. per cow and nearly three times the weight of the 1919 oats was fed of a mixture of corn, oats, and bran. To balance the ration an average of 235 lbs. of cottonseed meal was given. This additional protein did much to improve the herd's showing in profits according to Mr. Blackman but he believes a great benefit came from pasturing only five months instead of the period of six and one-half months as in 1919.

Mr. Blackman reports a revival in interest in testing associations. He says, "Iowa farmers are coming back to cows. We now have thirteen associations and can have more when the right kind of testers are available." He credits the increasing popularity of the milk cow on Hawkeye farms partly to improved marketing conditions.

Bureau of Animal Industry Exhibit

The Bureau of Animal Industry in an exhibit drew attention to the healthy progress of tuberculin testing in Iowa for the establishment of accredited herds. The statement was made that the applications for the test have increased in twelve months, July 1, 1919 to July 1, 1920, from 290 to 1,678. From results in the herds tested, it is estimated that 9 per cent of the cattle of Iowa and 23 per cent of the hogs are tubercular. On the basis of a cost of $114.72 per herd for a test, an appropriation of $500,000 to $700,000 will be sought from the next state legislature for a vigorous campaign of tuberculosis eradication.

Iowa State College

An experiment at Iowa State College was reported, in an exhibit by the college, which indicated a very high feeding value of soy bean hay in the feeding of ewes. It was shown to be equal or slightly superior to alfalfa.

The exhibit also showed that in fattening hogs, when corn has a feeding value of $1.27 per bushel, barley is worth $.83; kafir corn, $.97; milo maize, $1.20; ground oats, $.43; ground rye, $1.13; and ground wheat, $1.32.

In experimental work, the exhibit reported, success has been had in saving orphan pigs by supplying whole milk with nothing added. Feeding seven times per day is better than three times.

The poultry department had photographs of hens exhibited to illustrate that through proper breeding and selection the poor layer can be eliminated from the farm flock.

A. C. McCandlish's "Weed—Breed—Feed" exhibit was repeated from last year. Photographs were shown of the animals in work in which high producing cows were developed from scrubs through the use of pure-bred bulls. Also figures of cow testing association work were given showing that production can be quickly and markedly increased through liberal feeding. The statistics were proof of the assertion made: "Earn $10 per cow per month by giving ten minutes consideration to feeding problems."

The Dairy Cattle

The Iowa State Fair's dairy cattle showing was by no means the best which it has had. The total of three hundred seventy head falls far short of the number which should be seen and which has been shown in late years. Neither was the average quality better than average. A stronger showing of dairy cattle is required before Iowa farmers if the show ring is to give the milk breeds a larger place in the territory now so largely interested in the beef breeds.

Very pleasing however was the goodly number of new exhibitors of Holsteins and Jerseys. Show yard competition accomplishes much more by setting its gauge on the merits of many beginners than when it becomes merely the battle ground of professional showmen. Its influence strikes farthest and most effectively through numbers of amateur exhibitors. The classes for amateurs serve as a worth while encouragement to the small breeder.

The far-sighted policy of the Board of Control in the breeding management of dairy herds at state institutions was well illustrated by the Holstein entries from eight of these herds. The bulls which head these are half brothers, strongly backed by production records. They will be interchanged among the herds to prevent too close inbreeding. The young shown were of such high quality as to commend this Iowa plan to the boards of control in charge of herds in corresponding institutions in other states.

Mountain Brothers furnished Guernsey showmen and herdsmen a very pleasant occasion by inviting them to spend an evening at Iowanola and divide their attention between the herd and a fried chicken supper. The marked progress made in building up the present herd of accredited Guernseys since the first were bought in 1910 is an inspiration to a beginner. In ten years a healthy, high producing lot of typy animals has been developed which ranks the herd among the best in the middle west.



COW TESTING ASSOCIATION EXHIBIT AT 1920 IOWA STATE FAIR

Holsteins

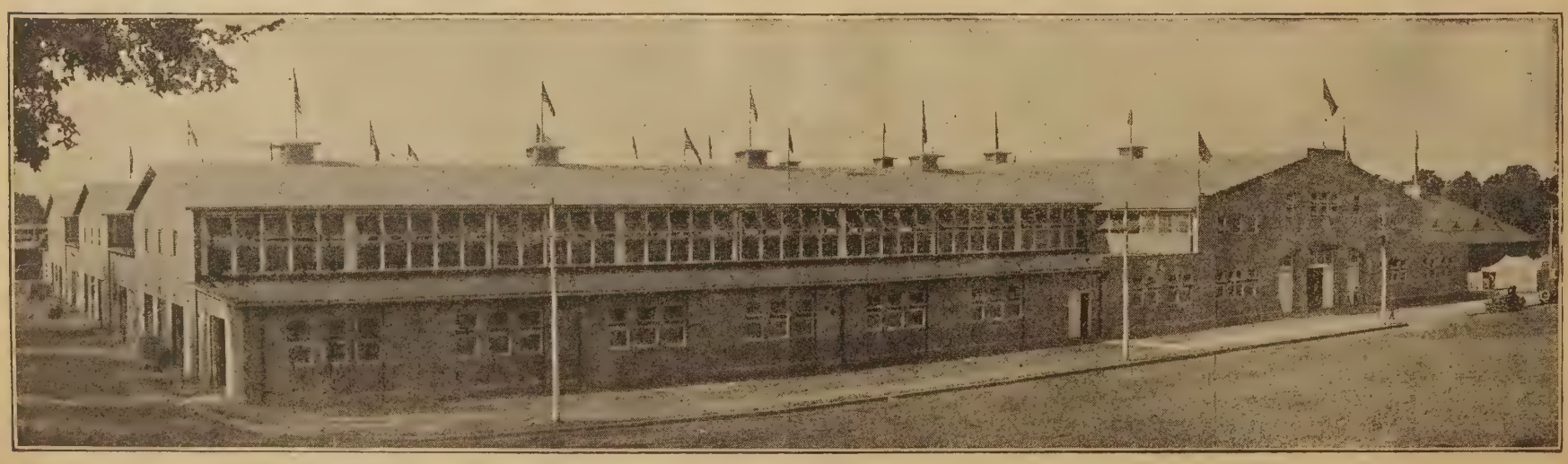
Exhibitors: Geo. B. Appleman, J. M. Chestnut and Sons, Collins and Van Horn, H. B. Cowles, Kansas Agricultural College, J. P. Mast, John Mails, W. R. Stubbs, and U. S. Disciplinary Barracks, all of Kansas; and M. Breen and Son, W. B. Barney and Son, W. J. Bopp, Cass Farm Co., John Cunningham, E. J. Erickson, Hargrove and Arnold, B. C. Hemphill, Pete Johnson, W. S. Leaverton and Son, H. O. Larsen, W. H. McIntosh and Son, Fred S. Miller, C. M. Parker, Wapsimoor Farm, all of Iowa, and eight state institution herds of Iowa.

Judge: L. S. Gillette, Iowa.

The dairy cattle exhibit came near being a Holstein show. The black and whites totaled 167 head which was near half of the offering from the five breeds and more than twice the number of the next highest breed. Thirty-two herds were represented, nine from Kansas and twenty-three from Iowa. They put up the only showing which drew worth-while attention to the dairy cattle side of the arena and battled well through every class in the division of honors between Iowa and Kansas. Judge Gillette had full classes, especially among the younger animals, and worked long and earnestly in making awards.

Kansas took the lead in the aged bull class, Johanna Bonheur Champion 2d, from the U. S. Disciplinary Barracks, defeating the Cass Farm's Illinois grand champion, King Aaggie Hengerveld, as he did under Mr. Gillette at the Missouri State Fair. He has the top and style of a winner and is better on his feet than the larger Iowa bull. He deserved the grand championship which was finally his. Wapsimoor Farm, Iowa, won with their three-year-old, Sir Wapsie

(Continued on page 388)



NEW CATTLE BARN ON IOWA STATE FAIR GROUNDS

Filling the Gap in Power Farming

R. U. BLASINGAME, PENNSYLVANIA

THIS is a day of specialization. Men are specializing, training themselves along particular lines of work that they may become proficient. Farmers are specializing in dairying, fruit growing, vegetable gardening, etc. To meet the demands of various kinds of work manufacturing firms are producing specialized farm machines to do particular work. The corn planter, the grain drill, the silage cutter, the grain binder, the corn husker, etc., and so on are all specialized farm machines which are not used many days during the year yet their use is indispensable in modern farm operations.

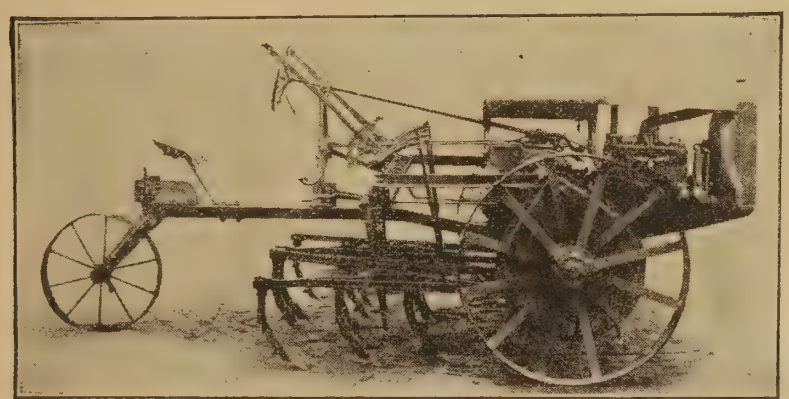
The farm tractor has been developed to handle most of the machines mentioned as well as many others which are not enumerated above. However, the average tractor is not suited to the work of cultivation of growing crops. They are too heavy and do not have the many qualities necessary to meet the demands of cultivation. The farmer is therefore forced to keep almost as many teams as he employed before the purchase of the tractor in order to meet the heavy demands during the short cultivation season.

With the coming of the motor cultivator, the gap is filled between the seeding and harvest season. While this power unit is rather a new machine to the public the tractor and farm machinery people have had the ideas of such a machine for several years, and undoubtedly the motor cultivator would have been on the market before this time, had it not been interfered with by the shortage of labor and material during the war. Even in the face of such difficulties several manufacturing concerns have been building and experimenting with a few motor cultivators for the past six years.

Probably these delays have given the manufacturer sufficient time to develop this specialized machine to a higher and more successful degree than if there had been no interference to quantity production. The manufacturer has had easy sailing in the design of the motor cultivator so far as certain features are concerned; however, there have been many difficulties in adapting the machine to agriculture. Past experience in tractor manufacture has indicated very clearly that the use of certain systems of lubrication, clutches, refinement, etc., are essential to a successful power outfit. The difficulties have been in making the motor cultivator an agricultural implement. The first difficulty was in making short turns at the end of the field. There are no head lands in a corn field; it is necessary to cultivate to the fence and then make the short turn. The three wheel type with the front wheel made in the form of a caster has been found to be successful in turning short with the aid of a brake to stop the wheel drive on the side to which the turn is to be made. The matter of sufficient clearance to prevent breaking down growing corn, for instance, had to be taken into consideration. To obviate this difficulty, the motor cultivator has been built sufficiently high to prevent damage to growing crops.



MOTOR CULTIVATOR PLANTING CORN



DETAILS OF CONSTRUCTION OF MOTOR CULTIVATOR. NOTE THAT THE CONTROL LEVERS ARE WITHIN EASY REACH OF THE OPERATOR

The motor cultivator had to be a light machine and yet have sufficient traction in operating a two-row cultivator. This feature also has been solved with the use of special cleats and wheels. The control levers are placed so that the driver is under no more strain in operating the machine than in case of driving a team. Shields and cultivator beams, shovels, and foot control of rigs are very similar to the already well developed horse drawn machine.

The variation in width of rows has been taken care of by several of the manufacturers, by so constructing the machine as to allow for adjusting the distance apart of drive wheels.

The motor cultivator is equipped with a belt pulley for operating auxiliary machines and the cultivator beams may be removed and the machine used for plowing, haying, etc.

The advantage of the power cultivator lies in the ability of the machine to work long hours—under two shifts if necessary—thus enabling the farmer to increase his volume of business and take full advantage of every hour of the day. In idle seasons the machine can be stored and requires neither food nor attention.

This is truly a day of power farming brought about by economic conditions and the earlier the farmer puts his farm operations on a mechanical basis, the more one man will be able to do with the least amount of human effort and with more satisfactory results.

A Hint to Farm Housewives

A. C. TYLER, Minnesota College of Agriculture

RUNNING water in kitchen and particularly at the kitchen sink is a subject which appeals to every woman on the farm. If by any chance both hot and cold water are thus available the appeal is far greater.

This article is not intended to be an argument in favor of running water in the kitchen since absolutely no argument is needed, in fact there can be no argument because there is only one side to the question.

A good many people are going without the advantages of running water for one reason or another. It may be that the necessary money is not available or it may be that a new house is contemplated which will have running water in it, the same to be built at some future time; in the meantime we will get along without it. It sometimes happens that very great inconveniences are put up with because a person does not know how to get around them. If your circumstances are similar to any of the above and you would like to have running hot and cold water in your kitchen your attention is called to the sketch shown herewith.

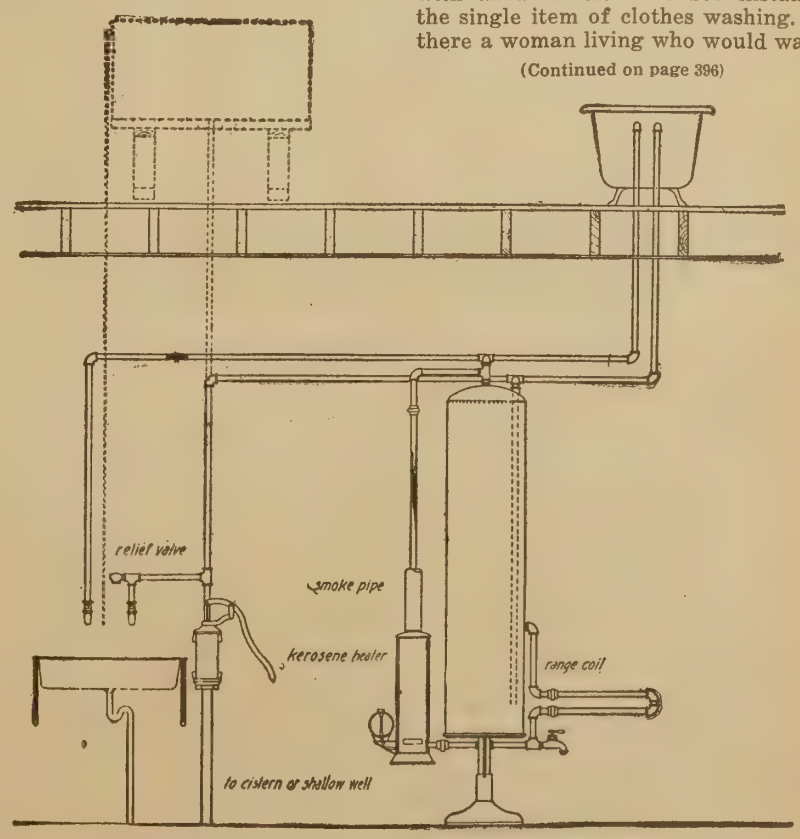
For want of a better name this arrangement may be called "A Simple Waterworks". The cost will range from $40.00 up depending upon the amount of piping and number of fixtures. The actual work of installing the system may be done by any one possessing a little mechanical skill. The only tools necessary are a couple of pipe wrenches, a three-fourths inch stock and die, a vise, and a pipe cutter or a hack saw.

The system shown is particularly adapted to the distribution of soft water for the reason that the cistern is generally near the house and the water is within easy reach of a suction pump. Except in a few localities well water is generally too far down to be handled in this way.

A large proportion of the water used on a farm is for human or animal consumption and consequently the farm water system, if there is one, is connected to the hard water supply. At present there is only one system, the pneumatic, which will deliver both hard and soft water with one outfit and even this requires a separate pump for each kind of water handled. A water motor which uses hard water under pressure to pump soft water is sometimes employed but under the best of conditions they are rather wasteful and therefore expensive to operate.

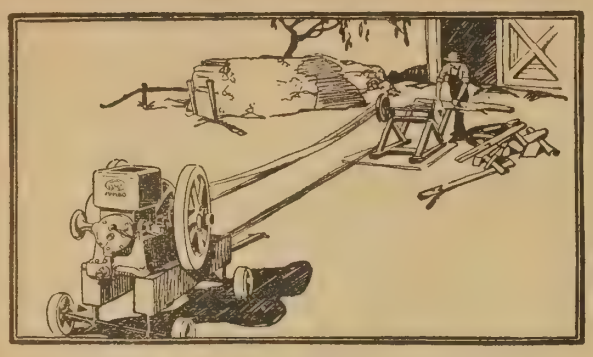
Every housewife realizes the value of soft water and will very often go to considerable trouble to obtain it even if there is an ample supply of running hard water at hand. With the exception of the water used for drinking and cooking all of the various household functions may be more easily taken care of with soft than with hard water. Take for instance the single item of clothes washing. Is there a woman living who would wash

(Continued on page 396)



A SIMPLE WATER SUPPLY FOR THE FARM HOME

If desired an overhead tank may be installed as shown by the dotted lines. This does away with frequent pumping and the relief valve may be omitted. The overflow from the top of the tank should return to the cistern.



Webster Oscillating Magneto — positive ignition — and special mixer insuring a uniform fuel, make Jumbo Engines easy to start in any kind of weather.

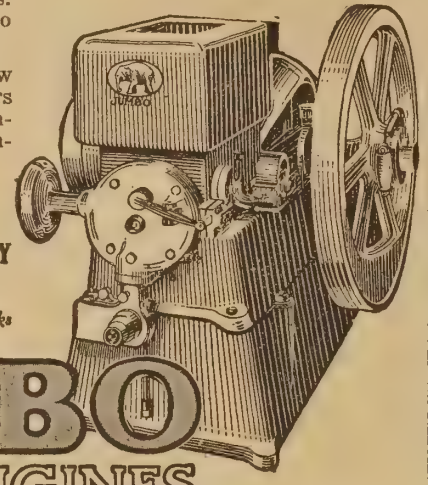
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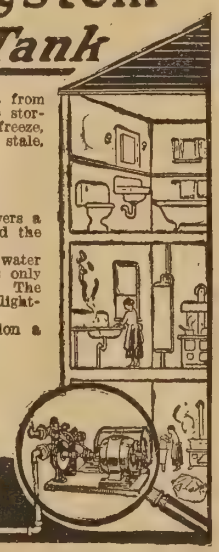
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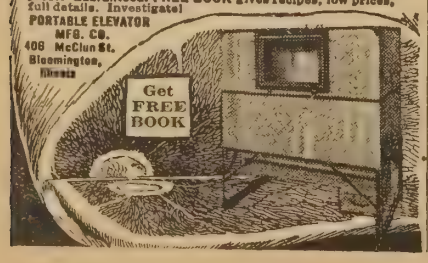
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MEADVILLE, PENNSYLVANIA

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Wis.	Wausau—Marathon	N. M. Nelson	July	466	24	51.8	Anton Volhard
"	North Crandon	Chas. Stivers	"	305	21	71.1	Henry Peterson
Mich.	Kent Co. Co-op.	M. J. Farmer	"	200	14	62.0	A. H. Norman
Wash.	Wahkiakum Co.	W. J. Carter	Aug.	509	116	66.0	Erick Berg
Tenn.	Rutherford Co.	W. H. Oliver	"	109	16	54.9	J. M. Buchanan
Wis.	Wood Co. No. 2	Clarel Stowe	"	520	8	51.1	John Gadson
Vt.	Waterbury—Waitsfield	K. R. Manning	"	471	7	55.6	Vt. State Hosp.
N. H.	Coos	W. J. Abbott	"	682	8	53.9	C. N. Nichols
N. H.	Claremont & Lebanon	A. E. Norman	"	309	18	53.2	Rush Chellis & Son
Iowa	Monona—Farmersburg	Ernest Lihn	"	293	11	52.1	Sam J. Little
N. Y.	W. Broome	J. H. Sherwood	"	445	12	47.6	Deyo Bros.
Wis.	Edgar—Marathon	S. G. Maxsted			32	73.3	Hart Bros.
"	Byron	A. W. Cowles	"	490	20	62.8	Claude Ferguson
"	Ellington	M. E. Nelson	"	454	35	53.9	F. D. Breitrick & Sons
Ill.	Madison Co. No. 1	L. Rasmussen	"	260		50.3	J. R. Holland

Association Notes

Wausau—Marathon, Wisconsin:—This association has reorganized and is ready to start its second year of testing. Five members are doing official testing. A number of farmers have started to feed grain as pastures are in very poor condition. Market milk testing 4% sold for $2.60 per cwt. and 6½c per point above. The creamery paid 61c per pound for fat and the cheese factory paid 54c. Milk retails for 14c per quart, butter for 58c per pound, and cheese for 35c per pound. July feed prices were: Silage, $6 per ton; hay, $22; bran, $46; middlings, $49; oil meal, $69; oats, $1 per bushel; barley, $1.30 per bushel; Wisconsin Balanced Ration, $70 per ton.

North Crandon, Wisconsin:—The members bought one carload of feed in July. Four members are feeding balanced rations. The association held a picnic August 18th which was well attended. Six unprofitable cows were sold to the butcher during July. The creamery paid 55c per pound for fat. Butter retails for 57c per pound. The following are local feed prices: Dairy Ration, $62.50 per ton; oats, 85c per bushel; oats and peas, 85c; oil meal, $70 per ton; bran (co-operative buying), $45 per ton.

Rutherford County, Tennessee:—Several Register of Merit testers have recently bought some unusually good cows, giving high prices for them but getting more than full value for their investment. In July fat sold for 62c per pound. Linseed meal is rated at $5 per cwt.; cottonseed meal, $3.50; corn and cob meal, $3 to $3.25; ground barley, $3.65.

Wood County No. 2, Wisconsin:—Three pure-bred sires have been purchased during August. Several more unprofitable cows have been sold.

Waterbury—Waitsfield, Vermont:—One unprofitable cow was sold and one reacted to the tuberculin test during August. A great deal of testing for tuberculosis is being done in this locality and at least five members of the association already have accredited herds. In July market milk sold for $3.36 per cwt., 6c being paid for each point above 3.7%. The creamery paid 66c to 70c per pound for fat. Milk retails for 14c per quart. As one part of the association is on the railroad and the other is 12 miles distant, grain prices vary greatly; however, these are the average prices for the month: Larro, $3.85 per cwt.; cottonseed meal, $4; mixed feed, $3.50; oil meal, $3.75; corn meal, $3.80.

Coos, New Hampshire:—July market milk sold for $3.44 per cwt. and 5.7c per point above 3.7%. Milk retails for 16c per quart.

Claremont and Lebanon, New Hampshire:—On August 25th the farmers of Sullivan and Cheshire Counties held their annual picnic at the Beaman Farm. It was a great success, the attendance being estimated at 4,000 people. Baseball and other games were played by the two counties and at noon a basket lunch was served. In the afternoon several talks were given and a band furnished music for dancing. Dairymen had ample opportunity to inspect a modern and efficiently run dairy. Mr. Beaman's pure-bred Guernsey sire and herd also held the interest of the picnickers. Two unprofitable and severable profitable cows were sold during the month of August. Only pure-bred bulls are used by members of this association. More farmers are buying their grain from the Farmers' Exchange. Market milk testing 3.7% sold for $4 per cwt. and 6c per point above. The creamery paid 75c per pound for fat. Milk retails at 16c per quart and butter for 75c per pound. Feed prices are: bran, $60 per ton; gluten feed, $77; cottonseed meal, $76; oil meal, $75; ground oats, $72; corn meal, $75; hominy, $77; stock feed, $73; provender, $70; mixed feed, $73; ready mixed rations, $83 to $86; rowen, $18; green millet, $4; green peas and oats, $6; silage, $8.

Monona—Farmersburg, Iowa:—This association, co-operating with the McGregor association, put on an exhibit at the Clayton County Fair, showing four cows and some charts and posters. Two cows showed an increased production through breeding and feeding, the daughter giving 40 lbs. more fat than the dam each of the two years tested, and each cow giving $75 more profit the second year by increased feed cost of $40. The other two cows were used for selection, one cow giving 9,700 lbs. milk containing 370 lbs. fat at a profit of $124 and the other giving 8,500 lbs. milk containing 278 lbs. fat at a profit of $82. Several thousand people visited the exhibit. Cottonseed meal is rated in this community at $70 per ton; oats, $40; bran, $50; oil meal, $80.

Western Broome, New York:—Twenty-five cows were discarded during August and ten purchased to replace them. Grain is being fed by nearly all the dairymen with satisfactory results. Cows are still decreasing in milk flow, but as winter cows are beginning to freshen the amount of milk will soon increase. Market milk testing 3% sold for $3.35 per cwt.,

and 4c per point above. Milk retails for 15c per quart, butter for 68c per pound, and cheese for 35c per pound. Local feed prices are: Gluten, $71 per ton; oil meal, $73; cottonseed meal, $74; corn meal, $73; wheat bran, $60; hay, $35; green fodder, $10.

Edgar—Marathon, Wisconsin:—Five "boarder" cows were sold in August. The members purchased co-operatively one carload of oil meal $67.50 delivered. One herd was tested for tuberculosis and no reactors were found. Some of the members had stock at the county fair. The creamery paid 57c per pound for fat and the cheese factory paid 50c to 61c.

Ellington, Wisconsin:—August milk testing 4% sold to the condensery for $3.20 per cwt. The following feeds can be purchased at Appleton: Bran, $50 per ton; middlings, $63; oil meal, $69.50; gluten feed, $69; ground corn, $67; oats, 68c per bushel.

Madison County No. 1, Illinois:—During the month of August four unprofitable cows were sold and two carloads of concentrates were bought cooperatively. One hundred sixty-two cows were dry this month. The corn failure was modified a little by late rains. Most members have their silos filled. The pastures are getting green again. The condensery paid $3.75 for 3.5% milk, and 4c per point above this test. The creamery paid 56c per pound for fat. Milk retails for 14c per quart, butter for 70c per pound. Feed prices are: Cottonseed meal $3.75 per cwt.; peanut meal, $3.90; hominy, $3.60; crushed oats, $3.30; bran, $2.65; alfalfa, $32 per ton; clover, $30.

Wausau—Marathon Association Yearly Report

The Wausau—Marathon Association, one of nine that has been in operation in this county (Marathon) the past year, completed its first year's work July 31, 1920. Twenty-nine herds having 361 cows were on test for the full year and averaged 5,967 lbs. of milk, 247.1 lbs. fat, and $115.82 profit per cow. All except four of the members had never experienced the benefits of a cow testing association and were, therefore, agreeably as well as disagreeably surprised at some of the results secured. That testing year after year is certain of raising the standard of production is clearly shown by the records made by those four members who had belonged to an association previous to joining this association. Their averages in butterfat production led all others, by being the four highest records in the association. This should support well the statement made by many that, "It pays to test".

The average records of the cows of the five highest producing herds in the association are given below:

Owner	Breed	No. of cows	Milk lbs.	Fat lbs.	Profit over feed cost
Anton Volhard	Holsteins	13	8146	328.6	$166.27
C. J. Baumann	Guernseys	15	6862	307.8	161.42
Arden Paronto	Holsteins	14	8281	303.9	126.02
B. McAdam & Son	Guernseys	10	5959	295.1	149.02
M. C. Ewing	Guernseys	10	5943	294.8	134.01

Every cow in the above named herds was sired by a pure-bred sire. A total of 224 cows was sired by pure-bred bulls, their average production of fat being 262.1 lbs., while the remainder that had no pure-bred ancestry averaged only 232 lbs. fat or 30.1 lbs. less than the former. A pure-bred sire is one of the best paying investments on the farm. With such a sire at the head of a herd the owner is most generally branded as a progressive type of farmer. The farmers belonging to this association early took heed to the advice of ousting the scrubs and replacing them with pure-breds of good breeding, making the association 100% pure-bred when only five months old. Twelve pure-bred sires were purchased the past year.

The average production of the poorest cow from each herd was 142.5 lbs. fat, while the best cow from each herd averaged 321.3 lbs.

The herd owned by Fred Heil, a Holstein breeder, was the most economical in production, a pound of fat being produced at a cost of 17 cents. A cow in this herd produced 340.5 lbs. fat at a cost of 14 cents per pound which is also a record for the association. This herd received no grain in their ration, hay and silage being their only feed during the winter and pasture only during the summer months.

Twenty-two cows were sent to the butcher, but the association saved more than this number. The cow that turned out to be the best in the herd owned by B. McAdam & Son was the cow, "that we wanted to sell for a song," as Mr. McAdam expressed it, and is a typical instance of the rescue work being done by cow testing associations.

By being a member of a cow testing association the past year, each farmer has seen the results of good and poor care given the dairy herd as well as learning the value of different grain rations that were fed. This work has, therefore, resulted in making wiser and better dairymen of those farmers who started the Wausau—Marathon Cow Testing Association.

NANDER M. NELSON,
Official Tester.

A Yearly Report

Mr. Wm. Maxfield, tester for the Arkansas, Wisconsin, Cow Testing Association, has just completed a very successful year's work and is one of the first testers to keep a complete record of the progress made in the association during the year and to have his report ready to present to the members at the annual meeting. Through his leadership and the able assistance of its secretary, Mr. Peter Krings, this association has secured the co-operation of its members in building a higher standard of dairying in the community, with results that have been very gratifying. The following is a brief summary of Mr. Maxfield's report:

The ten high herds averaged 297 lbs. fat, with a feed cost of $84.61, making a net profit per cow of $120.75. Eight of the high herds had been tested before, either through a testing association or by private testing. All of the first five high herds were tested before. All of the animals in these herds were high grades and pure-breds with the exception of one herd, which was composed of grades and natives. The animals were fed a balanced ration in amounts proportioned to their production.

The ten lowest herds averaged 191.9 pounds fat with a feed cost of $65.78 and an average net profit per cow of $64.62. The six lowest herds were all natives and showed the results of long continued use of scrub bulls, as they were all fed a ration suitable for production. The four next lowest herds were made up of grades and natives. All of the ten lowest herds had spring fresh cows



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and all except one were fed grain in their rations.

The highest herd averaged 363.7 lbs. fat, with a feed cost of $103.21 and a net profit per cow of $150.28—a return of $2.45 per every dollar expended for feed. The lowest herd in the association made an average production of 126.7 lbs. fat, with a feed cost of $66.98 and a net profit per cow of $18.16, or a return of $1.27 for each dollar spent for feed. A herd of ten cows equal to the average production of the highest herd would pay their owner a salary of $1,502.80 for their keep, while the owner of ten cows with the average production of the lowest producing herd would only receive $181.60.

It was also found that in net returns the twelve cows in the high herd were equal to 99 cows yielding the average net returns from the lowest producing herd.

Wisconsin. ERWIN SUTTON.

New England Holstein Breeders Start Campaign for Field Secretary

The officers of the New England Holstein-Friesian Club, as well as many of the leading breeders and owners of Holsteins throughout New England, favor the employment of a competent person to act as field secretary.

The first gun of the campaign has been fired. President Aitken has written to some thirty-three hundred breeders and owners of Holsteins in New England explaining the importance and benefits of such a campaign, and asking their opinions as to its feasibility and their willingness to cooperate. The response to this letter has been exceedingly gratifying, and from the tone of the reply, as well as their numbers, the success of the campaign is practically assured.

Maine is the first of the New England States to have its preliminary plans for the campaign completed. Professor Rider of the Extension Service has just finished a ten-day tour of the state, meeting with the leaders in different Holstein centers, going over with them the objects of the campaign, as well as helping in the plans for giving it adequate publicity and securing the selection of local committees which will have charge of the final arrangements in their part of the state. There was wonderful cooperation given to this work by the Maine Holstein breeders, and the Maine State Holstein-Friesian Association went on record at its annual field day as being in full sympathy with such a campaign and voted to give its full support to the New England Holstein-Friesian Club in its effort to provide a Holstein field secretary.

Following is the proposed schedule for the campaign meetings in Maine:

Biddeford, Oct. 21; Auburn, Oct. 21; Norway, Oct. 21; Farmington, Oct. 22; Skowhegan, Oct. 23; Waterville, Oct. 23; Newport, Oct. 25; Bangor, Oct. 25; Rockland, Oct. 26; Machius, Oct. 26; Presque Isle and Houlton, Oct. 28.

From Maine Professor Rider will go into Vermont. Here similar arrangements will be perfected. Then plans will be perfected in New Hampshire, Massachusetts, Connecticut, and Rhode Island. It is thus expected that all arrangements will be completed prior to the Eastern States Exposition at Springfield September 19-25; and that the campaign will begin immediately following the National Dairy Show at Chicago October 7-16, or as soon as the Extension Service force can return east.

National Holstein Men Will Cooperate

This campaign in New England will have the support and co-operation of Holstein leaders from all parts of the United States. President Aitken and Mr. R. C. Pollock of the Extension Service will take a prominent part, as will various members of our Board of Directors and other prominent Holstein breeders. Besides these, help will be given by some of our present field secretaries of the Middle Western States. All in all this campaign, as planned by the New England Holstein-Friesian Club and conducted under the personal supervision of Professor Rider of the Extension Service co-operating with each of the six state Holstein breeders' associations, will prove to be one of the most progressive and far-reaching steps taken by Holstein owners for the building up of the dairy industry and the advancement of the Holstein breed interests in the East.—Holstein-Friesian Association of America.



DE KOL KORNDYKE ORMSBY 2D, FIRST PRIZE AGED HOLSTEIN COW AT 1920 NORTH DAKOTA STATE FAIR, SHOWN IN 3-YEAR-OLD FORM
OWNED BY MANKATO HOLSTEIN FARMS, MINNESOTA

After the farm implements are sheltered for the season, axe and saw help make farmers independent of the coal shortage.

Whether all signs point to a long winter or not, an abundant woodpile is good insurance. Coal is going to be higher than ever.

League Co-operative Movement

HOARD'S DAIRYMAN:—For some months now, I think since the first of April, the League co-operative has been engaged in handling milk in one way or another. It has done a big amount of business and it has developed a start on a number of other plants. Every little while we have heard of some complaint in one way or another. These have obtained but little attention for they were easily explained. All the same they have made us think. Payments to the patrons of these co-operative plants have been delayed commonly beyond the time when other farmers have had their money to use, at least that is what we are told. Possibly that may have been only in respect to part payments. Then it is said that full league prices have not been obtained. And so it goes. Not a large amount of this is circulated in outside sections but we hear something occasionally.

It is true that I am not in possession of full information relating to all these and other items of criticism, if such it can be called. I do know something about the circumstances, however, and that is why I am writing. This League co-operative movement appears to be our only salvation. It is fully as important to us outside the co-operative territory as to those who patronize those plants. It must succeed in order to save the life of the League itself, if I see the situation correctly. I believe that it is succeeding but at the same time possibly those farmers are engaged in a work that we ought to be aiding.

It takes more than a month or a quarter to determine a success or a failure. Suppose that the dairymen did not realize full League prices for June or even July, that does not prove a failure, nor does it prove that the average price for the year may not be higher than the League price. It takes the full year to determine that. With one year a little below the League it does not follow that those who patronize the creamery or the factory may not be as well off in the long run as other farmers. In some cases it may be that the dairymen might not be located rightly to get the advantage of the highest prices. I know of one factory that is not in the co-operative plan that has taken a very considerable loss all summer because of their location, and they are members of the League too.

On the other hand, we who have the advantage of location and sell direct to the large manufacturers or distributors of milk should consider whether we are not being helped by the co-operative and whether we cannot be of some assistance to them. They have as much right to prompt payments as we have. It takes some time to sell the products and collect in full. It is possible that there should be a fund from which to make these payments. They are fighting our battles in a sense and if we can make it easier for them to continue so much the better for us and for them. With a capital sufficient for them to operate as a milk company would, they are in a sense independent. Then we better remember that they are paying for the stock in the plant by deducting perhaps fifteen or maybe twenty-five cents a hundred for this purpose. True, they are expecting to get interest on that money but it is not cash in hand to do business with. Suppose we loan them something in the way of capital and take the interest on it in the revolving fund plan. It may help them and we will be more interested in their success. We have got to take an interest in the prosperity of each other if we are to continue in the League plan.

All members of the League ought to share equally in its benefits, making due allowances for distance from the big city and distance from a railroad station. There may be other allowances to make but such as are needed should be made, then divide in a proper manner. I am told that such is the case about Chicago but know nothing definite about that. Mr. Dillon had something such a plan back in '16 and I understand that Mr. Cooper wishes to see something of the sort brought about. Evidently there is much to do to perfect the League and its associates in organization. Some of us will be gray perhaps before all the problems are solved. After all, that is the interesting part. Making improvements is the way to live and there is no doubt about the opportunity for them, no matter how long we try them out.

While we are about it, let us remember that if it were not for the co-operative plants and those in process of formation we could have a milk strike on the part of dealers all the time until we got tired out and ready to quit. At least that is the way it looks. We have not only got to fix our price but we must be able to take care of ourselves sufficiently to make it interesting to obstructors. You can't win out by peaceful methods unless you have the ability to win by force. At least it has been that way generally speaking in nations and with individuals. It is so in the milk business, producer or dealer. We are coming to be dealers somewhat as well as producers.

New York. H. H. LYON.



FORTUNE'S ADMIRATION, JERSEY CHAMPION OF NORTH CAROLINA. OWNED BY DIGGS FARM. HER RECORD IS 13,016 LBS. MILK, 785 LBS. FAT



Increase Production and Keep it Up!

Urging them to *"KEEP UP PRODUCTION,"* which cannot be done without feeding a grain mixture of quality to bolster up the pasture—especially in the fall, *The New England Dairyman*, official paper of some 20,000 good dairymen, says "the outlook for high prices for milk is very promising."

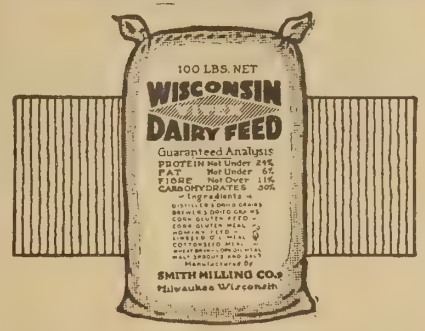
Milk prices have been going up generally this summer. Probably without an exception anywhere in the country, the best prices ever paid for September milk are being paid now.

With September milk bringing $3.50 or more per 100 lbs., a ton of productive grain mixture composed of BUFFALO CORN GLUTEN FEED, wheat bran or millfeed, etc., costing $75 or less, liberally fed with good roughage, is producing from good milkers $200 to $300 worth of milk.

The man who feeds BUFFALO CORN GLUTEN FEED generously, summer as well as winter, never complains of a lack of profit in dairying, nor does he say much about poor cows. BUFFALO CORN GLUTEN FEED, abundantly fed makes cows *better* cows, heavier milkers.

FEED UP! Your dealer should have BUFFALO CORN GLUTEN FEED. If he does not, write us for sample and literature, and give us his name.

Corn Products Refining Co.
New York Chicago



Cheaper Than Grain Ration

Feed Vitex Dairy Feed for economy as well as for a fuller milk pail. Dairy farmers have learned that there is profit in selling their whole grain and keeping the herd in top condition by feeding

WISCONSIN DAIRY FEED

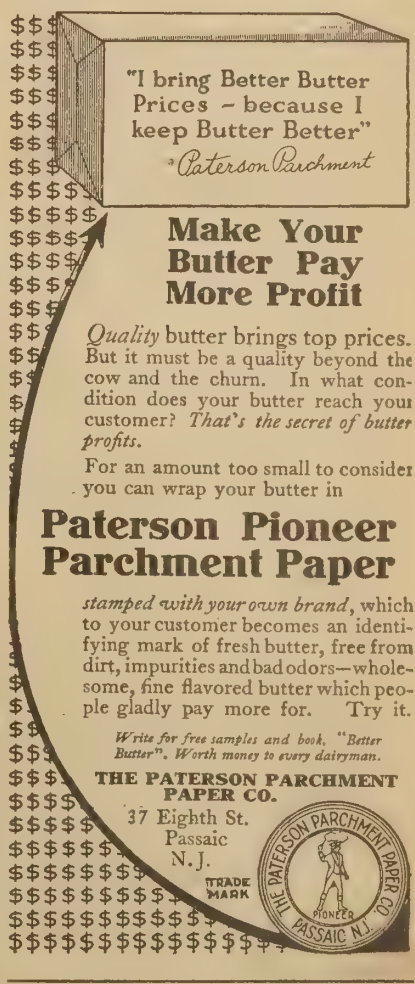
A scientifically balanced ration containing the proper milk producing ingredients in the right proportion to provide protein and other elements the cow needs. No molasses, dirt hulls or other worthless filler. Vitex is **all** feed.

4—ALL

For horses, sheep, hogs and beef cattle. Builds meat or working strength at low feeding cost. A perfect blend of corn oil meal, linseed oil meal and selected grains.

Ask your dealer for Vitex and 4-All, or write us.

SMITH MILLING CO.
36th and Lincoln Aves. Milwaukee, Wis.



Make Your Butter Pay More Profit

Quality butter brings top prices. But it must be a quality beyond the cow and the churn. In what condition does your butter reach your customer? *That's the secret of butter profits.*

For an amount too small to consider you can wrap your butter in

Paterson Pioneer Parchment Paper

stamped with your own brand, which to your customer becomes an identifying mark of fresh butter, free from dirt, impurities and bad odors—wholesome, fine flavored butter which people gladly pay more for. Try it.

Write for free samples and book, "Better Butter". Worth money to every dairyman.

THE PATERSON PARCHMENT PAPER CO.
37 Eighth St.
Passaic
N. J.
TRADE MARK

Alfalfa Hay

We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.

W. A. FERSON HAY CO.
511 Reliance Bldg., Kansas City, Mo.

When writing advertisers please mention Hoard's Dairyman

OHIO STATE FAIR

CLARENCE M. BAKER, OHIO

OHIO'S seventieth annual state fair, held at the State Fair Grounds, Columbus, from August 31 to September 4, was the largest exhibition of live stock, machinery, and farm equipment ever held in the Buckeye State. The attendance reached a height of almost 100,000 on Thursday. The other days averaged approximately 30,000. Ohio's State Fair grounds are now too small to accommodate this educational exposition and plans are under foot for enlarging the grounds to provide for greater ease and comfort in live stock exhibition, as well as to give proper space to the demonstration of farm machinery.

In the educational exhibits alone, each department of the Ohio College of Agriculture at Columbus had a booth presenting timely lessons to the farmer.

In the contest as to which department presented its truth most forcibly, the department of Rural Economics was given first place. Their exhibit consisted in presenting the actual lay-out of a southwestern Ohio farm. The farm in miniature was about 15 feet square with fields, fences, buildings, and crops arranged in reality as they were found on the farm when records were taken by county agents and farm management officials. The sales from this farm of 170 acres last year amounted to more than $2,000—it paid $1,000 to the owner above expenses and an additional 15 per cent on the investment. Five points were found out as being the reason for the good results on this farm, whereas an average farm of its size and locality produced total crop sales of only $3,000. The points are: (1) Crop yields are maintained at 20% above the average; (2) one-third of the land in clover at all times and either pastured or made into hay; (3) live stock returns $127 for every $100 worth of feed; (4) employs 2 men the year around, and (5) income in percentage on farm was from hogs, 29; cattle, 25; and wheat, 22.

Entomology officials, for instance, presented facts to show work on the destructive Hessian fly in Ohio during the past season and showed what could be accomplished in the way of sowing wheat on dates so that the work of the fly could be largely controlled. The first safe date to sow wheat in Ohio for 1920 starts from September 20 in the most northern tier of counties and for each 50-mile belt southward, 2 days are added, making the first sowing dates for extreme southern Ohio about October 4. The wheat joint worm and red weevil have done very little damage to Ohio's wheat crop during the past year.

The department of dairying presented its story on the family milk supply, which in short is that each family in town pays out an average of $40.95 each year for milk, 70 gallons being the amount that is used by the average family. To produce this amount of milk the average Ohio cow, as found from cow testing association records, consumes the following amounts of feed and labor: Hay, 190 lbs.; silage, 685; stover, 106; green corn, 49; oats, 50; bran, 50; oil meal, 48; bedding, 176; salt, 3; pasture, 3-10 acres; man labor is 18 1-5 hours.

Other college exhibits show that new and improved varieties of soy beans, wheat, and oats are gaining favor in Ohio.

An annual feature of the fair consists in the presentation of instruction to country folk in up-to-date methods of canning by the county canning clubs, from 4 to 8 teams of girls presenting subjects daily, going through the actual operation with fruits and canning material. This exhibit was constantly watched by farm women and probably 10,000 people took the story home with them.



GRAIN EXHIBIT AT OHIO STATE FAIR



ATHALEE OF PATASKALA, SENIOR AND GRAND CHAMPION AYRSHIRE COW AT OHIO STATE FAIR
OWNED BY H. A. STALTER, OHIO

Experiment Station Exhibit

One of the newer features of experimental work presented by the Ohio Experiment Station was the fact that deep plowing is of little value in the state as compared with shallow plowing; that is, deep plowing is 15 to 16 inches and ordinary plowing about 8 inches. The differences in the yields of corn, oats, and wheat at the Ohio Station in the tests of deep plowing versus shallow plowing can only be measured in fractions of bushels, which have no significance in practical farming. The yields were maintained at normal by ordinary plowing, which was contrary to the expectation of a good many farmers who were watching the tests.

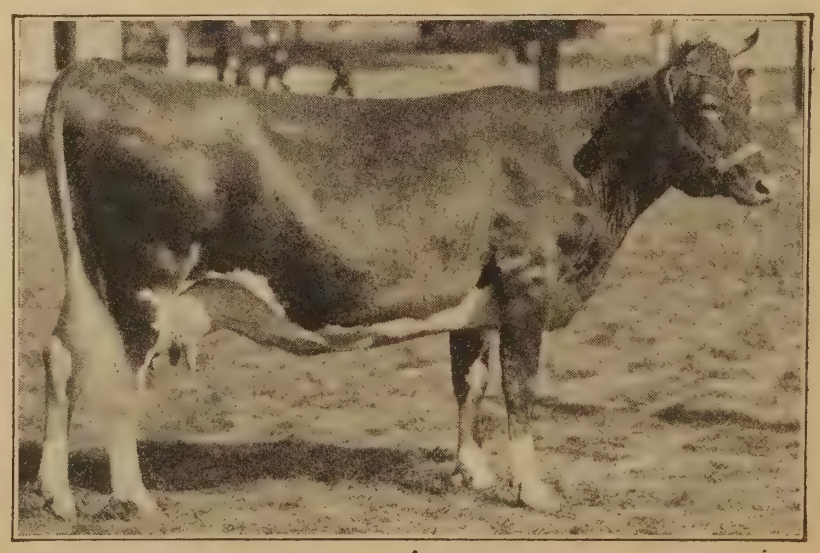
The gradual increase of crops due to the careful handling of manure was presented in graphic form. For instance, the increase for an application of 8 tons of barnyard manure to the acre for corn is 20 bushels; wheat, 10 bushels, and hay, 830 lbs. For fresh stable manure, corn, 24 bushels; wheat, 10 bushels; hay, 1,351 lbs. For fresh manure with an application of floats (raw rock phosphate), the increase is, corn, 31 bushels; wheat, 14 bushels; and hay, 1,600 lbs. When yard manure is reinforced with acid phosphate, at the rate of 40 lbs. per ton of manure, the increase for 8 tons of manure per acre on the crop is 32 bushels of corn; 15 bushels of wheat and 1,837 lbs. of hay; but when we look at the figures for the highest type of fertility conservation—that of applying fresh stable manure and acid phosphate, we see an increase of 35 bushels of corn; 16 bushels of wheat and 2,357 lbs. of hay per acre. This all goes to signify that the farmer with poor land, by the application of fresh stable manure and acid phosphate, may increase the fertility of his land and do this at a good profit on his investment and labor.

Ohio's soils need phosphorus. It was shown in exhibits that a 100-bushel yield of corn takes 40 lbs. of phosphoric acid; 100-bushel yield of oats, about 39 lbs.; a 50-bushel yield of wheat, 36 lbs., and a 4-ton yield of clover, 33 lbs. While these yields are high, yet they have been maintained at the Ohio Experiment Station. In this 4-year rotation, 140 lbs. of phosphoric acid are required. In short, 32 lbs. of phosphoric acid should be applied per year to increase and maintain

(Continued on page 407)



OHIO LIZETTE, SENIOR CHAMPION HOLSTEIN COW AT OHIO STATE FAIR
OWNED BY OHIO STATE UNIVERSITY



ROCKINGHAM'S TULIP, SENIOR AND GRAND CHAMPION GUERNSEY COW AT OHIO STATE FAIR
OWNED BY R M. COOPER, SOUTH CAROLINA

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

Washington, Sept. 11—Manager Warber of the Washington office of the National Milk Producers' Federation who, with the representatives of the National Board of Farm Organizations, attended the sessions of that organization in Columbus, Ohio, is home, and actively engaged in laying out plans for further organization work. He reports two resolutions adopted at the general meeting there which are of interest to dairymen.

The more important one reads as follows: "We demand that all restrictions and discriminations be removed which make it impossible for the formation of co-operative associations both on the part of producers and consumers, and that co-operative associations of farmers engaged in interstate commerce be given the same opportunities in marketing their products in all respects as that enjoyed by private enterprises under similar conditions."

The other resolution deals with the importation of oriental oils urging the enactment of a protective tariff against the importation of all oils which injuriously compete with American products.

⚜

Attention is directed to the acreage percentage figures in the current Crop Estimate Report, issued September 8. The estimates show large crops of corn, potatoes, etc., but a material decline in wheat figures since August 1st, and a total of only 770 million bushels of wheat, winter and spring combined, as against a crop of 941 million bushels last year and a five-year average of 822 million bushels. But the large yields this year in general are due to weather conditions, and this is proven by a study of acreage percentages which is interesting. There was a marked decline in the acreage devoted to wheat, oats, rye, buckwheat, and white potatoes, a slight decline in sweet potato acreage, and a slight increase in corn, barley, and flax; the only material increase in acreage in any crop being in rice and sugar beets. The percentage declines are as follows: Wheat, 26.7 less than last year; oats, 3.2 less than last year; rye, 22.6 less than last year; buckwheat, 4.8 less than last year; white potatoes, 4.1 less than last year. The best proof of the influence of the season is found in the corn crop, where with only 1.5 per cent increase in acreage, the crop is estimated at 114 million bushels larger than last year.

⚜

Results in the "Milk Campaigns" conducted, under the direction of Miss Hoover, campaign specialist of the dairy division, during the past few months in widely scattered American cities, are beginning to be evident from reports received at Miss Hoover's office in the department of agriculture. The conservative estimate arrived at from these reports is an increased consumption of milk not less than 100 million gallons in all in the current year. Milk campaign work will be carried on, although handicapped by decreased appropriations. The plans call for only one campaign in a state, the selection of the location to be made only after very careful consideration of a number of problems including the sanitary situation, the availability of the home demonstration agents from a large number of counties, the whole hearted support of the community organizations of the city selected, the milk distributors, and the milk producers, the interest and the approval of the state college authorities, etc. When under way the activities of these campaigns take a very wide range, but Miss Hoover is greatly interested in the efficacy of that part of the campaign which interests first the teachers in the public schools, next the children in those schools, and through them the mothers who handle the family appropriation for food.

When the milk campaign work is resumed, a new feature will be the use of a working model as a feature display. This model is now on exhibition in the dairy division, and it has an interesting history. The model shows Fort Good Health and Fort Ill Health. Fort Good Health is literally blowing the dark, dreary lair of sickness to pieces, by a constant volley of milk bottles. Aeroplanes hover over the fort, and drop miniature milk bottles on it, which complete the destruction. The model is built after a poster, designed and handed in as a part of the work of interested boys and girls in the Kansas City schools during the Kansas City campaign. Miss Hoover reports almost unanimous approval and support of the campaign. Incidentally she is a vigorous believer in emphasizing the vital principles of dairy products at every point in the work with careful attention to scientific accuracy; and her instructions are to attack no other products, but there is a notable increase in butter sales reported in every city where this campaign has been conducted.

⚜

For the first time this season cold storage reports show declines in butter, cheese, and eggs in storage, indicating that the outward movement has begun,

An uncensored report from the Bureau of Markets received publicity here this week, stating that the butter imports into the United States were not material factors, and stating that the largest yearly importation on record was that of 1919 when the total was a little over nine million pounds. The author of this story failed to look up the statistics easily available showing imports since Jan. 1, this year, already amounting to over 22,000,000 lbs. The July figures alone as quoted last week show over eight million pounds imported. No misstatements of this kind can hide the need of tariff protection for the butter industry.

Dairies in Mexico

The federal government of Mexico through its agricutural bureau is encouraging the purchase of high grade dairy cattle in the United States and their shipment to that country. Several large dairies are to be established at Monterey, San Luis Potosi, Aguas Calientes, Tampico, Guadalajara, Chihuahua, Torreon, City of Mexico, and possibly other cities, according to authentic reports received from that country.

⚜

The Dairy Farmers' Co-operative Society has been incorporated at Alvin, Texas; no capital stock. Incorporators, E. C. Winston, C. A. Riesal, G. D. Dean, and others.

W. D. HORNADAY.

Mower County Sale Cancelled

The Mower County Holstein Sale scheduled for Austin, Minn., Oct. 7, and so advertised in this and the preceding issue, has been cancelled.

Be of good courage; that is the main thing.—THOREAU.



-and in Every Allied Trench in France

MUD-MIRED and water-soaked; wrecked and rebuilt; abused and neglected; now idle; now laboring under maximum loads for endless hours, thousands of *Webster*-equipped engines went through the Great Adventure with a ***fault-free ignition record.***

And the reason is obvious. The smooth-running, dependable *Webster* has no gears. No moving wires. No brushes. No rubbing contacts to be damaged by excessive speeds. ***Nothing to wear out. Nothing to get out of order.***

The magnets are the finest Tungsten steel. The permanent, rigidly fixed windings are doubly water-proofed. The unwound inductor runs on a solid shaft in heavy bronze bearings. Every part is built to insure but one result: ***steady, sure spark action.***

WEBSTER MAGNETO

600,000 *Webster* Magnetos are now in use. 85% of the manufacturers of farm engines using make-and-break ignition, supply the *Webster* as standard equipment. *Webster*-equipped engines are demanded for sale by the most progressive dealers and farmers everywhere ***insist on Webster ignition.***

Webster service men and over 46 Webster service stations cover the country.

WEBSTER ELECTRIC COMPANY
RACINE WISCONSIN U.S.A.

COWMATIC EQUIPMENT

Fresh, Pure Water from the CowmatiC Individual Drinking Fountain will increase the milk yield!

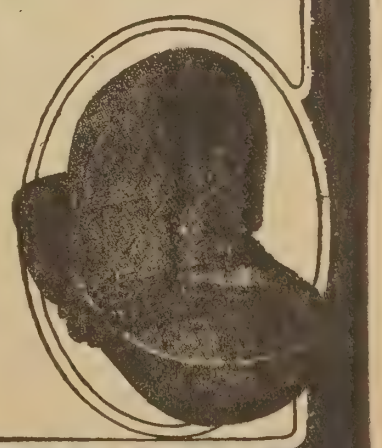
For frequent watering—for fresh and pure water, for the prevention of disease, the CowmatiC Drinking Fountain should be a part of every dairyman's equipment.

Saves labor—is self-emptying—does not accumulate mucus.

We are the manufacturers of a full line of CowmatiC Barn equipment, including stalls, stanchions, manger divisions, litter and feed carriers.

Every dairymen should see our catalog before buying Barn equipment. It contains new and improved devices on every page. *Write for it—it's free.*

COWMATIC CORPORATION
Lynchburg, Va.



20% More Milk

EDITORIAL COMMENT



HAS GOOD VOICE

A recent advertisement reads as follows: "Wanted—A steady, respectable young man to look after a garden and care for a cow who has a good voice and is accustomed to singing in the choir."

We have always been opposed to attempting to breed dual-purpose cattle, but perhaps we will have to modify our views, for we see no objection to breeding cows with good voices and capable of singing in a choir.

SAWDUST FOR FEED

Several years ago we published an article describing briefly how some of the scientists of Sweden treated sawdust to make it a palatable, nourishing feed for cattle. The past year or two the Wisconsin Experiment Station has been treating sawdust chemically and making it a nourishing cattle feed. It has practically no protein, but is rich in carbohydrates. No doubt certain sections of the country could use this feed, if it could be purchased at reasonable prices. It is rather doubtful, though, whether this feed will have any great market among farmers who raise an abundance of corn, for corn furnishes a large amount of carbohydrates and at low prices. In sections where large amounts of alfalfa and other feeds rich in protein are grown, we can see an opportunity for a market, providing freight rates and cost of manufacture do not make this feed prohibitive.

It should be remembered that sawdust untreated is worse than worthless. A large outlay of capital is required to establish an institution for treating sawdust chemically and preparing it as feed for cattle. The result in feeding sawdust in combination with high protein feed at the Wisconsin Experiment Station has been satisfactory, but it is rather early to say whether it will ever become a feed generally used in the United States.

MACHINE MILKING INCREASES

"Does the milking machine give satisfaction?" The labor situation on the dairy farm has made this a pertinent and persistent question. One of the best answers we have been able to give is that where the milking machine has been tried out thoroughly, it is in the greatest popularity.

In the last analysis, the milking machine must speak for itself as any other implement must speak for itself, and that it will so speak is indicated by the report of Mr. W. T. Meyers, tester for the Barneveld, Wisconsin, Cow Testing Association. In writing to his state supervisor recently, Mr. Meyer said: "Twenty-one of our twenty-five members own milking machines. Each of the four others have expressed an intention of purchasing next year."

But this is not the only testimony Wisconsin cow testing associations offer, and we know of no other higher authority than that offered by a group of men who are putting the test of merit against their cows and know what their cows are doing 365 days of the year. On July 1, 1920, Wisconsin had 115 cow testing associations. Statistical reports were received from 68 of these associations, showing, among other things, that of the 2,051 herds in these associations, 468 were being milked by machine. This is better than one herd out of five and is a very good proportion when consideration is given to the relatively recent introduction of the milking machine. Of the total associations reporting, there were only three that apparently had no herds milked by machine, while seventeen of these associations reported ten or more herds as being milked by machine.

But even this is not all that these Wisconsin associations have to offer concerning the progress of the milking machine. The most recent monthly report gives account of the additional installation of twenty new machines and this is significant when consideration is given to the fact that these reports were made incidentally in the letters from the several testers. The Arkansas and Mishicott associations report one new machine each. The Ellington association reports two and the Juneau, Richfield, and Rockfield associations each installed three new machines. The Stratford association, which does not appear in the annual survey, reports seven machines purchased during the year.

While reports of this character may not be conclusive evidence, yet they do indicate the drift of farm opinion. It is scarcely to be expected that several neighbors would install a piece of machinery unless it had been found practical and desirable. Visits to these several localities would convince the most skeptical that although there is now and then a failure with machine milking, due to some preventable cause in nearly every case, the large majority of users are well pleased and consider that their investment brings good returns.

CO-OPERATIVE LEAGUE MOVEMENT

Over a year ago the New York Dairymen's League organized a co-operative marketing company. The purpose of this association is to handle a considerable portion of the milk produced in the section supplying New York City with market milk. There are times when there is a surplus, that is, more milk than will be consumed in liquid form, and it becomes necessary to convert this so-called surplus into butter, cheese, condensed milk, milk powder, etc. Further, the co-operative marketing company expects to be in position to take care of a considerable portion of the producers' milk when the price offered for market milk is not in keeping with the prices of other dairy products. In short, it is an organization which endeavors to place the farmer in position to direct his own business.

We are informed by good authority that "the co-operative market association is a source of constant concern and study in order to overcome the difficulties in getting a big work launched on a proper foundation. The great difficulty with farm people is that they are content to go along in fair weather without preparing for foul weather. League prices have been fairly good this summer, with the result that the co-operative marketing company has not received the support, either in proper finances or volume of milk, which it must have in order to get started. Prices on all farm products are declining. Farmers have made the least out of the war of any class."

Our correspondent also states: "The farmers are discouraged and I fear they are going to be more so. With the farmers feeling as they do, it will be very easy for the dealers to get control again and it will be hard for the farmers to continue to stick together." It is well known that when the co-operative marketing work was started that it would be a tremendous job to establish it and that it would require sacrifice and a lot of hard work. A good start has been made but it is only a start. The marketing company is by no means out of the woods. It is to be regretted that whenever a group of farmers, willing to devote their time to assist their fellow farmers in co-operative effort, in the marketing of their products, that they are not given wholehearted support. If payments are not made quite as promptly by their organization, or if prices are not quite so good as paid by well established firms, they become discouraged and often leave their organization. Farmers will never accomplish what is so highly desirable, that of controlling the marketing of their own products, unless they learn how to stick together under adversities. These men who are easily discouraged with their own enterprises, forget that no great concern ever developed without its setbacks, without overcoming adversities, and without labor and sacrifice. Why is it that farmers cannot unite in manufacturing and in directing the marketing of their own products?

Elsewhere in this issue will be found a communication from our Mr. Lyon, entitled "League Co-operative Movement", which points out some of the difficulties of the League Co-operative Marketing Co.

FARM BUREAU TO INVESTIGATE

It has been stated that the farmer need not be concerned regarding the price the distributor asks for his products. That is, in part, true. If the farmer can receive his price for a product he is, as a rule, little concerned what disposition the purchaser makes of it. On the other hand, if the farmers have produced and are producing a large quantity of a product and the high price charged the consumers tends to restrict consumption and create a surplus, then he is concerned about what it is sold for to the consumer.

An example of this character is shown in the price which the consumers of Rock Island, Ill., are paying for milk. Farmers are selling their milk for 7½c per quart and the consumers are paying 17c. The cost of getting the milk from the farmer to the consumer in this city is 9½c per quart, while in some other cities it costs but five cents. When milk sells for 17c a quart, there is not so much consumed as when it sells for less. This concerns the farmer, especially when there is an abundance of milk. Further, the cost of 9½c per quart to deliver milk from producer to consumer, under ordinary conditions, is excessive.

The Rock Island Farm Bureau will investigate the charge of 9½c a quart for delivering milk from the producer to the consumer to determine whether it is just. This is a laudable undertaking upon the part of the farm bureau and is one of its functions.

There may be good reasons why it costs 9½c a quart to get milk from the producer to the consumer in Rock Island. If it is reasonable and just, no complaint should be made, but if it is excessive, a change should be made. The farmer is affected when his products are sold at too high prices, for it decreases consumption and leads to overproduction, when in reality there may not be enough milk produced to satisfy the demand at more reasonable prices.

SMALL EXHIBITOR AT FAIRS

The dairy cattle exhibits at the midwest state fairs this year, particularly at Wisconsin and Minnesota, have been far ahead of anything brought out at previous fairs. In one or two instances the number of entries for a single breed have been doubled or even trebled over the number shown last year. Better still, the number of exhibitors has very greatly increased, in some cases even to the extent of being multiplied by ten or more.

The small breeder is coming into his own at the ringside and is finding to his own as well as others' surprise that his best compare very favorably with the best from any herd, large or small. At Minnesota, for example, fifty per cent of the places in the Holstein bull classes were won by breeders exhibiting six animals or less and forty per cent went to exhibitors with not to exceed half that number of entries.

The county show herd idea is directly responsible for this, especially in the two states above mentioned, and the credit for it belongs mainly to state and county breed associations and county agents. Association secretaries and many of the county agents have worked early and late to get out creditable showings from their localities and no one who has attended these fairs has a question as to their success.

Such showings should be encouraged in every way possible, in every state, not only because of the direct benefit to the small breeder who exhibits, but because they stimulate a very greatly increased interest in the fair among all breeders. They serve as splendid advertisements of the kind of cattle to be found in the counties represented.

Feeding Cows on Test

I would be very thankful if you would make out a ration for cows going on Advanced Registry test. I have oats and corn, good clover and some alfalfa hay. The cows are Guernseys. I want them to finish in the double letter class. How soon after they freshen should they be bred?

Would some of the prepared feeds be good? I will buy beet pulp and molasses. How shall it be prepared? How much fed daily? I will milk three times daily. I have silage but it will not be very rich in corn. I will buy oil meal, bran, or any feeds you suggest as I want good rations as cheap as possible but the ration must be good. Would bone meal be good? One is a heifer. Is there more danger of overfeeding or "burning out" so that they won't breed, in a heifer? Would you consider it necessary to milk more than three times a day and how much milk should they produce at each milking to warrant more milkings a day?

Carver, Minn. G. W. O.

There are other things of very great importance in the making of records with cows than the mere calculation of the ration to be fed. A cow's production is influenced very greatly by the attention given to small details in feeding, which cannot be specified in any arbitrary combination of roughages and concentrates.

A splendid basis for a ration is found in the feeds which have been produced on this farm. Alfalfa and clover hay and silage make a roughage combination which serves as a most satisfactory basis for a ration. If the succulence of the silage can be combined with dried beet pulp in fairly liberal quantities our correspondent needs only to add a suitable grain mixture to have a splendid ration. The hay should be supplied as liberally as it will be consumed. This is both economical and conducive to heavy production. Silage may be fed at the rate of about 25 lbs. per day and 4 to 6 lbs. of dried beet pulp, preparing this for feeding by soaking it at least 12 hours in 3 to 5 times its weight of water, is a usual allowance. Corn and oats are an economical basis for the concentrate mixture. A combination of 300 pounds ground corn, 200 pounds ground oats, and 100 pounds oil meal or cottonseed meal will prove a valuable mixture with the average cow on test. This may well be supplied at the rate of 1 lb. for every 3 to 3½ lbs. of milk produced. The quantity should vary from this rule with different individuals, some cows consuming a larger proportion of roughages than others and therefore requiring a trifle less concentrates.

Molasses is usually an economical source of carbohydrates but its chief virtue in the test ration lies in its palatability and the fact that through its use the cow will eat increased quantities of feed rather than in the quantity of nutrients it adds to the ration.

It may be fed to test cows by diluting it and sprinkling it over the hay or wetting the grain with it. There are other concentrates which may be economical to add to the mixture suggested. There is some advantage in a larger number of feeds because of the added variety. Oats can be partially substituted with bran, the two feeds having very much the same place in the ration. Also, there are a number of commercial feed mixtures which are highly nutritious and which can be used to satisfaction if the purchase price is comparable with the cost of the other concentrates available.

There is some question about the value of bone meal in a cow's ration. It is held by some feeders that the liberal use of bone meal supplies mineral matter which tends to lessen abortions in a herd. There can be no harm in feeding it. We would supply it separate from the concentrate mixture, allowing the cows to consume as much of it as they desire.

In testing a heifer it is necessary to bear in mind that the young animal needs to grow as well as produce milk. Consequently a bit more of protein should be furnished than is necessary with older cows. It is a wise practice also to encourage younger animals to consume roughages liberally. We believe there is no more danger of damaging a young animal through heavy feeding than an older one. No feeding practice is a judicious one which risks injuring animals on test simply for the benefits which may come from a slightly increased production.

There is no question but that four times a day milking increases the quantity of milk over that which can be secured from milking three times. The increase varies with different cows and depends largely upon the quantity of milk being produced. Heavy milking cows respond especially well to the extra milking. In commercial dairies it is doubtful whether four times a day milking can be made to pay. In the making of records we believe that there is no question but that it is a great stimulus to increased milk flow.

To qualify in the double letter classes Guernsey cows must carry their calves at least 265 days during the test period of 365 days.

Straightening a Silo

We note an inquiry from one of your subscribers as to the proper way to straighten a leaning silo. This is a proposition that frequently arises in our silo department and is really a simple operation.

The first step is to loosen the guy wires and then by means of an ordinary crowbar and some blocking, pry the leaning side up into a plumb position, blocking it up there. Next step is to guy it firmly in the new position. Then loosen the hoops, and with a maul drive the elevated staves down into position on the wall. Tighten the hoops and anchors and the job is complete. It should not take over one or two hours time.

Wisconsin. A. J. MARTIN LUMBER CO.

In reply to H. M. J., advice on straightening a stave silo, I straightened one that leaned very much. I took a patent wagon jack that I had, fastened one end to a solid post and the other end to a chain placed around the top of the silo. I worked the lever on the jack until I had a good tension on the chain, then I went to the opposite side of the silo with a pole and butted the silo as high as I could reach, and when I went back to the jack I found it loose. I tightened the jack again and repeated until I had it plumb. A fence stretcher would do fine. I would not try to pull it back by main force; the jarring loosens the tongue in the grooves and gradually they slide as they would have to do.

Shelbyville, Ind. A. R. M.

I notice an inquiry about straightening a silo. I will give you our experience along this line. Our silo is 16'x26', of the two-piece stave type. We have three silos of this size in our gang and have had to straighten them all at some time or other.

When we are ready to set up the cutter, first we fasten a cable or heavy wire near the top of the silo on the side to which it leans. The other end is fastened to the drawbar of the tractor which is started slowly, being on the opposite side of the silo from where the cable is fastened, so that the silo is slightly twisted when being pulled, which makes it pull easier. Care must be taken not to pull too fast or too far. If the hoops were loosened it will be a little easier, but we have straightened them without loosening them. This method has proved satisfactory with us for several years even if the silo has been out of shape for six months or even a year.

Steen, Minnesota. V. A. P.

Size of Pulley

My milker is connected up by line shaft with engine. The 20-inch milker pump pulley should have a speed of 80 revolutions. Its line shaft pulley is 6 inches in diameter and the 8-inch engine pulley has a speed of 370. What should be the size of pulley connecting line shaft with engine?

Graham, Mo. H. R. C.

We would suggest the use of a crown face pulley having an eleven-inch diameter. When used on the line shaft this will give 268 R. P. M. (revolutions per minute) of line shaft and 80.4 R. P. M. of milker pump pulley. This should prove satisfactory as there is liable to be a slight slip between belts and pulleys.

Wisconsin. E. L. WHITE.

Plowing Under Cowpeas

We have a nice crop of cowpeas, drilled after oats were harvested, that will make about one ton hay per acre. The land is thin. Would it pay us to plow this crop of peas under and buy alfalfa at the market price to feed dairy cows?

Bentonville, Ark. J. H. L.

As to whether it will prove desirable to plow under the cowpeas or make hay of them is an open question. Consideration must be given to the needs of the field in question and the plans for next year's rotation, as well as the supply of fertilizers and humus. There is also the question as to the amount of feed now available and the price that will be paid for something to take the place of the cowpeas.

If the cowpeas can be harvested into good quality hay, it is somewhat questionable whether, under the average condition, it would pay to plow them under. Indeed, it is to be remembered that the cowpeas can be cured as hay and at least 80% of the fertility value will be returned to the soil in the shape of manure, providing good care is given to this valuable by-product of the cow. It would seem probable that if fertilizers were desirable, they might be purchased in some form cheaper than to buy alfalfa hay at the prevailing rate.

For several years we have seeded clover in all our grain, using some of it for hay and plowing under the rest. Owing to the high price of red clover seed, we have for the past two years used sweet clover and have found this a very desirable green manure crop. It makes, under our conditions of farming, a very good growth and we estimate that it is equivalent in value to a light application of manure. The same condition may exist relative to this field of cowpeas, but a decision in these matters rests so much upon other factors in farming operations that it is difficult to give an out and out opinion.

Ration With Hominy

I expect to feed my cows silage, alfalfa, and for grain feed I want to use hominy feed and either cottonseed, oil meal, or gluten. Would the hominy with either of the last three make a good ration? If not what would you suggest to add to this ration? I expect to feed one pound of grain to each 4 lbs. of milk. The cows are Holsteins.

Waukegan, Ill. A. J. D.

Hominy is a good feed and it has about the same feeding value as corn and, in view of this, supplements alfalfa hay very nicely.

Whether cottonseed meal, oil meal, or gluten feed is selected to be used with hominy depends upon the prices of these feeds. Any one of them will supplement the hominy well. If cottonseed or oil meal is selected, we would not use more than enough to supply one pound of either of these feeds per cow per day. If gluten feed is used, enough may be mixed with the hominy so that the cow gets two or three pounds.

We might suggest that more meals be used for making the mixture. We like to have, at least, three or four meals in the grain mixture for an animal's ration. With alfalfa hay and corn silage, however, it is not so essential that a large number of meals be used for making a mixture, as these roughages form the basis of a splendid ration and it is almost impossible to make a mixture that will not supplement well. It is better, however, to use corn, barley, hominy, and feeds rich in carbohydrates when alfalfa hay is on hand. It is not out of place, however, to use some feeds rich in protein.

Sweet Clover and Rape for Pasture

What kind of pasture would sweet clover and rape make for cows? How early do you think prairie grass in fall when it gets dry will dry up cows? How many cows will it take to keep ensilage down in fourteen-foot silo during summer?

Dimock, S. D. H. P. R.

Sweet clover will make an excellent pasture for cows, but we question the advisabiltiy of seeding it with rape. The latter plant has a very strong odor and unless care is exercised in keeping the cows off from pasture for several hours before milking, the taint is likely to carry over into the milk.

It is not so much the dryness of the prairie grass as it is the lack of a sufficient amount of feed that would cause cows to go down in milk flow. Cows that are not in milk will maintain themselves in fairly good flesh on dry grass if it is in sufficient abundance, but in order that a cow produce milk, she must have better feed. As to just what time this must be given is a question that can only be determined by the condition of the pasture itself and the production of the cow.

In order to feed off two inches daily from a fourteen-foot silo, it will take from 30 to 35 cows fed at the rate of 30 lbs. each per day. In cold weather or late fall and winter it will not be necessary to feed off this quantity in order to prevent spoilage, particularly if this silage has been properly made and is well compacted. Indeed, we have known of cases where very little spoilage resulted when fifteen head of stock were being fed during summer from a silo nearly sixteen feet in diameter. In the particular case to which we refer, however, the silage came from the bottom of a fairly deep silo and it was, at the time of feeding, in a pit below ground. We would say that under average conditions twenty head of stock would keep silage down in a fourteen-foot silo so that it would not spoil.

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Dairy Cattle Congress Judges

The stage is set for the eleventh annual Dairy Cattle Congress to be held in Waterloo September 27—October 3. No sooner had the 1919 show closed after a most successful week than the management began to lay plans for a bigger and better show for 1920. The officers of the Dairy Cattle Congress had but one thought in mind and that was to make the 1920 event the crowning exposition and the culmination of ten previous years of earnest endeavor to produce a dairy show that would be second to none in the United States. When the final curtain is rung down on the show this fall, if all indications can be relied upon, the management will have approached nearer its ultimate aim than at any previous show.

The Dairy Cattle Congress was established for the express purpose of advancing the best interests of dairying and the breeding of dairy cattle. How well the founders of this great show have succeeded in their work can be best indicated by the attitude of dairymen throughout the country. Many of the prominent breeders who show annually at the National Dairy Show have entered their herds for the Dairy Cattle Congress and as heretofore the cattle exhibited at these two leading shows will be very similar.

Entries in the five dairy breed classes have been received from Montana, Indiana, Michigan, Missouri, Texas, Kansas, Ohio, Illinois, Iowa, Minnesota, New Jersey, and Colorado. Many other states will be represented when the final entry date arrives.

Because of the fact that breeders from many states have entered cattle in the 1920 show and because the management desires to give all a square deal in every particular, special care was used in selecting judges. The small breeder is assured an equal chance with the large breeder if his cattle can "produce the goods."

Jerseys will be lined up before Professor J. A. McLean of the University of British Columbia. Professor McLean is an authority on cattle of national reputation.

L. S. Gillette will judge Ayrshires. He was at one time connected with the Dairy Husbandry Department of Iowa State College and is now in the Holstein business at Fostoria, Iowa.

Howard C. Barker will tie the ribbons on the Brown Swiss. He is secretary of the Ohio Holstein-Friesian Association at Tiffin, Ohio, and and is a judge of considerable ring experience. He was formerly chief of dairy test association work in Iowa.

Professor J. B. Fitch, Kansas State Agricultural College, will judge Guernseys. He judged Brown Swiss at the 1919 Dairy Cattle Congress and gave complete satisfaction.

Because several states have entered state Holstein herds this year it was deemed advisable to secure a Holstein judge from a distance. C. H. Davis, North Yakima, Wash., will serve in this capacity. Mr. Davis is a Holstein breeder of note in the western section of the country.

Brown Swiss and Ayrshires will be judged on September 27th and 28th, Holsteins on September 28th and 29th, Jerseys September 29th and 30th, and Guernseys September 30th and October 1st.

Educational features of the show have been lined up to include the cow testing association demonstrations, the dairy calf club exhibits and demonstrations, feeding demonstrations, demonstrations of dairy barn and farm equipment, working cheese and milk products plants and many others. The conventions of dairymen, creamery managers and buttermakers will be an inspiration to all who attend. In short, the Dairy Cattle Congress is to be a Mecca for dairymen from all over the United States and a great exposition of dairy cattle and all things pertaining to the nation's vital and all important industry.—Publicity Department.

Dairymen's Market Threatened

Manufacturing Dealers Say They Will Close All Plants

Dairymen again face a very serious situation in the milk business. The New York Milk Conference Board has just served notice upon the Dairymen's League that on and after October 1st, no manufacturer will buy any milk at any price until such times as milk market conditions improve. This means, if carried out to the letter, that a large number of the members of the Dairymen's League will be without their regular market for their product and that the market of every other dairyman will be seriously affected.

The reason which the dealers give for this unprecedented action is that there is no market, either foreign or domestic, for manufactured dairy products and especially for condensed milk, evaporated milk, and milk powder. In American markets the dealers report that there is little or no buying of dairy products and that everyone seems to be waiting for lower prices. This situation has continued for several months with the result that dealers claim to have a great surplus on hand and enough to supply their trade without further manufacturing for a number of months. Because money has become increasingly hard to obtain from banks and interest rates are becoming higher and higher, dealers insist that they must either get rid of some of their surplus stock without accumulating more or get out of business entirely. They say that it is not a question of price now, but that they do not want the milk at any price.

The distributors of fluid milk in New York market say that there has been no shortage of milk this summer, and because there have been frequent rains throughout this territory, keeping the pastures in excellent condition, production is not declining as it usually has at this period in other years. Notwithstanding the fact that there has been a larger supply of milk produced this summer than ever before, the fluid market has been good because people are evidently consuming more milk than ever before. The increased consumption of fluid milk is probably due to prohibition and also to the various campaigns conducted by many different agencies encouraging a larger use of milk.

The situation as far as dairymen are concerned could hardly be more serious. Probably the best that can be done for a time at least, is to manufacture this unmarketed milk into butter and cheese. Some of it may be sold in fluid form but, of course, the fluid market cannot anywhere near absorb all the rest.

The dealers have said that they would be glad to keep their plants open, put in apparatus for manufacturing butter and make the dairymen's milk into butter and sell it as trustees for the farmers. What the League will decide to do cannot be told at this time and will depend upon the wishes of the membership.

This is another one of the many serious situations which are continually developing in the milk business emphasizing the need of the dairymen owning and operating their own plants and thereby providing themselves with a regular market for their product.

E. R. EASTMAN.

"Great opportunities come to those who make use of small ones."

Oregon Dairy Notes

HOARD'S DAIRYMAN:—While the outlook for the remainder of this year for the dairy industry in Oregon seems most promising, while breeders are improving their herds and creameries are bettering working conditions and upholding standards, there has been waging in Portland for several weeks what is known to the public as "a milk fight". The Oregon Dairy Council having members on both sides of the question, and knowing all of these members to be men of worth, is keeping out of the fight. A summary of the affair will be made for Hoard's Dairyman when it is over.

The first entry for the 1920 Pacific International was made by D. Brooks Hogan, manager of the Iron Mine Farm, Oregon, who has listed 20 of the finest animals of the famous Iron Mine farm herd of Jerseys. Seventeen are listed under the name of W. N. Ladd. The other three are the property of Mr. Hogan. It was Mr. Hogan who was chairman of the big Jersey jubilee held here in May and he is always a leader in dairydom and especially in any enterprise concerning Jerseys.

Entries for the stock show will close October 15. Indications point toward a 50 per cent heavier enlistment of entries than marked last year's show. "We are offering $75,000 in premiums this year," O. M. Plummer, manager of the big show, announces.

Sunflower silage this year has been a great factor in Oregon and great areas have been planted successfully and silos have been erected in all parts where formerly the feed question was a most serious one.

Banks of Oregon are co-operating splendidly. Heretofore one by one the banks were interested and helped finance the purchase of fine dairy herds. Now, through the co-operation of C. D. Rhorer of the agricultural committee of the Oregon State Bankers' Association, the signed pledges of more than 100 banks were received and as an association matter the banks now will finance the purchase of cattle. Much credit for this is due Mrs. W. P. Strandborg of the Pacific-International who put the matter convincingly before Mr. Rhorer.

Sales dates listed for the Pacific-International are: Jerseys, November 17; fat cattle, morning of November 18; Shorthorns and Guernseys, November 18; Herefords and Holsteins, November 19.

The secretary of the Oregon Dairy Council addressed the Portland Parent-Teacher Associations on the establishment of milk recesses in public schools. The teachers and parents, both, are favoring milk stations and the distributors have promised to provide the milk at cost, or even a little less. The council will have a special milk program for the Oregon State Parent-Teacher Convention.

The state of Oregon has appropriated $30,500 toward the payment of premiums at the 1920 Pacific-International Live Stock Exposition.

Students in animal husbandry are preparing to enter the judging contests which are open to any agricultural college in the United States or Canada. Boys and girls, too, are interested in the show and much is done by O. M. Plummer to encourage boys and girls to study animal husbandry, form calf clubs, and generally to build up the dairy industry.

Oregon. E. K. HILL.

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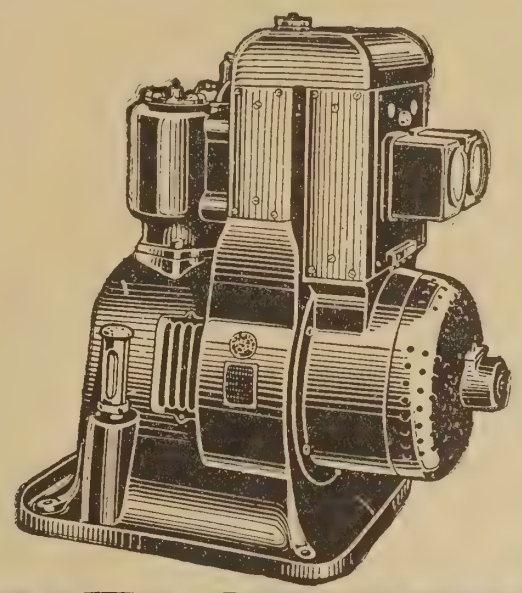
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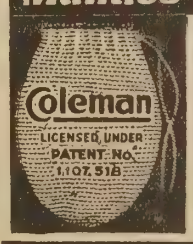


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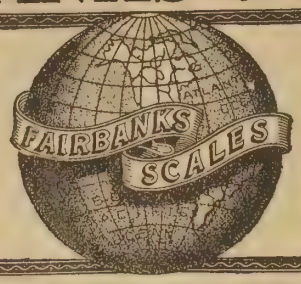
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IOWA STATE FAIR

(Continued from page 376)

Flossmoor, and the Board of Control of State Institutions took the blue in two-year-olds with King Pietertje Fayne Ormsby. But Kansas came back in the yearlings with C. McCoy's U. S. Korndyke Homestead Segis, a bull good enough to head his class of twelve and to win junior championship, giving Kansas, at the end of the first day's judging, the three male purple ribbons, though Iowa had four of the six firsts awarded in the bull classes.

Judge Gillette repeated his Missouri State Fair decision between Irene Sarcastic De Kol, aged cow owned by Geo. B. Appleman of Kansas, and the Cass Farm's Illinois grand champion, Lulu Baby Girl. He considered the Kansas entry outstanding in the aged group, her excellence in quality, udder, and scale giving her advantage over the red ribbon Iowa Holstein and carrying her to senior and grand championship. Cass Farm won five of the other six female competitions, showing Fayne Glitka De Kol, senior calf, to junior championship. The younger female classes were the best of the dairy cattle exhibition.

The placings in each class were as follows:

Bull 4 years or over—1, U. S. Disciplinary Barracks on Johanna Bonheur Champion 2nd; 2, Cass Farm Co. on King Aaggie Hengerveld; 3, Barney & Son on Woodcrest Sir Clyde; 4, Clarinda State Hospital on Wolfspring Sethje Mooie Pontiac; 5, Board of Control on Sir Korndyke Haidee. Bull 3 years and under 4—1, Wapsimoor Farm on Sir Wapsie Flossmor; 2, Parker on ———; 3, Clarinda State Hospital on Mudcura Aaggie Ormsby De Kol; 4, Breen & Son on King Buffalo Segis. Bull 2 years and under 3—1 and 4, Board of Control on King Pietertje Fayne Ormsby and ———; 2, Stubbs on King Fobes Genista Homestead; 3, Cass Farm Co. on Aaggie Almeda Hengerveld. Bull 1 year and under 2—1, McCoy on U. S. Korndyke Homestead Segis; 2, Cass Farm Co. on Bessie Homestead Alcastra; 3, Wapsimoor Farm on Sir Joe; 4, Stubbs on King Korndyke Canary Homestead; 5 and 6, Board of Control on King Pietertje Ormsby Piebe 6th and Sir Pietertje Korndyke Johanna's Sequel. Senior bull calf—1 and 6, Cass Farm Co. on Hengerveld Walker Homestead and Fayne Mollie Walker; 2 and 4, Hargrove & Arnold on King Pietertje Ormsby 15th and King Piebe; 3, U. S. Disciplinary Barracks on U. S. Lona Hilldale Skylark Champion; 5, Board of Control on Cherokee Cornucopia. Junior bull calf—1, Cunningham on Joe Calamo McKinley Pietje; 2, Mast on ———; 3, Cass Farm Co. on King Aaggie Craddock; 4 and 5, Board of Control on King Fobes Ormsby Segis and Woodward Daphine Pontiac; 6, Erickson on Oak Dale Spring De Kol 11th.

Cow 4 years or over—1, Appleman on Irene Sarcastic De Kol; 2, Hargrove & Arnold on North River Tidy Netherland; 3, Clarinda State Hospital on May Belle Queen of Ceres 3d; 4, Breen & Sons on Princess Concordia Segis 2d; 5, Cass Farm Co. on Almeda Luecke Hengerveld 5th; 6, U. S. Disciplinary Barracks on Rijaneta Inka Hengerveld. Cow 3 years and under 4—1, Cass Farm Co. on Pearl Johanna Pontiac De Kol; 2, Clarinda State Hospital on Lady Gerben Pauline; 3, Cunningham on Lady Wielske; 4, 5, and 6, Board of Control on Pledge Korndyke 2d, Lady Daphne Pambytuning, and Oakdale Wickfield Colantha. Heifer 2 years and under 3—1 and 2, Stubbs on De Lava Mechtilde Fobes and Ben Fobes Johanna De Kol; 3, U. S. Disciplinary Barracks on Poland Beauty Hengerveld; 4 and 5, Cass Farm Co. on Aaggie Hengerveld Daisy Homestead and Aaggie Hengerveld Whitney; 6, Clarinda State Hospital on Mechthilde Dummerston Celia. Senior yearling heifer—1 and 4, Cass Farm Co. on Bessie Homestead Jewel and Queen Wanmander Beauty; 2 and 3, U. S. Disciplinary Barracks on Johanna Bonheur Juliana Inka and Johanna Bonheur Segis De Kol; 5, Larsen on Forum Aaggie Beauty. 6, Hemphill on Roadside Rosalind. Junior yearling heifer—1 and 6, Cass Farm Co. on Bessie Homestead Walker Lyons and Canary Bessie Homestead; 2 and 5, Clarinda State Hospital on Lady Pietje Mooie and Luxe Maid Pontiac; 3, Kansas Agricultural College on Canary Paul Inka; 4, Miller on Millercrest Johanna Segis. Senior heifer calf—1, 3, and 6, Cass Farm Co. on Fayne Glitka De Kol, Ormsby Bessie Johanna, and Bessie Alcartra Fink; 2, Appleman on ———;4, Clarinda State Hospital on Mercedes Korndyke Mooie; 5, Larsen on Maud Masterpiece. Junior heifer calf—1 and 5, Cass Farm Co. on Nirvana Grace De Kol Fayne and Aaggie Hengerveld Canary Pearl; 2, Clarinda State Hospital on ———; 3, Board of Control on Cherokee Sarcastic; 4, Miller on ———.

Senior and grand champion male—Johanna Bonheur Champion 2nd. Junior champion male—U. S. Korndyke Homestead Segis. Senior and grand champion female—Irene Sarcastic De Kol. Junior champion female—Fayne Glitka De Kol.

Graded herd—1, U. S. Disciplinary Barracks; 2 and 4, Cass Farm Co.; 3, Clarinda State Hospital. Breeder's young herd—1 and 2, Cass Farm Co. Breeder's calf herd—1, Cass Farm Co. Get of sire—1 and 3, Cass Farm Co.; 2, Board of Control; 4, Stubbs Farm; 5, Hemphill; 6, Clarinda State Hospital. Produce of cow—1, Kansas State College; 2, 3, and 5, Cass Farm Co.; 4, Larsen; 6, Miller.

Guernseys

Exhibitors: W. O. Bohart, Montana; and Dairyland Farm, Wm. J. Lockhart, Mountain Bros., W. W. Marsh, and H. J. Schmidt, all of Iowa.

Judge: W. A. McKerrow, Minnesota.

Five Iowa herds and that of W. O. Bohart of Montana furnished a Guernsey showing of 83 head. W. W. Marsh was the heaviest winner but divided money with Mountain Bros. and Dairyland Farm. In the male classes chief interest centered about Cherub's Prince, Marsh's three-year-old and Mountain Brothers' Imp. Kitchener's Express. The latter bull is more compact, neater, a bit showier, and is better headed. He is nearer the type of winning females, an example being Marsh's Honey Bloom of the Prairie. But he failed to break up Cherub's Prince's habit of winning, on scale, length of barrel and rump, depth, and general dairy form. The latter was then an easy winner of senior and grand championship. The Marsh yearling, Golden Laddie of the Prairie, was made junior champion, winning over a stable mate, Blossom's Prince of the Prairie, and Mountain Bros.' junior calf, Lydia's Express of Iowanola.

Ten aged cows made a ring of high quality. Engleside Pretoria Vrangue, third cow in A. R. class E. E. with a record of 582 pounds fat, won on her typiness and neatness though she is a trifle small. She made an attractive senior champion and was good competitor in the final placing. Her sister, Engleside Pretoria Queen was winning three-year-old. Marsh's senior yearling, Honey Bloom of the Prairie, was given premier honors. In six shows in 1919 and three thus far in 1920 she has been junior champion and in six has captured the grand.

A notable feature of the Guernsey show was the striking improvement evidenced in the herds of Mountain Bros., and Dairyland Farm, owned by A. Hyzer, over the animals with which they began but a few years ago. There are few better examples of the benefits which may be gained in the show ring.

The detailed awards follow:

Bull 4 years or over—1, Mountain Bros. on Imp. Kitchener's Express; 2, Bohart on Estrella's Major. Bull 3 years and under 4—1, Marsh on Cherub's Prince; 2, Dairyland Farm on Plato of 4 Pine; 3, Lockhart on Franseca's Glenwood of Iowanola. Bull 2 years and under 3—1, Marsh on Marie's Cherub of the Prairie; 2, Dairyland Farm on Hawthorn of Wiedywold; 3, Bohart on Princes' Boy. Bull 1 year and under 2—1, Marsh on Golden Laddie of the Prairie; 2, Dairyland Farm on Lalla's Prince; 3, Mountain Bros. on Simplicity's Winner of Iowanola; 4, Schmidt on Bobby Holden of Grand Home; 5, Bohart on Major Bozeman. Senior bull calf—1 and 3, Marsh on Blossom's Prince of the Prairie and Prince Charming of the Prairie; 2, 4 and 5, Mountain Bros. on Dorothy's Cherub of Iowanola, Lilly's Express of Iowanola, and Golden Master of Iowanola; 6, Dairyland Farm on Dairyland King. Junior bull calf—1 and 3, Mountain Bros. on Lydia's Express of Iowanola and May King's Cherub of Iowanola; 2, Marsh on ———; 4, Dairyland Farm on Dairyland Renown; 5, Bohart on Select's Major; 6, Schmidt on Rosette's Butternut King of G. H.

Cow 4 years or over—1 and 5, Mountain Bros. on Engleside's Pretoria Vrangue and May King's Recollection of Iowanola; 2 and 6, Dairyland Farm on Velma of Mapledell and Crystal of Floyd; 3 and 4, Schmidt on Marcus Glenwood's Daisy and Glenwood Daisy's Rouge of Grand Home. Cow 3 years and under 4—

1 and 3, Mountain Bros. on Engleside Pretoria Queen and Simplicity's Glenwood of Iowanola; 2, Marsh on Princess Bopeep of the Prairie; 4, Schmidt on High Life Victoria of Grand Home; 5, Bohart on Onward Girl. Heifer 2 years and under 3—1 and 2, Mountain Bros. on Lady Ruth of Iowanola and Imogene of Iowanola; 3, Dairyland Farm on Genevieve of Maoledell; 4, Schmidt on Glenwood Rosette's Rilma of Grand Home; 5, Bohart on P. Lela Onward. Senior yearling heifer—1, 3 and 5, Marsh on Honey Bloom of the Prairie, Golden Locks of the Prairie and Marsh Marigold of the Prairie; 2 and 4, Mountain Bros. on Dorothy Arnold of Iowanola and Florinda's Lavetta of Iowanola. Junor yearling heifer—1, Marsh on Princess Pretoria of the Prairie; 2 and 4, Dairyland Farm on Dairyland Ruth and Fancy of Dairyland; 3, Schmidt on Glenwood Daisy's Dairymaid of Grand Home; 5 and 6, Bohart on Bozeman's Pride and Major's O. L. Senior heifer calf—1 and 5, Mountain Bros. on Kitchener's Pet of Iowanola and Polly May Betty of Iowanola; 2, 3 and 4, Marsh on Sensation of the Prairie, Honeydew of the Prairie and Primrose of the Prairie; 6 and 7, Dairyland Farm on Dairyland Modesty and Snow Flake of Prairie. Junior heifer calf—1, Marsh on Mayflower of the Prairie; 2 and 5, Dairyland Farm on Cloth of Gold's Beauty and Dairyland Janette; 3, Mountain Bros. on Cherub's Grace of Iowanola; 4, Bohart on Major's Princess Lela; 6, Schmidt on High Life's Clover Blossom of Grand Home.

Senior and grand champion male—Cherub's Prince. Junior champion male—Golden Laddie of the Prairie. Senior champion female—Engleside Pretoria Vrangue. Junior and grand champion female—Honey Bloom of the Prairie.

Graded herd—1, Mountain Bros.; 2, Dairyland Farm; 3 and 4, Bohart. Breeder's young herd—1, Marsh; 2, Mountain Bros.; 3, Dairyland Farm; 4, Bohart. Breeder's calf herd—1, Marsh; 2, Mountain Bros. Get of sire—1, Marsh; 2 and 3, Mountain Bros. Produce of cow—1, Marsh; 2 and 4, Mountain Bros.; 3, Dairyland Farm; 5, Schmidt.

Jerseys

Exhibitors: H. L. Elliott, Minn.; and E. L. Reed, W. J. Campbell, M. McMurry, G. C. Sterling, Lloyd Sisson and Will Thompson, all of Iowa, the last four from Blackhawk County.

Judge: C. L. Blackman, Iowa.

The Jersey showing was the poorest which has been seen at Des Moines in many years. While the quality fell short of that at previous fairs, the small number made the breeds' representation especially weak. Seven exhibitors mustered a total of thirty-nine head, H. L. Elliott of Minnesota, the only out of the state showman, furnishing fifteen. A very pleasing feature, one which partly balanced the light showing, was the number of small herds represented, all seven being non-professional show herds.

The aged bull class failed to bring out competition for Campbell's Maxmillion You'll Do; Plymouth Noble Lad, a three-year-old, owned by Sterling, was equally fortunate; while the two-year-olds failed to appear. The three-year-old was given the senior purple. The younger groups were better, bringing out several acceptable calves. A yearling, Golden Noble's Majesty, owned by Elliott was made junior champion and easily defeated the senior for premier honors.

The cow classes had more Jersey merit. Five aged females made a very fair line-up. Among them was Fox's Lucy of Ingleside, a twelve-year-old of sufficient character that Mr. Blackman made her grand champion. Her age is evidenced in back and udder but her capacity and size with enough refinement made her clearly the breed's leader. Campbell's senior yearling, Mabel's Financial Maiden, had no competition in her class but was strong enough to acquire the junior purple and offer the aged champion the best competition the breed furnished.

The following lists the awards by classes:

Bull 4 years or over—1, Campbell on Maxmillion You'll Do. Bull 3 years and under 4—1, Sterling on Plymouth Noble Lad. Bull 1 year and under 2—1, Elliott on Golden Noble's Majesty. Senior bull calf—1, Campbell on You'll Do Bobbie; 2 and 3, Elliott on Ida's Dandy Fox and Countess Dandy King; 4, Sisson on Fin. Countess King. Junior bull calf—1, McMurry on ———; 2, Elliott on Pride's Chief Proudy; 3, Sterling on ———.

Cow 4 years or over—1, McMurry on Fox's Lucy of Ingleside; 2 and 5, Sterling on Golden Fern's Bosnia and Golden Fern's Primrose; 3, Campbell on Minnette's Golden Fern; 4, Elliott on Jolley's Easterbelle. Cow 3 years and under 4—1 and 2, Eliott on Topsy's Cupid Jewel and Mayflower's Cupid Pride; 3, Thompson on Rioter's Fancy Rose. Heifer 2 years and under 3—1, Campbell on Sweet Maria's Rhea; 2, Elliott on Jolly's Queen Lily; 3, Sisson on Fin. Thistle Belle. Senior yearling heifer—1, Campbell on Mabel's Fin Maiden. Junior yearling heifer—1, McMurry on Financial Gambogess; 2 and 5, Elliott on Ethel's Noble Beauty and Jewel's Judd Rosabella; 3 and 4, Sterling on Plymouth's Noble Fox and You'll Do's Golden Aboukir. Senior heifer calf—1, Campbell on You'll Do Lora; 2 and 5, McMurry on Fin. Countess Comity and ———; 3, Sisson on Fin. Countess Kate; 4, Sterling on Pansy's Dahlia Blossom. Junior heifer calf—1, Sisson on ———; 2, Sterling on ———; 3, Reed on ———; 4 and 5, Elliott on Brenda's Combination Bessa and Jewel's Pogis Mayflower.

Senior champion male—Plymouth Noble Lad. Junior and grand champion male—Golden Noble's Majesty. Senior and grand champion female—Fox's Lucy of Ingleside. Junior champion female—Mabel's Fin Maiden.

Graded herd—1, Campbell. Breeder's young herd—1, Elliott. Breeder's calf herd—1, Elliott. Get of sire—1, Sisson; 2, Elliott. Produce of cow—1, Campbell; 2, 4, and 5, Elliott; 3, Sterling.

Ayrshires

Three breeders with thirty-seven Ayrshires lacked but two of tieing the Jerseys in numbers but failed to maintain the average of the breed's exhibitions at the Iowa fair during late years. Stephen Bull of Wisconsin took eight firsts and C. H. Peverill of Iowa nine. Championships were split evenly, the three females going to the Wisconsin herd and the three males to Iowa. Selmer O. Storby of Iowa exhibited a two-year-old bull.

Friendlesshead Victor, Bull's three-year-old, is making a much improved individual, showing better than as a growing bull. At Des Moines he had finish and showiness to excel his competition. Peverill's two-year-old, Cloverdale's Choice Goods, has more length, depth, and carries out better. He was given his Missouri State Fair rating of grand champion by Judge J. B. Fitch of Kansas, who credited him with superior dairy qualities. Peverill's yearling, Rosebud Buster, won over the junior classes.

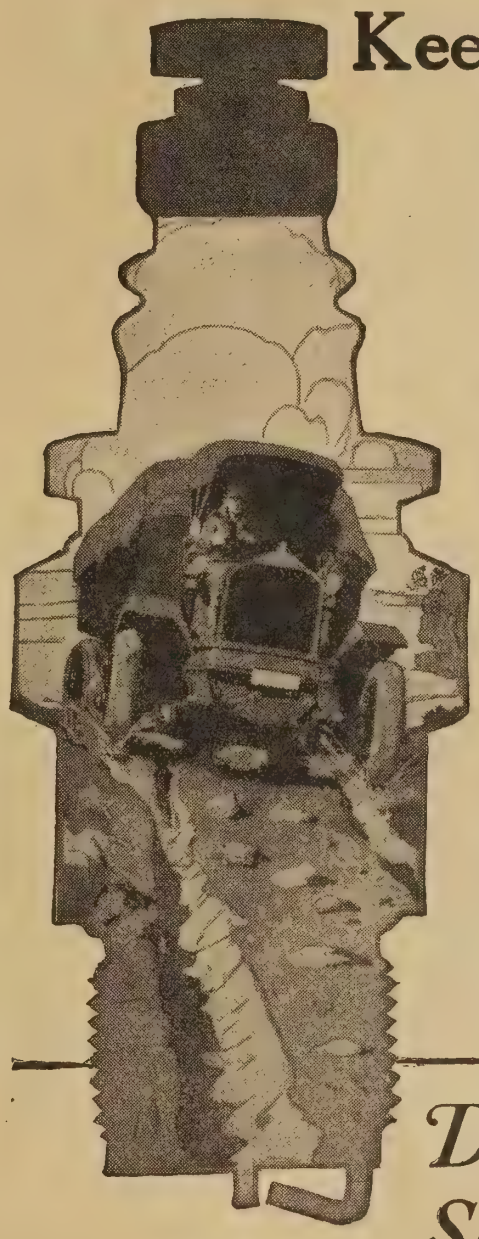
The aged cows were not exceptional. The milkiest animal among them, Rosie Noxemall, went to fifth place because of faulty breed type. Mr. Fitch chose Craigley Ada from the Bull herd for first place because of her stronger heart, spring of rib, and balance of udder than the Peverill second prize winner, Enid Lessnessock. Hughina Beauty easily led the two-year-olds and brought the senior champion ribbon to the Wisconsin herd. She has the scale and capacity which pleases Judge Fitch and gives promise of making a producer. Bull's senior heifer, Aldebaran Flirt, won in a class of four and was made junior champion. The two-year-old won easily in the final contest.

The awards by classes follow:

Bull 3 years and under 4—1, Bull on Friendlesshead Victor. Bull 2 years and under 3—1 and 2, Peverill on Cloverdale's Choice Goods and Cavalier's Fashion Plate; 3, Storby on Silver Ring of South Farm. Bull one year and under 2—1, Peverill on Rosebud Buster; 2, Bull on Garclaugh Ivanhoe. Senior bull calf—1 and 2, Peverill on Rosebud Carl and Rosebud Bill; 3, Bull on Aldebaran Crest. Junior bull calf—1, Bull on Aldebaran Hugh; 2 and 3, Peverill on Cavalier's Good Gift and Rosebud Lassie Boy.

Cow four years or over—1, 4, and 5, Bull on Craigley Ada, Rosy Genevieve, and Rosie Noxemal; 2 and 3, Peverill on Enid Lessnessock and Sylva Good Gift. Cow 3 years and under 4—1, Peverill on Beauty of Cloverdale. Heifer 2

(Continued on page 404)



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Minnesota State Fair

ONE hundred and seventy-five thousand people attended the Minnesota State Fair on Labor Day, excelling all previous single day records excepting that for 1919. Favorable weather and the presence of the presidential candidates contributed greatly to the 1920 success, bringing many thousands through the gates and keeping up the high attendance standard of the Gopher State Fair.

This year, according to F. W. Murphy, president, nearly $1,000,000 was spent on permanent improvements and the week's program, $115,000 being given as premiums to encourage agriculture and closely related industries. The outstanding improvement is the partially completed $500,000 cattle barn which is built to house 1,000 head. The new Iowa cattle barn is larger but the Minnesota structure leads in its completeness and finish.

Besides the live stock show at least two other exhibits are worth the attention of every farmer visitor at this fair. The horticultural building showing the products of Minnesota farms is a complete show in itself. The apple exhibit is so special a feature that if the state in general could come up with it in fruit production, "Minnesota Holsteins" would find difficulty in maintaining their lead. The floricultural show, while not directly financially profitable to the live stock man, profits him well if he will but study it and appreciate the accomplishments of those who successfully breed plants rather than cattle.

The dairy building sets apart from the live stock show and is overlooked by many who would otherwise find interest in its exhibits.

A high quality dairy products show was made under the supervision of Andrew French, S. G. Gustafson, and James Sorenson judging butter and J. T. Mc Carthy and Jacob Baumgartner, the cheese. The best creamery butter, scoring 96½, was shown by Gust. Knudson. J. M. Baumgartner won on full cream cheese with a score of 97¼, G. Andrist on Swiss cheese scoring 96½, and H. C. Crever on Brick cheese scoring 96½. No cheese entered scored less than 92.

Lessons from Testing

Cows from Minnesota cow testing associations were on exhibit to illustrate the benefits from co-operative record keeping. Two cows were shown whose production indicated the value of silage in the ration; two furnished examples of good and inferior type; two gave proof of the value of the pure-bred sire, one inferior animal being sired by a poor bull and a first class individual by a pure-bred; and two were exhibited to show the difference between an animal strong in constitution and capacity and one which is weak. Three calves were on exhibit to show results from feeding a minimum quantity of milk where whole milk is sold. One calf weaned at 60 days was above normal weight at 200 days, one weaned at 45 days was above normal at 158 days, and a second weaned at 45 days was 92.2 per cent normal in weight at 146 days. A grain mixture of 4 parts ground corn, one part linseed meal, and one part bran was fed with alfalfa. Calves were put on grain and hay as soon as possible and fed all they would clean up.

Holsteins

J. D. Bacon of North Dakota was the only out of state Holstein breeder who ventured to compete with eighty-three Minnesota exhibitors. A total of close to 275 head were on the grounds and dominated the dairy show. Even with the great number of animals the quality was well maintained. The large classes drew the largest ringside of the show and kept Axel Hanson as busy as he has been for many a month. He placed the ribbons on the best Holstein show ever seen at the Minnesota fair.

Sixteen aged bulls made up a difficult class of fair quality. Piebe Laura Ollie Homestead King, the choicest individual in the group, according to Judge Hanson, was left out of the money because of his soreness. Probably the second best typed entry was Sir Hendreikje De Kol Homestead owned by Joy Bros. Stock Co. This bull is clean cut, straight, and a winner—with more size. He shows as a three-year-old but is too small to head the ring. Mayowood Farm's Johanna Glenda Lad won the class on his scale and on being the smoothest bull of size. His quality is indicated by his having been twice a first prize winner at the Dairy Cattle Congress and the National Dairy Show. H. W. Schroeder won in the two-year-olds with Sir Hengerveld Pietertje Ormsby on scale and his remarkable capacity.

Mr. Hanson chose the junior yearling, Tidy Hengerveld De Kol Aaggie, owned by Victor Lohmann, for junior champion, making the aged winner senior and grand champion.

Thirty-six aged cows made such a dairy class as is seldom seen. It took a full hour to line them up. Blue ribbon competition settled on Jessie Tritomia De Kol 4th, a large, long rumped, showy cow with a slight tendency to carry plenty of covering, and South Side Inka De Kol, a smaller animal of pronounced dairy type, clean cut, and showing a neat, working udder. The latter, owned by the Minnesota Holstein Company, finally won, to the general approval of the ringside, leaving second honors to Egil Boeckman's entry. The younger classes were large and contained numbers of splendid heifers. A junior calf, Queen Segis Piebe Mercedes, owned by C. L. Spaulding was given the marked honor of junior championship, the aged cow being accorded the grand.

This Holstein show was worthy of much praise because of its numbers and the high average quality. Its greatest value was in its large number of small exhibitors, men who are not usually represented in a show. County exhibits made it possible for even the smallest breeder to send an animal or two. Seven firsts and seconds went to exhibitors with three head or less and 24 out of 43 placings in the bull classes went to exhibitors with six head or less. Twelve county exhibits were shown, the friendly rivalry among them being a healthy stimulus to the best showing. Mower, Clay, Rice, Washington, Olmstead, Anoka, Dakota, Blue Earth, Steele, Meeker, Goodhue, and Dodge counties entered the county group class in which each group consisted of ten head and were shown by not less than three exhibitors. The first four won in the order given above.

The awards are here given:

Bull 3 years or over—1, Mayowood Farm on Johanna Glenda Lad; 2, Pagel on King Heilo Aaggie Korndyke; 3, Joy Bros. Stock Co. on Sir Heindreikje De Kol Homestead; 4, Harris & Overstrude on Sir Bess Fayne Pontiac Ormsby; 5, Simon & Son on King Korndyke Chloe Colantha; 6, Martig Bros. on Duke Pietertje Korndyke Ormsby 2nd; 7, Schroeder Farms on Pietertje Alma Marie Ormsby; Bull 2 years under 3—1, Schroeder on Sir Hengerveld Pietertje Ormsby; 2, Lashbrook on Sir Walker Segis Homestead; 3, Krabbenhoft on Sir Pietertje Ormsby Mercedes Son; 4, Boeckmann on King Pietertje Ormsby Pledge; 5, Mayowood Farm on Ondine Homestead Posie; 6, Marlow and Randall on Mankato Pietertje Ormsby Mercedes; 7, Hunter Bros. on King Echo Johanna Sylvia. Senior yearling bull—1, Tyner & Son on Sir Pietertje Ormsby Walker; 2, Slindee on King Prilly Segis Pontiac; 3, Miller on R. C. Sir Johanna Glen Ormsby; 4, Bodin on Creamelle Segis Colantha Lad; 5, Benncrotte on Sir Madrigal Inka Ormsby. Junior yearling bull—1, Lohmann on Tidy Hengerveld De Kol Aaggie; 2, Johnson on Sir Ollie Pearl Homestead; 3, Moscrip on North Star Sir June Homestead; 4, Minnesota Holstein Co. on E. C. King Pontiac Segis (twin); 5, Marlow & Randall on Mankato Pietertje De Kol Ormsby; 6, Oakdale Farms on Oakdale Segis Pontiac Count. Senior bull calf—1, Minnesota Holstein Co. on Sir Inka Superior Segis; 2, Martig Bros.; 3, Christgau and Taylor on Eskimo Ormsby; 4, Spaulding on King Pontiac Ormsby Koffijne; 5, Grahamholm Farm on Grahamholm Sir Kaan; 6, Bacon and Son on Pontiac Ollie Pietertje Netherland. Junior bull calf—1, Minnesota Holstein Co. on Piebe Inka Homestead; 2 and 3, Bacon & Son on Lilac Hedge Colantha Lubrod Watson and Lilac Hedge Pontiac Elmdale De Kol; 4, Mayowood Farm; 5, Munson on Ted Korndyke Pontiac Segis; 6, Holmes.

Cow 4 years or over—1, Minnesota Holstein Co. on South Side Inka De Kol; 2, Boeckman on Jessie Tritomia De Kol 4th; 3, Heifort on Eona Aaggie Tidy; 4, Brosious on Elizabeth Korndyke Hengerveld; 5, Schroeder Farms on Burke Mercedes Ormsby; 6, St. Olaf College on Lady Glen Artis Ormsby; 7, Ridler on Lady Oakwood Butter Queen. Cow 3 years under 4—1, Schroeder Farms on Lizziee Pietertje Ormsby; 2, Miller on Canary Lunde Pontiac; 3, Bacon & Son on Lilac Hedge Fay Colantha Bismarch; 4, Spaulding on Watson Segis Pontiac Lady; 5, Grahamholm Farm on Grahamholm Colantha Kaan Marie; 6, Boeckmann on Lilly Beets Banostine. Cow 2 years under 3—



ROSE'S ELMHURST JOLLY, SENIOR AND GRAND CHAMPION JERSEY BULL AT MINNESOTA STATE FAIR
OWNED BY H. C. WAGNER, MINNESOTA



SEVEN FIRST PRIZE AGED HOLSTEIN COWS, STANDING IN ORDER PLACED
From left to right: South Side Inka De Kol, owned by Minnesota Holstein Co. (later senior and grand champion); Jessie Tritomia De Kol 4th, owned by Dr. E. Boeckman; Eona Aaggie Tidy, owned by E. A. Heifert; Elizabeth Korndyke Hengerveld, owned by E. J. Brosius; Burke Mercedes Ormsby, owned by E. C. Schroeder Farms; Lady Glen Artis Ormsby, owned by St. Olaf College; Lady Oakwood Butter Queen, owned by G. W. Ridler.



FIRST PRIZE GUERNSEY GET OF SIRE AT MINNESOTA STATE FAIR
OWNED BY JONES & MCKERROW, WISCONSIN

1 and 3, Schroeder Farms on Heilo Pietertje Piebe and Fytje De Kol Ormsby; 2, Minnesota Holstein Co. on Fair Oaks Miss Homestead Rue; 4, Hunt on Pietertje Elgin De Kol Mercedes; 5, Boeckmann on Korndyke Quality Lass; 6, Mayowood Farm on Avanella Canary Ondine; 7, Miller. Senior yearling heifer (dry)—1 and 2. Minnesota Holstein Co. on Fair Oakes Inka Homestead and Far Oaks Fannie Homestead; 3, Johnson on Beaver Oak Prilly Mercedes; 4, Lunde on Delilah Jewel of Lundewood; 5, Oakdale Farms on K. S. P. Lady Rue; 6, Crane on Miss Aaggie Johanna Mercedes; 7, Graham and Hanson on Grahamholm Silver Gloss. Junior yearling heifer—1, Bacon and Son on Princess Pontiac Ollie Homestead; 2 and 3, Grahamholm Farms on Grahamholm Cornucopia Segis Lad and Grahamholm Colantha Segis Kaan; 4 and 5, Minnesota Holstein Co. on Fern Segis Pontiac Countess and Star Segis Pontiac Superior; 6, McDonald Bros. on Woodville Jessie Burke Ormsby. Senior heifer calf—1, Grosser on Lizzetta Beauty Segis Korndyke 2d; 2, Minnesota Holstein Co. on Miss Inka Homestead; 3, Mayowood Farm; 4, Spaulding on Mercedes Ormsby Mabel; 5, Boeckmann on Echoland Lilly Ormsby; 6, Bacon & Son on Lilac Hedge Pontiac Colantha 1st; 7, Schroeder Farms on Beautiful Josephine 3d; 8, Carleton College Farm on Mabel Abbekirk Pontiac Segis. Junior heifer calf—1, Spaulding on Queen Segis Piebe Mercedes; 2 and 3, Grahamholm Farms on Grahamholm Pauline and Grahamholm Winana Beets; 4, Schroeder Farms on Jenny Wren Burke Ormsby; 5 and 8, Minnesota Holstein Co. on Miss Ideal Homestead and Pelagie Wayne Homestead; 6, Tyner & Son on Miss Colantha Tidy Johanna; 7, Boeckmann on Echoland Pava Ormsby.

Senior and grand champion bull—Johanna Glenda Lad. Junior champion bull—Tidy Hengerveld De Kol Aaggie. Senior and grand champion cow—South Side Inka De Kol. Junior champion cow—Queen Segis Piebe Mercedes.

Graded herd—1, Minnesota Holstein Co.; 2, Boeckman; 3, Schroeder Farms; 4, Bacon & Son; 5, Mayowood Farm; 6, Spaulding; 7, Marlow & Randall. Young herd—1 Minnesota Holstein Co.; 2, Bacon & Son; 3, Grahamholm Farms; 4, Boeckmann; 5, Marlow & Randall; 6, Mayowood Farm. Calf herd—1, Spaulding; 2, Schroeder Farms; 3, Mayowood Farm; 4, Minnesota Holstein Co.; 5, Bacon & Son; 6, Boeckmann. Get of sire—1, Schroeder Farms; 2, Minnesota Holstein Co.; 3, Miller; 4, Mayowood Farm; 5, Grahamholm Farm; 6, Marlow & Randall. Produce of cow—1, Miller; 2, Minnesota Holstein Co.; 3, Bacon & Son; 4, Grahamholm Farm; 5, Marlow & Randall; 6, Brosious. County group—1, Mower; 2, Clay; 3, Rice; 4, Washington.

Guernseys

The Guernsey showing this year was not what it should have been either in numbers or in point of quality. Minnesota has some very good Guernsey herds within her borders and should have a better exhibit of them at her state fair.

One of the good features of the showing was that it represented 18 different herds, all but one of them from within the state. Jones & McKerrow of Wisconsin, the only out of state exhibitor, were also the largest exhibitors with 20 head.

The aged bulls made the best showing among the males with 5 entries including D. D. Tenny's Ladysmith's Cherub, 3 times grand champion at the National and Jones & McKerrow's Bonnie Boy of Riverside, that has been well up in the money wherever shown this year. The Wisconsin entry has a better back and top line, carries an excellent body but he was too plain and heavy through the thighs to beat Tenny's entry. Ladysmith's Cherub was senior and grand champion, the junior championship going to Dot's Cherub of Shorewood, a junior yearling from the same herd.

Fourteen aged cows made the largest and best class of the entire Guernsey showing. Imp. Mildred 2nd of Les Godaines, the Wisconsin entry that has been grand champion at both Illinois and Wisconsin, duplicated at Minnesota, an easy senior and grand champion. Ultra Rosie, a senior calf also owned by Jones & McKerrow, was junior champion.

H. H. Kildee of Iowa did the judging.

Complete awards follow:

Bull 3 years or over—1, Tenny on Ladysmith's Cherub; 2 and 3, Jones & McKerrow on Bonnie Boy of Riverside and Chene King; 4, Olson & Krans on Ingleside King Chesterbrook; 5, Simon Kruse on Polly's Anchor. Bull 2 years under 3—1, Hughes on Betty's Prince of Prospect Hill; 2, Hageman & Sons on Merry May King. Senior yearling bull—1, Kruse on Pride of Radderon Farm. Junior yearling bull—1 and 2, Tenney on Dot's Cherub of Shorewood and Cherub's Pearl Royal of Shorewood; 3, Jones & McKerrow on Dora's King; 4, Street on Governor Jess Weshpi; 5, Skaar on Glen of Cor-Alfa Farm; 6, Bragg on Adelaide's Chief; 7, Crouse on Beda's Golden Lad of Lakeside. Senior bull calf—1 and 5, Jones & McKerrow on Ultra's Proud King and Coral Jerry King; 2 and 7, French on Polly's Pet of Fair Meadows and Jewel's Oliver of Fair Meadows; 3, Hageman & Sons on Floridale May Day Prince; 4, Skaar; 6, Fuissell on Frissdale King Susie. Junior bull calf—1, Hageman & Sons on Floridale General Washington; 2, Tenney on Cherub's Dean of Shorewood; 3, Skaar.

Cow 4 years or over—1, 3, and 4, Jones & McKerrow on Imp. Mildred 2nd of Les Godaines, Imp. Bordeau of Courtil Bree and Imp. Governor's Ella of McKerrow's Farm; 2, 5, and 7, Frissell on Susie of Skillet Creek, Raymond of the Priel's Val Rose, and Cherrys Trixie of City View; 6, Bragg on Aspara 2nd. Cow 3 years under 4—1, Hageman on Adell of Burnham Beach; 2, Jones & McKerrow on Kate of Aurelian Farms; 3, Shepard on Gerar Rose; 4, Kruse on Trickery Rose of Mukwonago; 5, Frissell on Strandford's Butter Maid of Chippewa. Cow 2 years under 3—1, Jones & McKerrow on Century Girl of Edgemoor; 2 and 3, Olson & Krans on Alvira of Oakley and Kings Charmeese of Oakley. Senior yearling heifer, dry—1 and 6, Jones & McKerrow on Eidelweiss of Edgemoor; 2, Kruse on Gloriana of Edgemoor; 3, Frissell on Ruth Yeksa of Bush Lake; 4 and 8, Hageman on Floridale Princess; 5, French on Flora's Beauty of Fair Meadows; 7, Nelson on May Primrose of Fairy Falls. Junior yearling heifer—1, 2, and 5, Jones & McKerrow on Dancing Girl of Edgemoor, Spring Maid of Edgemoor and Ultra Governess Chene; 3 and 4, Skaar on Rosette of Cor-Alfa Farm and Valentine of Cor-Alfa Farm. Senior heifer calf—1, 3, 5, and 7, Jones & McKerrow on Ultra Rosie, Ultra Pearly Ultra's Elizabeth Beauty, and Topsy's Ultra Lily; 2, Steele on Lassie of Maplewood; 4, Frissell on Morning Star Corolore; 6, French on Dairy Maid's Queen of Fair Meadow. Junior heifer calf—1, Jones & McKerrow on Chene King Northern Lady; 2, Tenney on Shorewood Lady LaVerne; 3, Skaar; 4, Shepard on Mabel Pride of Green Acres; 5, Street; 6, Kruse on Beauties Perfection of Raddiron.

Senior and grand champion male—Ladysmith's Cherub. Junior champion male—Dot's Cherub of Shorewood. Senior and grand champion female—Imp. Mildred 2nd of Les Godaines. Junior champion female—Ultra Rosie.

Graded herd—1, Jones & McKerrow; 2, Olson & Krans. Young herd—1, Skaar. Calf herd—1, Jones & McKerrow; 2, Skaar; 3, Nelson. Get of sire—1, Jones & McKerrow; 2, Tenney; 3, Skaar; 4, Olson and Krans; 5, Nelson. Produce of cow—1, Jones & McKerrow; 2, Hageman; 3, Skaar; 4, Bragg. County Group—1, Washington; 2, Anoka; 3, Freeborn; 4, Meeker.

Jerseys

Exhibitors: C. R. Brackett, W. Clarkson, Z. M. Cole, H. L. Elliott, R. A. Fox, J. W. Love, M. D. Munn, Geo. S. Taylor, and H. C. Wagner, all of Minnesota.

Judge: J. B. Fitch, Kansas.

Nine Minnesota breeders made up a Jersey show of about seventy head. While the quality throughout was not exceptional the exhibit received less than the attention it deserved because of the crowded ring. J. B. Fitch of Kansas made the awards making consistent placings and picking the best which was furnished him. The younger classes brought out a number of good juniors but the older ones were not overcrowded with worthy individuals.

In Wagner's aged bull, Rose's Elmhurst Jolly, Mr. Fitch found his grand champion male and as showy a Jersey as was led out. He was junior champion in the same ring in 1917 and grand champion in 1919. J. W. Love exhibited one bull, a junior yearling, Count Noble, which won his class of six and was made junior champion. From among six aged cows Mr. Fitch chose Noble Forfarshire owned by C. R. Brackett. In the final competition against M. D. Munn's junior champion, Majesty's Morn Merline, the aged cow won on her maturity.

The detailed awards follow:

Bull 3 years or over—1, Wagner on Rose's Elmhurst Jolly; 2, Munn on Signa's Raleigh Majesty; 3, Taylor on Gamboge's Defender; 4, Brackett on Moreton Fields Oxford Owl. Bull 2 years and under 3.—1, Clarkson on Androces; 2, Fox on Nerissa's Jolly Noble. Senior yearling bull—1, Munn on Crocus' Royal Majesty. Junior yearling bull—1, Love on Count Noble; 2, Elliott on Golden Nobles Majesty; 3 and 5, Brackett on Victoria's Noble Dandy and Maids Noble Forfarshire. Junior champion female—Majesty's Morn Merline.

Graded herd—1, Munn; 2, Brackett; 3, Taylor. Young herd—1, Munn; 2, Brackett; 3, Elliott. Calf herd—1, Munn; 2, Brackett; 3, Wagner; 4, Elliott; 5, Taylor. Get of sire—1, Munn; 2, Fox; 3, Brackett; 4, Wagner; 5, Taylor. Produce of cow—1, Munn; 2, Brackett; 3, Elliott; 4, Clarkson; 5, Taylor. County group—1, Washington, 2, Hennepin.



IN GOOD COMPANY AT MINNESOTA STATE FAIR
Senator Warren G. Harding, Republican candidate for President, visited the cattle barns after speaking at the Minnesota State Fair and is here shown with one of the prize winning Holsteins.

Brown Swiss

Minnesota and Iowa split the Brown Swiss prize money, F. P. Minette and Son and John Minette and Son, of the former, showing eighteen head against the seventeen brought out by Mooney and Larrabee Bros., Hawkeye breeders. H. H. Kildee of Iowa made the awards.

The bull classes failed to bring out strong competition. Hefty Boy of Valley Grove, aged sire in the Iowa herd, was made grand champion. He is round rumped, heavy over the back, and less inclined to dairy type than the Minnesota bull, Esther's College Boy, but has the heart girth and capacity to make him a winner. Carl the 6th, Mooney and Larrabee Bros. three-year-old, was entered out of class and disqualified.

The best under two bull was Czar L which brought the junior purple to Iowa.

The four aged cows were all worthy representatives of the breed. In the class was Believe, owned by F. P. Minette and Son, and the outstanding individual shown. Few Brown Swiss have equalled her character of head and neck, her clean shoulder and top and her square rump. She had strength and capacity and would look good under any color of hair. She was not in close competition. The junior champion was Little Egypt, a senior calf Iowa entry.

The awards follow:

Bull 3 years or over—1, Mooney & Larrabee Bros. on Hefty Boy of Valley Grove; 2, F. P. Minette & Son on Esther's College Boy. Bull 2 years under 3—1, Mooney & Larrabee Bros. on Carl the 6th. Senior yearling bull—1, Mooney & Larrabee Bros. on Czar L. Senior bull calf—1, F. P. Minette & Son on Emmett of Lake View; 2, Mooney & Larrabee Bros. on Ceylon 2nd; 3, John Minette & Sons on Paula Walla. Junior bull calf—1, Mooney & Larrabee Bros. on Howard Carl.

Cow 4 years or over—1 and 3, F. P. Minette & Son on Believe and Nagilla; 2, Mooney & Larrabee Bros. on Salley Verbegge; 4, John Minette & Sons on Calhoun Maiden. Cow 3 years under 4—1, Mooney & Larrabee Bros. on Chalfonte; 2, F. P. Minette & Son on Lamark's Girl; 3, John Minette & Sons on Velnora M. Cow 2 years under 3—1, F. P. Minette & Son on Lady 2nd of Tarpleywick; 2 and 3, Mooney and Larrabee Bros on Jeanne L. and Marie Gronzer; 4, John Minette & Sons on Nancy of Sedgeley. Senior yearling heifer—1 and 3, Mooney & Larrabee Bros. on Little Anne 2nd and Eiffle 2nd; 2, F. P. Minette & Son on Believe of Farview; 4, John Minette & Sons on Maiden of Farview. Junior yearling heifer—1, F. P. Minette & Son on Dorothy Believe of Farview; 2 and 3, Mooney & Larrabee Bros. on Doddy Robbins 2nd and Jeannet 2nd. Senior heifer calf—1, Mooney & Larrabee Bros. on Little Egypt 2nd; 2 and 4, John Minette & Sons on Betty of Farview and Velnora M. Girl; 3, F. P. Minette & Son on Pussy of Farview. Junior heifer calf—1, F. P. Minette & Son on Lady Dell; 2, 4, and 5, Mooney & Larrabee Bros. on Rowina 2nd, Yuly 2nd, and Janette L. 2nd; 3, John Minette & Sons on Orphalia Pansy.

Senior and grand champion male—Hefty Boy of Valley Grove. Junior champion male—Czar L. Senior and grand champion female—Believe. Junior champion female—Little Egypt 2nd.

Graded herd—1, Mooney & Larrabee Bros.; 2, F. P. Minette & Son. Young herd—1, Mooney & Larrabee Bros.; 2, F. P. Minette & Son. Calf herd—1, F. P. Minette & Son; 2, Mooney & Larrabee Bros.; 3, John Minette & Sons. Get of sire—1, Mooney & Larrabee Bros.; 2, F. P. Minette & Son. Produce of cow—1, F. P. Minette & Son; 2, Mooney & Larrabee Bros.; 3, John Minette & Sons.

The Small Exhibitor at the State Fair

The dairy cattle exhibits at the mid-west state fairs this year, particularly at Wisconsin and Minnesota, have been far ahead of anything brought out at previous fairs. In one or two instances the number of entries for a single breed have been doubled or even trebled over the number shown last year. Better still, the number of exhibitors has very

(Continued on page 394)



A Much Roomier Roadster

Seating *three* instead of two

It is easy for you to know how much more your money brings when you buy a New Mitchell. You can appreciate quickly the over-values. Throughout there is evidence of a generous policy.

Roominess, for instance, means that Mitchell is not compelled to skimp. We design and build our own bodies. So we can afford to put into Mitchells the money that would otherwise have to be paid as outside builders' profits. The entire car is Mitchell-built, not assembled.

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Another example is Timken Thrust Bearings on *all* four wheels, not on two. The braced frame, the extra-long cantilever springs with shock-absorbing rebound leaves, the drop forgings instead of stamped steel or castings, steering knuckles with castor bearings—all prove added values.

Examine the New Mitchell models. Prices are as follows: *six* passenger Touring Car, $1750; *three* passenger Roadster, $1750; *six* passenger Sedan, $2900; and *four* passenger Coupe, $2800. F. o. b. Racine, Wis.

See if you can find any car at the price, *or more*, that offers so much for your money.

MITCHELL MOTORS COMPANY, INC., RACINE, WISCONSIN

How One Co-operative Creamery Made Good

(Continued from first page.)

game was lost. The co-operative creamery was on the run.

But they reckoned without Mr. B——. Opportunity came when a salesman dropped in to sell the co-operative company supplies. The traveling man suggested a casein factory. To think was to act with Mr. B——. A meeting of stockholders was arranged, and in a short time a casein factory costing $8000 was established and again the co-operative creamery was more than holding its own. The produce company was making skimmilk powder out of skimmilk, the co-operative creamery was making casein.

A Hard Luck Story

But it looked as if fate were against the co-operative. Casein prices began to tumble, due, no doubt, to the fact that a few large centralizers had by purchasing expert advice been able to convert large quantities of buttermilk into casein. There being a limited demand for this product, prices began to slump, and the co-operative creamery management were again up against it. What should they do next? A demand for high grade buttermilk found them supplying that demand, but it was an uncertain market subject to changes as violent as the weather. It looked pretty bad. Patronage dropped off though the loyal patrons stuck. It was up to the creamery to make the next move. They could go into milk powder manufacturing like their competitors. This involved a good deal of capital and technical knowledge of a kind not familiar to the directors of the co-operative creamery. They had behind them their experience in the making of casein which had not been too satisfactory, but what else could be done?

Mr. B—— went to some of the districts where the produce company was getting cheaper fat and by showing the farmers they were getting much less than the same company paid at their factory he succeeded in organizing and establishing two co-operative creameries which succeeded so well that the produce company was forced out of the two best districts in its territory, but they still held an advantage in the value of the by-products manufactured. In the meantime they had increased their territory, and soon made up the loss of the two organized points by receipts from other districts.

Winning Out

About this time there commenced a campaign throughout the country to use more dairy products, particularly cottage cheese. A large distributing plant from a neighboring city that had been using a small amount of the co-operative products sent a representative to inquire as to the possibilities of supply. Mr. B—— saw his opportunity. By inquiry he found out the name of the man who had captured first prize in the cottage cheese contest. To know was to act: he hired him. Pretty soon cottage cheese was being shipped out in daily increasing quantities. Again the co-operative creamery had an even break or better and patronage began to increase. The new buttermaker at $3200 a year was making them money.

The last year, 1919, report of sales was as follows: butterfat sold, 220,317 lbs.; cottage cheese, 331,921 lbs.; and casein, 54,220 lbs. Average price for butterfat was 69.24 cents and for skimmilk, 60 cents per cwt.

From the figures it can be seen that the make of the co-operative is not large. That they have succeeded in the face of the keenest of competitors is certainly to their credit. It is encouraging to other co-operative plants. What one can do another can.

The above story would not be complete if certain deductions could not be drawn. Competition develops business acumen. This has affected both plants to the advantage of the patron. On the other hand the patron, because he was getting a good price for his products, was not forced to exert himself to produce economically. Those who did were making splendid returns. One thing that should not be forgotten is that the co-operative creamery was really setting the pace in price, even if the produce company did stimulate the latent business ability of the directors of the co-operative company. Because of this, the patrons of the district were morally bound to support the co-operative at least sufficiently to give it enough strength to meet its competitor. A well organized co-operative plant with sufficient volume of business may, loyally supported, meet any competition however keen. It is a matter of using brains, and hiring brains when needed. There is no business where brains and intellect and skill count more than in the dairy industry. Thirty-two hundred a year seems large, but there are cases where it would pay to give the present buttermakers that much to stay away from the creamery and hire a competent man at an even higher figure.

Hogging Off Corn Gives Big Returns

While corn usually is considered not as a money crop but one to clean up the land, yet the North Dakota Agricultural College received a return of $45.54 per acre by using 48 shotes to hog off 16 acres of flint corn in 1918, according to J. H. Shepperd of the Experiment Station.

"The hogs were turned in the field September 6, when they averaged 109 lbs. in weight, and left there until Nov. 12, making an average gain of 94 lbs., or a gain of 281.75 lbs. per acre. They were marketed at 16.31 cents, which, allowing for shrinkage, gave a return of $45.54 per acre."

A pure-bred Holstein heifer, Colantha Ormsby Korndyke, bred and raised at the State University Farm, St. Paul, has just completed a year's milking record as a junior two-year-old. During the year she produced 15,228.6 pounds of milk, containing 567.45 pounds of butterfat. This production entitles her to third position in the state for heifers of her age.

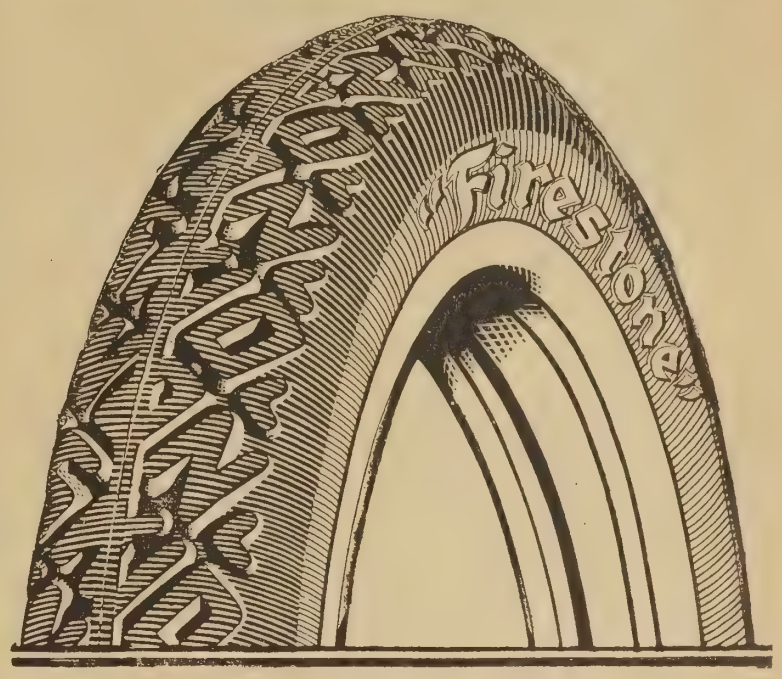
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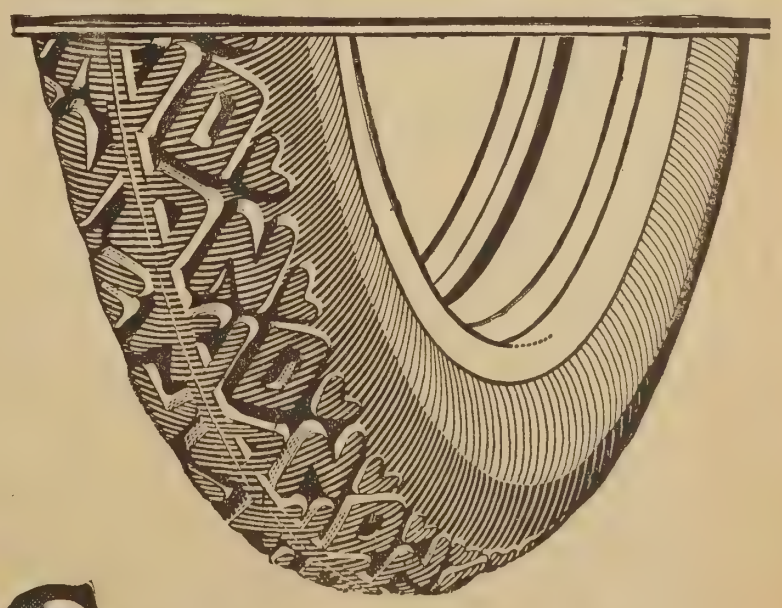


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ROWE MFG. CO., 601 Adams St., Galesburg, Ill.

Minnesota State Fair

(Continued from page 391)

greatly increased, in some cases even to the extent of being multiplied by 10 or more.

The small breeder is coming into his own at the ringside and is finding to his own as well as other's surprise that his best compare very favorably with the best from any herd, large or small. At Minnesota, for example, fully 50% of the places in the Holstein bull classes were won by breeders exhibiting 6 animals or less and 40 per cent went to exhibitors with not to exceed half that number of entries.

The county show herd idea is directly responsible for this especially in the two states above mentioned and the credit for it belongs mainly to state and county breed associations and county agents. Association secretaries and many of the county agents have worked early and late to get out creditable showings from their localities and no one who has attended these fairs has a question as to their success.

Such showings should be increased in every way possible in every state, not only because of the direct benefit to the small breeder who exhibits, but because they stimulate a very greatly increased interest in the fair among all breeders, and they certainly serve as splendid advertisements of the kind of cattle to be found in the counties represented.

Current Feed and Hay Prices

[From Reports by U. S. Bureau of Markets]

Because of the continued unsettled condition of the feed market the demand continued dull during the week ended September 11. Prices eased off considerably. The trade is reported as buying sparingly and does not seem inclined to anticipate wants. In New England stocks of feed with the exception of cottonseed and linseed meal are said to be light. The farmers are reported to have plenty of roughage and are buying as little feed as possible. The trade in this section has not as yet bought for fall requirements, feeling that prices will go to a lower level as soon as production increases. The Seattle feed market is reported as demoralized on account of a price cutting campaign being carried on by dealers. Retail prices on most commodities are less than wholesale prices.

Although the flour run is below normal, both bran and middlings showed decines of $1 to $5 during the week ended September 11. At Minneapolis the quotations were $38.50 for bran and middlings at $46.50, but they varied from $2 to $3. Bran averaged $42 at Chicago, $50 in New York, and $65 in San Francisco. Further arrivals of Argentine bran at Philadelphia met a limited demand and tended to depress the eastern markets, Canada millers also offering it at lower than domestic prices.

One of the large gluten feed manufacturers reduced prices $5 per ton during the week in order to meet the lower corn prices. Demand continues light, with quotations ranging from $58.75 in Chicago to $67 in Boston.

The alfalfa meal market is dull, the price in Kansas City being $35, with $38 at Chicago, and $50 at New York.

Linseed oil meal advanced to $66 in Chicago. In Buffalo the market shows weakness at $60 per ton, while Philadelphia quotes $53.50 and Minneapolis $63.

Cottonseed meal shows little change from last week: Demand is light and bookings for future shipment are small. Forty-one per cent meal is quoted at $57 in Kansas City, $63 in Philadelphia, and $64.50 in New York. Thirty-six per cent meal is priced at $52 in Memphis, $57 in Cincinnati, $59.75 in Chicago, $60.50 in New York, and $63 in San Francisco.

Hominy feed is quoted at $60 by Chicago jobbers, while brokers were reporting sales at $56. The average price is around $57, with Minneapolis quoting $56 and Boston $66. In San Francisco rice bran was being offered at $45, rice polish at $65, and beet pulp at $51.

Hay prices are still on the decline. Alfalfa has dropped to an average of about $31 per ton, which is $3 lower than the corresponding time last year and within $4 of the low point reached about the middle of June, 1919.

For the week ending September 11 timothy ranged from $28 in Kansas City to $34 in Chicago, with old hay going as high as $48.50 in New York. Mixed clover and timothy ranged about $4 under these prices, with straight clover one to two dollars still cheaper. No. 1 alfalfa is quoted at $26 in Omaha and San Francisco, $28.50 in Kansas City, $30 in Minneapolis, $33 in Chicago and Memphis, and $41 in Atlanta. Standard alfalfa is $2 to $4 under these prices, with No. 2 alfalfa trailing $2 to $6 still lower.

Scarcity of Fine Butter Keeps Market Firm

Medium and Undergrades Share but Slightly in Upward Price Trends —Production keeping Up

[Report by U. S. Bureau of Markets]

Butter trading improved over the Labor Day holiday as was generally expected, and the firmness of the markets had little or no setback during the week ending September 11. Prices continued their upward swing and support was not lacking after advances had occurred.

As had been the case for weeks past, strength centered on the fancy grades with medium and undergrades scarcely included, but buyers have had to ease up their standards in some cases or go unsupplied, because of a shortage of really fine butter. It is reported that some chain-store buyers have been forced to use 91 score butter for their best trade, which ordinarily is supplied with nothing under 92 score.

Demand for Fancy Print Butter

The demand for fancy butter continues, partly on account of the heavy print trade. Buyers report inability to keep up with their orders which generally call for the better grades of butter. Withdrawals from storage are being used to relieve the shortage, but prices will have to go a little higher before any large part of current holdings can be made available at a profit. On the other hand, much of a price advance will be made at the risk of curtailing consumption or inducing further importations of foreign butter.

Undergrades continue to show a surplus, which has been increased by reason of the fact that some factories are turning from the manufacture of medium grade sweet butter to salted butter. Metallic, oily, and fishy flavors cause the chief complaints regarding quality, and butter showing any of these defects is difficult to move.

Reports of production show very little shrinkage, and apparently more butter is being manufactured than at this time last year. Regardless of this fact, however, receipts at the four principal eastern markets are running lighter.

The average wholesale prices on 92 score butter at five of the principal markets for the week ending September 11, were as follows: New York, 58.3 cents; Chicago, 56 cents; Philadelphia, 58.95 cents; Boston, 58.9 cents; and San Francisco, 66.19 cents. A year ago the average prices at these markets were: 57.4c, 54.9c, 57.9c, 57.4c, and 60.2c, respectively.



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Cheese Price Advances Receive Temporary Check

Markets Remain Firm but Activity Drops Off—Slight Downward Tendency Noticeable

[Report by U. S. Bureau of Markets]

The gradual advance in cheese prices which has been occurring during the past month was at least temporarily checked during the week ending September 11. Markets still appear firm, but a review of the week's prices shows that advances occurred on some styles, also that in a few scattered markets the local feeling was firm and prices were a trifle higher, but that as a whole business was not so active as during the previous few weeks. In spite of the fact that a fairly firm tone has been maintained, many dealers have realized that their asking prices have been too high to attract active buying interest, nevertheless, they have not been forced to sell, and in fact buyers who have run short have had to purchase for current needs at the high prices which have continued to prevail. A slight tendency to lower prices was noticeable toward the end of the week, although average prices show little actual change.

Demand Develops for Larger Styles

With the approach of cooler weather some markets are turning more to the larger styles. In Philadelphia, for example, current arrivals of Daisies and Longhorns have been of higher cost to dealers, and this has resulted in slight advances on these styles. However, dealers have been free sellers, because with a difference of almost a cent per pound in favor of larger styles, and with the weather in their favor for handling them, retailers have bought the larger styles more readily.

The general scarcity of New York State cheese continues, and in those markets where it is in special demand prices are being well maintained. This shortage has been responsible for a fairly good movement of Wisconsin cheese at places where the demand has heretofore been for New York make. Supplies of Wisconsin cheese seem to be ample, and many sales are being made at prices lower than present replacement costs.

Sales of Larger Lots

At primary markets in Wisconsin trading was active all week at practically unchanged prices. Sales were for larger amounts than has been usual since the season opened. Some dealers report that orders have been plentiful at a good margin of profit and that only a lack of cheese to sell prevented more business. Others, however, continue to appear willing to shade prices, especially on large lots. Regardless of the check in price advances, the tone in all markets remains firm, and the trade seems to feel that the general outlook is bright. A heavier demand is anticipated from both domestic and export buyers.

The average wholesale prices on American cheese, style Twins, for the week ending September 11, were as follows: New York, 27.57 cents; Chicago, 26 cents; Boston, 27.65 cents; San Francisco, 30.56 cents; and Wisconsin primary market, 26.35 cents. The corresponding average for a year ago showed 30.25 cents, 27.95 cents, 31.45 cents, 31.79 cents, and 27.52 cents, respectively for these markets.

Jersey Cattle Notes

For week ending Sept. 3:

Number of animals registered: Bulls, 283; cows, 610; total, 893. Number of transfers recorded: Bulls, 208; cows, 637; total, 845.



"My 13 year old son milks the cows with the Perfection as well as I can and is back in the house in one hour from the time he leaves it." —V. D. CUMMINGS.

Interest Your Boy In Milking

DID you ever notice the interest your boy takes in fine machinery? Why not use that interest to solve your milking problem?

With a Perfection your young son can save you the wages of one or two men. Perfection more than pays for itself each year in the wages it saves.

Get a Perfection and interest your boy in being an up-to-date dairy farmer. He will like the farm and be glad to stay when the drudgery is gone and he has the best labor-saving machinery to work with. And he will do a better job of milking when he milks the Perfection way, because Perfection milks nature's way.

Perfection's gentle suction followed by a downward squeeze and a period of rest duplicates perfectly the action of the calf.

Send for Catalog

Write for the names and addresses of Perfection owners near you. We'll also send you a free copy of our book, "What the Dairyman Wants to Know." Why milk by hand?

Perfection Manufacturing Company

2100 East Hennepin Avenue **Minneapolis, Minnesota**

PERFECTION MILKER



Your Husband is a Busy Man, Mrs. Farmer!

THERE isn't any doubt that he has had it in mind to instal a modern lighting and cooking plant in the home some day—to give you and the family the comforts and conveniences you deserve. Other matters have caused him to overlook this important item.

That is why *you* should know all about the

COLT TRADE MARK.

CARBIDE LIGHTING AND COOKING PLANT

Just think of having a flood of bright, mellow light in any room in the house at a mere twist of the fingers! And carbide gas is the nearest light there is to actual sunlight,—bright, mellow and easy on the eyes. Best for reading and sewing, it makes the home cheerful and cozy and saves the children from eye-strain over their lessons. Think how convenient such light will be to your husband in the barns before sun-up and after night-fall!

The plant is easy to instal and requires no expert attention. In fact, it needs very little looking after of any sort. Takes up no more room than a couple of apple barrels and operates only when gas is actually being used for cooking and lighting. Between times it doesn't cost a penny.

In your kitchen, carbide gas will furnish the hottest known cooking flame. No more keeping a fire going all through the hot summer days; no more ashes to dirty your kitchen. It can be as clean and as cool as any room in the house. A carbide gas-burning iron will take the drudgery out of Tuesday.

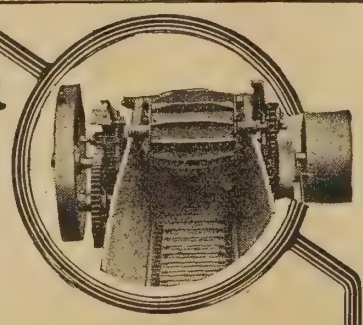
There are over 300,000 country homes using Carbide Cooking and Lighting Plants. Many have been in use for years and years without costing one penny in repairs!

Wouldn't you like to have these city conveniences in your home? Then write us for full particulars so that you may remind your husband of this important matter.

J. B. COLT COMPANY
30 East 42d Street, New York

C- 8

Safety Head



This feature places the Holstein Safety in a class by itself, eliminating all hand-feeding and accompanying dangers. This head automatically juggles the stalks into perfect alignment so that they enter the cutting head more evenly arranged than is possible with even the most perfect hand feeding.

HOLSTEIN SAFETY

really means what the words imply. No need for operator to put his hands where they could be injured.

The cutting blades are also insured against damage from foreign substances by the automatic shearing-off of wood pins, permitting the cutter head to stop but continuing the action of the blower and so cleaning out all silage.



Free Booklet

will be mailed on request to any farmer interested in modern ensilage cutting equipment. A postcard will bring it.

The Meili-Blumberg Company

Dept B New Holstein, Wis.

A Hint to Farm Housewives

(Continued from page 377)

with hard water if soft water were available?

The arrangement shown herewith should not be considered in any sense a makeshift since it is a perfectly workable water system. The water pipes may be hidden in the partitions (not outside walls) if so desired or they may be fastened to the walls by pipe straps. If a new house and comprehensive water system is contemplated at some future time every single article in this arrangement may be again used.

Every young man likes to exercise his ingenuity by creating something new and useful. Why not get mother to take a week's vacation and surprise her with a brand new water system?

The individual installation will depend very largely upon the individual conditions. The simplest arrangement would consist of a pump, a range boiler with a range coil and the necessary pipe and fittings. If an oil or gasoline stove is used during the summer months the kerosene heater can be used to very good advantage. The hot and cold water pipes may be run to the bathroom, the washroom, or anywhere else as desired.

The operation of the system is as follows: Suppose the cold water faucet over the sink is opened. If the pump is operated a stream of cold water will immediately run out of this faucet. If hot water is wanted at the kitchen sink and there is hot water in the tank, open the hot water faucet and pump the same as for cold water. The cold water forced into the bottom of the range boiler forces out an equal amount of hot water from the top of the tank. The same thing will apply to any hot or cold water faucet wherever located. It should be remembered that the system is or should be at all times full of water. If the pump is worked when none of the faucets are open a considerable pressure will be produced, or if the water in the tank should ever get hot enough to turn into steam a rather dangerous condition might prevail. The principal difficulty, however, is liability of the water expanding to such an extent when it is heated that it will burst the tank or one of the pipes. To avoid any of these conditions a relief valve should be placed somewhere in the system. It is here shown connected to the cold water faucet over the sink. It might just as well be connected to the hot water faucet or at any other convenient point. The probabilities of steam forming in the ordinary home installation are rather remote but the possibility should be guarded against.

If a little more elaborate system is wanted an overhead tank may be put in as shown by the dotted lines. The bottom of this tank should be a little higher than the highest faucet in the system. There should be an overflow pipe which may lead to the kitchen sink; if this is done the person pumping can tell when the tank is full. If the overhead tank is used the relief valve may be omitted. The advantage of the overhead tank is that Willie may pump it full before going to school so that mother will not have to pump during the day. Avoid wooden tanks or barrels upstairs as they are bound to shrink when dry. Do not fail to put a faucet at the lowest point in the system so that it may be drained if every one goes away during cold weather. If it is a rain water system the water may just as well be drained back into the cistern as wasted. It should also be remembered that a hot fire in the stove will be apt to crack the empty hot water-back. Pump in enough water to fill the coil or water-back and then build the fire. Cold water on a hot water back is almost sure to ruin the back.

It will be very evident to everyone how impossible it is to estimate the cost of such a system but a list of approximate prices is given for what it may be worth:

30-gallon galvanized range boiler with stand	$21.00
House force pump	10.00
Kerosene water heater	25.00
Faucets (Fuller or compression) each	2.50
Malleable iron fittings, each	
¾-inch elbows	.10
¾-inch 45 degree elbows	.12
¾-inch tees	.12
1 inch-¾-inch bushings	.06
boiler couplings	.50
¾-inch Unions	.35
¾-inch Black pipe per foot	.14
1-¼-inch black pipe per foot	.30
¾-inch relief valve	2.50

Trimming Hoofs

HOARD'S DAIRYMAN:—In a recent issue I note an inquiry is made as to what is the best tool to trim cows' hoofs with. The best instrument for such use that I have ever seen is a pair of large nippers used in clipping limbs off of trees. They work on much the same principle as a dehorning clipper. A cow's hoof is usually so hard that a knife or nippers used by blacksmiths will not give satisfaction. The long handles on the nippers or shears give a good purchase for cutting.

Wisconsin. MANLY SHARP.

August Condensery Prices

Prices paid producers for 3.5% milk delivered at factories during August are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms operating approximately 71% of the total factories in the United States.

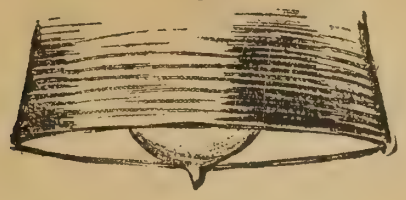
Geographic sections	No. of firms reporting	Price per cwt. Range	Price per cwt. Ave.
New England	4	$3.45—3.99	$3.80
Middle Atlantic	95	2.60—3.89	3.43
South Atlantic	5	2.60—3.57	3.09
East North Central	98	2.66—3.90	3.21
West North Central	12	2.45—3.70	2.86
South Central			
North Central	20	2.45—3.73	2.74
South Western	14	2.45—3.42	2.71
United States	248	2.45—3.99	3.22

The wholesale prices given below are based on reports made by manufacturers covering actual sales of condensed and evaporated milk delivered to jobbers, wholesale grocers, and similar buyers at manufacturers' distributing points on basis of cash short time credit. Foreign prices are given as f. o. b. or f. a. s. points of export in section in which sales were made:

Geographic sections	Sweetened condensed per case* 14 oz. cans		Unsweetened evaporated per case* 16 oz. cans		Sweetened condensed bulk per cwt.		Unsweetened evaporated bulk per cwt.	
	Domestic	Foreign	Domestic	Foreign	Unskimmed	Skimmed	Unskimmed	Skimmed
New England	$10.29	$10.35	$6.39	$7.00	$22.03	$16.50	$10.32	$5.10
Middle Atlantic	9.99	10.08	6.22	6.58	20.58	15.62	11.19	6.35
South Atlantic	10.25	10.35	6.63	7.00	19.45	16.00	13.00	5.55
East North Central	10.25	10.35	6.19	7.00	19.73	16.32	11.64	5.70
West North Central	10.25	10.35	6.28	7.00	20.05	16.52	10.66	
South Central	10.30	10.35	6.43	7.00	19.85	15.10		7.00
North Western	10.17	9.71	6.28	7.00	20.23	16.50		6.22
South Western	10.25	10.35	6.15	7.00	19.70	17.50		
United States	10.12	10.10	6.30	6.88	20.04	16.00	11.29	6.05

*Case contains 48 cans.

Every Farmer Runs a Factory



The farmer's "factory" consists of his barn, dairy, tool room and other equipment. Just as in the big city factories, time must be made to count and one of the greatest time savers is good lighting! One of the first investments on a modern farm should be an electric lighting plant. Nine-tenths of the plants now being sold are equipped with NATIONAL MAZDA lamps. There must be a reason for this, and you will find it wise to buy the same kind—NATIONAL MAZDA. You can secure them from the man who sells the lighting plant or from the lamp agent where you see the Blue Carton displayed.

NATIONAL LAMP WORKS *of* General Electric Company
67 Nela Park, Cleveland, Ohio

Each of these labels represents a Division of National Lamp Works equipped to give a complete lighting service



NATIONAL MAZDA LAMPS

"America's Quality Herd"

—is Sending Three of its Choice Animals to the Chicago Sale, October 13-14



SCHILLING COLANTHA LANGTRY 222523

This 33-lb. Cow—

"Schilling Colantha Langtry"

Butter 33.81
Milk 602.90

Butter (4 yrs)..28.00

This beautiful cow is now on year test and will finish with approximately 1,000 lbs. butter and 20,000 lbs. milk.

Bred Feb. 16, 1920, to KING PONTIAC DIONA JOLIE ONA, a bull backed by three direct generations of 1,000-lb. dams. Consider the value of the calf of this combination.

—And this beautiful Son of a 33-lb. dam

"King Valdessa Pontiac Artis"

Born November 25, 1919

A very handsome young bull. One of the finest individuals we have ever bred.

He is sired by King Valdessa Pontiac, son of Mabel Segis Korndyke (40.32 lbs.) and sire of Echo King Sylvia. 45 daughters of King Valdessa Pontiac are in our herd for development.

The dam is Carrie Colantha Artis, a most perfect individual cow, with 32.51 lbs. butter from 503 lbs. milk and now making a year record, has 605 lbs. butter from 15,797 lbs. milk in 8 months.

The two nearest dams of this calf average over 36 lbs. butter. A youngster worthy of heading most any herd.



KING VALDESSA PONTIAC ARTIS 289704

Also—

BELL FARM LADY, a yearling daughter of Mr. Moscrip's herd sire, Bessie Fobes Oak Homestead, from a 22-lb., 4-year-old granddaughter of Sir Ormsby Hengerveld De Kol, second dam our old foundation cow, Juneau Segis Homestead. A very attractive heifer in every way.

Bell Farm asks that you carefully consider its representation in this sale. We always guarantee in every way every animal we sell.

Bell Farm

CORAOPOLIS, PENNA.

"The Utmost in Quality Holsteins"

HOME OF ECHO KING SYLVIA

Holstein Breeders' Sale Co.

First Fall Sale

Oct. 15, 1920

Fond du Lac, Wis.

80 head of the best cattle we have ever sold

40 head will be fresh or heavy springers, 20 of them with A.R.O. records from 14 to 31 pounds butter.

We will sell Fairview Milla Korn. 2d, a 31.46-lb. daughter of Rag Apple Korn. 8th, bred to Erricson's Marathon Bess Burke Bull. We will sell her son by Pabst Pontiac Heng. DeKol, also a yearling son of King Segis Pontiac and Queen Julianna Dirkje. His 2 nearest dams average 1146.66 lbs. butter in 365 days, and 33 lbs. butter in 7 days.

Also twin bulls ready for service out of a 28-lb. dam and a 37-lb. sires dam.

Remember the date and watch for further information.

S. H. BIRD, Sales Mgr.

Summit County Breeders' Sale

Akron Fair Grounds - - - - Akron, Ohio

October 4, 1920 Commencing at 10 o'clock prompt

95 Registered Holsteins 95

The youngest animal to be sold will be a springing two-year-old.

Nothing in this sale over seven years of age.

The first cow to be sold will be 24-lb. Ormsby cow that is 55% the same blood as the five times 30-lb. cow.

Fifteen choice A. R. O. cows bred to King Ona 251236, who is a grandson of Pontiac Aaggie Korndyke, who was the first bull to have four 1,200-lb. daughters. His dam, Ona Button De Kol, seven days 30.29, milk 608.40. Butter 30 days, 120.19, milk 2,481.00. Butter 365 days, 1,345.55, milk 26,767.20.

Three A. R. O. daughters.

Several large A. R. O. cows, highest class individuals with extra good breeding.

Sold subject to 60-day retest privilege. All cattle in this sale are personally inspected and hand picked.

Good Individuals - No Blemished Animals - Good Blood Lines - Health Guaranteed

Credit of 8 months by furnishing bank references.

Sale Manager, W. F. COOK, Hudson, Ohio

Auctioneers: Kelly, Hess and Hammond - - - - - S. T. Wood in the Box

AUCTION

90 Head

Pure-bred Holsteins

The Finest Registered Holsteins

Ever offered at public auction.

30-Lb. Cows
Sons and Daughters of 30-lb. Cows
Sons and Daughters of 35-and 40-lb. Bulls.
Daughters and Granddaughters of Colantha Johanna Lad

COWS THAT HAVE MADE OVER 100 LBS. OF MILK A DAY

From the Noted "Field" Herd

Greatest Milk Producing Herd in the United States

Monday, Oct. 4th, 1920, 10 A. M.

D. W. Field Farm Co., Oak Street Montello, Mass.

DAIRY SALE

ABSOLUTE DISPERSAL

At SEDALIA, MO.,

Wednesday, October 6, 1920

150 High Grade 150

Holstein, Jersey and Guernsey

Cows and Heifers

This is all high class stock of our own raising and will be a golden opportunity to secure good dairy cows as foundation stock. A few high grade Hereford stock, cows and heifers.

1 Extra good Registered Guernsey Bull
1 Extra good Registered Holstein Bull out of A. R. O. cow.

Sale to be held at Farm known as the B. W. Gorrell Farm, 4 miles northeast of town. (Rain or shine.)

Sale Opens at 10:00 o'clock Sharp — Dinner on the Grounds

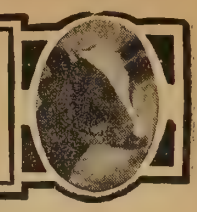
H. E. & HARRY COLVIN

AUCTIONEERS:

Charley and Kemp Hieronymus and Clay Harned



HOARDS DAIRYMAN JUNIORS



A DEPARTMENT FOR THE DAIRY FARM BOY

Boys and Girls Serve Refreshments

Eighteen months ago the boys of Bartholomew County, Indiana, who were members of the cow and calf and pig clubs, decided that they needed a supervisor for their club work.

No sooner had they decided that a supervisor was needed than they set out to get one. As a result of their efforts, announcement was made early this week that such a supervisor will be employed, beginning next spring. Here's how the boys brought it about.

First they determined to have a refreshment stand at the county fair. Like most everyone else they had discovered that the food which is generally served at county fairs is not of the highest order and therefore they decided that there would be a good market for refreshments made from farm products.

Next the boys enlisted the support of the members of girls' clubs of the county, who agreed to help with the work in the stand and to furnish pies and bread for sandwiches.

When the fair season opened last year the boys' and girls' clubs of the county announced through the local papers that they would serve refreshments at the county fair of the kind that "mother used to make". Ice cold milk, taken from the Jersey cows on exhibition at the fair, country cured ham sandwiches, fresh baked country pies, pressed and fried chicken, sandwiches went to make up the menu offered fair goers.

People, long tired of the usual food served by the fair concessionaries, flocked to the "club stand" where they ate plenty and often. The project was a decided success and after all bills had been paid, it was found that $170 had been cleared from the stand.

With this amount as a nest egg and the experience gained from the previous year, the boys began early to plan for the 1920 stand, determined to make enough from it to "put over" the supervisor idea.

On the first day practically everything was sold out by noon and although larger amounts were provided for each succeeding day, the shelves of the stand were bare long before night. Needless to say the stand was a success for announcement has been made by County Agent C. M. Job that the supervisor will be employed in time to begin his work in the spring.

Although the boys have attained the goal towards which they started, they declare that the refreshment stand idea must not be abandoned. Next year they will have a stand and if the profits aren't needed to pay the supervisor's salary, something else will be undertaken.

Indiana. Y. C. CLINE.

A Health Calendar for the Junior Poultryman

KINDS OF LICE—1, body; 2, head; 3, feather. Habits—1, Live on the hen; 2, Eat body waste; 3, Feed any time. Treatment—1, Equal parts of blue ointment and vaseline; 2, Louse powders: Cresol, one part; gasoline, three parts; Plaster Paris, enough to make a thick paste; dry and powder; 3, Sodium fluoride.

KIND OF MITE:—1, red; 2, scaly leg; 3, depluming. Habits—1, Live in coops; 2, Suck the blood; 3, Feed at night. Treatment—1, Clean up thoroughly; 2, Spray house and paint the roosts.

Missouri's Junior Judging Team Selected for National Dairy Show

One of the additional features of the Missouri State Fair this year was a Junior Dairy Judging Contest open to teams from every county in the state. The contest was a success in every way, with seven teams competing. The contest was under the management of F. L. Wright, assistant State Boys' and Girls' Club Leader and was judged by E. M. Harmon, Dairy Extension Specialist for the University of Missouri.

The sweepstakes teams were: 1, Livingston County; 2, Holt County; and 3, Pettis County. The Livingston County team, consisting of Arthur Bennett, Lowell Forbus, Francis Gwin and Arthur Gwin will represent Missouri in the junior judging contest at the National Dairy Show in October. They were coached for the state contest by J. A. Wisdom, instructor in vocational agriculture at Chillicothe. He and E. M. Harmon of the Dairy Department of the University of Missouri will coach the team for the National contest.

E. M. HARMON.



LIVINGSTON COUNTY JUNIOR DAIRY JUDGING TEAM, CHAMPIONS AT MISSOURI STATE FAIR

Left to right: (Top row), Francis Gwin, Arthur Gwin, Arthur Bennett. (Bottom row), J. A. Wisdom (coach), Lowell Forbis.

A Letter from Connecticut

HOARD'S DAIRYMAN JUNIORS:—I want to write a letter for the Junior Department of Hoard's Dairyman, though I have long ago passed my childhood. On my farm is a little boy, named Harold Raymond Stacey, four years old. He is a very bright, happy, lovable child and every one likes him. Like all children of that age, he watches others to see what they do, and then he tries, like a parrot, to copy their actions. I am enclosing some photographs that his sister took of him. In one of them he is trying to use a hoe; in another he is trying to help by carrying a bushel basket back to the barn where it belongs. He is not old enough yet to know that there should be a place for everything, and everything in its right place, but he knew that this basket's right place was in the barn so when he saw that the pears were all picked, he started to help by carrying the basket back.

Harold likes calves, too. One day he was found sitting on a heifer's back as she was lying on the ground. He had never seen any one do this before, but had probably seen his father on horse back, so, like a child copying what he sees others do, he tried to have joy on a heifer's back. Just before this he went up to the heifer to fondle her and he put his little hand in her mouth. When she brought her teeth together it hurt him and he came into the house crying. Probably he will know better next time. The other children have to be very careful what they say or do, for this little fellow is sure to imitate them. They have to be very careful about the words they speak so Harold will not learn any bad words. That great and wonderful book, the Bible, says that "even a little child is known by his ways". When stones are being gathered out of a field after plowing, Harold goes out with his little express wagon, fills it with stones, and his father hitches it on the back of the big wagon and draws it along to the dumping ground.

As I see this little boy frequently mimicing or copying others, I feel impressed with the great power of good and evil example, and how very careful we all ought to be that our example is always for the good, so that no one can ever copy anything that we do, and yet do wrong in the sight of God, who loves righteousness and hates sin.

Connecticut. GEORGE W. SMITH.

Five Cent Piece Starts Boy on Road to Success

Van Palmtree is a 13-year-old boy who lives in Panola County, Mississippi. Van belongs to one of the many boys' agricultural clubs in that state. Many of the Mississippi club boys have had unusual success with their club projects, but Van's success is noteworthy because of its small beginning.

In April, 1916, 5 cents was given him by his teacher as a reward for unusually good lessons and good behavior one day at school. With this money he bought a chicken. It was crippled, hence its low price, but much coddling on his part saved its life, and it grew to maturity. The next summer she raised a brood of chickens which were sold for $1.50. With this money Van bought a pig. It was a runt pig, but care and good feeding for a few months made it well worth the $9.36 for which its owner sold it.

Immediately the young financier bought a heifer calf with the price paid him for the hog. Last year and again this she presented her owner with a heifer calf, so he now has a little herd of three, all the outgrowth of that one nickel which he invested four years ago.

The club boy's cattle are scrubs, but he is hoping to have something better some of these days, and with a boy of his kind, to plan is to do. So it would not be surprising if the nickel continued to grow and become a pure-bred herd before Van is 16—Weekly News Letter, U. S. Dept. of Agr.

Junior Letters

Hoard's Dairyman Juniors:—I received the watch fob, button, and creed and like them very well. This is my second letter to the juniors.

I live on a 105-acre farm. We have four heifers and four bulls that will be one year old and three heifers coming two years old and seven cows between three and five years of age. Our herd sire's name is Tobe Segis Korndyke.

It is raining here now for the first time in three weeks. Our corn needed it badly, not only the corn but all the other crops. We have had the best early potato crop ever known in this territory. We are hauling gravel at the present time as threshing is almost over. We intend to concrete our barnyard a block about twenty by sixty feet.

It is getting near trapping time in this state. Muskrat law came in in August last year. I caught three skunks and a few rats last year but I expect to catch more this season because there are more rats and skunks this year.

I have no calf but would like very well to have one. I have a sow that will have pigs soon. She is a Poland-China. I also have about fifteen gray and white rabbits.

Our county fair was this week. There weren't any dairy cattle there but there was one Shorthorn cow and about 50 head of horses. They were most all Percheron horses and over one hundred race horses.

Well, I will close for this time and would like to see more juniors from Ohio. The nearest junior to me lives at Sidney, Ohio.

Ohio. Eugene Hanawalt.

Hoard's Dairyman Juniors:—My chickens are getting along fine now and I am expecting the pullets to lay soon. I did have fourteen, but I sold two cockerels. There are ten pullets in the bunch.

They have organized a grange here since I wrote to you last. We had a picnic Sunday and the men here started the grange hall. I am going to join soon.

We have nine pigs now, but they aren't grown. The mother died when they were quite young, from over feeding. One of them is my youngest sister's. She calls it "Nig".

We have all of our grass hay and oats in now, but there are about three loads of wheat not quite ready yet. We will have quite a bit of hay this year.

We have only five calves this year. Their names are Bo-Peep, Peaches, Cream, Janet, and Muggins. Bo-Peep is mine.

Oregon. Grace McHargen.

Hoard's Dairyman Juniors:—I received my fob and creed today. This is my first letter to the juniors and I am proud of my fob and button.

I have a red heifer but am thinking about trading her off for a Jersey.

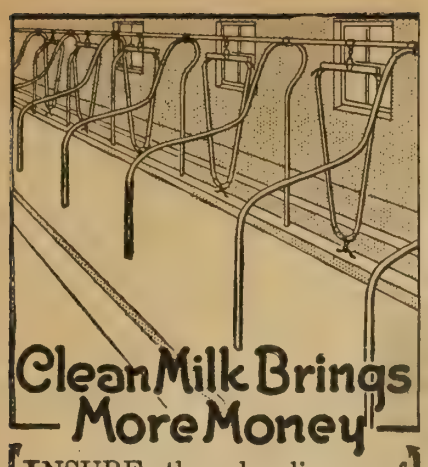
I am nine years old and passed into the fourth grade of school. I have passed every year.

I am leaving Sunday for Roseville, California.

Good luck to the juniors.

Kansas. Elmo Hardison.

Hoard's Dairyman Juniors:—We are now living on our own ranch that dad bought last winter. We own sixty-two acres of land here and it is almost all cleared. We have nineteen milk cows, two heifers, and five calves here. We also have two sows and seventeen little



Clean Milk Brings More Money

INSURE the cleanliness of your milk supply. Increase the yield. Give your cows safety, quiet and pasture comfort in the barn. Save feed, time and labor, eliminate trouble and expense and **make more money** by installing

CLAY Sanitary Dairy Barn Equipment

Only 3 parts in stall. Strong steel tubing—no corners—easy to clean. **Permanent construction**—less up-keep cost. CLAY 2-Way Stanchion instantly closed or opened **both** ways by **one** hand. Fits any size animal and gives perfect ease. Hangs in center of stall—cow can't get in wrong—no sure-stops needed. CLAY Equipment is fully guaranteed. Users say it quickly pays for itself.

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pigs. We had bad luck with our stock last winter. Two of our horses and two cows died.

It is mighty dry here this summer. Everything is drying up on the high land. Some farmers up there hardly got any hay for their stock next winter. Down in the river bottom where we live it isn't quite as dry but soon will be if it doesn't rain. We have lots of hay for this winter and expect to sell some. I think hay will sell at a high price next winter because there is so little. Some farmers were buying it this summer at $25 a ton in the shock.

Wishing all the juniors good luck. I would like to have some of the juniors write to me. My address is Lynden, Wash. Bert Brune.

Hoard's Dairyman Juniors:—Our cows are holding up good this summer. I bred one to a pure-bred Jersey and one to a pure-bred Holstein. The last calf we had was a freak. It was born without a tail and was stiff legged and ran like a jack rabbit.

I received a letter from Raymond Gardner, one of the juniors, and would like to hear from others.

My brother and I keep 3 cows and sell about 30 qts. daily. I live on a poultry farm. We keep about 1,200 layers and about 1,500 young stock. My father and another man are starting a hatchery. They are going to have 50,000 eggs capacity.

Well, I will close, wishing the juniors good luck. My address is R. F. D. 1, Box 214, San Diego, Cal. Meredith E. Owen.

Hoard's Dairyman Juniors:—I am very well pleased with the button, watch fob, and creed you sent me.

I live on a farm. We milk seven cows. I milk two of them about every evening.

I am 11 years old. We have two calves, Bob and Jersey. Sometimes we tie them out in the field together. I have a patch of my own. I have corn, potatoes, melons, cucumbers, cabbage, peanuts, and tomatoes.

I have two brothers. Their names are Paul and Leslie.

The weasel killed all of our chickens. We have another bunch of thirteen. They are not very big. They are about three weeks old. We have a sow three years old. She had her leg broken once but it is all right now.

Ohio. Ruth Switzer.

Hoard's Dairyman Juniors:—I am glad to say that I have just been admitted to the junior club, of which I am very proud. I was 15 the 12th of August. We live in Linn Co., Oregon. We keep registered Jersey cows and raise most all our own feed, including corn, beets, roots, kale, clover hay, wheat, and oats.

I am going to the state fair at Salem, Ore., as a caretaker for a neighbor who raises Percherons, 20 head in all.

I thank the editor very much for my fob, button, and creed which I believe in to the bottom of my heart. I also stand for our America first.

Will close with best regards to all juniors.

Oregon. I. Nathan Quick.

Hoard's Dairyman Juniors:—I received my creed, fob, and botton. Many thanks. I surely like to read the juniors' page.

We have two horses, two pigs, and four cows. I also have one cow. We have one 3-year-old heifer and three 1-year-old heifers.

Wishing the juniors good luck.

Oregon. Victor Wolf.

Hoard's Dairyman Juniors:—I have just joined the juniors' club. I received my creed, watch fob, and button. I have joined the Oneida County Calf Club, too. I expected my pure-bred calf the first part of this week. I have one large pig. My brother and I own a registered gilt.

I wish some juniors would write to me and tell about their calves and pigs. My address is R. D. 1, Vernon Center, N. Y.

Stanley E. Skinner.

Hoard's Dairyman Juniors:—Received your fob, button, and creed and thank you very much. I believe every word on the creed.

We are milking 15 cows at present. I milk 2 cows every night and morning. We have pure-bred Holstein cattle.

They organized a boys' and girls' calf club out here. I joined it and have a heifer calf. I am going to take it to the fair and hope to win 1st prize. I have 3 guinea chickens and 9 young ones.

As my letter is getting long I think I have to close. I wish some of the juniors would write to me. My address is R. R. No. 2, Dyersville, Ia. Wm. L. Pape.

Hoard's Dairyman Juniors:—I received the creed, fob, and button and like them very much. We have 6 cows, 2 horses, 21 little chickens, 2 pigs, 4 rabbits (1 pair is mine), and 25 sheep and lambs. Our farm is 61 acres. I wish some of the juniors would write to me.

New York. Reginald Goodrich.

Hoard's Dairyman Juniors:—I have not written for so long I suppose you have forgotten I am a junior.

We have been very busy lately. We threshed quite a while ago. Our wheat made 21 bushels to the acre and our oats 36. I helped shock it.

We are through cutting millet. We cut it with the binder and shocked it. I helped do the shocking. Now we are cutting the cane with the binder. I am helping shock it, also.

My chickens are doing fine. My hen hatched every egg she had but I have only a third of the chickens left. Some died and the coyottes got some.

We are only milking four cows now. We are not getting much milk.

We are having a cool, rainy August. The other day the temperature dropped to 67 degrees.

My letter is getting long so I will close.

Oklahoma. Mildred Reynolds.

Hoard's Dairyman Juniors:—I did not see my last letter in print but that does not discourage me for I don't become discouraged that easily.

We have our haying all done. We had 84 loads, 72 of which we put in the barn and the other 12 were put up on shares by my uncle. We haven't threshed yet but will start soon.

We have a milker now and like it fine. We couldn't get along without it when papa has to go away threshing. We have a 1½ horse power engine to run it with.

Our corn will average 14 feet high in all of the fields. One man had some oats go 80 bushels to the acre but don't think ours will be that good.

We turn the cows in on the clover now to keep them up on their milk because the pasture is so short. We are milking 20 cows now and get about 45 to 50 gallons of milk a day. They are all starting to go dry now because they freshen in October and November.

Wisconsin. Agnes Seamans.

Hoard's Dairyman Juniors:—I guess it is about time I was answering your last letter. We have been pretty busy since then with haying, grain harvesting, and threshing. Our first crop of hay was fine, only most of it got wet. We cut 23 loads from 11 acres. It was medium clover. The second crop is pretty short, due to dry weather.

We threshed out 681 bus. of oats from 11 acres, 348 bus. of barley from 9 acres, and 24 bus. of wheat from 1¾ acres. Our oats yielded second highest in the entire neighborhood and the barley was not far behind.

The weather has been so dry that some fellows are cutting corn. Potatoes will be quite light around here this year. Ours look better than most of them through the country.

We had some rain the last two days and started plowing today. For winter wheat we will have three acres. Winter wheat runs about 25 to 30 bus. per acre around here; spring wheat was less than half that this year.

You asked me in your letter if we feed our cows grain. Yes, we feed them ground oats in addition to clover hay and it sure does pay. We are milking eleven and stripping two.

School starts September 13.

I wish the juniors good luck.

Wisconsin. Paul Krippner.

Hoard's Dairyman Juniors:—I live on a farm of 175 acres. We have 25 head of milking cows and 17 head of young stock. We have 5 horses. We are working another farm of 65 acres. We had 140 acres of hay. Most of it is pretty good.

I read the juniors' letters every week and I think they are interesting. I have a calf and a nice team of horses. They weigh 2,900 lbs. We bought a manure spreader this summer. It saves labor and time. Men are very hard to get around here.

The corn looks good around here. The wheat was pretty good, too. It is not very good haying weather now. We have nine little pigs. They are nice ones. I would like to hear from some of the junior members. My address is R. F. D. No. 1, Canastota, N. Y.

George Welch.

Hoard's Dairyman Juniors:—I received your nice watch fob and lapel button, also farm boys' creed and believe every word in it is true. I am ten years old. I belong to the Buffalo Valley Pig Feeding Club. My pig is a Berkshire. There are three other Berkshires, two O. I. C. pigs, one Duroc Jersey, and four grades.

We started May 19th and will have the annual round-up Oct. 8th, which will make 140 days. The round-up will take place at the Union Co. fair grounds and then we are going to select the best pigs for competition with the other pig clubs, at the Union Co. fair, which will be held from Oct. 12th to the 15th.

I have written this letter on the typewriter which I got last Christmas.

Pennsylvania. Philip K. Frederick.

Hoard's Dairyman Juniors:—Well, don't forget I am a junior though I don't write very often.

I have three pet lambs which I am going to sell to papa for fifteen dollars or five dollars apiece.

I am raising chickens. I have about 65 and I will sell the roosters this fall and mamma will pay me for the pullets. She will pay me 20 cents for every chicken I raise.

I mailed a letter to Gerald Spaulding of Oconomowoc, Wis. The first Spaulding I noticed on the junior page.

I am 10 years old and in the 6th grade at school.

We have eleven milk cows and feed one calf. We have about thirty sheep, two horses, and seven or eight pigs.

I hope to hear from some of the juniors. My address is R. F. D. 1, Box 164, Buchanan, Mich. Agnes Spaulding.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

Let us ship you those Holstein calves you are thinking about. Subject to inspection at $35 each. We pay express and ship C. O. D. SPREADING OAK FARM, Route 1, Whitewater, Wisconsin. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Registered Holstein bull ready for service; two of his dams averaged 100 lbs. milk in one day, and 40 lbs. butter in 7 days officially. $200. R. N. HARRIMAN, Appleton, Wis. 5-6

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated. C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 10*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

For Sale—26 Holstein heifers 2 and 3 years old, to freshen this fall and winter, at $90.00 per head. WILL H. GIBSON, Brodhead, Wis. 8-4

Three hundred high grade and pure-bred Holsteins of all ages. Write for prices. FRICK & HOESLY, New Glarus, Wis. 2-spl

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

For Bargains in registered and high grade Holsteins try us. LOVELAND FARM, Holland, Ind. 9-3

Herd Headers—Ready for service. King Korndyke Sadie Vale, King Segis Pontiac, King Model Blood. Forty-pound breeding close up. $75 to $200. JOHNSON COUNTY HOLSTEIN CO., Warrensburg, Mo. 9-2

For Sale—8 head high grade Holstein cows. Some have Cow Testing Association records as high as 10,499 lbs. milk in 10 months. Would like to sell whole herd to same party. Have been tested for tuberculosis every year. Will sacrifice for quick sale. J. A. HOPPER, Sinclair, Illinois. 9-2

Carload choice grade Holstein springers. All young. Two registered Holstein bulls, 8 months old, 30-lb. sire. Price, $100. JOHN ZENTNER, Kilbourn, Wisconsin. 10-2

Registered Holstein 31-lb. herd sire, young bulls and calves for sale. PHILIP LEHNER, Princeton, Wisconsin. 10-2

For Sale—47 head registered tuberculin tested Holstein cows, heifers; bred to 32.88-lb. bull. Fresh or soon due. OSCAR WESTERHEIDE, New Douglas, Illinois.

Having rented my farm will sell entire herd of 26 registered and high grade Holstein cows and heifers, result of years of careful selection and breeding. Most of them to freshen by February. All bred to grandson of K. K. S. V. 27.43-lb. herd bull. Bull also included if desired. Sold reasonable if taken at once. E. M. BICKFORD, Plain View Farm, Neponset, Illinois. 10*

See my calves before you pay for them. I offer extra choice high grade Holstein heifer calves at $25.00. Registered bull calves $40.00. C. O. D. Safe delivery and satisfaction guaranteed. J. M. McFARLAND, Watertown, Wisconsin. 10-2

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Plebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

For Sale—50 head of registered Holsteins, 25 cows aged 3 to 7 years, sired by a 26-lb. and bred to a 30-lb. bull. Start to freshen September. Also 25 heifers, 1 to 2 years old. ARTHUR N. BIRKHOLZ, New Buffalo, Michigan. 10-2

Registered yearling Holstein bull—Sir Johanna Fayne breeding. Priced right. LYONIAN HOLSTEIN FARMS, Lyons, Iowa. 10-2

Holstein Bulls—Ready for service. 37-lb. sire. IDEAL STOCK FARM, Dexter, Iowa. 10-4

Guernseys—Eight high grade perfectly marked heifers. Yearlings coming two this fall, just being bred, also three last spring heifers. They are from high producing dams. Pathfinder and Sensation Duroc boars. Write for details. L. E. GRUNENWALD, Livingston, Wisconsin. 10-2

STOCK FOR SALE

For Sale—Registered Holstein bulls from tested dams. High class herd. Tuberculin tested. Full particulars on request. ARTHUR C. DAILY, Springfield, Mo. 10-3

Jefferson County Guernsey Breeders' Association can suppiy a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

For Sale—A carload of high grade Guernsey cows made up from the pick of Polk County Guernsey herds. What you want in grades. Polk County Guernsey Breeders' Association, J. H. STEWART, Sec., Clear Lake, Wis. 8*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

For Sale—Pure-bred Guernsey bull, one and two-thirds years old, with papers and pedigree. Well marked, guaranteed breeder, good individual. JOS A. TRAXEL, Route 4, Almond, Wis. 8-4

For Sale—Twenty head high grade, tuberculin tested Guernsey heifers and young cows, nearly all bred at this time to pure-bred Guernsey bulls. If interested address A. W. BROWN, Rhinelander, Wisconsin. 8-4

For Sale—Cows, bulls. Registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wisconsin. 10-5

Guernsey bulls for sale two months to eighteen months old. From A. R. cows. May Rose and Sequel breeding. Send for sale list. Also several big type Poland China boars, sired by The Comet and he by Liberator. Real boars at reasonable prices. DALE E. RUNDELL, Ore Hill Farm, Livingston, Wis. 10-4

Grade Guernseys—32 cows and heifers, 18 giving milk, 9 due to freshen before December 1st, also 4 registered bull calves, from 6 to 10 months old. Our herd was sired by Langwater Peerless and out of a 600-lb. A. R. cow. CHAS. E. WILBUR & SON, Greenwich, N. Y.

Edward of Linwood for Sale—One-year-old, good individual, good color. A grandson of Imp. Clara's Sequel and a 740-lb. cow. His dam has 421 lbs. at 2 years and is to be retested and will make 600 lbs. fat. Extra fine bull. HOMER RUNDELL, Livingston, Wisconsin.

Guernsey sale September 29. Pure-breds and grades. 2½ miles west of Black Earth, Wisconsin. ALBERT HENNING.

Guernsey bull—Thirty months old, quiet. Grandson Ne Plus Ultra. Dam making A. R. record. Tubercular free herd. MEADOW BROOK FARM, Ottsville, Pennsylvania.

Dispersion sale Hall Roberts' Guernsey herd, thirty head high grades and pure-breds October 12th. H. E. ROBERTS, Ex., Postville, Iowa.

Majesty Jersey bull, 7 months. Sire from 800-lb. cow. Dam, 200 lbs. fat 4 months. Fine individual, well grown. Price, $125.00. For picture and pedigree address CHAS. STREUL, Mgr., Whittlesey Place, Ottawa, Illinois.

For Sale—Some good quality registered Jersey cows, newly freshened. PARKER DOW, Whitewater, Wisconsin. 8-4

Grade Jersey cows for sale in carlots. Prices reasonable. TRIMBLE BROTHERS, Trimble, Ill. 8-4

Sophie Tormentor Jersey bull calves 6 to 8 months old, 75 per cent Hood Farm blood. ROY J. GUYER, Linneus, Missouri. 9-3

We have a few young registered Jersey cows and heifers for sale. Write for particulars. SHARON HILL FARM, Coraopolis, Pa. 10-5

Registered Jersey heifers, calves and yearlings, good breeding, $50.00 to $150.00. AVALON DAIRY, Bangor, Michigan.

Registered Jersey calves of finest Sophie Tormentor breeding. Choice individuals, both sexes. Prices moderate. RUTH WOOD, North Andover, Mass.

For Sale—Registered Brown Swiss bulls from 10 to 14 months old. From high producing dams. Write for prices. A. C. BOODY, Hudson, Wis. 14*

Federally tested Brown Swiss bulls. A. W. WILLMANN, Hawkeye, Iowa. 9-4

STOCK WANTED

Wanted—A pure-bred Holstein bull of serviceable age, more white than black and of a record of thirty lbs. or more, both dam and sire. H. G. HUNTE & SONS, Hartland, Minnesota.

Wanted—Registered Holstein bull, serviceable age, good breeding. Farmers' price. E. D. WOLFE, Lemhi, Idaho.

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

Shropshire rams of best breeding, also few Oxfords. GEO. McKERROW, Pewaukee, Wisconsin. 9-3

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

New Zealand Reds—For food, fur, pleasure or profit. Every family should have a trio at least to reduce the H. C. L. Two to three months old $5.00 pair, $7.00 trio. Add $1.00 pair for each month older. All thoroughbreds. FULLER'S RABBITRY, Fort Atkinson, Wisconsin. 7-4

POULTRY

50 Single Comb White Leghorn Cockerels for sale. $1.50 each. HUBERT A. NEIHOFF, Horicon, Wisconsin. 10-2

SWINE

Hampshires. Registered stock, either sex, all ages. State fair winners. GLEN EYRIE FARM, Delavan, Wis. 7-5

For Sale—Eight-week-old pigs. Reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 8-8

Large Yorkshires. Fine March boars at $30.00, yearling boar at $50.00. Certificates furnished. M. O. LARSEN & SON, Colfax, Wisconsin. 9-2

Pure-bred, big type, Chester White boars. Excellent breeding. LLOYD NESBIT, Barron, Wis. 10-3

For Sale—Registered Chester White pigs, either sex, 10 weeks old, from Babcock's prize stock, $25.00. BULL MOOSE STOCK FARM, Watertown, Wis.

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Ill. 8-4

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 39 South La Salle St., Chicago. 18*

SALESMAN WANTED

Salesman wanted—High grade salesman to sell molasses dairy feed, cattle fattner and chicken feeds. In Wisconsin, Iowa, Illinois, and Indiana, by a new mill with large capacity, and producing a high grade line of feeds. To the right salesman with experience and initiative we can offer an attractive proposition. In answering give full particulars as to your experience and state territory you have covered. BROOKS ELEVATOR COMPANY, Minneapolis, Minn. 9-2

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MACHINERY

For Sale—One 12—20 Eagle tractor. In good mechanical condition. Also one 10-foot double disc used one season. E. E. RANDALL & SON, Watertown, Wisconsin. 9-2

For Sale—Single cylinder 10-20 International tractor; good condition and must sell. J. A. MARTINY, Baraboo, Wisconsin. 10-2

For Sale—10—20 horse power Titan tractor in good condition for $500.00. ROY SUCKON, care Elmwood Farm, Neillsville, Wisconsin.

For Sale—Ronning ensilage outfit complete, never been used. Cost $1,215.00. Will take $850.00. A. E. D., 84 Garland St., Sturgeon Bay, Wisconsin.

144 Bottle sterilizing oven. New, in original crate, thermometer, shelves, piping. No stand, first draft of $35.00 gets it. W. DOOLEY, Lawler, Iowa.

PARTNER WANTED

Experienced Dairyman—Would there be any profit for you to furnish all the labor and one-half of the cows for a 30-cow dairy on 140 acres good producing land for corn and clover on 50-50 basis. Ten cents quart for bottled milk at the farm. Correspondence solicited. Address N. A. W., South Erie Office, Erie, Pennsylvania. 9-2

Superintendent and Partner wanted.—A gentleman owning an up-to-date dairy which is now making in net profits over $7,000 a year is obliged by age and ill health to relinquish its management. He wants to dispose of an interest in the property to a man competent to manage the business. Best and bank references given. Apply in writing to MISS CROWLEY, Stenographer, Worthy Hotel, Springfield, Mass.

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

For Rent—160 acres good land, on shares, 20 fine, high grade Holstein cows and 15 heifers, haul milk 4 miles. Want only a good farmer and dairyman. Give experience and references in first letter. J. H. MOSHER, Prophetstown, Whiteside Co., Ill. 10-2

WANT TO RENT

Wanted to rent—Farm with cows and equipment. Prefer Central Wisconsin. Married. Lifetime experience. HENRY THOMPSON, Route 1, Gordon, Wis.

Want to rent on shares dairy farm with stock and machinery; either in Fall or Spring. Experienced. Southern Wisconsin preferred. Address BOX 382, care Hoard's Dairyman.

Wanted—To rent dairy farm on shares. Experienced, scientific and practical dairyman. BOX 378, care Hoard's Dairyman.

CHEESEMAKERS

Good, reliable middle-aged cheesemaker, with lifetime experience in foreign cheese making, wishes position as second hand with an A-1 American cheesemaker. JACOB ANDREA, care of Clifton Hotel, Milwaukee, Wisconsin.

DAIRIES

Dairy for Sale—Either all or half. Furnishing babies milk in city of Houston, Texas. Have demand for triple the amount. Getting the biggest prices at present in the far South. Am raising my prices in a few weeks to 30 cents per quart. Have feed enough for entire winter, some put up. Reason for selling, cannot get suitable help. Write for full particulars. KEYWORTH'S DAIRY, Box 476, Houston, Texas.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 7-5

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

SEEDS

Wisconsin grown winter sand vetch. VAN LOON, La Crosse, Wis. 8*

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

Are you looking for good farm land? We are offering real bargains in Aitkin County, "The County of Land Opportunity". This big railroad wants new settlers and for that reason can offer you a real bargain in a farm for a small down payment and on easy terms. Write today and we will send you free information on how to get one of these farms. L. B. ARNOLD, Land Agent, Rock Island Railroad, 154 Wolvin Bldg., Duluth, Minn. 7-4

High Class Virginia Bluegrass stock, grain and dairy farms. Near Washington and best markets. Mild climate. Write for free booklet. CAVINESS REALTY CO., Leesburg, Virginia. 8-5

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

300-acre farm, well improved, 6 miles from Madill, Okla. 200 in cultivation. Rich bottom land, 40 acres in alfalfa. Terms. Address BOX 247, Madill, Oklahoma. 9-2

Wanted to sell all or half interest in a large farm (nearly 500 acres) in St. Croix county, Wisconsin. A show farm beautifully located, fully equipped with modern buildings, and stocked with registered Holstein cattle. The soil is clay with clay subsoil, very productive and under a good state of cultivation. Walking distance to accredited high school and shopping district of live little city. A splendid opportunity for a progressive farmer of high character who will take over the active management. For full particulars address BOX 364, care Hoard's Dairyman, Ft. Atkinson, Wis. 9-2

Must sell 70-acre farm adjoining city limits with all personal property. $16,000. Further particulars, write WM. ALBRECHT, JR., Wausau, Wisconsin. 9-4

Good dairy farms in the fertile Mohawk Valley section, from 20 to 350 acres, some with or without equipment. P. E. TURTLELOT, Frankfort, N. Y. 9-2

Free map and list land bargains near Twin Cities. BAKER S-76, St. Croix Falls, Wisconsin. 6-spl

130 acres level, black clay loam, 2½ miles from county seat, gravel road, large 9-room house, 30x60 gambrel and 54x62 gambrel roof barns, granary, tool shed, and all the necessary outbuildings, all buildings painted and in good condition. Good orchard, good fences, well drained, 100 acres under cultivation, 30 acres pasture and timber. This farm is in a high state cultivation and is in every way a No. 1 farm. Price $135 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 16-spl

100 acres—6 miles from town, good roads, good 10-room house, good 50x60 barn, two smaller barns, outbuildings, black clay loam tiled, 76 acres under cultivation, 20 acres saw timber, balance pasture. Without help, must sell. $125 per acre. MICHIGAN FARM AGENCY, Box 928, East Lansing, Mich. 24-spl

New York Farm Agency, Westfield, New York, sells farms. Old folks die at about 100. Have to quit. Opportunity for young men. Come East! 10-spl

Maryland: Beautiful country home and modern dairy farm, 120 acres, every known convenience, mansion house, 12 rooms, tenant house, five rooms, on main line two railroads. Everything new and recently painted white. Address OWNER, 1721 Tribune Building, New York City. 10*

Springdale Stock farm, 155 acres, good land, suitable for tractor, good buildings. GEO. SCHOEWE, Owner, Waukesha, Wisconsin.

For Sale—156-acre dairy farm; buildings in best of condition; stock and utensils complete; located one-half mile from village of Florence, on State road. Price, $10,000. Part cash. MARIA COSTIN, Route 1, Florence, Oneida County, New York.

For Sale—A productive farm located in the heart of the famous Illinois Corn Belt. 211½ acres, 8 miles west of Kankakee main road and 1¼ miles from elevator. New 2-story 8-room house. Barn 40x42 and other outbuildings. Address WM. BURKHART, Bonfield, Illinois, or ANNA E. WHITCOMB, 423 N. Elmwood Ave., Oak Park, Illinois.

350-acre farm with 40 cattle, 3 horses, crops and 3 hogs, flock sheep, poultry, fodder to winter stock, machinery, wagons, tools; 275 acres machine-worked fields, wire-fenced pasture. 1,000 cords wood, market nearby; 200 sugar maples, apple orchard; 2-story, 12-room modern house, bathroom; 107-ft. barn, 2 silos, spring water, 2 other barns, poultry house, other buildings; settling estate, everything goes to quick buyer for $7,200, easy terms. Details this and good farm with 11 cows, equipment and produce, only $1,000 cash needed, page 22 Strout's Big Illustrated Catalog Farm Bargains 33 States. Just out. Call or write for free copy. STROUT FARM AGENCY, 150 D. L. Nassau St., New York City.

135 acres of land in Camden, New York; 20 head of cattle; all crops; fine house and barns; near school, church, state road, creamery; no agents; come and see it; $10,000. JOSEPH SEUBERT, Camden, N. Y.

For Sale—120-acre farm, 2½ miles from Hanover College, on good road; well watered; ten acres in timber; balance tillable. Price $65.00 per acre. One-half cash. Possession in 60 days. Will also sell six imported Guernsey cattle, one bull. CHARLES RODGERS, Route 1, Hanover, Indiana.

Owner obliged to go to another state offers fully equipped 200-acre dairy farm with two good houses at big sacrifice if taken now. Convenient to best schools and colleges. Examine and make offer, with or without equipment. WILLIAM B. HATCH, Ypsilanti, Michigan.

If you are looking for good, black prairie, alfalfa, corn, clover, stock and dairy land, come to Aberdeen; most beautiful city and best farming section in the South, where Lincoln Harbold of Iowa, largest hog feeder in the world, has located; 3 railroads, creameries, good water and schools, hard roads, magnificent climate, hundreds of Northern farmers; improved and unimproved farms; easy terms. WISHART REALTY CO., Aberdeen, Mississippi. 10-2

For Sale—100 acres in Glen, Montgomery Co., N. Y. Four miles from R. R., 3 from church, fair buildings. Price, $4,000.00. D. E. VOORHEES, Plainville, N. Y. 10-2

South Dakota—Never again will there be such opportunities for purchasing cheap lands as are now offered in South Dakota. Every acre that is now selling for $25.00 up per acre will soon sell for $100.00 or more. Write to Immigration Department, Capitol F-15, Pierre, South Dakota.

FARMS FOR SALE

For Sale—My farm of 185 acres with stock and tools. Good buildings, fertile soil, well watered. For particulars write FRANK J. NESBITT, Route 2, Attica, Wyoming County, N. Y.

FARMS WANTED

Farm Wanted—Have $15,000 second mortgage to pay down. Two banks for reference. ELLIS WADE, Waterville, Iowa. 8-3

Farms of 400 to 600 acres wanted. Need only be part under plow with good buildings and fully stocked. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

STANCHIONS

Crumb's Stanchions are guaranteed to please the purchaser. They are shipped subject to trial in the buyer's stable. They are right. Send for booklet. WALLACE B. CRUMB, Box H, Forestville, Conn. 1-10

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

BUSINESS OPPORTUNITY

Business opportunities suitable for retired farmer, or one whose time is not fully employed. $1,500 required. FRANK J. GRADY, 2203 Division St., Madison, Wisconsin.



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 8-4

Wanted—A young married man with some dairy experience, also knowledge of other stock and general farming on an improved road, good house and good equipment. Good opportunity for a young man wanting to get a start. Address BOX 353, care Hoard's Dairyman. 8-3

Wanted—Married herdsman for semi work. State records you have made in first letter. W. B. BARNEY & SONS, Chapin, Iowa. 8-4

Wanted—Married man, preferably without children, to work Virginia farm of from 150 to 200 acres on shares, 50-50 basis. February possession. Address FLOYD STARR, Albion, Michigan. 9-2

Single herdsman wanted to take charge of small pure-bred Holstein herd near Chicago where Advance Registry Official work is done. Good opportunity with excellent living connections for energetic, ambitious man. Address ROOM 1005, 112 West Adams St., Chicago, Illinois. 9*

Wanted—A single man to do four times a day milking. Must be a good milker. State wages and experience. PINEHURST FARMS CO., Sheboygan Falls, Wisconsin. 9-2

Herdsman wanted—To take charge of about 80 head Holstein cattle (about 20 registered) and help on a general plan to have all registered stock. Fair wages and a good per cent of the farm profits. THOMAS A. SOPER, 2516 Wabash Ave., Chicago, Ill. 9-3

Wanted—Man to operate my 200-acre farm situated near Oshkosh, Wis., on interurban road. Must thoroughly understand soils, rotation of crops and the care of a first-class dairy herd. A splendid opportunity for the right man as there is great activity in this county with pure-bred stock and pedigreed seeds. Address BOX 363, care Hoard's Dairyman. 9-3

Wanted—Single man for general farm work. Good place to work. State wages and experience. Address BOX 356, care Hoard's Dairyman. 8*

Wanted at once—Single young man of good habits to do farm and dairy work on Holstein farm. Yearly employment and good wages. Write stating terms. JOHN H. PESTER, Whitewater, Wisconsin. 9-2

Wanted—Single man, good dry hand milker, with good habits. Give reference and past experience in first letter. Good salary for right party. PERGUE FARM, Streator, Illinois. 9-2

Wanted—October 1st, young married man for dairy and farm work and interested in Holsteins. 135 acres, up-to-date equipment, good house, village adjoining farm. Good wages and opportunities. WAYSIDE STOCK FARM, Fond du Lac, Wisconsin. 10-2

Herdsman single or married, experienced in handling pure-bred cattle on test for Advanced Registry. Capable and experienced in producing special grades of milk including certified milk. Must be energetic and able to look after all details observed where good animals are kept and good milk produced. Steady employment and opportunity for advancement. State age, experience and references, as well as compensation expected, noting whether single or married. CRESTMONT FARM, 31 N. Fourth St., Sunbury, Pennsylvania. 10*

Wanted—Single man to work on dairy farm. Work all year and good wages. References required. Young German or Swiss preferrred. P. A. KUMMROW, Ceylon, Minnesota. 10-2

Wanted—Reliable, single man, general farm work and milking. Pure-bred stock, steady employment. Good home, near town. W. J. MARTIN, Darlington, Wisconsin. 10-2

Wanted—Man to do general work on Holstein farm. Good wages. W. J. PESTER, Whitewater, Wis. 10-2

Middle-aged couple for small retail dairy farm. No children unless capable boy about fifteen. Woman do housework. Live with employers. Married or single men. Write PEARSON DAIRY FARM, Owosso, Michigan. 10-2

Wanted—By single, middle-aged man, position on sanitary dairy. Experienced with general farm and dairy work. Good dry hand milker. State wages you want to pay. NELS NELSON, 64 West 10th St., St. Paul, Minnesota.

Wanted—An experienced man for bottling room on a dairy farm, bottling approximately 1,000 bottles per day. Farm three miles from Denver, Colorado. Man familiar with certified methods preferred. Must be able to handle small boiler for heating and sterilizing, operate bottling and capping machine, understand running of five-ton ice machine and Babcock testing. Must be single man of good habits and have good references. Good board and room furnished. State wages expected. Address BROOKRIDGE FARM, Littleton, Colorado.

Wanted—Assistant herdsman at once, with high grade registered Holstein cattle. State experience, salary, nationality, age and give reference in first letter. T. H. SKREI, Glyndon, Minn.

Wanted at once—Herdsman to care for Guernsey cattle on A. R. test. SUGAR RIVER STOCK FARM, Allie S. Knudson, Prop., Route 5, Brodhead, Wisconsin. 10-3

Wanted—Man and wife on dairy farm. $100 per month, house, garden and milk. ALONZO DRAKE, Bedford, Ohio. 10-2

HELP WANTED

Wanted—Boy 16 to 18 years old on small dairy farm. State age and wages expected in first letter. FARNERHOLM DAIRY FARM, Colfax, Wis. 10-3

Wanted—Herdsman, married, first class feeder and milker; wages one hundred dollars and percentage. J. L. GILKERSON, Holtville, Calif.

Wanted at once—An experienced dairyman and farmer to fit for herdsman. Holsteins. State wages. BELVOIR FARMS, Lake Geneva, Wisconsin. 10-2

Wanted—Married man for farm work, mechanical milkers used. Separate house and other privileges. Year round man preferred. State wages desired. LESLIE DEAKINS, Lancaster, Wis.

Wanted—Single man for milking and milk house work, who wants to learn Advanced Registry work. C. F. B. THOMFORDE, West Grove, Chester Co., Pa.

Wanted—Married man for farm work. House furnished, family to board extra help. Steady position to right man. Must be experienced in handling cattle and hogs and willing to work. W. S. HILL, Mitchell, S. Dakota. 10-2

Wanted—Man competent to manage or assist managing 220-acre stock farm. Registered Holsteins and Chester White swine. BULL MOOSE STOCK FARM, Watertown, Wisconsin.

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Guernseys. Work to begin at once. Write inclosing salary desired and credentials to Northland College, Ashland, Wis. 10*

Wanted—Experienced, single man, Protestant (Scotchman preferred) for general farm work and to assist with milking, must understand all farm machinery and care for horses, for farm near Chicago. State full particulars and salary wanted in first letter. LEASKDALE FARM, Wheaton, Illinois.

Wanted—Woman to assist housekeeping on dairy farm. Address BOX 384, care Hoard's Dairyman.

Wanted—Experienced man for general farming and dairy work. Modern conveniences. Good salary. Near town. Registered stock. Address BOX 383, care Hoard's Dairyman.

Wanted—Single man to work around barn and getting up wood, and other odd jobs. No cigarettes, fair milker, $70.00 per month, board and room. IDLEDALE FARM, Monticello, Wisconsin.

Farm Superintendent. Agricultural college graduate preferred. To take charge of farm in Butler County about fifty miles from Pittsburgh. Must be familiar with general farm work but especially qualified to take care of orchard, cattle, poultry, and garden. State experience, references, age, size of family and salary expected, and also date services will be available. CARROLL MILLER, Union Bank Building, Pittsburgh, Pennsylvania. 10-2

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Wanted—Position as managing herdsman by first class married man, 28 years old. Broad experience in breeding Holsteins, and Advanced Registry feeding. College training. Highly recommended. BOX 374, care Hoard's Dairyman. 9-2

Wanted—Position as creameryman. Bottling milk, separating, pasteurizing and manufacturing dairy products. Address BOX 371, care Hoard's Dairyman. 9-2

Two young men, Hollanders, single, want positions on dairy farm to work in cow barn or field. Good milkers. State wages in first letter. Address BOX 360, care Hoard's Dairyman. 8-5

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work. Salary, $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spl

Wanted—Position as farm manager. Twenty years' experience in general farming. Have two boys who will help me. BOX 381, care Hoard's Dairyman.

Situation wanted as working foreman or take charge of a farm about 200 acres. Have my own help. On share or monthly pay and privileges. Have 16 years' experience in stock raising and general farming. 40 years old. Bohemian, absolutely reliable and competent. FRED KORSKY, Beatrice, Nebr.

Farm manager wants position. 30 years old, married, 8 years in present position as manager of large farm, graduate agricultural college. Experienced in general farming, A. R. O. work, stock raising, fruit growing, soil improvement, drainage, handling of men, farm accounting. Excellent references. No small proposition considered. Address BOX 376, care Hoard's Dairyman.

County agent for three years wants position as farm manager after November 1. Agricultural training and experience. Single, 26 years old. Prefer Virginia. BOX 243, Campbellsville, Ky. 10-2

Farm and garden manager, with energy, push and proven ability, desires position on large modern farm, institution or private estate, where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and vegetable garden. Married, two children. Excellent references. Address FARMER AND GARDENER, 4463 North Uber Street, Philadelphia, Pennsylvania. 10-spl.

Farm manager open for position to develop pure-bred stock farm. Practical experience in all branches of farming, stock breeding, feeding and A. R. O. work. Progressive, good organizer and executive. Highest references as to character and business ability. Married, age 35. Eastern States preferred. Give full particulars in first letter. Address BOX 379, care Hoard's Dairyman.

Single young man wishes a place on dairy farm; dry hand milker. State particulars and wages in first letter. Address BOX 380, care Hoard's Dairyman.

Wanted—Position as herd manager by young married man, no children, $125.00 with furnished house. F. L. SHREWSBURY, Middle River, Minn.

Manager, now operating large ranch wants similar position. I have always been farming and managing and have the ability and want the opportunity of something big for my own success and your profit. Address BOX 377, care Hoard's Dairyman.

Wanted—Position as assistant manager on large stock farm or as working manager on small farm by strong, capable, young man. Years of practical experience on high-class stock farms. Agricultural college graduate. References. R. W. BEAMER, Manor, Pennsylvania.

Wanted by experienced manager—Position as manager or working foreman in a pure-bred herd. A graduate of Wisconsin College of Agriculture. Experienced in A. R. O. work, feeding, calf raising and general farming. Life experience. Satisfaction guaranteed. Particulars and salary in first letter. Married, no children. Can furnish best of references. Address BOX 386, care Hoard's Dairyman.

Farm manager or high grade herdsman, practical farmer in all branches up-to-date farming, running latest farm machinery, tractors, etc. Specialize in alfalfa and soiling crops. Thoroughly acquainted care and management of pure-bred dairy cattle, fitting and feeding for show, sale and milk production. Have made large A. R. O. records—one world's record for yearly production. Scotchman. Married. References. Address BOX 385, care Hoard's Dairyman.

Wanted—Steady position only, on a good farm. By a young man, aged 21. State wages first letter. JOHN J. CASH, Gen. Del., Pittsburgh, Pa.

Wanted—By educated young man who has had two years' experience on dairy farm in Colorado, work in dairy in Oregon, Washington, or Colorado. Would prefer job where there is some future. Address BOX 387, care Hoard's Dairyman.

Creamery Butter in Cold Storage

The preliminary tabulation of the monthly cold storage report shows 115,600,000 pounds of creamery butter and 6,410,000 cases of eggs in cold storage on September 1.

The holdings of creamery butter are 15,800,000 pounds less than on September 1, 1919, but 16,300,000 pounds more than on the same date in 1918. The average September 1 holdings for the years 1916 to 1920, inclusive, are 112,100,000 pounds. The net increase in holdings during August was 15,200,000 pounds compared with 7,900,000 pounds in 1919 and 11,000,000 pounds in 1918.—U. S. Market Reporter.

MARKETS

CHICAGO, Sept. 16—Butter—Creamery, extras, 56c; standards, 53¼c; dairy, firsts, 47@54½c; seconds, 43@46c.

Eggs—Ordinary, 45@46c; firsts, 50@51c.

Cheese—Twins, 24¾c; Young Americas, 26c.

MILWAUKEE, Sept. 16—Butter—Creamery, tubs, 56c; prints, 57c; extra firsts, 54c; firsts, 50@51c; No. 1. packing stock, 34@35c; No. 2 do, 20@30c.

Eggs—Fresh firsts, recandled for city trade, 55@56c; current receipts, country candled, 49@50c; checks, 31@34c; dirties, 35@38c.

Cheese—Twins, 25½c; Daisies, 26¾c; Longhorns, 25½c; fancy Brick, 25½c; Limburger, new, 1 lb., 25½c; Limburger, new, 2 lbs., 24½c.

NEW YORK, Sept. 16—Cheese—Steady; skimmilk, common to specials, 20@29¼c; skims, common to specials, 5@17½c.

Butter—Firmer; receipts, 7,368 pkgs.; creamery, extras, 58½c; state dairy, tubs, 45@58c; imitation creamery, prints, nominal.

Eggs—Firmer; receipts, 12,856 cases; nearby white, fancy, 81@82c; nearby mixed fancy, 52@73c; fresh firsts, 55@63c.

An Exceptional Opportunity

to secure the Foundation of a Registered Guernsey Herd. $1,200.00 buys three two-year-old heifers, bred to the first prize bull of the 1919 Wisconsin State Fair. This bull is of exceptionally good breeding. If you want them, act quick.

WILD WOOD POINT FARM

Nashotah, Waukesha County, Wisconsin



Here's Another Good Son

of Sir Bess Ormsby Fobes, the $30,000 son of "37th". He is Ureeka Dio Dandy Sir Bess, born Feb. 6, well grown and a splendid individual like his sire.

His dam is a 21-lb. 3-year-old daughter of a 24-lb. heifer.

This bull is not a cheap one but he's priced reasonable. Write us today about him.

UREEKA STOCK FARM,
Otto W. Schinke, R. 1, - Jefferson, Wisconsin

Vermont Breeders' Sale
150 Registered Holsteins 150
Rutland Fair Grounds, Rutland, Vt.
October 1 and 2

Strictly a quality sale.
All animals federally tested and sold on a 60-day retest with proper guarantee restrictions.
17 granddaughters of King of the Pontiacs (39037).
25 daughters of Pine Cliff Pietje De Kol Serida (177041). He is one of the greatest show bulls living and ninety per cent of his get are fit for the show ring.
29 daughters of a show bull, whose dam has a year's record of 25,466 lbs. milk, 1,150.33 lbs. butter.
2 daughters of King Segis Pontiac Konigen ($7988).
2 daughters of King Segis Pontiac Columbo (105152).
A fourteen months old son of a 34-lb. three-year-old. His six nearest dams average over 34 lbs. butter.
A 21-lb. five-year-old daughter of a 31-lb. cow who in turn is from a 30-lb. cow.
Large young cows with superior type having good normal A. R. O. records.
Open heifers, just right to take home and breed to your good bull.
Heifer calves six months old, as good as ever were led into a ring.
THE ABOVE ARE A FEW OF THE MANY OFFERINGS.
Don't forget the dates, October 1st and 2d. This is a chance to buy foundation stock of the highest order. Rutland has the best of Hotel accommodations and is on the main line of travel by steam or motor cars.

Sale Held Under Cover — Catalogs on Request

Auctioneers: Col. B. V. Kelley, Robt. Haeger. Pedigree Expert: S. T. Wood
MANAGERS: Orin A. Thomas, Rutland, Vt., S. J. Lobdell, Wells, Vt.

COMPLETE DISPERSION
H. G. Cox's Holstein Herd
Oct. 6th, St. Charles, Minn.
22 Registered Holsteins
50 High-Grade Holsteins

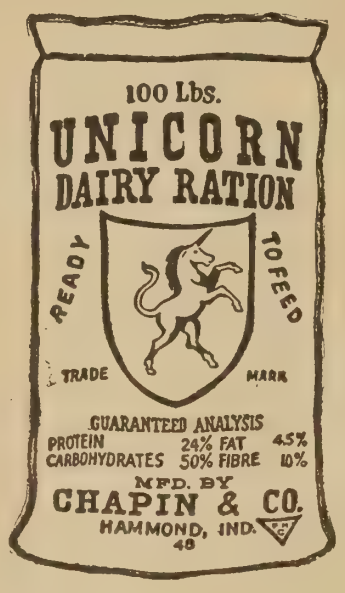
This herd was established in 1880 and since that time has been continually improved by the use of good pure-bred sires and by the selection of the best female offspring.

The grade herd is made up entirely of high class cows and heifers, the result of years of breeding.

Write for further information to

Harry G. Cox, Proprietor
St. Charles, Minnesota

Honor and Profit for Mr. Dayett



We have said that a large number of leaders in cow testing associations are Unicorn users.

J. Irvin Dayett is one of these. He is a member of the Diamond State Cow Testing Association of Delaware.

For the year ending August 1, 1920, his herd stood first in average yield of both milk and fat for less than ten cows:

Milk . . . . . 12,271.0 lbs.
Fat . . . . . 416.4 lbs.
Average profit per cow, $186.63

His herd contained the champion producers of both milk and fat:

	Milk	Fat
Cow No. 7 . .	15,101	488.2
Cow No. 9 . .	13,691	519.1

Mr. Dayett feeds Unicorn and gives it much credit for his success. Credit is equally due to his good cows and to his skill in feeding.

From the annual report of the Association we copy the following:

"The question of whether or not it pays to feed cows heavily when the price of grain is so high has been answered through this year's work. In every case where heavy feeding has been practiced a good profit has resulted"

It pays to feed Unicorn to your cows.

CHAPIN & COMPANY, Chicago

"BetterSires—BetterStock"

We will award a money prize of $1,000 to the county that first eliminates its inferior sires.

This prize will be awarded under rules provided by the Bureau of Animal Industry, United States Department of Agriculture.

Detailed information on request.

"Just Between You and Me"

says the Good Judge



Here's genuine chewing satisfaction for you, hooked up with real economy.

A small chew of this class of tobacco lasts much longer than a big chew of the ordinary kind—that's because the full, rich, real tobacco taste lasts so long.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Iowa State Fair

(Continued from page 389)

years and under 3—1, 4, and 5, Bull on Hughina Beauty, Aldebaran Ella and Aldebaran Milkmaid; 2 and 3, Peverill on Bess. Garland and Cherry Food Gift. Senior yearling heifer—1 and 4, Peverill on Rosebud Nellie Carlton and Rosebud Stonehouse Lucy; 2 and 3, Bull on Garclaugh Snow and Violet Finlayston 2nd. Junior yearling heifer—1 and 2, Bull on Aldebaran Blossom Again and Aldebaran Delightful; 3, Peverill on Rosebud Financier's Violet. Senior heifer calf—1 and 3, Bull on Aldebaran Flirt and Aldebaran Clementine; 2 and 4, Peverill on Rosebud Fair Beauty and Rosebud Cherry Blossom. Junior heifer calf—1, Bull on Aldebaran Victoria; 2 and 3, Peverill on Rosebud Nona and Bess's Pride.

Senior and grand champion male—Cloverdale's Choice Goods. Junior champion male—Rosebud Buster.

Senior and grand champion female—Hughina Beauty. Junior champion female—Aldebaran Flirt.

Graded herd—1, Bull; 2 and 3, Peverill. Breeder's young herd—1, Peverill; 2, Bull. Breeder's calf herd—1, Peverill. Get of sire—1 and 3, Peverill; 2, Bull. Produce of cow—1, 2, and 3, Peverill.

Brown Swiss

W. O. Bohart of Montana and Mooney and Larrabee Bros. of Iowa exhibited forty-four Brown Swiss. Professor J. B. Fitch of Kansas made the awards. The Iowa herd won eleven of the seventeen firsts and four of the six champions. Hefty Boy of Valley Grove was an easy winner in the aged sire class and brought the senior and grand championships to Mooney and Larrabee Bros. Beauty 2nd's Dick, Bohart's senior calf, was made junior champion over two other Montana blue ribbon winners, one of them being Tassa M's Nick, Bohart's previously undefeated junior champion yearling bull. The Iowa entries won in all the milk classes, the two-year-old, Jeanne L, being made senior champion. Each breeder took two blue ribbons in the junior female classes, the purple going to Bohart on Nick's Alice C which was defeated for the grand.

The awards by classes follow:

Bull 3 years or over—1 and 2, Mooney and Larrabee Bros. on Hefty Boy of Valley Grove and Carl the 6th; 3 and 4, Bohart on Sunny Hill Bob and Beauty 22d's Master. Bull 2 years and under 3—1 and 2, Bohart on Zell A. W. and Beauty C's N. M. Bull one year and under 2—1, 3, and 4, Bohart on Tassa M's Nick, Tassa's Bob and Nick's Master 2nd; 2, Mooney and Larrabee Bros. on Czar L. Senior bull calf—1 and 3, Bohart on Beauty 2nd's Dick and D's Dick; 2, Mooney and Larrabee Bros. on Celoyn 2nd. Junior bull calf—1, Mooney and Larrabee Bros. on Howard; 2, 3 and 4, Bohart on Bozeman Boy, Master A's Bob and Little Nick's Dick.

Cow 4 years or over—1, Mooney and Larrabee Bros. on Sally Verbruge; 2 and 3, Bohart on Master's Bernice and Master's Beauty C. Cow 3 years and under 4—1, Mooney and Larrabee Bros. on Chalfonte; 2, Bohart on Bowney's Perfection. Heifer 2 years and under 3,—1 and 2, Mooney and Larrabee Bros. on Marie Gronyer and Jeanne L.; 3 and 4, Bohart on D's Tassa and Beauty D. Senior yearling heifer—1 and 4, Mooney and Larrabee Bros. on Little Anne 2nd and Eiffie 2nd; 2 and 3, Bohart on Bob's Mascott and Katherin's Heifer. Junior yearling heifer—1 and 4, Bohart on Nick's Alice C. and Nellie Deer; 2 and 3, Mooney and Larrabee Bros. on Doddy Robbins 2nd and Jeanne 2nd. Senior heifer calf—1 and 3, Mooney and Larrabee Bros. on Little Egypt 2nd and Janette L. 2nd; 2 and 4, Bohart on Dick's Charm and Dick's Gallatin Girl. Junior heifer calf—1 and 3, Bohart on Dick's Nellie B. and Bole's D. 2nd; 2 and 4, Mooney and Larrabee Bros. on Yuly 2nd and Rowina 2nd.

Senior and grand champion male—Hefty Boy of Valley Grove. Junior champion male—Beauty 2nd's Dick.

Senior and grand champion female—Jeanne L. Junior champion female—Nick's Alice C.

Graded herd—1 and 3, Mooney and Larrabee Bros.; 2 and 4, Bohart. Breeder's young herd—1 and 4, Bohart; 2 and 3, Mooney and Larrabee Bros. Breeder's calf herd—1, Mooney and Larrabee Bros.; 2, Bohart. Get of sire—1 and 3, Mooney and Larrabee Bros.; 2 and 4, Bohart. Produce of cow—1 and 3, Mooney and Larrabee Bros.; 2 and 4, Bohart.

The Dairy Councils' Exhibit at the National Dairy Show

One of the most outstanding and attractive exhibits scheduled for the National Dairy Show this year is that of the National and State Dairy Councils. One of the largest rooms in the entire show building has been secured, it being 162 feet by 59 feet in dimensions. This large room will be headquarters for all organizations holding meetings in connection with the Show. Also headquarters for all agricultural county agents and many other organizations.

The National and State Dairy Councils' exhibit should attract the attention of every person attending the National Dairy Show this year. There will be rest rooms for the weary, milk drinks for the thirsty, and most attractive and educational booths concerning the dairy industry

One end of the large room will be partitioned off in which meetings will be held. Besides the meetings there will be picture shows scheduled; also the revised Milk Fairy Play will be staged every afternoon so that the many visitors can receive a real treat by attending this little play. The Detroit newspapers, speaking of the Milk Fairy Play, said it was the most unique play that had ever been put on by children in their city.

M. O. MAUGHAN.

Whatever is worth doing on the farm is worth doing well.

A Plan to Move The Wool Crop

A. F. B. F. Will Push Credit Plan to Enable Germany to Buy Surplus

When Congress reconvenes in December the American Farm Bureau Federation will urge immediate passage of a bill establishing a credit with Germany and her former associated countries equal in amount to the net proceeds of the sale of alien property in this country during the war. The money received by the Alien Property Custodian during the war amounted to nearly a billion and a half dollars and the remainder now in the United States Treasury, after various claims and expenses are allowed, will run well up toward a billion dollars. Sooner or later this money must be turned over to Germany and her associates and now is the time the central European countries can use it to best advantage. The raw materials which this money would buy in this country are the very things needed by Germany to start and operate her factories.

A careful survey of the world's wool supply gathered from the best available sources—some direct by cable—shows that the world's wool stocks are somewhat greater than usual. Where the usual holdings prior to 1919 amounted to about half a year's supply, or around a billion and a quarter pounds, the stocks now available seem to amount to about a full year's supply. But nearly all of this surplus is of the coarser grades. Apparently there is no real surplus of the finer grades of wool—the kinds which we use in this country to manufacture our clothing. The accumulation of coarse wool stocks seems to be a direct result of the inability of Germany and Austria to buy and consume their usual quotas. These markets have been practically closed for a long time now, and as a result coarse wool stocks have accumulated in all parts of the world to depress the fine wool market also. Sending large quantities of coarse wool into the German mills, where it is badly needed, would have a very wholesome and stimulating effect upon both the coarse and the fine wool markets the world over.

Mr. Gray Silver, Washington representative of the American Farm Bureau Federation, first proposed this plan of rehabilitating the wool market in a speech made before the Farm Bureau officials and wool producers at a conference at Salt Lake City, August 20. The plan is based upon a careful analysis of the world wool situation worked out by the Federation in cooperation with market experts of the U. S. Department of Agriculture.

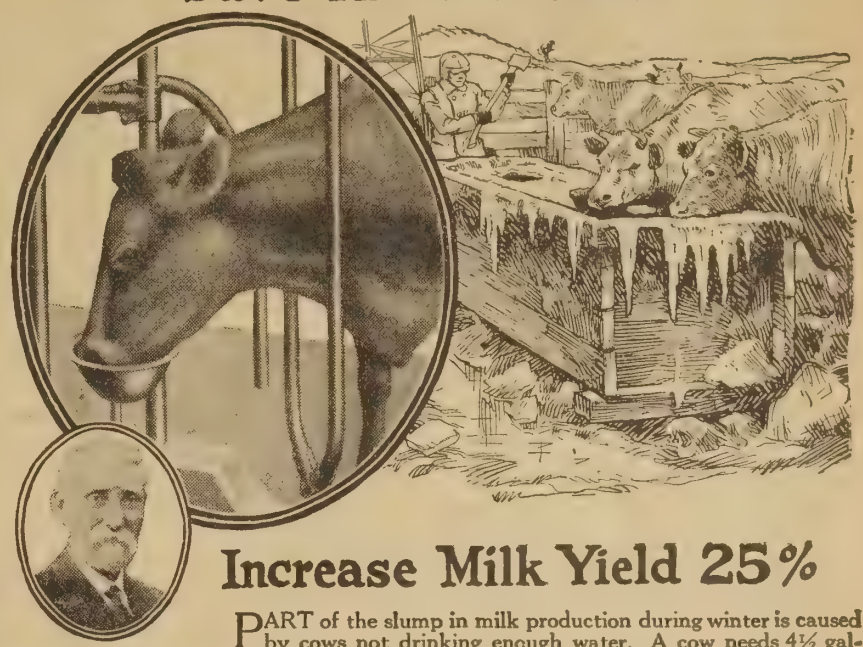
Considerable progress was made last spring in getting this German credit bill favorably before Congress, but the sudden adjournment stopped further action at that time. Prompt legislative action last spring would in all probability have prevented the serious break in the wool market. The plan will be pushed with renewed vigor with the reconvening of Congress and with special reference to its benefits to wool producers.

A. F. B. F.

Sale Announcements

Sept. 25—Holsteins. John Stotzer herd, Suffield, Ohio.
Sept. 27—Holsteins. Detweiler's Dispersal Sale. Illinois Holstein-Friesian Ass'n., Mgrs.
Sept. 27—Holstein bulls. Holstein Breeders' of Lake County Indiana, Crown Point, Ind. Roscoe Clark, Sale Mgr.
Sept. 29—Ayrshires. Ayrshire Dispersion of C. H. Peverill of Waterloo, Ia., at Dairy Cattle Congress, Waterloo, Ia. Amos Burhans, Sale Mgr.
Oct. 1—Jerseys. Virginia Jersey Cattle Club Sale at Fredericksburg, Va. Tom Dempsey, Sale Manager.
Oct. 1-2—Holsteins. Vermont Breeders' Sale at Rutland, Vermont.
October 1-2—Holsteins. Dairy Center Sale at Northfield, Minnesota. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 4—Holsteins. Summit Co. Holstein Breeders' Ass'n. Sale at Akron, Ohio. Wm. F. Cook, Hudson, O., Mgr.
October 5—Guernseys. Blue Earth County Breeders. Mankato, Minn. Dr. M. B. Wood, Mankato, Minnesota, Sale Manager.
Oct. 5—Holsteins. Wright County Holstein Breeders' Sale at Houard Lake, Minn.
Oct. 5—Holsteins. Hall Bros., South Denver Station, Denver, Colo.
October 6—Guernseys. Guernsey Breeders' Association of Northern Minnesota and Northern Wisconsin, Tristate Fair Grounds, Superior, Wisconsin. E. P. Gibson, Sale Manager, Duluth, Minnesota.
Oct. 6—Holsteins. Dispersion of H. G. Cox herd of Registered and Grade Holsteins at St. Charles, Minn.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Mower County Holstein Breeders' Sale at Austin, Minn.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 12—Guernseys. Annual Sale Lake County Guernsey Breeders' Association, Libertyville, Ill. W. E. Watkins, Secretary.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 18—Holsteins. Lake County Holstein Breeders' Sale at Libertyville, Ill. R. N. Thompson, People's Life Bldg., Chicago, Mgr.
Oct. 19—Holsteins. West Concord Security Sale at West Concord, Minn.
Oct. 21—Holsteins. Carver County Breeders' Sale at Waconia, Minn.
Oct. 22—Holsteins. Ashtabula Co., Ohio. will hold sale at County Fair Grounds, Jefferson, O.
October 22—Holsteins. Central Pennsylvania Holstein-Friesian breeders' second annual sale at Hughesville, Pa.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 27—Guernseys. E. J. Himmelberger's complete dispersal sale of registered Guernseys at Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Mgr.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
October 28—Guernseys. F. G. Eberhardt complete dispersal sale of registered and grade Guernseys at Mishawaka, Ind. F. E. Fox, Sales Mgr., Waukesha, Wis.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 30—Holsteins. Daniel S. Johnson's Holstein Sale at Rockdale, N. Y.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

LOUDEN
WATER BOWLS
Save All the Labor



WM. LOUDEN
Over 53 years inventor of Modern Barn Equipment

Increase Milk Yield 25%

PART of the slump in milk production during winter is caused by cows not drinking enough water. A cow needs 4½ gallons of water for each gallon of milk produced. No cow drinks enough when watered only once or twice a day.

With Louden Automatic Water Bowls, cows drink frequently—get all they want, day or night. The result is a big increase in milk yield that more than pays for the water bowls in a single season. Any farmer can install them in any barn. They are easily cleaned. Cannot get out of order.

Frank W. Morrison, prominent Massachusetts dairyman, writes us that his cows gave 40% more milk after Louden Water Bowls had been installed.

Louden Bowls *save all the labor* of watering—give cows water of right temperature—eliminate expense and trouble of heating water in winter.

Write for 224-Page Catalog

Tells all about Louden Water Bowls and other labor-saving, profit-making barn equipment—stalls and stanchions, animal pens, litter and feed carriers, manger divisions, barn and garage door hangers, hay unloading tools, power hoists, cupolas, ventilators—"*Everything for the Barn.*"

If you expect to build or remodel a barn write for Louden Barn Plans, a 112-page book devoted entirely to barn building. Our barn building experts will give you plans and suggestions to meet your needs. No charge or obligation.

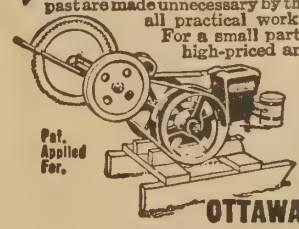
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A Newly Invented SAW RIG

WILL saw your winter's wood in a few hours and then you can make money sawing for others. Many users say they make upwards of $11.00 a day cutting wood for neighbors. Expensive cumbersome rigs used in the past are made unnecessary by the Ottawa Saw Rig. Does all practical work any other saw rig can. For a small part of the cost of one of these high-priced and obsolete rigs you can now own the

LOW INTRODUCTORY OFFER



OTTAWA SAW RIG

Strictly a one man outfit. Easy to operate, light to move, simple to handle. Powerful 4-cycle motor that drives any belt machinery when not sawing. It will pay for itself in cash in two weeks, just cutting wood for neighbors. 30 Days' Trial; 10 Year Guarantee. Let the Ottawa work a month for you to prove our claims. Write for FREE BOOK TODAY.

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For the Full Milk Pail

Feed **Kane Syro**—it will increase your milk production from 10% to 25%. Kane Syro is rich in milk-producing fats, having a sugar content of at least 52%. No sugar has been extracted.

KANE SYRO

will make your other feeds palatable and digestible.
Shipped direct from Cuba and Porto Rico—the home of real cane molasses. We pump directly from the ship into staunch barrels, which are shipped direct to you. Prompt deliveries guaranteed.

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NATIONAL MOLASSES CORPORATION
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Cow Waters Herself



with this wonderful new Libbey Automatic Water Bowl. Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

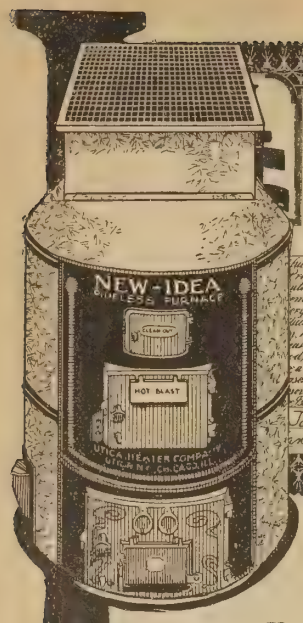
Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

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THE WONDERFUL NEW IDEA PIPELESS FURNACE
DESIGNATED AND MANUFACTURED BY
UTICA HEATER COMPANY
UTICA, NEW YORK
(INCORPORATED 1900 UNDER LAWS OF STATE OF NEW YORK)
This Certifies that Frank C. Edwards
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New Utica Pipeless Furnace and when properly installed, under suitable approved flue, chimney etc., the manufacturers of Utica Heater Company, Utica, N.Y. guarantee quality proper and satisfactory working of said Heater.
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Every month are not then eliminated, and the Heater itself determined, to be in the Heater itself - Utica Heater Company agrees to promptly refund the Purchase Price of the Heater.
The Utica Heater Company guarantees for a period of five years, under normal conditions, the Heater will not burn out or crack, if properly installed and given proper care and attention in the ordinary use of the same as may be reasonably required.
This instrument does not cover a sixty-day trial, but is a Lifetime Guarantee, designed for the protection of the purchaser and provides that the purchaser shall be the sole judge of whether the Heater is unsuitable or unsatisfactory and the expense of the purchase price. This is the Most Liberal Guarantee Covering Heating Equipment.
Utica Heater Company
James C. Taylor
May 20, 1920
Edward Morris

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Few countries possess all the conditions for happy, prosperous living as does British Columbia. The varieties of climate and soil offer inducements for almost every branch of agriculture. Whether in the warm interior valleys, the rich grazing table lands or the fruitful lowlands of the coast or Vancouver Island, the advantages offered for

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Learn about this wonderful Province and share in its possibilities. Its industrial life—mining, lumbering, fishing, manufacturing, transportation—assures a ready market at good prices for all the farmer can produce. Schools, churches, railways, roads, telephones, all the conveniences of an old land await you in this new Province of Opportunity and Success.

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Kewanee also makes separate Lighting Plants, Water Supply Systems and Sewage Disposal Systems.

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VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Milklessness

On August 22nd I had a pure-bred Guernsey heifer a little over two and one-half years old, freshen; we made arrangements to put her on test. For the first time she made an excellent bag and is very healthy and a good feeder. There is no abortion in the herd nor any tuberculosis.

On Monday morning, I noticed that the calf, which was very healthy and lively, very gaunt. Upon examination of the heifer I found that she had not a particle of milk in the bag. We immediately called the veterinarian and he told me that there was no milk in her bag; he took her temperature which was normal. We put the calf on another cow and then put her back with the cow and kept her there until the present time. Her bag is now going down and there has never been any milk at all in her bag. Will this calf, which is a heifer, be affected by this, or if she is kept over until she freshens again will she have the same experience?

Cairo, N. Y. L. S. W.

It is quite unlikely that the heifer calf will, when mature and "fresh" have a similar attack of agalactia or suppression of milk if the dam on both sides sprung from "performing" stock. The attack in question probably was due to chill or the shock of calving. Hypodermic treatment with pilocarpin and strychnine should have been given at once and possibly might have helped. Another plan in such a case is to dissolve 4 grains of pilocarpin hydrochlorid and 2½ grains of strychnine sulphate in a pint of water. Divide into 3 doses and give these at intervals of 3 hours. We fear treatment will not now avail.

Lame Heifer

A neighbor of mine has a young heifer about two years old which was bred about in April and was in the very best of health until about a month ago. One day it returned from the pasture (it running at large over cutover land) acting as if it were not well, the time being just after that big hail storm which we had on the 6th of August. The heifer was out in the storm and being very fat was beaten up pretty badly. Now it is all swelled up and can not hardly walk and does not eat and when it breathes it just pants and its nose is so hot and dry. It is all swollen in front of the udder and around the navel also the jaws and throat and the breast is very hard. Was it the beating of the hail that caused this condition or has it some disease and what shall they do for it as they have done all that they know how to do?

Pembine, Wis. H. G.

This is a most unusual case. One naturally would suspect pneumonia as the disease present and the cause exposure to the rain and hail storm, but such an attack would be likely to prove quickly fatal. That also would be the result of an attack of hemorrhagic septicemia or of blackleg or anthrax, diseases which might cause symptoms similar to those described. We are therefore at a loss to account for the present condition, so long after exposure to the storm, but pneumonia certainly is to be suspected as the heifer does not eat and has fever.

It would of course be best to employ a veterinarian to examine and treat the animal, but if that cannot well be done we should advise you to give the heifer 5 drops of tincture of aconite in a little water every 4 hours, along with a dram of fluid extract of gentian root and 2 drams of sweet spirits of niter. Also dissolve a tablespoonful of powdered saltpeter in the drinking water twice daily. Support strength with gruels, milk, and raw eggs, if the heifer will not eat.

It may be added that a drench of medicine given in such a way that it got into the lungs might cause symptoms such as you describe and would be likely to prove fatal.

Seed corn selected in the field where it grew can be judged on how it performed in competition with neighboring stalks.

Barren Cows

Must Be Made to Breed or Your Dairy Business Will Be a Failure. They

Can Be Made to Breed

By the use of

Hood Farm Breeding Powder

We say this confidently because it has been used with such marvelous results by so many breeders. Every cow at Hood Farm is treated with the Breeding Powder, and we know that it does make barren cows and heifers breed; we know that it checks and prevents abortion; we know that it makes cows clean quickly, thereby saving us hundreds of dollars annually.

Order today, mentioning this paper.

Prices prepaid $1.15, $2.75 and $5.00. Flexible Injection Tube, by mail, 90c. Mammoth size Breeding Powder and Tube, prepaid, $5.75.

C. I. HOOD CO., Lowell, Mass.

How to Breed Live Stock



Free Book Write today. A post card will do.

Get our wonderful free booklet, "How to Breed Live Stock". Reveals valuable information on the breeding and feeding of horses, cattle, swine and sheep. Shows pictures of breeding organs. Also describes our wonderful home-study course in Animal Breeding, Sterility, Disease-Prevention, Contagious Abortion, Artificial Breeding, Systems of Breeding, etc.—all taught in detail. Write today for free booklet and learn how to master scientific breeding at home. We have brought the school to the breeder. Get our free booklet. Write today. Just mail a postcard.

NATIONAL SCHOOL OF ANIMAL BREEDING
Dept. 49 Pleasant Hill, Ohio

Dehorning is Cruel



and a bloody job. The easy, quick, humane way to avoid dangerous horns on cattle is to treat calves with

Fleming's Chemical Horn Stop

Apply to calves, 3 to 10 days old and horns never develop. It's a thick paste. Doesn't run or make a bad sore. EASILY APPLIED AND NEVER FAILS. The cost is small—**50 cents a tube**—enough for twenty-five calves.

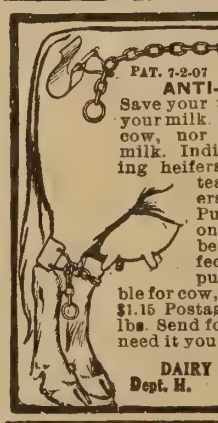
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255 Union Stock Yards, CHICAGO



America's Pioneer Dog Medicines

BOOK ON
DOG DISEASES And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York



PAT. 7-2-07
ANTI-COW-KICKER
Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.



Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

SWINE



Foundation Berkshire Trios and Bred Sows

From the herd that sold the $6,500.00 world's record price Berkshire boar at public sale and the $3,900.00 world's record price Berkshire sow.

From the herd that won 36 out of a possible 48 firsts, 14 out of a possible 18 championships, and 5 out of a possible 6 grand championships at the great Illinois, Iowa, and Indiana State Fairs this year.

Bred sows, $250.00 each and up.

Trios $300.00 to $2,500.00.

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Our Berkshires are the smoothest and deepest big-type hogs.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES

REGISTERED DUROC-JERSEYS

We are offering **For Sale** until **October 1st,** Spring **Duroc Gilts** and **Boars,** a number of Fall gilts and a number of brood sows including sows from **King Orion** and boars and gilts from **Crimson Orion Cherry King 2nd.** No better **Duroc** blood to be obtained. We will book orders now for pigs that will be farrowed in August. Satisfaction guaranteed on our **Durocs.**

EDGEWATER STOCK FARM, Ft. Atkinson, Wis.



Why Take Chances?

when you can see our DUROCS on your own farm before you pay. Everything in the Duroc line. Write for Catalog and price-list.

Green Valley Cherry King 2nd No. 260435n.

We deliver the Hogs before you pay.

GREEN VALLEY STOCK FARM

BOX 6. LOUISVILLE, ILLINOIS

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Ohio State Fair

(Continued on page 382)

crop yields; or, to interpret in practical terms, 200 lbs. of acid phosphate should be applied to every crop grown.

Live Stock

Ohio's claim as being the "Mother of Durocs" was vividly brought forth by the exhibition of 400 head of swine, this being one-fourth of the entire number of hogs exhibited on the grounds. Many of the Durocs came from southwestern Ohio, while northeastern Ohio furnished a classy exhibit of Berkshires. Herds of Chester Whites and Poland-Chinas came from all over the state, while another popular breed—the Hampshires — came mostly from central and western portions of Ohio.

Many Ohio swine breeders brought their herds to the Ohio State Fair in trucks, this being a cheaper and more satisfactory way to travel. Some breeders had several trucks and transported the pigs up to a distance of 100 miles. Many advantages are found in trucking as the hogs stand the trip well and the congested railroad situation may be avoided. The trucks are packed heavily with straw, but only a few hogs are crated for these trips.

Dairy Cattle Show

County co-operation prevailed in the showing of dairy cattle more than ever before. A large Jersey and Holstein show was presented with an increasing number of Ayrshires and Guernseys shown. The feature of the Ohio State University dairy cattle exhibit was the old cow, Ohio Colantha Bakker. This "long distance" cow has produced 105,000 lbs. of milk and 4,687 lbs. butter in her lifetime. With Holsteins, a junior heifer calf "Zerhinghurst Mercedes Lass", was made grand champion female of the show. This calf was reared by one of the calf club boys of Ohio. The Holsteins were placed by W. H. Standish of Ohio; the Guernseys and Jerseys by Professor J. C. McNutt, Amherst, Mass.; and the Ayrshires by Professor C. S. Plumb, Ohio.

Machinery Exhibit

Ohio farm women are giving more attention to the selection of farm machinery, for the household exhibits of power washing machines, both gasoline and electrically driven, attracted more attention than usual, while electrically driven dish washers for country homes promise to be as popular as the washing machine. More than a score of different makes of tractors were exhibited on the grounds and much attention given to the reducing of farm help by operating small threshing machines, hay balers, and ensilage cutters with the farm tractor.

Labor Day Farm Bureau Picnic

On Labor Day the Farm Bureau of Rock County, Wisconsin, held a most successful picnic which about 1,500 attended. C. P. Norgord, Wisconsin Commissioner of Agriculture, addressed the members and urged them to free the herds of the county from tuberculosis, taking advantage of the law which provides that if fifty per cent of the farmers of a county petition to have their cattle tested for tuberculosis, a county program of testing can be started.

A pig feeding demonstration was given by M. H. Scott. It was shown that 19 pigs which averaged 100½ pounds August 1st were made to average by September 5th 149 pounds. In the 35 days they made a profit of $40.26, gaining 48 2-3 pounds each, or 1.39 pounds daily. The ration fed was made up of 3,000 pounds of corn, 235 pounds of barley, 185 pounds of oats, and 50 pounds of tankage.

The Labor Day picnic will be made an annual event.

Wisconsin. R. T. GLASSCO.

Shows Dairy Cattle Feed Needs

Successful dairying in any community is dependent upon an all-year supply of highly nutritious succulent feed, green or silage, and properly maintained meadows and pastures. No effort, therefore, has been spared by the United States Department of Agriculture in its search for and study of such crops as will best serve the dairymen in all sections of the country. As part of its exhibit at the National Dairy Show, the Department will present a series of transparent colored photographs illustrating the value and utilization of important forage crops. Many of the crops were introduced into this country by the Department.

JERSEYS

Cedar Crest Farms

Offer a Bull

Sired by Fairy's Duchess Chief 173902 out of Yolande's Fairy 275996; entered Register of Merit Class AA at 4 years, 6 months, producing 7,815 lbs. of milk, 478.04 lbs. of 85% butter.

First $150.00 takes him.

J. K. Dering, Lake Villa, Ill.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

$250.00

Buys Jersey Bull Calf

Dropped May 30, 1920

$300.00

Buys Jersey Bull Calf

Dropped Jan. 24, 1920

These bulls are rich in the high producing Sophie Tormentor blood, Register of Merit ancestry on both sides. For extended pedigree and description, write

HOOD FARM, INC.

Lowell, Mass.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son

Whose Son sold at auction $7,500

Owl's-Over-the-Top and Golden Maid's Victors Jolly

100 head—no reactors

ULSTERDORP FARMS Highland, N. Y.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM

LIBERTYVILLE, ILLINOIS

W. A. BREWERTON, Owner L. A. BENT, Mgr.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY. BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 808 lbs. buttert Granddaughter Jacoba Irene, young stock; St. Lamberf breeding for sale. R. C. Green & Son, Albion, Wis.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.

J. Q. EMERY & SON, Edgerton, Wisconsin

JERSEYS AT AUCTION

Dr. H. M. Moulton, Cumberland Center, Maine, will sell his entire herd of

Register of Merit Jerseys

Tuesday, September 28th, 1920

About seventy-five animals will be sold; a number of them with Register of Merit records. The herd ranks very high in the quality of its individuals, having won a large number of prizes at the New England Fairs. It is under the supervision of the Federal authorities and was given a clean bill of health at the last inspection.

For Catalogue address

Leander F. Herrick, Sale Manager, 405 Main St., Worcester, Mass.



MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

The National Duroc-Jersey Record Association. Dept. 300 Peoria, Ill.



For Sale—Three-Year-Old Cow

Majesty's Brown Bess 400192, dropped July 1, 1919, solid fawn color, bred to Golden Renown's Majesty 168983, due to freshen Sept. 26, 1920. She is sired by a grandson of Royal Majesty 79313, and her dam is a R. of M. granddaughter of Noble of Oakland. Price $200.

W. M. KNIGHT, OAK GROVE JERSEY FARM. Eagle, Waukesha Co., Wisconsin.

Registered Bulls — $100 and Up

West View Farm offers registered Jersey bull calf, born April 15th, 1920, solid color and a good one. Dam now on test and making a good record. Double grandam made 609 lbs. butter in one year. Price $100.00 f. o. b. here. Also other bulls one to nineteen months old. Good ones priced right.

Registered Berkshire pigs eight to ten weeks old, $15.00 either sex. Also yearling sows. For size, type, and prolificacy you can't do better.

W. C. BROOKOVER, Route No. 1, Chandlersville, Ohio.

Something New in Cattle Clubs

HOARD'S DAIRYMAN:—Scrub bulls got a terrible wallop and the eradication of tuberculosis a big boost when the dairymen of Central Vermont got together on August 10, and formed the Central Vermont Cattle Club. Nobody can be a member who does not use pure-bred sires exclusively in his herd, and who does not place his herd under state and federal supervision for eradication of tuberculosis. This is the first dairy club of the kind to be organized in the country, according to the county agent of Washington County, Vermont.

The object of this club is to "promote the breeding of more and better dairy cattle; to advertise properly in the buying states by centralizing information regarding cattle for sale; to encourage selling in carload lots, thereby obtaining prices that will encourage raising of better dairy stock for market; to promote community ownership of pure-bred bulls of the best possible breeding; to wage unceasing warfare upon bovine tuberculosis and contagious abortion; to banish the scrub sire; to do all that is possible to make farm life attractive to the boys and girls and encourage them to remain on the farms; to encourage the spirit of goodfellowship, unity, and co-operation among members of the club and to promote the dairy interests of the state."

A paid secretary will keep complete information regarding stock for sale by members, and will advertise such stock for sale. Thus, the dairymen will have a clearing house for first class stock. There will be an annual field day for exhibiting stock.

The directors are: E. H. Bancroft, Barre; W. E. Tucker, Orange; J. P. Davis, Chelsea; W. H. Moody, Waterbury; O. L. Dow, Cabot; Arthur White, West Topsham; Neil Smith, Williamstown; G. M. Jones, Waitsfield; F. B. Catlin, Randolph.

Pennsylvania. MARTIN GLEN.

Guernseys for Sale

Twenty females, cows and heifers, a number of May Roses. Mostly bred to Laverna's Ultra May King 24660 and Gerar Pearl's Royal 58411, who is full brother to three class leaders. Also several sons of Langwater Royal, Langwater Raritan and Laverna's Ultra May King from A. R. cows or cows on test, several ready for service. All are priced to sell.

M. T. Phillips, - Pomeroy, Pa.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

For Sale

The last son of Imp. Spotswood Sequel A. R. Dam, full sister and two sisters of dam average 630 lbs. fat. Very choice individual. Also two sons and two daughters of May Rose Noble of Jean Du Luth, prize winning son of May King of Linda Vista. For further particulars and bargain prices write to

Paul Love, St. Austell Farms, - Jackson, Mich.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Watch later issues for more complete information

SOUTHERN WISCONSIN GUERNSEY BREEDERS ASSOCIATION

First Annual Sale of -GUERNSEYS-

October 14, 1920, at Janesville, Wis.

For Catalog write James H. Murphy, Delavan, Wis.

Choice Breeding

I have six choicely bred Guernsey bull calves ranging in age from one to eighteen months, mostly out of Advanced Registry cows, which I will sell at very reasonable prices, from $75.00 up to $250.00.

L. S. Meyer, - Springfield, Mo.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr.**

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price—May Rose and Glenwood strains—write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.

August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

HILLSCROFT FARM

Offers for Sale Guernsey Bulls

HILLSCROFT'S PROUD WARRIOR

Dam, Felice of Falcon's Flight 71209. Sire, Falcon's Proud Warrior 47559. Born March 31st, 1920. The dam of this bull is now producing 40 lbs. of milk.

BULL CALF

Dam, Florham Bell 2nd of Oakhurst 54984, A. R. record. Sire, Rosie's Golden King of Oakhurst 31630. Born August 9th.

E. W. Simons, Bantam, Conn.

Falcon's Gallant

Dropped March 4, 1920.

Sire: *Falcon's Proud Warrior 47559*, pronounced by many to be one of the greatest bulls of the breed, both from breeding and individuality.

Dam: *Fidelis of Falcon's Flight 54398*, whose A. R. record shows 502 lbs. fat and who carries the blood that has made the Falcon's Flight herd nationally famous.

Send for particulars on Gallant. At his price ($500.00) he is bound to be a sterling investment.

Falcon's Flight Farms, - Litchfield, Conn.

Meadowland Guernseys

Fifteen well bred females at prices ranging from $225 to $600. Write for particulars.

Meadowland Farms, Litchfield, Conn.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Edward of Linwood FOR SALE

One year old, good individual, good color. A grandson of Imp. Clara's Sequel and a 740-lb. cow. His dam has 421 lbs. at 2 years and is to be retested and will make 600 lbs. fat. Extra fine bull.

Homer Rundell, Livingston, Wis.

CITY HOME FARM GUERNSEYS

Fine registered Guernsey bulls of serviceable age and younger of most fashionable breeding. Priced right Can also spare a few fine females.

F. W. MEYER BARRON, WIS.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

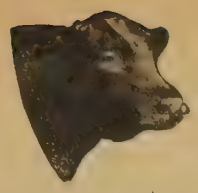
Appletree Point Farms



PENCOYD'S SECRET MAROSE 48332

The "Get" of this bull is being exhibited along with the rest of our show herd at the New England Fair in Worcester, Mass.; Connecticut State Fair at Hartford; New York State Fair at Syracuse; Eastern States Exposition at Springfield, Mass.; Waterloo Dairy Cattle Congress at Waterloo, Iowa; and National Dairy Show at Chicago. Write for information about bull calves and a few females, some being daughters of Langwater Peerless.

U. A. WOODBURY, II, Burlington, Vermont



Economy in Production ← GUERNSEYS → Quality of Products



In 1911 a Wisconsin boy paid $50 for a Guernsey heifer calf. Exactly nine years later he sold the cow together with seven of her descendants for $4,600. Why milk ordinary cows when pure-bred Guernseys return much greater profits? Send for our free literature.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 83, PETFRBORO, N. H.

READY FOR SERVICE



DISTURBER OF PROSPECT 61173
DROPPED OCTOBER 4, 1919

Sire—Anton's King Confidence No. 43517. Dam—Sally of Prospect No. 49680, A. R. 5593.

Besides having six May Rose crosses this young fellow is a wonder for type and individuality.

His sire's dam has a record of 764.65 lbs. of butterfat as a junior four-year-old. Disturber is priced to sell quick and guaranteed in every way.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

45 Guernseys 45

At Mankato, Minn., Oct. 5, 1920

In the New Sale Pavilion

The offering will consist of 20 pure-bred cows and heifers, 6 pure-bred bulls, and about 20 splendid high grade cows and heifers, all consigned by Blue Earth County breeders. Cattle will be tuberculin tested and sold under the standard guarantees. Catalogues September 15th. Write for one to

DR. M. B. WOOD, Mankato, Minn., Manager of the Sale.

Oliver S. Johnson, Auctioneer. First Nat. Bank of Mankato, Clerk of Sale

Guernseys At Auction

Second Annual Consignment Sale

Guernsey Breeders' Ass'n of Northern Minnesota and Northern Wisconsin

Tri-State Fair Grounds, Superior, Wisconsin
Wednesday, October 6, 1920

A QUALITY SALE A GUARANTY SALE

Auctioneers: Love, Benjamin, McGuire

For catalogue write to

E. P. Gibson, Sales Mgr., 310 Court House, Duluth, Minnesota

SECOND

Wisconsin State Sale

— OF —

Guernseys

October 13th, 1920

MADISON, WIS.

For catalogs write James H. Murphy, Delavan, Wis.

See later issues for more complete information.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm. Waukesha, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary. Fond du Lac, Wis.



"A good bull is more than half the herd
A scrub bull is mighty near all of it."
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put on
AYRSHIRE BULL
at the head of your herd



A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals.

Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.
JOHN R. VALENTINE, Prop. PHILIP C. PALMER, V. S. Mgr.



LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Duncraggan
Sons of
Ringmaster's Brae Burn Diplomat
For Sale
GEORGE F. WHITE, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

5 Ayrshire Cows Fresh 5
and Service Bull of the best blood lines. Priced for quick sale.
L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale
Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis.

ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS



NANCY'S MINT MASTER

Idlewood Farm offers at private sale these Ayrshires

The great bull, NANCY'S MINT MASTER No. 20151, junior and grand champion at National Dairy Show in 1918, and first prize senior calf in 1917 (was not shown last year) said to be the most perfect type Ayrshire bull ever bred in America.

FIVE FRESH COWS, with four heifer calves and one bull calf at sides, the five calves sired by this grand champion bull. One cow is a Roll of Honor cow and a great show cow as a heifer, and the others are highly bred young cows ready for test.

Eleven Head in All

Nancy's Mint Master, undefeated in the show ring in America, was sired by Howie's Mint Master, also grand champion bull in America and Scotland, with a long line of undefeated ancestors, sire of A. R. daughters. This wonderful bull, only four years old on August 14, 1920, was purchased by Idlewood Farm at the 1919 National Ayrshire Sale at the highest price ever paid for an Ayrshire bull at public auction. He is easy to handle—a child can lead him about—and is in excellent, practical breeding condition. In August births, four of his five calves were heifers. If you want to build up a herd with the best bull in America, here is your chance. Price and other information desired will be furnished on application.

T. J. Murphy, Owner, Devon, Pa.

Middlesex Meadows Ayrshires

No matron stays in the herd that does not make an A. R. record of 10,000 lbs. or better. Most of them have records far exceeding this standard. Their bull calves by our herd sires are for sale.

A. Henry Hippenberger

SOUTH LINCOLN, MASS.



FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Ayrshire Bull For Sale

READY FOR SERVICE

Sire, a brother of Otterkill Roseleaf, $2,550 at National Sale. Dam, a Silver Medal Winner; both grandams in A. R.; great grandam 5 A. R. records. Traces 11 times to A. R. sires, 12 to dams. 2 sisters of dam under R. of M. test ahead of champions, another in second place.

Sears & Howell, Blooming Grove, N. Y.

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston

Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

Without Skimmilk

The dairy division at University Farm, Minnesota, has been conducting some experimental work whereby the dairyman who sells whole milk may find a solution for calf feeding problems. The results of the experiments indicate that calves can be raised successfully on a grain mixture of four parts ground corn, one part linseed meal, one part bran, and a legume roughage—alfalfa hay—after being weaned from their milk diet at the early age of 50 to 60 days.

The hay and grain should be placed before the calves when they are very young, the object being to get them started on dry feed as soon as possible and to give them all the feed of this kind they will clean up. Best results are obtained by feeding the hay and grain in about equal quantities.

One of the calves in these experiments was weaned at the age of 60 days and thereafter fed grain mixture and alfalfa hay. At the end of the trial this calf weighed 377 pounds and was 104.1 per cent normal. Another calf weaned at the age of 45 days was raised on 461 pounds of milk and a grain mixture and alfalfa hay. At 158 days old it weighed 335 pounds and was 106.3 per cent normal.—Minnesota College of Agriculture.

It is said that about four-fifths of all the poultry products in the country are the result of the work of women. An inquisitive person might like to know whether women get four-fifths of the money returns.

Ayrshire Cattle For Sale

Choice Registered Ayrshire cows, heifers, and calves of either sex. Single animal or carload. Herd tuberculosis free accredited.

F. D. Stowell, Black Creek, N. Y.

When writing advertisers please mention Hoard's Dairyman.

Shows Result of Community Development

Before the community-development work was begun at Grove City, Pennsylvania, practically no dairy products were shipped to outside markets. What has been accomplished will be shown by the United States Department of Agriculture exhibits at the National Dairy Show. The following figures show the extent of dairy production in the last year:

For the year ending June 30, 1920, 505,909 pounds of butter were manufactured; 828,065 pounds of skimmilk were condensed; 30,773 pounds of casein were made; 112,927 pounds of Swiss, 7,737 pounds of Camembert, 12,378 pounds of Roquefort, 21,393 pounds of Cheddar, and 230,968 pounds of cottage cheese were manufactured.

The exhibit contains samples of the butter, condensed milk, and the other products of the creamery. Information as to methods and cost of manufacture and the prices received for the products are available.

Make yourself necessary to the world and the world will give you bread.—EMERSON.

BROWN SWISS



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

HOLSTEINS

FOR SALE

For Sale—Son of Anna Terry Mercedes Johanna 2d, 461540, butter at 1 yr., 5 mo., 11.9 lbs.; by Wayne Finderne Burke from Zuba Veeman Burke, butter 22.60 lbs. at 3 yrs. $175.00 crated, f. o. b. Deposit, N. Y. BLUE STONE FARMS.

This 30-lb. Bull For Sale



Home Farm King Sadie Jewel

A son of King Korndyke Sadie Vale 24th, born May, 1919. His dam has 30.9 lbs. butter in 7 days, 120 lbs. in 30 days, 219 lbs. in 60 days, 95.5 lbs. milk in a day and another record of 25.5 lbs.

His six nearest dams average 28.7 lbs. and he is given a federal certificate of health.

If you are in the market for a bull of his quality, get in touch with us at once.

W. B. BARNEY & SONS
HOME FARM
CHAPIN, - - - IOWA

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25,63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write C. I. Reamer, North Liberty, Ind.

Maaikenshof Holsteins

We are now offering for sale some very choice sons of *Dutchland Creamelle Colantha 230137*. Colantha breeding is prominent in these calves. *Dutchland Creamelle Colantha* is out of Dutchland Colantha Denver, the highest record daughter of Colantha Johanna Lad in both 7-day and yearly tests. Her records are 7-day, 36.25 butter, 702.30 milk; year, 1,315.15 butter, 25,431 milk.

If you want a future sire of this excellent breeding write us immediately as we have priced these calves to sell in quick order.

We are pleased to send out our circulars if you are interested.

MAAIKENSHOF, R. E. Buell, Supt.
Bedford Hills, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

FOR SALE AND EXCHANGE

25 head of Holstein cows, 23 of which are high grade and 2 are registered. Also herd bull, a grandson of K. S. P. A., the fifty thousand dollar bull. This bull is from a 27-lb. cow. Most of these cows bred to this bull. All young cows and well marked, good heavy producers. Price $200 per head if the herd is bought together. Will take two good teams of draft mares or mules as a partial payment. Might consider a good automobile as a partial payment.
G. A. HIGGINBOTHAM, ROSSVILLE, KANSAS.

Two-Year-Old Sire

His two nearest dams average for 7-day production nearly 34 lbs. butter. For yearly production they average better than 1,000 lbs. butter.

He is well grown, a show animal, and free from disease. Worthy to head a top notch herd. Priced for quick sale.

He has been used in a small registered herd the past year. We want him placed in a herd where his daughters will be tested. If you need a herd sire, with 7-day and yearly production, combined with good individuality, here is your chance.

Don't delay, write us.

Hargrove & Arnold, Norwalk, Iowa

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Sons of a 37-Lb. Ormsby Bull

whose dam, full sister, three-fourths sister and maternal sister have all held state records. Herd under Federal supervision.

BLUEBELL FARM. RICEVILLE, IOWA.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

When writing advertisers please mention Hoard's Dairyman.



THE NATIONAL DAIRYMEN'S SALE—Chicago, Oct. 13 and 14

IN CONNECTION WITH THE NATIONAL DAIRY SHOW

A Sale of the World's Greatest Producers
A Sale of America's Leading Show Cattle

IN THE SALE WILL BE

A senior 2-year-old with a year's milk record of 21,567 lbs.
A senior 2-year-old with a year's milk record of 20,822 lbs.
A 2-year-old that up to Sept. 1 had produced in 321 days ..... 19,948 lbs. and still continuing strong, though she will be 6 months along with calf at sale time.
A 4-year-old that up to Sept. 1 had produced in 268 days ..... 18,169 lbs. and still going on—likewise 6 months with calf by time of sale.
A show-cow of wide reputation with a year's milk record of ..... 20,418 lbs.
The Senior Champion Cow at California State Fair, 1919, now rounding out a year's milk record of over ..... 20,000 lbs.
The First-prize Senior Calf, California State Fair, 1919, daughter of Miss Konigen Pontiac, World's Milk Champion Senior 3-year-old for 7 days (772 lbs.) and 30 days (3,235 lbs.), now 7 months in test at a gait promising for the year over 1,100 lbs. butter, with milk ..... 25,000 lbs.
A full brother to the preceding, born last January.
Sir Pietertje Ormsby Mercedes 43d, son of the world-famous sire whose name he bears, and from Aaggie Wayne Peep, with the colossal record for 5 consecutive years of 110,706 lbs. milk, 4,992 lbs. butter—a World's Record over all ages and breeds.

THESE ARE ONLY A SUGGESTION OF THE EXTRAORDINARY OFFERINGS IN THIS SALE REPRESENTING AMERICA'S LEADING HOLSTEIN HERDS FROM COAST TO COAST. THE ENTRIES RECEIVED INDICATE A SALE THAT WILL BRING TOGETHER THE MOST WONDERFUL LOT OF HOLSTEINS COMBINING SHOW QUALITY WITH HIGH RECORD BACKING EVER LED INTO A SALE RING. THIS IS A 60-DAY GUARANTY SALE OF THE BEST ALL AMERICA CAN OFFER.

THE NATIONAL DAIRYMEN'S SALE—E. M. Hastings Co., Managers, Pulaski, New York

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Monday, October 4th



Watertown, South Dakota

Second Annual South Dakota State

HOLSTEIN SALE

70 Head of South Dakota Holsteins 70
60 FEMALES — 10 MALES

Granddaughters of the Famous Sires:
Sir Pietertje Ormsby Mercedes and King Segis Pontiac Count.

Bred to Sons of:
"King of The Ormsbys"
Ormsby Korndyke Lad,
College Belle Wayne,
Sir Pietertje Ormsby Mercedes and the famous "King Segis".

A GREAT SALE of large, typy, producing cows. Every animal guaranteed right. 90-day retests.

Sale under management of

South Dakota Holstein-Friesian Breeders' Association

T. E. GAGE, Secretary, GROTON, S. D.

---

44 Registered Holstein Bulls

at

Public Auction

Sept. 27 at Crown Point, Ind.

The Holstein-Friesian Breeders of Lake County, Ind., will hold a consignment sale of bulls at the fair grounds at Crown Point.

Forty-four of the best bulls that could be selected will be sold on that date. Many of them will be ready for service. This, Mr. Dairyman, is your opportunity to buy just the kind of a bull you want. With 44 good ones to select from you can satisfy yourself as to individuality and breeding and you buy at your price.

The sale will begin at 12:30 p. m. Be there. Send today for your catalog to

Harry Newton

Crown Point **Indiana**

STRICKLAND & SMITH, Auctioneers



Holstein Cows First as Money Makers

The day is passing when milk can be produced at a profit by a herd of mongrel cows. Look the fact in the face and study the methods of progressive dairymen.

Wherever the interest in dairying is most active and most intelligent, there the pure-bred Holstein stands first. And every month adds to her prestige as a money maker.

If you mean business, why not get your start before the demand increases still more?

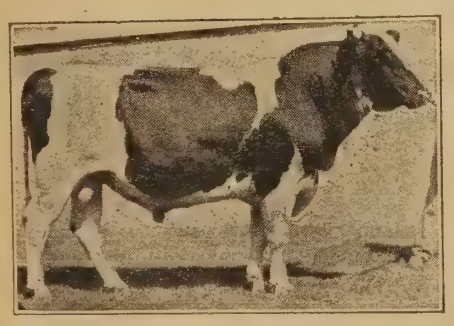
Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

October 5, 1920 **October 5, 1920**

HALL BROS.

— A Dissolution and Dispersion Sale of —

150 Head of Registered Holstein-Friesian Cows, Heifers and Bulls

at their Western Holstein Farm, 5½ Miles Southwest of Denver
On the Morrison Road

After twenty-three years of agreeable partnership of the brothers —Carlos W. and Storrs H. Hall, by their mutual agreement they have decided to close their partnership in this very successful business, and are offering at public sale one of the great herds of the day.

The foundation blood upon which this herd was established was of the best of the breed, and under the guidance of the Hall Bros. has increased in quality, and is today recognized from coast to coast as one of the great herds of America, and its breeding is the standard of excellence in the nation's greatest live stock exhibitions and sales, and in official testing.

The herd is composed entirely of animals of correct conformation and great milk and butter-yielding qualities. The herd is healthy and high class in every way. It was established with the view in mind of creating a herd of this breed in Colorado to supply foundation stock of this breed to the fast-growing dairy interests of the Rocky Mountain States. The Hall Bros. are, in live stock circles, well known men and highly respected. After years of successful operation in the dairy interests of Denver, the Western Holstein Farm and its herd of registered Holstein cattle, the owners believe a lightening up of their responsibilities of their large business should be observed, and hence this sale.

Just once in a great while does an apportunity present itself to buy your own selection of real foundation breeding blood of any blood of the various breeds, at your own price, and you should, those who are interested in this great breed, avail yourself of this great opportunity. *Remember the date, Tuesday, October 5, 1920.*

HALL BROS., Prop., WESTERN HOLSTEIN FARM
DENVER, COLO., South Denver Station

Catalogs ready September 1, 1920. Sale at the Farm.

COL. G. M. BANKS, Auctioneer, 709 E. 11th Ave., DENVER, COLO.



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

"SPOT"



Eli Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

LISLE FARMS CO., Lisle, Illinois

BREEDERS OF HOLSTEIN CATTLE

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

Combining Type, Size, Constitution and Production.

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

Now Is the Time

To select your bull for next winter's use.

Select a son from Woodcrest Pietje Clyde, our herd sire.

7 days	365 days
33.07 butter	970.48 butter
523 milk	22,558.40 milk

He has 4 20-lb. Junior 2-year-olds including one 26.58-lb. Illinois State Champion. They are from *A. R. O. Dams* up to 27 lbs. butter and 636 lbs. milk. Prices reasonable.

JOHN SEXAUER & SONS
BELVIDERE, ILL.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

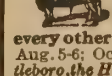
DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb. 4-5; Apr. 1-2; June 3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

LEVEL-LAY FARM HERD

headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.

E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. Chris. Indermuehle, R. 1, Juneau, Wis.

7-MONTH-OLD BULL—$150.

Marked more white than black. 27-lb. sire. Dam a 1700-lb. cow. Will be tested when she freshens in January. Rich in Homestead Breeding. Herd tuberculin tested annually. Check or bond takes him. Chic Dairy Farm, - - Juneau, Wis.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.

S. T. JONES, - R. 8, Watertown, Wis.

JOHANNA BOY TWISK

heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. Nothing for sale at present.

T. W. LUCK, R. 1, HORICON, Wis.

PABST KORNDYKE SEGIS

a son of Korndyke Segis Johanna heads my herd. His dam, Pabst Citronella, made 669.4 lbs. butter, 16,867.8 lbs. milk in 1 year as a 2-yr.-old, 26.285 lbs. butter in 7 days as a 4-year-old.

HERMAN LUEBKE, R. 8, WATERTOWN, WIS.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 862 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

Get One of These Good Grandsons of K.K.S.V.

for Your Next Herd Sire



No. 1—Summit Fyke De Kol, born Oct. 10, '19. A good individual, son of Circe Fyke Canary De Kol, 16.86-lb. 3-year-old just now finishing a very good year record.

No. 2—Summit Rag Artis, born Oct. 25, '19, from Queen Rag Apple Colantha, 16-lb. 2-year-old now finishing a good year record.

These are both sired by King Pontiac Artis Sadie Vale, 34-lb. son of the great King Korndyke Sadie Vale. **They are priced to sell.** Write

Hollyhock Farms, Dousman, Wis.

GUSTAVE PABST, Owner FRED SOUTHCOTT, Manager

WAUKESHA COUNTY

HOME OF THE WORLD'S GREATEST HOLSTEIN-FRIESIAN SIRES

WAUKESHA COUNTY — Tuberculin tested herds—State and Federal.

WISCONSIN — Individuality Short and long time production records.

Send for list of 40 bulls in service in Waukesha County whose dams have records of over 30 lbs. of butter in 7 days or 1000 lbs. of butter in 365 days.

When in the market for Holstein Cattle for foundation stock, grades or pure-breds, buy them in Waukesha County. If you want a bull, reasonably priced, send for list.

Waukesha County Holstein-Friesian Breeders' Association
Waukesha, Wisconsin Office 254 Broadway

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. S. A. BAIRD & SON, WAUKESHA, WIS.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

BUY A BULL

That carries the blood of Colantha 4th's Johanna, Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. These represent, we believe, the very best producing combination of the breed. We are just now able to offer sons of S. P. O. M. 38, carrying just this combination and backed by excellent A. R. O. records.



If you want one, write at once. We don't have them long.

W. J. Gillett & Sons, Rosendale, Wis.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Central Wisconsin Holstein Breeders' Association

Consignment Sale

70—Head—70

Quality Registered Holsteins

60 young Cows and Heifers. 10 Bulls —ages from 3 months to 3 years. Good enough to head any herd in the world.

Sale Pavilion, Fair Grounds

Marshfield, Wisconsin

October 7th, 1920

We have picked the best individuals from the herds of the best breeders of Marathon, Clark, Taylor, and Wood Counties. Some of these animals will be bred to King Pietertje Ormsby Piebe 10th, a 1200-lb. sire, and others equally good.

One daughter of a 35-lb. sire and out of a 30-lb. cow, bred to a 30-lb. sire.

One yearling daughter of a 37-lb. sire, King Sadie Vale Hengerveld.

One daughter from a 22-lb. four-year-old, bred to a 37-lb. bull.

The Master Ormsby bull, 4 months old. His dam is a 28-lb. heifer by Prince Hengerveld Fayne.

BREEDING AND QUALITY—OUR WATCH-WORD

A real chance to get Foundation Stock for your herd. Come to this sale. Bring your wife and daughters as well as the boys.

We will make this sale amusing, interesting, and instructive. You can't afford to miss it. Remember the date—October 7th, 1920.

Marshfield, Wisconsin

LET'S ALL GO

Auctioneers: Heintz, Krause, Ebbe. Pedigree Man: Arthur Imig.

For Sale Catalogs address
J. P. Heintz, Sale Manager,
Box 17 H, Hewitt, Wis.

Dinner served in large dining hall on grounds, by Ladies' Aid, at 11 A. M.
Sale starts at 12 o'clock sharp.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Waupaca County Holstein Breeders' Association

1. Where the largest breeders can secure their choicest herd sires.
2. Where the average breeder can buy those animals of high class breeding that will build up his herd.
3. Where the beginner can obtain that good foundation stock with most excellent type and good records at moderate prices.

Buy that carload in Waupaca Co., the county noted for its large number of Federal Accredited Herds.

Stock for sale at all times.
Write to

A. B. Rowe, Sec'y, Waupaca, Wisconsin

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association.
A. F. Gafke, Secretary, Jefferson, Wis.

King Waldrof Pietje Echo

Jr. Herd Sire

His dam's records at 2, 3, 4, and 5 yrs. average 32.27 lbs. butter, 655 lbs. milk in 7 days; 132.45 lbs. butter, 2,677.5 lbs. milk in 30 days. Best 7 days butter 36.33; best 7 days milk 762.5. A few choice sons for sale from dams with records up to 27 lbs.

Wayside Stock Farm, - Fond du Lac, Wis.
A. L. Williams, Est., C. A. Williams, Executor.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs. and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

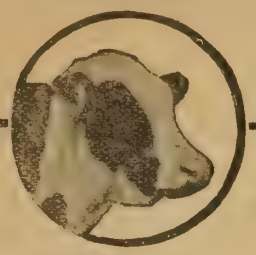
Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9th, 1920

Sale will start at 10:30 A. M.

Oconomowoc, Waukesha County, Wis



OCT. 9th—PABST

Breeders Wanting A New Sire Should Read—

STOCK FARMS FIRST SEMI-ANNUAL SALE



PABST CLYDE MECHTHILDE
A ten-months son of a 33-lb. sire from a 28-lb. 4-year-old daughter of King Pontiac Champion.



PABST CREATOR ORMSBY
A Creator son from a 32.55-lb. senior 3-year-old. Now on year test. Four dams all year record cows.



PABST CREATOR VON HOUTTEI
A Creator son from a 27.53-lb. daughter of King Pontiac Champion. Note the quality.

A compilation of all of the animals in the association prize list for the year 1919-20 brings out the fact that Pabst Stock Farm was leading breeder of prize winning animals during the past year, and won third place as owner of prize winners. This means that we are putting forth our best efforts to develop the animals we own and since the dams of the young bulls we are to sell at our first semi-annual sale are for one, two and three generations of Pabst Stock Farm breeding, means the bulls you select will increase in value very much during the next few years.

40 Bulls

Some of the finest young bulls we have ever bred will be included in this first semi-annual sale. Look over this list.

PABST KORNDYKE CLOVER KING—a 22-month-old son of Korndyke Segis Johanna (12 20-lb. 2-year-old daughters, two 21,000-lb. 2-year-old daughters)—from the **highest milk record daughter** of King Pontiac Champion—she made 768 lbs. in 7 days and in 10 months made 923 lbs. butter and 22,337 lbs. milk. Inside of twelve months she made another 32-lb. record and promises to make over 1,000 lbs. for the year. She weighs a ton and is a great prospect.

PABST CLYDE MECHTHILDE—an eleven-month-old son of Woodcrest Clyde (his dam with 33 lbs. in 7 days—over 970 lbs. in year)—from a 28-lb. senior 4-year-old daughter of King Pontiac Champion, now making a great year record. She is a full sister to a 31-lb. cow with over 725 lbs. milk.

PABST WOODCREST PONTIAC—an eleven-month-old son of Woodcrest Clyde from our most perfect individual daughter of King Pontiac Champion. This dam made over 800 lbs. in a year and now on her second test has over 828 lbs. butter and 18,000 lbs. milk in 7 months. A grand individual whose two nearest dams will surely average well over 1,000 lbs. butter in a year.

PABST CREATOR ORMSBY—a ten-month-old son of Creator from Pabst Inez Ormsby, a 27-lb. senior 2-year-old (27.97 lbs. to be exact) and then came back as a senior 3-year-old with 32.55 lbs. She is now making a splendid year record. Her dam is a 24-lb. daughter of King Ormsby. **A most wonderful son of Creator.**

PABST CREATOR MUTUAL DE KOL—a ten-month-old son of Creator—from Pabst Sweet Clover with two records above 30 lbs., making 34.78 lbs. during her best period from 667 lbs. milk. She is one of the high record daughters of King Pontiac Champion and sold for $3,500. Two nearest dams of this bull average over 36 lbs. butter and 730 lbs. milk.

PABST KING PONTIAC LAD 33d—an eight-month-old son of Pabst King Pontiac Lad from Pabst Maplecrest Arrowhead that as a junior 4-year-old made 33.90 lbs. butter and is now making a good year record. Her dam has a record of over 28 lbs., while she is sired by a son of Friend Hengerveld De Kol Butter Boy, from a Pontiac Aaggie Korndyke dam.

PABST PONTIAC WOODCREST—an eight-month-old son of Woodcrest Clyde from a 25-lb. senior 3-year-old daughter of King Pontiac Champion, now on year test. She is a full sister to Pabst Kinnickinnic with over 35 lbs. Her dam is a 26-lb. cow with four 25-lb. daughters.

SATURDAY PRECEDING HOLSTEIN DAY at the NATIONAL

Send for descriptive circular—Catalog at the ringside

PABST STOCK FARM, Oconomowoc, Wis.

HOLSTEINS AND GUERNSEYS

Why not buy your cattle from a reliable firm established in the cattle and dairy business for twenty-five years? We can fill your order for any number, pure-bred or high grade, any age desired from four weeks up. Give us your mail order to insure satisfaction.

EDGEWATER STOCK FARM
FORT ATKINSON, WIS.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Consignment Sale, Oct. 6-7

of Registered and A. R. O. Holstein-Friesian Cattle, at the Hornless Holstein Farms, Clarks Summit, Pa.

10 Miles North of Scranton, Penna., on the D. L. & W. Railroad and Northern Electric Ry.

—ABOUT 100 HEAD—

Many of them sired by the **BEST DAMMED BULL** of the breed, a son of the **WORLD'S RECORD SENIOR 4-YEAR-OLD, KEYSTONE BEAUTY PLUM JOHANNA**, with 25,787.5 lbs. of milk, 1,294.7 lbs. of butter, strictly official in a year, **4% IN LONG TIME TEST.** Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30-lb. cows; son of a cow with 1,056 lbs. in semi-official test. 35 animals from herds under Federal supervision. Some of the consignments sold on a 60-day re-test. Many animals **NATURALLY HORNLESS.**

GEORGE E. STEVENSON, SCRANTON, PA.

SIR ORMSBY BEAUTY PONTIAC SEGIS

A son of that great heifer, Beauty Girl Pontiac Segis—1,112 lbs. butter, 24,924 lbs. milk in a year, as a jr. 3-yr.-old—20 world's records to her credit, while just a heifer. His sire is youngest son of Pietertje Maid Ormsby—the great foundation cow, and dam of Sir Pietertje Ormsby Mercedes, only sire of breed ' have 8 1000-lb. daughters. SIR ORMSBY sires the straight kind—one of his heifer calves took first place at the Wisconsin State Fair.

Get a son of SIR ORMSBY, out of cows that are now on yearly work.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year. He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Backed by Year Records

Bull born May 23, 1919. Extra well marked, square and well shaped. A splendid individual and bred in the best of blood lines. His dam, *Lothian Ruth Pietertje Korndyke No. 315679* A. R. O., at 1 year, 11 months, 28 days, milk, 7 days, 408.5, butter 17.378; milk, 30 days, 1,726.1, butter 72.818; milk, 7 days, 8 months from calving, 261.9, butter 12.502; milk, 365 days, 15,288, butter, 365 days, 688.-072. Sire of calf *Sir Ona Clothilde De Kol No. 241486.* His sire is backed by the best of yearly backing over 1,000 lbs. butter and over 25,000 lbs. of milk. This young bull is all right every way.

The Lothian-Riverode Stock Farms
Novelty, Ohio
ALEXANDER WATTS L. M. WILLIAMS

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

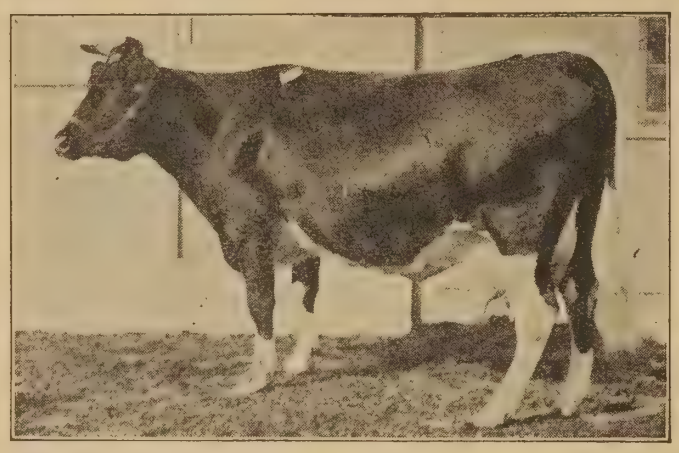
Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

A Son of this Cow for Sale

Born December 25, 1919



GLEN CANARY ORMSBY MERCEDES

Butter 365 days at 5 yrs.	722.60
Butter 7 days	27.94
Butter 365 days at 2 yrs.	550.86
Butter 7 days	20.71

She is a full sister to Glen Canary De Kol 2d, the junior four-year-old that last year made 1,323 lbs. butter for the year. She is sired by Sir Pietertje Ormsby Mercedes, the greatest sire of yearly producers and show ring winners in the world. Her dam is Glen Canary De Kol, former world's champion with 34.59 lbs. butter in 7 days and 139 lbs. in 30 days. She is by Sir Johanna Canary De Kol and from the grand champion, Glen De Kol Artis 3d, a daughter of Homestead Jr. De Kol.

THE SIRE OF THE CALF

is Uneeda King Alcartra. He is from a 33-lb. daughter of Johanna McKinley Segis, the only 40-lb. son of King Segis. His sire is the $50,000 bull, King Segis Pontiac Alcartra, a son of King Segis Pontiac and from a world's record daughter of King of the Pontiacs.

Price on this Calf is $1000.00

E. C. SCHROEDER FARMS,

Moorhead *(A Federal Accredited Herd)* **Minnesota.**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

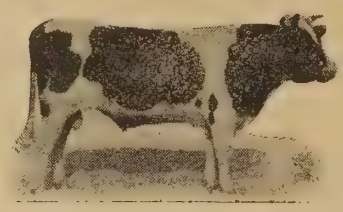
M. L. ENRIGHT. - - - - - - - - E. GRAND FORKS, MINN.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell.
Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

We Believe King Segis Pontiac Fayne Star

is the best individual King Segis Pontiac Count ever sired. We believe that he is destined to rank as the best son of his famous sire. There will never be a better time to buy one of his sons. A postal brings the bull circular. Write right now.

Flecks Farms, Faribault, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.
A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.
A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.
(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.
His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines Very good individuals from good A. R. O. dams.
For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

Grandsons and Granddaughters of Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm
William Schmidt, Prop. St. Peter, Minn.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.
Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pure-bred Holstein Females

In order to make room for fall calves, we are offering a choice lot of heifers from three months to two years old, some bred to freshen this fall and winter, in excellent condition, well grown and good individuals. Popular A. R. O. breeding and sold on a money back guarantee, priced reasonable for quick sale.

Blumecrest Farm, Maple Lake, Wright Co., Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.
Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

Mr. Breeder of Registered Cattle

Here's something Hoard's Dairyman has worked out for your convenience! It gives you a neat, handy place for

All the Records You Need To Keep



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In a Book You'll Be Glad To Show

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HOARD'S DAIRYMAN, FORT ATKINSON, WISCONSIN.

Fifth Semi-Annual Guarantee Sale

Holstein-Friesian at Alfakorn Farms

Evansville, Wis., Oct. 8, 1920

75 Females 75

To Freshen this Fall and Early Winter

A Sale of Production, Breeding and Quality

More high records and richly bred ones than we have ever offered before. Remember the Date and Come

FIFTEEN RICHLY BRED HEIFERS

All from A. R. O. dams, seven are half-sisters being granddaughters of King Segis Pontiac. All bred to our Junior herd sire, a 35-lb. son of King Segis Pontiac Alcartra; some are granddaughters of King of the Pontiacs.

Two granddaughters of **Maud Burke** and from **A. R. O. dams.**

A yearling daughter of a **40-lb. bull** and bred April 9th to a **42-lb. bull,** and a wonderful individual.

Also a granddaughter of **The Milk and Butter King,** and every dam in four generations is A. R. O.

Also a half-sister to **Carnation King Sylvia, every dam A. R. O.** and a heifer of wonderful quality.

Also two daughters of **King Pontiac Reliance,** a 33.16-lb. sire. These two are bred to our Senior sire, (dam 38.54).

A granddaughter of King Korndyke Sadie Vale from a 31-lb. sire and a 24-lb. cow.

A yearling daughter of a 37-lb. bull. A. R. O. springer cows.

THIRTY YEARLINGS AND HEIFER CALVES. A FEW EXTRA WELL BRED BULLS AND REAL BULLS

REMEMBER THE DATE AND COME

ALFAKORN FARMS

F. B. Green & Sons, Evansville, Wisconsin

Remember the Date

Oct. 19th

The West Concord Security Sale

At the Sale Pavilion, WEST CONCORD, MINN.

70 Registered Cows and Heifers 70

These sale animals will go out as advertisements of the herds of West Concord breeders, so you may be very sure that nothing has been entered that will not be a credit to this community.

Individually they are good, they represent the best breeding obtainable in this section of Minnesota and most of them are bred for fall and early winter freshening.

Why You Should Attend This Sale

It is a sale of strictly high class, registered females. No old animals or cull stock will be offered.

70 animals of this quality are not for sale at private treaty in the entire county. They are the kind we like to keep.

Every animal is guaranteed healthy.

The state association is managing it. That guarantees you a square sale.

Write for catalogs to

The Minnesota Holstein-Friesian Breeders' Ass'n.

406 Market Bank Building, Minneapolis, Minn.



Mower County Holstein Breeders'
First Annual Sale
October 7, 1920 Austin, Minn.

This is a sale of 60 of the best ones that could be selected from the herds of Mower County—the county that showed the best herd at the State Fair in the county herd class.

Piebe Laura Ollie Homestead King, known the country over as a sire of phenomenal producers, Lola Segis Pontiac Homestead, a 34-lb., 1,000-lb. grandson of "Count" Sir Hengerveld Pietertje Ormsby, a double grandson of S. P. O. M. and others of similar quality will be represented here by sons and daughters or by foundation females bred to them.

This is the first consignment sale the breeders of Mower County have ever held and they have selected the very best to be obtained from the herds of their association members. They have selected the kind of Holsteins they believe you want, large, individually good, well bred, and guaranteed healthy.

Sit down today and write Secretary Scott of the state association for a catalog. See for yourself just what will be offered. You will be interested in it.

The Minnesota Holstein-Friesian Breeders' Association

406 Market Bank Building Minneapolis, Minnesota

This Daughter of S. P. O. M.
— WILL BE SOLD AT —
The Dairy Center Sale



GLEN DE KOL MERCEDES

We Have Consigned this splendid daughter of Sir Pietertje Ormsby Mercedes to the Dairy Center Sale, October 1-2 at Northfield, Minnesota. She is out of Glen De Kol Artis 3rd, grand champion female at the 1913 Minnesota State Fair, she a daughter of Homestead Jr. De Kol.

Glen De Kol Mercedes is a full sister to Lady Glen Artis Ormsby, highest priced female at the 1920 Minnesota state sale. She has a 22-lb. junior 4-year-old record and is now making a splendid year record. She will be bred to our Piebe Laura Ollie Homestead King.

We Are Also Consigning Her Son, Glen Pontiac Mercedes Homestead, born June 10, '20, and sired by Lola Segis Pontiac Homestead, a 34-lb. 1,000-lb. son of Piebe and grandson of "Count". This calf is a splendid individual and combines as closely as possible the blood of S. P. O. M., King Segis Pontiac Count, and Piebe Laura Ollie Homestead King, Minnesota's 3 greatest long distance sires.

Look for them in your catalog and write us for more complete information.

Minnesota Holstein Co.

V. S. Culver, Sec. and Mgr. AUSTIN, MINN.

Wright County Holstein Sale
Will be Held
October 5 at Howard Lake, Minn.
60 Registered Holsteins 60

The sale will be made up mainly of young cows and heifers, many of them bred to freshen this fall and winter and bred to some of the best sires in the state. Only a very few young bulls will be offered and these few will be good ones.

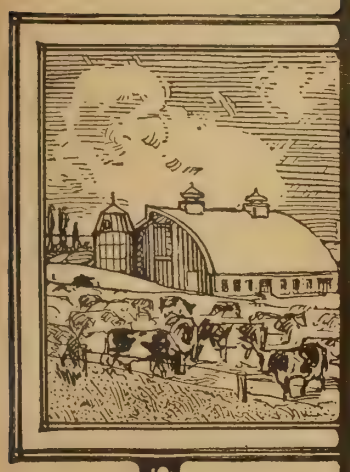
If you want one or a dozen well bred females of the very best type, be at the Howard Lake sales pavilion on that date. You will find them at the sale and if you do not succeed in getting as many as you want on October 5th, association members will give you every assistance in buying others from the good herds in the county.

The state association is back of this sale and the fact that they have accepted the management of it is a guarantee that everything will be exactly as represented.

Find out just what is offered from your catalog. You can get it by writing.

Minnesota Holstein-Friesian Breeders' Association

406 Market Bank Building Minneapolis, Minnesota







October 1st and 2nd **Northfield, Minn.**

The Second Annual

Dairy Center Holstein Sale

Essentially a Sale of Type. Plenty of A.R.O. Records, both Seven-Day and Yearly. The Very Best of Breeding with Minnesota's Most Famous Sires liberally represented. But Type and Quality and Constitution were the Chief Requirements of the Sales Committee. A Wonderful Lot from which to Select Foundation Animals.

60 Herds of 8 Counties Were Combed to Secure 135 Head for This Sale

Remember the Dates

October 1st and 2nd **Northfield, Minnesota**

For Catalogs Address

The Minnesota Holstein Friesian Breeders Association

406 Market Bank Bldg Minneapolis

Makes New Holstein Record



Let Mr. W. F. BRAATZ tell you his own story:

"I am using the Pine Tree Milker on my herd of pure bred Holsteins and wish to say that it is a wonderful machine. I am not only milking my two times a day cows with it, but also those that are on test. These are milked four times a day with very satisfactory results. In fact, we have broken the state record on a junior four year old, in the eight months after calving division. The winner is Prospect Johanna Posch 331115.

"I have never had any udder trouble and can say my cows are doing better work with the Pine Tree Milker than they ever did before."

Yours sincerely,

W. F. BRAATZ,
Maple Grove Stock Farm, Brandon, Wis.

We have always said "Judge It by What It Does". That is all we ask. The wonderful record Pine Tree is making for the country's greatest dairymen is the best guide in choosing a milker for your herd. Judge by results and you are certain of satisfaction—of getting the most milk from your cows and keeping them free from udder or teat trouble.

Farmers struggling with labor troubles and high wages realize that a milking machine will save much time, money and worry—but some still ask, "Do machines milk as well as men?" Here is a machine that milks *better*. Enthusiastic Pine Tree owners the country over tell you so. You can no longer afford to milk by hand. Now is the time to investigate.

See your nearby Pine Tree Dealer and let him show you everything. Or write today for our big free book on machine milking. Get all the facts before you buy.



PINE TREE MILKER

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110 Montgomery St., Syracuse, N. Y. 325 Second Ave. S., Minneapolis, Minn. 346 Washington St., San Francisco, Cal.

Dept. 2856

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Fort Atkinson, Wisconsin Volume LX, No. 11 October 1, 1920

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

What the Bank Does at Grove City

Making capital immediately and easily available to the farmers has been the function of the Grove City, Pa., National Bank in the development of the dairy enterprise in its community. A representative of the bank, which will have a booth at the National Dairy Show, as a part of the exhibit of the United States Department of Agriculture, will be glad to tell those interested how other banks may aid in developing dairy communities. Here are some of the things the bank has done that are applicable to other communities:

Since 1916 it has assisted in the purchase and distribution, among farmer patrons of the creamery, of 12 carloads of pure-bred tuberculin tested dairy cattle. In the immediate vicinity of Grove City there are now more than 250 farmers owning one or more pure-bred dairy animals. The bank has financed the somewhat extensive purchase of the best available bulls. It provided prizes for the local stock show; aided the boys' and girls' club work; gave support to an accredited herd association; and encouraged thrift clubs among school children. In addition the bank publishes a dairy newspaper sent free to every farmer in the community.

New Georgia Jersey Record

Raleigh's Corinne, a Jersey owned by J. R. Humphries of Georgia, has broken all records for the state for butterfat production. In a record begun at three years and eight months, she has produced 13,917 lbs. milk containing 772 lbs. butterfat. This cow was bred, developed, and tested in Georgia. Her record gives her fifth place in her class for the breed.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Dairy John's Philosophy

I wouldn't give two shucks for a pedigree bull that had a temper like a bunch of for-get-me-nots. Fire in his eyes is as necessary as meat in a mince pie.

A fine young heifer on the farm, with a family name written on its papers, is as much a promise of prosperity as changing from mud roads to concrete.

The milkmaid has not gone out of fashion—it's just that she does it all by electricity.

The County Fair

Once again the apples,
In a handsome row,
Once again the ribbon crops,
Prettied-up for show.
Pictures made from kernels
Of the golden corn.
Farmers proud and happy.
They weren't city-born.

Tractors under canvas,
Some exhibiting,
Motor cars and trucking cars
Fine as anything!
Sows that grunt and sniffle,
From their weight of fat.
Handsome cows and mild-eyed cows
Leave it go at that!

Flags on tents a-flying,
Trotting races, too.
Lemonade that's crimson,
Lots of things to do.
Little babies crying,
Side shows quaint and queer;
But th' fair seems better
Every passing year.

"Has Eb Brown a new lighting plant on his farm?"

"You bet he has. And since electric lights have been put in the rooms of the help, everybody stays up reading so late, they can't start work next day till around nine. When Eb has her going full strength, the neighbors think a circus has come to town."

The Lonely Life

"Poor man," said the city feller to the big dairy farmer, "What a lonely life you must lead all winter, snowbound and with no place to go. Do you find trouble arranging for entertainment?"

"Yep," was the answer, "already we have sixty-three big dances arranged for December, and it's a mighty hard job to plan a schedule without missin' one of 'em."

October

The shocks of corn in the field.
The bright yellow pumpkins in and around them.
The bumper crops of everything.
The knowledge that the big jobs are almost over.
The cutting of the ensilage.
The cattle grazing over what's left behind.
The bulging barn that won't hold any more.
The song of the cider mill.
The jams and jellies and preserves that mother put up.
The time to stop and enjoy your pipe.
The oiling up of harness.
The smile the country banker gives you.
The knowledge that your credit was never better.

Some folks think that there is no difference in milk—it's all just milk. What about folks? Some have more breeding than others, haven't they?

There's Just One 100% Efficient

CREAM SEPARATOR

And That's The

DE LAVAL

For Forty Years

The World's Standard



There may be a half-dozen plows, wagons, tractors, autos or other farm equipment to choose between, but no would-be imitator or utilizer of expired De Laval patents has yet produced a cream separator comparable with the De Laval.

First in the beginning, De Laval machines have led in every step of cream separator improvement and development. Every year has presented some new feature or betterment, and the 1920 machines are still better than they have ever been before.

If you haven t seen or tried a new 1920 De Laval machine, any local agent will be glad to afford you the opportunity to do so.

If you don't know the nearest De Laval local agent simply address the nearest main office as below.

The De Laval Separator Co.

165 Broadway NEW YORK
29 East Madison Street CHICAGO
61 Beale Street SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

Dr. Entz, Friend of Children

FRANK M. CHASE, KANSAS



FIVE CHILDREN MAKING THE GREATEST GAIN IN LOST SPRINGS SCHOOLS

They gained from 1½ to 3 lbs. in ten weeks. One pound is normal gain for children of this age in this length of time according to chart prepared by Dr. Thos. Wood, Bureau of Education, Washington, D. C.

THE country doctor is proverbially the friend of children. Dr. J. J. Entz of Kansas is particularly so. He might in fairness be called their "wholesale" friend; for, besides sharing the peculiar love of the physician for the babies whom he helps to enter this world and the confidence of the young folks who have learned to trust him in illness, he is helping the children of a whole county to grow up into better men and women. His friendship extends be-



DR. J. J. ENTZ

yond telling stories to bribe the taking of distasteful medicine, into a service that will bring them returns throughout their lives.

As the medical officer of Marion County, Doctor Entz directed an examination of the children attending the rural schools, including those in towns of not more than 500 inhabitants. Data was obtained on 3,704 children; though the survey was as thorough as possible, it was estimated that about 400 pupils were missed through absences and other causes.

The age, weight, and height of every child was taken. By comparing this information with a standard chart showing the correct weight and height for children of a certain age, it was possible to tell whether the child was normal in weight. Such physical defects as bad tonsils, adenoids, and eye strain were also noted. Miss Cora Gui, a public health nurse employed by the Red Cross, assisted Doctor Entz in making this investigation.

The information relative to the weights of children especially revealed conditions needing attention. Sixty-nine of every hundred were found to be 2 per cent or more underweight, 19 were overweight, only 12 being normal. Among the youngsters carrying too much flesh, the average percentage of overweight was 9.5. Overweight children were most numerous in the ages between 10 and 15 years. So far as the investigation showed, the physical condition of neither the underweight nor overweight children improved as they grew older.

Striking as the foregoing statistics are, a more distressful fact is, that of the 69 underweight children in every hundred 34 of them did not come within 8 per cent of weighing what they should. As by child welfare standards a condition of 8 per cent or more of underweight is considered alarming, this group certainly needed a friend. And they found one in Doctor Entz, as we shall see.

An unfortunate thing about many surveys is that they end with the gathering of a lot of data. But this investigation in Marion County was not of that kind. The information obtained through the examination of the school children indicated to Doctor Entz the pressing need for some corrective measures in the diet of the children, and he decided to act upon the facts in the case.

Now regulating the diet of school children is not an easy matter for the county medical officer, or for anyone else outside their homes. He can advise and recommend and suggest to his heart's content, but when it comes to compelling the pupils as to what they shall or shall not eat he is not likely to get very far—not in America anyway. Accordingly whatever action was decided upon had to be taken with the full knowledge and consent of all persons concerned.

The results of the health survey were placed before Miss Rena Faubion, a specialist in milk utilization representing the Kansas State Agricultural College and the United States Department of Agriculture. A consultation followed, to consider the case of the Marion County school children. This was attended by Doctor Entz, Miss Faubion, another milk utilization expert, the county public school nurse, county superintendent, and the county agricultural agent; and when the "doctors" ended their diagnosing and consulting and finally wrote the prescription, it called for plain, ordinary cow's milk.

How to administer the "medicine" constituted the next problem. To solve it Miss Faubion remained in Marion County four weeks, during which she visited 30 schools, presenting the plan and asking for the co-operation of teachers, parents, school boards, and children. She asked that some arrangement be made whereby children could have milk to drink at school at regular intervals. The children were to be weighed at the beginning of the test and at the end of every month thereafter, so that the effect of the milk feeding could be noted.

Five schools agreed to carry out the experiment. Four of these were in rural districts, the other being in a small town. Pupils of the first and second grades only were included in the trial.

The expense of the milk feeding was met in several ways. Some of the schools had money on hand which could be used for buying bottles, bottle caps, and straws, the children bringing the milk from their homes. In other schools the parents provided all the equipment that was necessary, while one school board voted to purchase all the supplies, including the milk.

Each child in the test consumed one pint of milk daily, drinking one-half pint just before the morning and afternoon recesses. Some exceedingly interesting and valuable results were obtained from this use of milk. In one rural school the smallest gain in weight the first month was three pounds, while one boy gained 15 lbs. In another school the milk caused an average gain of 1¼ lbs. the first month, and 1.1 lbs. the second.

The milk also was found to be a corrective for overweight children, as well as for those weighing too little. One overweight child lost 2 lbs. the first month. In another case a boy who was 20 lbs. overweight, disposed of his surplus at the rate of a pound a month. The improvement in the overweight children was probably due to the fact that the milk replaced the rich food which they formerly ate between meals.

At Lost Springs the school board became so interested in the milk feeding project that it bought all the necessary utensils. These included a tin cup for every child in the first and second grades; a large pan in which the cups of milk could be carried to the children and in which the cups were washed; an electric hot plate for heating water; a teakettle and a dipper.

Though the foregoing supplies cost $21, this progressive school board considered that a small investment indeed to make in the children's health. While the experiment was in progress last spring, therefore, the board purchased 3½ gallons of milk every school day, at a cost of 40 cents a gallon, and had it delivered at the school house. The girls of the eighth grade assisted the teacher in serving the milk and in washing the cups.

In the primary room of this school were 25 small children. Twenty-eight per cent of them were 10 per cent or more underweight. Then along came Doctor Milk's twice-daily trips to the



THE CHILDREN IN THE PRIMARY ROOM IN LOST SPRINGS SCHOOL DRANK MILK MID-MORNING AND MID-AFTERNOON



DR. ENTZ AND PUBLIC HEALTH NURSE WEIGHING, MEASURING, AND EXAMINING SCHOOL CHILDREN

undernourished bodies. Though the underweight children gained the most rapidly, the average gain of all the pupils in the room the first month was 1½ lbs. This is more than double the normal gain. The largest gain of any child in the room that month was 3 lbs. Do not these results justify every cent which this wide awake school board spent for milk?

The work of Doctor Entz in bringing about these object lessons in the importance of milk to children is resulting in a better appreciation of this food in the homes of Marion County. Many boys and girls are going to have better bodies and keener minds because of him. Both children and parents should be very thankful for a friend like Doctor Entz.

Seeding Grass Seed in Autumn

HOARD'S DAIRYMAN:—There are farmers everywhere who cling most tenaciously to the notion that fall seeding of grass with fall grain is the best; that they get a better "stand" and a better yield of hay crop than from spring seeding. This fact only explains that the business of farming is not one of absolute but relative achievements. The kind of soil, lay of land, and condition of weather—all these play an important part in the production of the crop. What may successfully be carried out in one locality and one field will not do in another field.

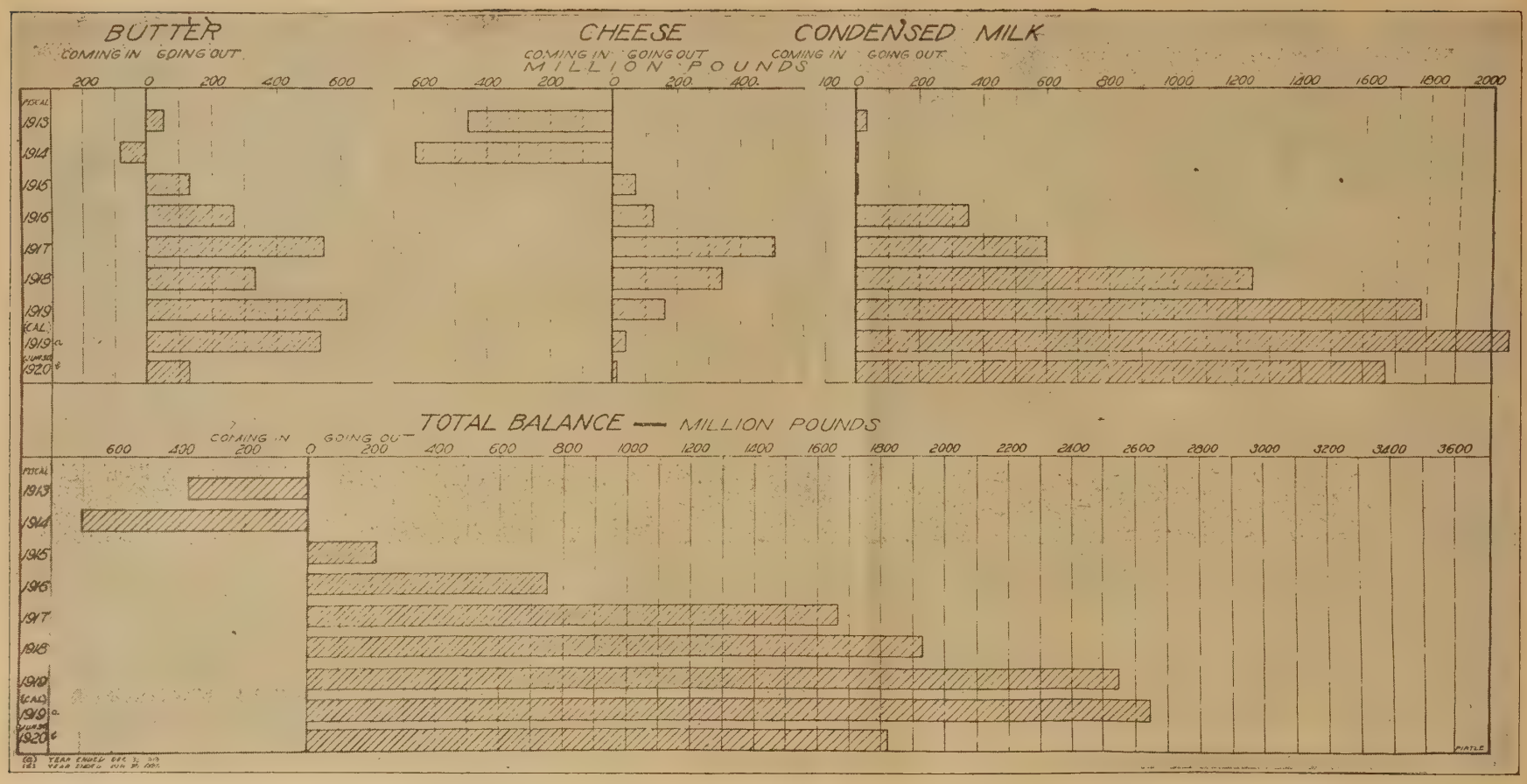
The fact that frequently better and more hay may be obtained through fall than spring seeding may be attributed to the following causes: It may happen that the soil is of loose texture and is easily workable, a soil that otherwise cannot long retain moisture in the early summer and in times of drouth. If the grass is seeded in the spring, continued drouth in the early summer may dry up the little grass plantlets.

By seeding grass seed in the fall, the seeds of weeds as well as those of grass will germinate and the early frost will then largely kill the early germinated weed seeds and not hurt the germinated grass seeds. In this manner many weeds that might otherwise do positive injury to young grass are put out of the way altogether. It should be remembered that grass seed and cereal grain will germinate and grow at much lower temperatures than most of the really hurtful weeds. Those weeds that do not germinate will not cause annoyance to the grass plantlets when they have once become established. Fall grain seeded with grass will help to hold a covering of snow upon the land during the winter and so work to shield the grass from harm.

Wisconsin. J. F. WOJTA.

Reward the vegetables that behaved well this season by saving the seed for next season's planting.

Balance of Trade in Dairy Products



THIS chart was plotted by the United States Dairy Division to show the differences in the exports and imports of the three major dairy products in terms of whole milk, assuming that one pound of butter equals 21 lbs. milk, one pound of cheese equals 10 lbs. milk, and one pound of condensed or evaporated milk equals 2½ lbs. milk.

The total imports and exports of these products for the year ending June 30, 1920, are shown in the following table, but attention is drawn to the fact that this is given in pounds of each of the three products themselves and not in their milk equivalent as in the case of the chart:

	Imports, lbs.	Exports, lbs.	Net exports, lbs.
Butter	20,770,959	27,155,834	6,384,375
Cheese	17,913,682	19,398,158	1,464,476
Condensed milk	19,080,642	638,463,187	669,382,545

N. Y. Farmer—Business Conference

H. H. LYON, NEW YORK

NEW YORKERS are quite in earnest in relation to the betterment of farm conditions. Among the various activities there has just been held a conference under the direction of the Council of Farms and Markets, at which W. E. Dana, president of the council, presided. In the morning four somewhat notable addresses were given. Commissioner Hogue of the Department of Agriculture, Commissioner Porter of the Department of Markets, Dean Mann of the state college, and President Strivings of the State Federation of Farm Bureaus were the speakers at that session.

Mr. Hogue asserted that at no period has so much of applied science reached agricultural activities as during the past few years. With less labor available there has been much greater production. It might almost seem from Mr. Hogue's arguments that production has outstripped the facilities of business to handle the products, as indeed is the opinion of farmers. The reason for the meeting was to find methods of relief in the way of financing agriculture, of making transportation of better avail, affording means of storage, and perfecting marketing conditions.

⚜

Commissioner Porter asked for refrigerator trains for fruits and vegetables, and for the various cities to encourage co-operative marketing and similar means to secure foods at lower costs. Cold storage is needed for farmers to hold products over times of surplus and so avoid waste, at the same time stabilize prices. He went further and said that the present returns to farmers are not such as to encourage the present generation sticking to the farm. The cities of the state have increased in population by 25 to over 200 per cent. Every rural county shows a decrease.

⚜

Dean Mann also thinks the present is a time for action. It is a time for co-operation, not alone among farmers or groups of citizens but for all those who are interested in the public welfare to get together and come to some understanding relative to the duty that confronts all. He advised the appointment of a committee to consist of representatives of bankers, shippers, traffic managers, farmers, and the Council of Farms and Markets to work out some adequate plan as an agricultural program to better the present conditions.

⚜

Mr. Strivings is very optimistic as to the future of organized agriculture, especially as shown in the farm bureau movement. He believes that the business of the farmer is to produce, but thinks that there should be compensation for production. It is there-

(Continued on page 446) 446



OUTAGAMIE COUNTY, WISCONSIN, GUERNSEY ENTHUSIASTS RECENTLY TOOK AN AUTO EXCURSION TO VISIT PROMINENT HERDS OF GUERNSEYS IN NEIGHBORING COUNTIES. ONE OF THE STOPS MADE WAS AT THE FRED INGALLS' FARM, WHERE THE ABOVE PHOTOGRAPH WAS TAKEN. THE FOND DU LAC GUERNSEY BREEDERS' ASSOCIATION SERVED DINNER TO THEIR GUESTS ON THIS FARM

Nebraska State Fair

W. A. DOBBINS, NEBRASKA

THE 1920 Nebraska prosperity fair broke former records for total attendance and for the volume of the exhibits. Approximately 300,000 visitors passed through the gates. The immense crops of all kinds raised in the state this year were reflected in the great displays. The horse exhibit was not as large as other years, but Secretary E. R. Danielson of the state fair board said that the horse will come back in spite of the keen rivalry of the automobile.

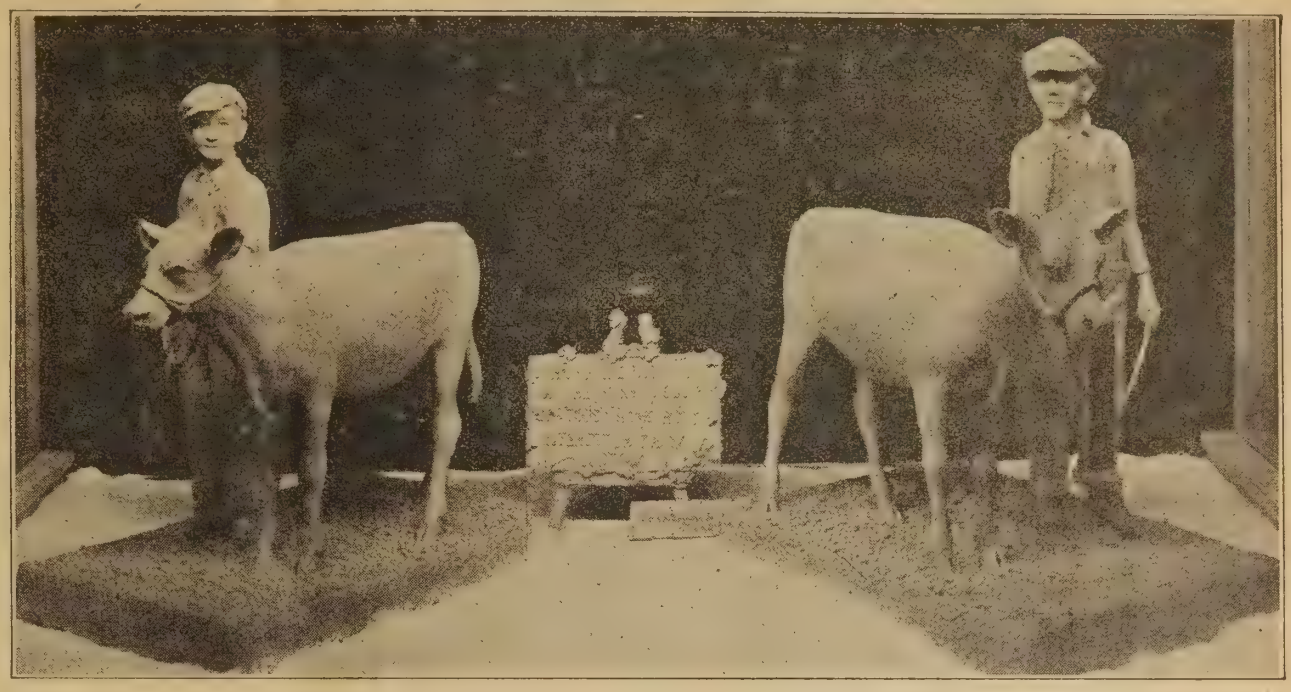
The Nebraska dairy exhibit at the state fair this year was up to its usual high standard. Perhaps the outstanding feature was what was called a "cow's pantry". Here was displayed the milk and butter ability of the Nebraska champion Holstein cow, Tulip Pietertje Konigen 2d, owned by Starke Brothers. She produced 26,721 pounds of milk and 1,066 pounds of butter in twelve months. It required 315 ten-gallon cans to hold the milk she produced, and this was shown in a striking way by that number of cans filled with milk. Alongside the cans were samples indicating the kind and quantity of the feed consumed for the year covering her remarkable record.

Huge quantities of alfalfa, corn, and other feed brought home forceably to city men and women what it costs in money to produce milk in these days of the high cost of living. A complete record kept of what the champion cow ate showed that she consumed 498 pounds of oats, 2,312 of wheat bran, 1,790 of ground corn, 463 of ground barley, 1,352 of oil meal, 1,254 of beet pulp, 4,680 of corn silage, 4,068 of alfalfa, and 9,645 pounds of sugar beets.

The butter statue this year emphasized the importance of the boys' and girls' club work. It was considered a beautiful creation of art as well as utility, fashioned with great skill and fidelity. It represented two prize-winning calves and two equally perfect boys. It was exhibited under the auspices of the Nebraska Creamery Association, and according to Professor J. H. Frandsen, head of the University of Nebraska Dairy Department, it was one of the best of the long list of butter statues which has made the Nebraska State Fair famous.

The university dairy exhibit was in charge of Professors Hendrickson and Boeher. The general dairy display was financed by the Nebraska State Dairymen's Association and was under the direction of a committee consisting of J. E. Palm, secretary; H. A. Morrison, president; and Professor Frandsen of the University Dairy Department. The latter said that the hearty support and financial assistance of the state dairymen's organization and the excellent work of Professors Hendrickson, Boeher, and Thompson and the young women of the University Dairy Department contributed to the best dairy exhibit ever shown at a Nebraska State Fair. He expressed the hope that the state

(Continued on page 442)



THE BUTTER STATUE EXHIBITED AT THE NEBRASKA STATE FAIR UNDER THE AUSPICES OF THE NEBRASKA CREAMERY ASSOCIATION. IT REPRESENTS TWO PRIZE WINNING CALVES HELD BY BOYS

THE ALFALFA MARKET

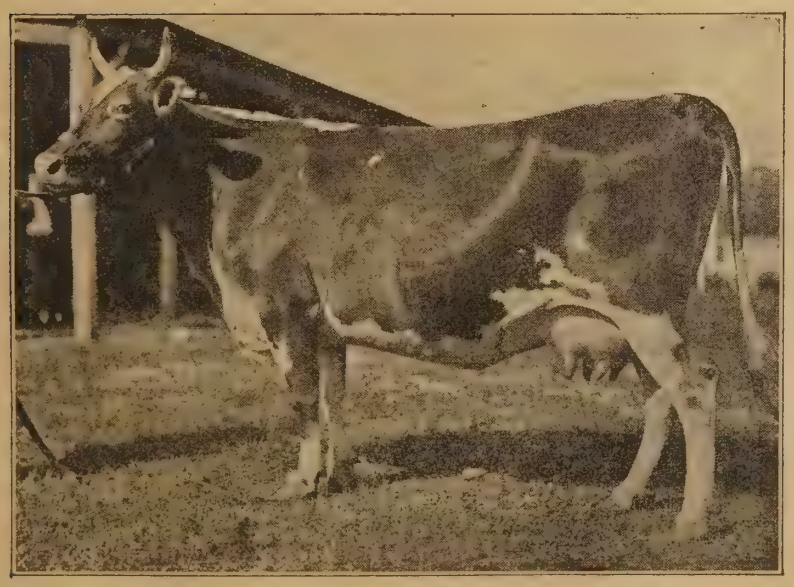
SANDERS SOSLAND, MISSOURI

WITH the passing of summer, dairymen, are scrutinizing the position of alfalfa markets preparatory to accumulating supplies for their stock during the fall and winter seasons. Many milk producers have profited by buying their deferred needs of alfalfa and clover during September, or about this time, though occasional losses also have been suffered by consuming interests when markets failed to follow seasonable price movements. The trend of values during the fall and winter seasons of the past three years resulted in profits from the purchase of alfalfa on a liberal scale in the early autumn. Demand and supply conditions today, however, are unlike those which prevailed during the late summer and early fall of the last three years. For this reason, the consuming trade is more reluctant to take hold.

Alfalfa hay is in a very weak position at the present writing, the weakness following an extended period of remarkable strength and sharp advances in prices. It is not unusual to witness an easy tone in alfalfa during September; in fact, under normal marketing conditions the legume frequently recedes to the lowest level of the season during this month. Whether the absence of important buying power will permit declines of a material character before the market reaches a firm basis is questionable. The influences which brought about the upturns in prices were largely artificial, and having since almost entirely disappeared, the trade is naturally more friendly to the bearish side.

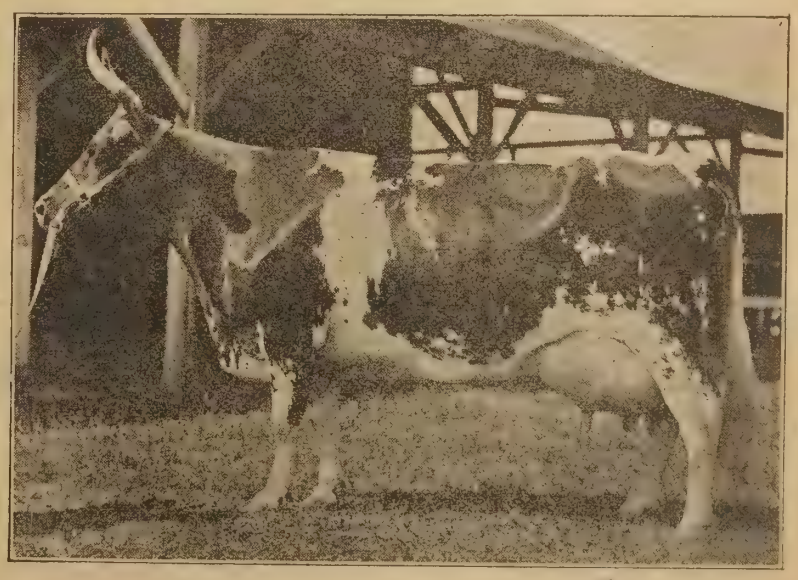
Immediately after the public announcement by the Interstate Commerce Commission of the advances in railroad freight rates, a great wave of buying developed, which gained momentum rapidly during the twenty-six days preceding the date when the new schedule of tariffs became effective. The buying of hay was not the result of an exhaustion of stocks in hands of consumers, nor was it based on any particular bullish theories which the trade in alfalfa entertained. But dairymen, cattle feeders, alfalfa millers, and other consuming interests saw approaching an increase in freight rates which markets could not easily offset. From Kansas City, the largest alfalfa market in the United States, to the dairy districts of the East and to points in the Southeast, the increase in freight rates under the

(Continued from page 438)



MISS SPOTSWOOD OF A. D. F., FIRST PRIZE, SENIOR AND GRAND CHAMPION GUERNSEY COW AT NEW ENGLAND FAIR. ALSO WINNER OF SILVER MEDAL FOR BEST GUERNSEY COW IN THE STATE

OWNED BY THE OAKS FARM, MASSACHUSETTS



HENDERSON'S BETTY, FIRST PRIZE, SENIOR AND GRAND CHAMPION AYRSHIRE COW AT NEW ENGLAND FAIR. ALSO WINNER OF GOLD MEDAL GIVEN BY STATE OF MASSACHUSETTS FOR THE BEST DAIRY COW, ANY BREED, IN THE STATE

OWNED BY WEYMOUTH FARMS, MASSACHUSETTS



Dandelion Butter Color" Is Big Prize Winner

Be sure and use Dandelion Brand Butter Color and give your butter that June golden shade which brings top prices —pleasing the eye and tempting the palate.

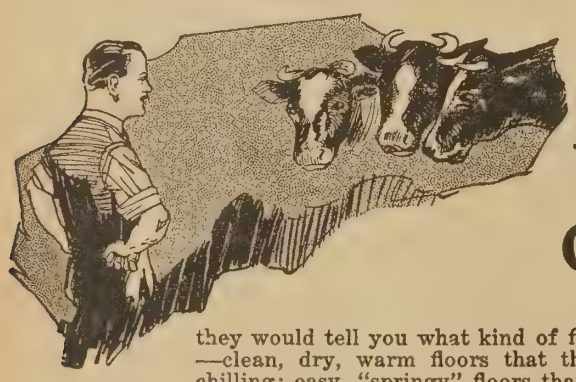
The High Scores of 1920

In many of the State Buttermakers' Shows, first awards were won by users of old reliable "Dandelion Brand." You can't miss by giving a trial to the butter color which helps 90% of the successful buttermakers of America.

Never gets rancid. Doesn't affect flavor.
Doesn't color the buttermilk. Leaves no sediment.
Colors more butter to the gallon.

Dandelion Brand Butter Color is purely vegetable and fully meets requirements of all Food laws—State and National. Ask your jobber for prices.

WELLS & RICHARDSON CO., Inc. BURLINGTON, VERMONT



If Your Cows Could Talk

they would tell you what kind of floors to put in their stalls —clean, dry, warm floors that they could lie on without chilling; easy, "springy" floors that wouldn't hurt their feet and make their knees stiff; safe floors that they could step on without slipping. And they would promise to give more milk and to have less need for the veterinary if you would provide stall floors like this.

Your cows do their best for you. Why not reciprocate and give them warm, safe and comfortable floors to stand and lie on during the long winter months?

The 28-page illustrated book, "Better Stall Floors", tells you exactly what your cows need—Circle A Cork Brick. Send for your copy today. It and a sample of Circle A Cork Brick will be sent free of charge on request.

Armstrong Cork & Insulation Company 112 Twenty-fourth Street PITTSBURGH, PA.

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FOR ALL STALL FLOORS



CONTRACTORS MIXERS
AT ASTONISHINGLY LOW PRICES

Perfection
BARREL TYPE
CONCRETE MIXERS
With Steel Armored Oak Drums and Massive Semi-Steel Gears.

Lowest-Priced "High Speed" Mixers in the World.
Machine mixed concrete 50 per cent stronger, several times as fast and easier than hand mixing.
WE SAVE YOU 20 PER CENT on concrete tools, block, post, tile or brick machines. Ask about our larger mixers at correspondingly low prices. Write or wire
Contractors' Equipment Co. Keokuk, Iowa

380-PAGE BOOK FREE with each outfit. Tells how to build your silos, barns, floors, tanks, manure pits, ice houses, etc.

Vermont Ayrshire Club Meeting

HOARD'S DAIRYMAN:—The fourth annual meeting of the Vermont Ayrshire Club was held with Mr. and Mrs. F. B. Catlin, at the Green Mountain Stock Farm. Local showers kept down the attendance but representative breeders from over the state were present and a good meeting held. The forenoon was spent in inspecting the herd of Ayrshires which Mr. Catlin has and in meeting and getting acquainted with other breeders present.

After a basket lunch supplemented by hot coffee furnished by Mr. and Mrs. Catlin, the business meeting of the club was held. The report of the year's activities of the club was made by C. N. Smith, secretary-treasurer, and accepted. The report of the sales committee, of which C. W. Wilson of Vergennes is chairman, was made. This sale will be held October 26th in Rutland and will be a representative sale of selected Ayrshires from some twenty-five Vermont breeders. The election of officers for the ensuing year resulted in Geo. H. Dunsmore, St. Albans, president; C. N. Smith, Brandon, secretary-treasurer; F. B. Catlin, Randolph, auditor; with C. W. Wilson, Vergennes, and B. F. Butterfield, Derby Line, additional members of the executive committee. Vice-presidents were elected from each county.

Commissioner of Agriculture E. S. Brigham, gave a talk on "Tuberculosis Eradication in Vermont". He stated that $265,269.77 had been spent in the fiscal year to June 30, 1920, that 36,741 animals had been tested in co-operation, of which 9,769 were purebreds. To date 52,616 animals have been tested representing 14% of the cattle in the state. The results have been very satisfactory. The department has tested 1,343 herds which have passed one test without a reactor and had over 1,900 herds under supervision July 1st, 1920. These results have created a demand for Vermont bred animals and the ultimate results of tuberculosis eradication is assured. He asked for the co-operation of breeders in carrying on the program of eradication work.

J. G. Watson, secretary, National Ayrshire Breeders' Association, asked the support of breeders in tuberculosis eradication work and emphasized the increased value added to dairy cattle of the state and nation through the elimination of this disease, for the co-operation of breeders in showing at local fair throughout the state one or more representative animals bringing publicity to the Ayrshire and the individual herd represented and to the dairy industry generally. He called the attention of breeders to the necessity of growing young stock to early maturity and the demand for animals of good scale irrespective of breed. Publicity to available and surplus stock through advertising is a necessity which breeders must give consideration. He also gave a judging and scoring demonstration on three animals emphasizing the need of constitution, capacity, and udder development, in the dairy cow.

A pleasant and profitable day was spent by those present and a vote of thanks was given Mr. and Mrs. Catlin for their hospitality during the day.

CLYDE N. SMITH,
Sec., Vermont Ayrshire Club.



AYRSHIRES AT PASTURE ON GREEN MOUNTAIN STOCK FARM

This herd produced milk the cheapest of any of 2,500 herds in New England under investigation by the Boston Chamber of Commerce. Mr. Catlin was described as "The Best Farmer in New England" in the report.

The New York Outlook

HOARD'S DAIRYMAN:—For some months we have been congratulating ourselves that we can make a little money this winter in the dairy business. Now that the price making season is almost at hand we find that there is a propaganda looking to lower prices on all that we have to sell, but it does not hit hard much that we buy. Dealers tell us that anything that has steel will not decline for some time. Sugar is down a little but still remains far beyond the general price level. It may return towards its month-ago rate as soon as the farmers have disposed of the beets for the sugar. Groceries still sell at high prices almost everything. Why should we not get a good price for milk?

Now to look for a moment at the shadows that are crossing our path, uninvited and unexpected. Milk dealers, some of them, say that they will close plants the first of October because they are overstocked with goods. It is true that this comes from those that have sent out some apparently false impressions in the past. It may be that it is all for effect but I am afraid that there is some basis for the action.

For some weeks it has been apparent that work is slackening in the big cities. Not until today did I know that it had hit our little villages. Within an hour I met a workman who said that he is out of a job tonight and is going back home. He told of business concerns that advertise for a helper and get over thirty applications. We are in for a hard winter he said. Others in town say the same. This may not make it easier for farmers to get help for some time, and it certainly does not yet, but if continued there will be a difference on the farm. However it may affect the help on farms, it is not going to make for high milk prices. Is it possible that milk can be depressed as low as last winter? We have been sure that it could not. Propaganda and a little

fact can be made to go a long way. There will be propaganda in fixing the price but I am afraid that there is a little fact also. Our league officials are studying the problem closely and can be depended upon to make as good a bargain as circumstances warrant.

The fall growth for feeding is fine and many farmers have turned into the meadows. I do not approve of that practice generally speaking. There are cases, however, where it may be wise to pasture down some aftergrowth. Commonly we like to mow off some and feed in the barn. Alfalfa is too particular a crop for general use but fields can be found on most farms where it can be grown. On the home farm second growth is being fed direct from the field and during the past month since feeding alfalfa there has been an increase of nearly fifty per cent in milk and no additional grain until within a few days. There could not have been so large an increase under all conditions, but this feed is the best that has been tried. Better let it wilt a little before feeding. That is true when feeding "sowed" corn, oats, and peas, etc. Alfalfa is worth while even in this section but it is no slouch of a job to make grow and do well.

Grain has been fed for nearly or quite two months, but generally speaking farmers have not fed as much as formerly on account of the high price of grain feeds. One dairyman told me a day or so ago that he wanted to get his feed 23 cents a hundred less than the milk brings and then he can afford to feed it. We haven't been getting it for that, yet it probably is best to feed some grain as soon as the pasture feed drops back, say in July. Now we are getting that much margin and there ought to be some profit to make up for the loss on the grain fed in July and August. Not entirely encouraging to be sure when we cannot figure a profit on the grain for the three months, yet we believe in feeding some grain. It will have an after affect. Some are figuring on $65 grain feed for the winter.

New York. H. H. LYON.

Wisconsin Dairy Council Membership

During the month of August twenty-one members joined the Wisconsin Dairy Council, among these members are two condenseries, two manufacturers of dairy barn equipment, one breed association, ten creameries, six cheese factories, and one farm bureau. The Rock County Farm Bureau subscribed $200 to general Dairy Council fund and set aside $200 to be used as the basis of an advertising campaign fund for Rock County. A committee of the farm bureau has been appointed to meet with distributors in Rock County to raise a $1,000 fund for advertising the food value of dairy products in Rock County.

At the Wisconsin State Fair the Dairy Council had three exhibits, two featuring the food value of dairy products and one featuring our membership. Pamphlets were distributed from the latter booth as well as from the Dairy and Food Commissioner's booth, where high quality cheese and butter were given away on a cracker or rye bread. It seems a shame that so few creameries and cheese factories are supporting the Wisconsin Dairy Council. Representatives from many firms called at the Dairy Council booth and secured a list of our membership, therefore we hope our members supply them with high quality dairy products when the prospective patrons write for trial orders. Many called to get a set of our attractive posters for exhibition purposes but they failed to leave their membership or even ask for charges on same, therefore it is quite evident that the dairymen want to advertise but they want the other fellow to pay the bill.

Remember, gentlemen, that it takes money to advertise and if you expect great results from the Dairy Council you must put considerable money into the council treasury. Your help is solicited for the good of the dairy industry. Interest your friends and neighbors in this progressive work that costs so little, yet means so much to the health, wealth, and happiness of our people and state.

Names	County	Am't.
Alto Creamery Co.	Fond du Lac	$ 25.00
Badger Creamery	Iowa	8.00
Brodhead Cheese and Cold Storage	Green	25.00
Dresser Junction Cry.	Polk	9.10
Eau Claire Guernsey Breeders' Ass'n.	Eau Claire	19.75
Farmers' Co-op. Dairy Co.	Juneau	10.00
Harker Cheese Co.	Dane	3.50
Hudson Mfg. Co.	Brown	25.00
Iola Creamery Ass'n.	Waupaca	40.00
Little Falls Dairy Prod. Co.	Polk	4.72
Marty-Gempeler Co.	Green	27.00
Melvina Cry. Co.	Monroe	15.00
Mitchell & Mitchell Cry.	Iowa	7.80
Neillsville Condensed Milk Co.	Trempealeau	100.40
Ogdensburg Cry. Ass'n.	Waupaca	12.90
F. Rassmann Mfg. Co.	Dodge	50.00
Rock Co. Farm Bureau	Rock	200.00
Shell Lake Co-op. Cry. Association	Washburn	21.50
Waupaca Cry. Co.	Waupaca	25.00
Westfield Cheese Co.	Sauk	3.50
White Clover Cheese Co.	Waupaca	4.50

J. F. THOMAS, Field Secretary.



When the Cow Kicks over an open pail the milk is spilled and lost. This cannot happen if you use a Non-Spill Sanitary Dairy Pail. This new pail is spill-proof. An automatic valve is your protection against spills. This simple device saves milk and money for you.

The Pail Pays for Itself several times over during the summer season when the flies and heat cause the cow to kick. It is a protection against costly milk waste by spills.

The Non-Spill Pail is absolutely sanitary. It is made of heavy charcoal tin plate. Its seams are smoothly soldered, leaving no crevices where germs can lodge. Its capacity is 3 gallons. A closely woven brass sieve, protected by a non-splash rim, strains the milk and keeps dirt and foreign substances out of the pail.

Your local dealer sells it or will get it for you. It's a Schlueter metal product.

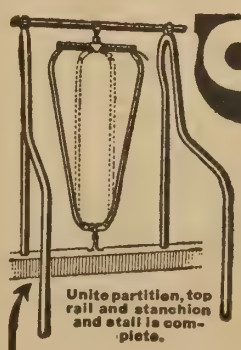
Dealers: Write for our special proposition. Your customers will want Non-Spill Sanitary Dairy Pails.

Non-Spill Sanitary Dairy Pail Co.
4636 N. Broadway : St. Louis









Only 3 Parts to Erect

and the Construction is *PERMANENT*

One-piece partition, stanchion and top rail complete a CLAY Sanitary Cow Stall. Easy to erect. Lasts longer than the barn. Patented design—no angles—can't bend, push or twist. Simple and safe. Cuts upkeep cost. Easy to clean.

Bigger Dairy Profits. Give your cows quiet and pasture comfort in the barn, save feed, time and labor and make more money by installing

CLAY Sanitary Steel Stalls

CLAY 2-Way Stanchion instantly closed or opened **both ways** with **one hand.** Fits any size animal. Gives free movement. Hangs straight in center of stall—no sure-stops needed. Lock warranted cow-proof. CLAY Equipment is fully guaranteed.

Barn Plans Free Our architects will plan your alterations or new barns FREE. Send postal **today** for catalog and Free Barn Plan Blank.

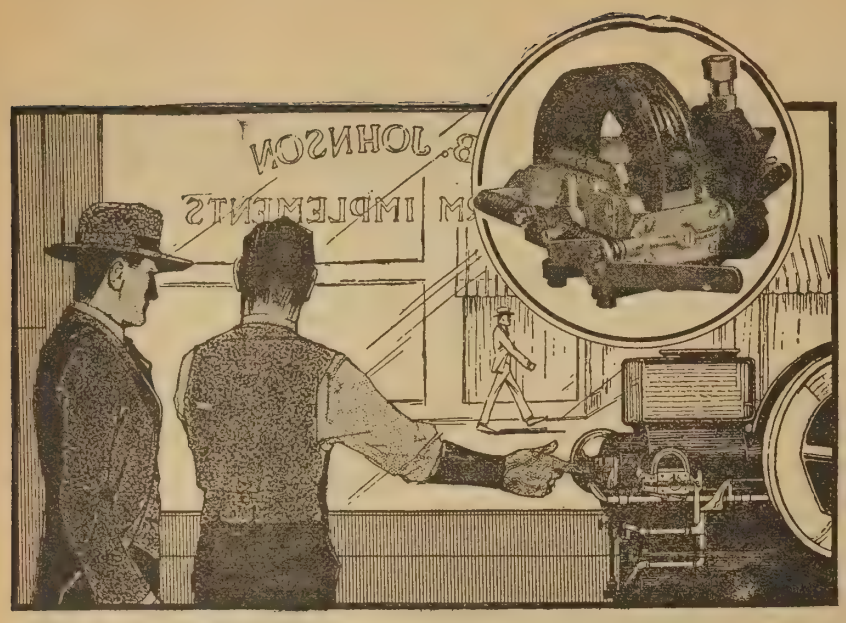
IOWA GATE COMPANY, 601 Clay Street, Cedar Falls, Iowa.



For bedding most convenient, serviceable and sanitary. Write for prices.

Defnet & Jagerson Supply Co., Neenah, Wis.

CARBO STEEL POSTS
Self aligning
TENSION FENCING SYSTEM
10 Times Strongest. No Breaking. Buckling Etc.
Half the Cost — No Concrete
CARBO STEEL PRODUCTS CO 2607 W. 111th St. CHICAGO



Insist upon a WEBSTER MAGNETO *Equipped Engine*

WHEN you buy your next farm engine, insist upon getting one that is equipped with a *Webster* Magneto. For a *Webster*-equipped engine will give you better service.

It will be longer lived. It will be easier to start and it will require less attention.

85% of the manufacturers of farm engines, using make-and-break ignition, now equip their engines with this sturdy, dependable Magneto, because it renders the most efficient service — always — under all conditions. Just as over 600,000 *Webster*-Equipped Engines are now doing.

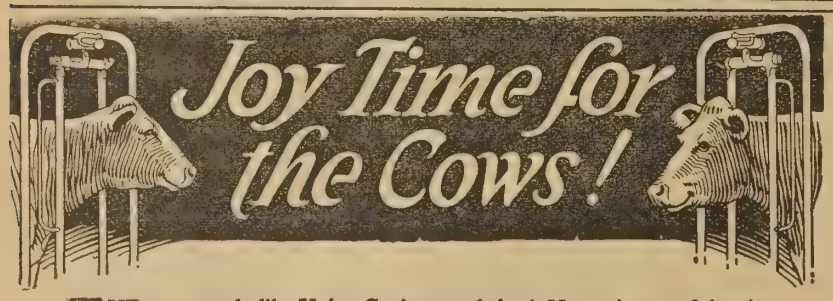
WEBSTER MAGNETO

The *Webster* is water-proof; its permanent, rigidly fixed, one piece windings will stand repeated soakings. It is oil proof. It has no brushes or rubbing contacts. Its unwound inductor permits the use of a solid shaft and lighter springs. ***This means quick, sure spark action.***

There are over 46 *Webster* magneto service stations in the country. We also maintain a field force of magneto specialists. A specialist, a service station man or a dealer selling *Webster*-equipped engines is ready at any time to aid you in securing better results from your magneto.

If you now own a engine that is not *Webster*-equipped, *write* us and we will see that you are supplied.

WEBSTER ELECTRIC COMPANY
RACINE WISCONSIN U.S.A.



THE cows surely like Union Grains—and that's Nature's way of showing that it's good for them. It contains just the right elements to make cows happy and healthy, with the big flow of milk that it is sure to bring.

Hundreds of the most successful dairymen who are feed experts themselves use Union Grains because in careful tests in which they weighed the milk and figured the cost of feed—Union Grains proved itself more economical.

It saves the time and trouble of mixing, too, and makes it possible to use that time to better advantage. Feed Union Grains and you know the feed is always right. Know where you make and where you lose money by keeping a Ubiko Cost Sheet. It will tell you which feeds and which cows pay best. Write for it. It's free.

We also make Ubiko Calf Meal, Ubiko Stock Feed, Ubiko Pig Meal and Ubiko Poultry Feeds.

THE UBIKO MILLING COMPANY
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UBIKO
BALANCED RATIONS
For All Farm Stock
UNION GRAINS

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Pa.	So. Blair Co.	C. H. Detweiler	Aug.	330	17	46.0	Albert Perry
Pa.	North Branch	J. R. Smith	"	353	9	82.1	J. E. Lenker
Iowa	W. Branch-Tri-Co.	Ralph Houser	"	279	5	51.0	Wm. Edward
Idaho	Canyon County	C. O. Miller	"	248	25	61.5	Uni. Exp. Sta.
Colo.	Johnstown	Walter Geurkink	"	304	56	65.6	W. A. Purvis
Colo.	Platte, Boulder, St. Vrain	L. L. Simpson	"	354	24	58.5	H. S. Andrew
Minn.	Dodge Co. Central	Maroy A. Melin	"	418		51.7	Sam Andrist
Kans.	Bourbon Co. Co-op.	T. A. Trull	"	370	8	45.7	Trask & Richards
Ohio	Butler Road	F. L. Rostocil	"	230	52	64.0	M. O. Fay
Wis.	Empire	V. M. Anderton	"	490	33	70.3	Bobt. Byrnes
Colo.	Otero Co.	A. A. Eastman	"	203		38.5	A. O. Showalter
"	Douglas Co.	R. E. Sherman	"	457	19	70.8	J. E. Linquist
"	Arkansas Valley	R. M. Reed	"	214		70.0	

Association Notes

Southern Blair County, Pennsylvania:—August market milk testing 4% sold for $3.88 per cwt. and 4c per point above. Feeds have varied little in price since last month.

North Branch, Pennsylvania:—There is an increased interest in balanced rations and home mixing of feeds. Market milk in August, testing 3%, sold for $3.85 per cwt. and 4c per point above. Milk retails for 14c per quart and butter for 75c per pound. Feeds are charged as follows: oats, 65c per bushel; corn, $1.45; middlings, $65 per ton; bran, $60; cottonseed meal (36%), $85; linseed meal, $77.

Canyon County, Idaho:—In this association there were nine silos and eight milking machines being used. Two men are trying out sunflowers for silage. The August price for butterfat was 68c per pound at the creamery and 74c per pound at the condensery. Hay is rated at $12 per ton.

Johnstown, Colorado:—One dairy purchased a 13-month-old registered Holstein bull during August. Another farm has improved its dairy barn with a coat of whitewash. August milk sold at the condensery for $3 per cwt. The condensery and the creamery each paid 75c per pound for fat. Milk retails for 15c per quart. Feed prices are: Silage, $7 to $10 per ton; alfalfa, $12 to $15; dried beet pulp, $1.75 per cwt.; bran, $2.55; cottonseed meal, $4; oil meal, $4.40; crushed oats, $2.80; crushed barley, $2.70; milo maize, ground, $2.25; chopped corn or corn meal, $3.15.

Platte, Boulder, St. Vrain Valleys, Colorado:—Four unprofitable cows were replaced with three registered ones. One Guernsey sire was purchased. The dairymen in general are beginning to feed better rations. The condensery paid 75c per pound for fat in August, and the creamery paid the same price. Milk retails for 12½ to 15c per quart and butter for 60c per pound. The following are the local prices for feed: alfalfa, $14 to $16 per ton; corn silage, $7; corn chop, $3.50 per cwt.; barley, $4; oats, $4; dried beet pulp, $1.75; cottonseed meal, $4; linseed meal, $4.50.

Dodge County Central, Minnesota:—There were twenty-two unprofitable cows sold in August. Many members are feeding grain to their cattle because of low pasture. The creamery paid 66c per pound for fat and the cheese factory paid 50c to 58c. Milk retails for 11c per quart, butter for 66c per pound, and cheese for 24c. Oil meal is rated at $65 per ton; bran, $48; cottonseed meal, $80; oats, 50c per bushel; corn, 98c; barley, 86c.

Bourbon County Co-operative, Kansas:—All feedstuff is coming down. There will be an abundance of silage this fall, due to the large amount of rain in August. Many members have been unable to build silos due, it seems, to a scarcity of material. Several unprofitable cows have been weeded out. August market milk testing 4% sold for 27c per gallon. The condensery paid 86¼c per pound for fat. Milk retails for 15c per quart, butter for 60c per pound, and cheese for 40c per pound. Feed prices are: bran, $2.20 per cwt.; cottonseed meal, $4; oil meal, $4.25; oats, 50c per bushel.

Butler Road, Ohio:—This is a one hundred per cent pure-bred sire association. Its members are buying feed in carload lots. During Aug. 27 cows and heifers were sold to an Oklahoma breeder. Market milk testing 3.5% sold for 35½c per gallon. Oil meal is rated at $70 per ton; cottonseed meal, $82; bran, $60; Larro, $78.

Empire, Wisconsin:—The last grade sire was recently sold for beef and this association now stands one hundred per cent in the use of pure-bred sires. Owing to the scattered location of members, co-operative feed buying is not practical in this association; however, farmers are stocking up on oil meal, bran, etc., before winter prices begin. The crops of home grains and hay are splendid this year. The condensery paid 75c per pound for fat in August, the creamery paid 65c per pound, and the cheese factory 61c. Milk retails for 12c per quart, butter for 64c per pound, and cheese for 25c per pound. Feed prices are: Oil meal, $70—$75 per ton; bran, $45; corn meal, $80; wheat middlings, $65; barley, 90c to $1 per bushel; oats, 60c per bushel.

Otero County, Colorado:—The association in general shows a falling off in production, but two members show an increase in production due to the addition of grain to the ration. The condensery paid $3.10 per cwt. for 3.5% milk during August. Feed prices are: alfalfa, $17 to $20 per ton; corn chop, $5.50 per cwt.; oats, $3; bran, $2 60; shorts, $2.95; linseed meal, $6.50; cottonseed meal, $4.

Douglas County, Colorado:—Seven unprofitable cows were sold in August and 12 head purchased. One cement silo was completed. The association is planning an exhibit at the county fair. During August the creamery paid 75c to 85c per pound for fat. Feed prices are: alfalfa, $20 per ton; silage, $10; bran, $2.75—$3.35 per cwt.; cottonseed meal, $6; linseed meal, $6.50; oats, $4—$4.40; barley, $4; corn chop, $3.25—$4.

Arkansas Valley, Colorado:—At present the dairy situation is very bright and much interest is taken by dairymen. There is an immediate demand for good cows and herdsmen.

About 70 head changed hands in the last few days, 40 averaging $215 and 30 springing heifers $118. The condensery paid $3.20 per cwt. for milk. Alfalfa is rated at $17—$20 per ton; silage, $10; beet pulp wet, $4; bran, $2.10 per cwt.; oats, $2.25; barley, $1.85; corn chop, $2.35; shorts, $2.10.

Canadian Dairy Notes

HOARD'S DAIRYMAN:—We on this side of the International boundary are just completing the most bountiful harvest we have had in four years. In the early part of the season the weather was droughty and all crops got off to a poor start. The hay crop, as a result, was short. Since July 1st, however, rains have been frequent and grain, roots, and corn have made almost a record growth. I have just completed a tour of some of the leading dairy districts of Eastern Canada, and everywhere the grain and corn were a treat to behold. In Western Canada, too, the crop is the most satisfactory in years. Our dairy farmers are figuring on a more plentiful supply of mill feeds and a smaller demand as home grown grains will make the farmers less dependent on the feed dealers than they were last year. Lots of straw and a good corn crop will overcome, to some extent, the drawback of a short hay crop.

Alfalfa has demonstrated its merit this year as never before. The only men with lots of hay are the alfalfa growers. The first cutting was heavier than either red clover or mixed hay and the second cutting is even heavier than the first. Many will have a good third crop as well. I have seen many fields that will yield five tons to the acre this year and few fields will return less than three tons. In most cases, if the crop were sold, it would bring in more money than the selling value of the land. Mr. Scott, an Ontario farmer, sold the standing alfalfa from 15 acres for $1,050 and will have the third crop for himself. The Grimm variety is becoming more and more popular every year because of its hardiness and yield. The great problem is to secure reliable seed of this variety. There are many fakirs to capitalize on its popularity.

Winter Price for Milk

The milk producers' associations have decided that the winter price shall start this year on Sept. 1st, instead of Oct. 1st as heretofore. At a well attended meeting of the Toronto Milk Producers' Association it was decided to ask $3.25 per 80-pound can delivered at the dairies and 84 cents a pound butterfat for sweet cream on a f. o. b. basis, cans supplied. The distributors have accepted this price. The same price will prevail at Hamilton. The price last year was fixed at $3.10 by the Board of Commerce, the producers asking $3.25.

For three years past, city milk producers have worked at a disadvantage. They asked for a price that seemed fair in the fall but rising costs of production often left the balance on the wrong side of the ledger before spring. This year opposite conditions may prevail but if the producer finds price charges working to his advantage he will consider it as no more than his due. On the whole, the outlook for the milk producer this winter is more satisfactory than for four years at least. Cheese factories and creameries have also been paying a fair price for milk although cheese has not been selling as high as in the fall of 1919.

Scrub Bull Legislation

Hoard's Dairyman has evidently been misinformed regarding scrub bull legislation in Ontario. We have no laws compelling a man to keep a pure-bred sire. If a farmer is foolish enough to prefer a scrub to a registered sire he is perfectly free to keep one and always will be so long as the spirit of the people remains what it is. The government of the province is in the hands of the organized farmers with a farmer premier and a cabinet also largely composed of farmers and there is no danger of such a government becoming quite so autocratic. The agricultural representatives referred to in your editorial asked that legislation be enacted forbidding a man keeping a scrub bull for service in neighboring herds. They desire that the owner of a scrub sire keep his trouble at home. Such legislation is already in effect in Ontario in connection with stallions and the results have been beneficial. In Nova Scotia the use of a scrub or grade sire is permitted for use outside of the owner's herd only when a pure-bred sire is not available within a reasonable distance.

Personally, I am not in favor of even this measure of anti-scrub bull legislation and doubt if it will be sanctioned in Ontario. It is, as you state, too great an interference with the liberty of the individual. At the present time, however, Ontario is waging a vigorous campaign for the elimination of the scrub sire, but this is purely educational.

Farm Labor

One of the largest and most influential daily papers in Canada, and one that takes an intelligent interest in agriculture, has recently raised the



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AT least one of the stores in your neighborhood will have a window display of Colgate's Ribbon Dental Cream. These windows will be ready to photograph beginning October 1st.

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$1005.00 in Prizes

Look for a store window with the Colgate pictures and packages in it. The dealer will gladly let you take a picture of his window.

Look on the back covers of some of the October magazines where you will find all the rules of the contest. Or write to Colgate & Co., Dept. 69, 199 Fulton Street, New York, for particulars.

Ask an older friend who takes pictures or the man from whom you buy films to advise you how to photograph windows. Taking pictures through plate glass is a tricky operation and one that you may never have tried before.

And let parents remember, too, that by encouraging the boys and girls to enter this unique contest, there is not only added zest to Kodak-ing, but a fresh interest in the importance of brushing the teeth regularly, night and morning. The delicious flavor of Ribbon Dental Cream is an important help in forming that habit for health.

115 CASH PRIZES

Enter your photographs in the contest, for which prizes will be awarded as follows:

For the best photograph . . . $100
For the 3 next best . . $50 each
For the 10 next best . . $25 each
For the 101 next best . . $5 each

Prizes will be awarded before January 1st, and winners will be announced in an early 1921 issue of this magazine. In case of a tie, each will receive the full value of the prize tied for.

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Also Holds These Noted Records

Many other unmatched Essex records forecast its ability to break the transcontinental records at will. For instance it holds the official 50-hour endurance record of 3,037 miles in 50 hours. It holds the 24-hour dirt track mark of 1,261 miles, made by an owner-car, which had previously seen over 12,000 miles service. And it holds the world's 24-hour road mark of 1,061 miles, made over Iowa country highways.

Yet these records are significant only because they show the endurance and reliability of every Essex car. They speak for the ability of any Essex to duplicate these feats.

Essex Motors, Detroit, Michigan

(228)

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question: "Is dairying on the decline?" Help has been tremendously scarce for years. Men who work for a living have been flocking to the cities with their eight-hour day and easy working conditions. This has been accompanied by a changing attitude toward excessively hard labor and long hours on the part of the farmers themselves. "Why should we work long hours in order to feed cheaply a lot of city people who are working shorter and shorter hours?" asks the farmer. There is also a growing conviction that other industries deliberately restrict production in order to maintain prices. "Why shouldn't we do the same?" is the farmer's question.

Such an attitude, were it to become at all general, would first make itself felt in dairying, which requires close application and long hours. The daily in question believes that these factors are already restricting dairy output. Recently one of their correspondents investigated conditions in the Lindsay District of Ontario. This investigator found that on most farms only one-half as many cows were being milked as a few years ago. In another district with which I am well acquainted I could name farm after farm where eight or ten cows were once milked and where now only one or two are milked to supply family needs. At the same time the best statistics available from Ottawa show that the cow population is increasing. The explanation, I think, is found in this: In both districts mentioned the cows usually kept are grade Shorthorns and it is very easy to shift from dairy to beef. In recent years the combination of scarcity of labor and record prices for beef has transferred their interest to beef and the calves have sucked the cows. Beef is now on the down grade, labor promises to be more plentiful, and when conditions warrant a transfer will be made back to dairying.

In the dairy districts, on the other hand, I find no indications of decreased production. In one district in Oxford County, in fact, the manager of the milk shipping station assured me that several farmers who had stayed with fat cattle were now planning to go in for dairying. Where dairying is well developed and the steady returns have come to be taken for granted, farmers are naturally slow to return to a less remunerative, even if easier, system of farming. It is possible that in the Prairie Provinces, however, the good grain crop this year may tend to switch some interest away from dairying.

The Dairy Industry

It is some years since I have mentioned in these notes the almost phenomenal development of the dairy industry in British Columbia. This development has been not so much in the increasing number of cows kept as in their quality and in the perfection of the marketing system. British Columbia breeders of Holsteins, Jerseys, Guernseys, and Ayrshires are making new records in Record of Performance out of all proportion to the number of registered cattle owned in that province. One breeder, Mr. Shannon of Cloverdale, B. C., predicts that in a few years all top records will be held in his province. This is a strong statement, however, as eastern breeders are still going strong. Undoubtedly, however, the mild climate of the Pacific coast is conducive to maximum production.

The milk producers are well organized and in Vancouver control the retail distribution of their product; "The Milk Trust" as the citizens call the producers' association. Such an organization, if the monopoly enjoyed is not abused (and it has not been) is invaluable to the dairy industry. British Columbia dairymen seem to be setting the pace for the rest of Canada.

Ontario. F. E. ELLIS.

What Farmers Say

HOARD'S DAIRYMAN:—At the various state meetings there are about as many things of interest obtained in conversation as from the public addresses. Of course, these matters show more of the trend of opinion than of actual announcements yet by a little selection much of real value is secured. Men come together from different points and bring their reports.

There are many sections where canning crops are not being purchased and the canneries are not operated. It looks, from reports here and there, as though this season is to see the most waste of foodstuffs that has been known for many years. Of course, these news items may be a little exaggerated, yet one feels that there is too much of truth in them.

As for fruits, out here there is a surplus. Some feel that there will be less competition from the West on these on account of the increase in freight rates and that possibly prices may be such as to save producers from loss. That remains to be told. Much the same is said respecting potatoes, but there may be less gain in this line. Both fruits and vegetables are likely to bring producers low prices this fall.

Occasionally we hear of action taken to save producers. In one county in the southern tier a potato warehouse has been purchased for $40,000 by farmers for the storage of potatoes until prices become better adjusted.

The wool pool in this state has not been given up. Marketing conditions are bad, but it is still thought that a half million pounds will be held in storage in a pool in Syracuse for better markets. This may be less than forty to fifty per cent of the wool clip of the state, but it is a considerable amount.

The G. L. F. Exchange

This organization is going ahead. More than seventy per cent of the million dollars wanted is in sight and the remainder is undoubtedly coming. When it comes to the purchase of real estate it is possible that another million may be needed. The management is firm in the belief that if needed the money will be forthcoming. An experienced feed man has been employed. His reputation is first class, and he has already made big money for employers. He has had charge of some of the largest concerns in the country.

Arrangements are already made to start activities in each county. The county president of the Dairymen's League, president of Farm Bureau, and the master of the Pomona Grange will take the initiative. County meetings will be called of representatives from the various school districts to determine county action. A manager may be selected for the county and each town may establish a warehouse if thought best. That and other details are still to be worked out.

Syracuse Dairymen Build Milk Plant

At Syracuse there is now nearing completion a fine, large milk station owned by a dairymen's organization. The association has a capital of about $400,000 and I understand that provision has been made for practically the whole payment. The manner of organization is interesting. Five hundred dairymen in the county gave notes for $300 each or paid that amount in cash. The banks took over these notes as fast as the cash was needed. If these are not redeemed in cash then they are to be paid from milk delivered when the plant starts. Each of these 500 men is obligated to deliver milk, I was told, and in case of failure to do so he forfeits his $300. This gave the initial $150,000. Then bonds were issued and these have been sold as fast as more cash is needed.

The matter of surprise to me was that for the most part farmers have bought the bonds. The average amount purchased is between $200 and $300. It will be seen that these are pretty well distributed. The management of the finances seems to have been in the hands, not only of the board of directors and manager of the association, but has had the active co-operation of the farm bureau and of banking and business interests of the city. Indeed it appears that the farm bureau has much direction from business men. In this particular case it is possible that this may be the best plan.

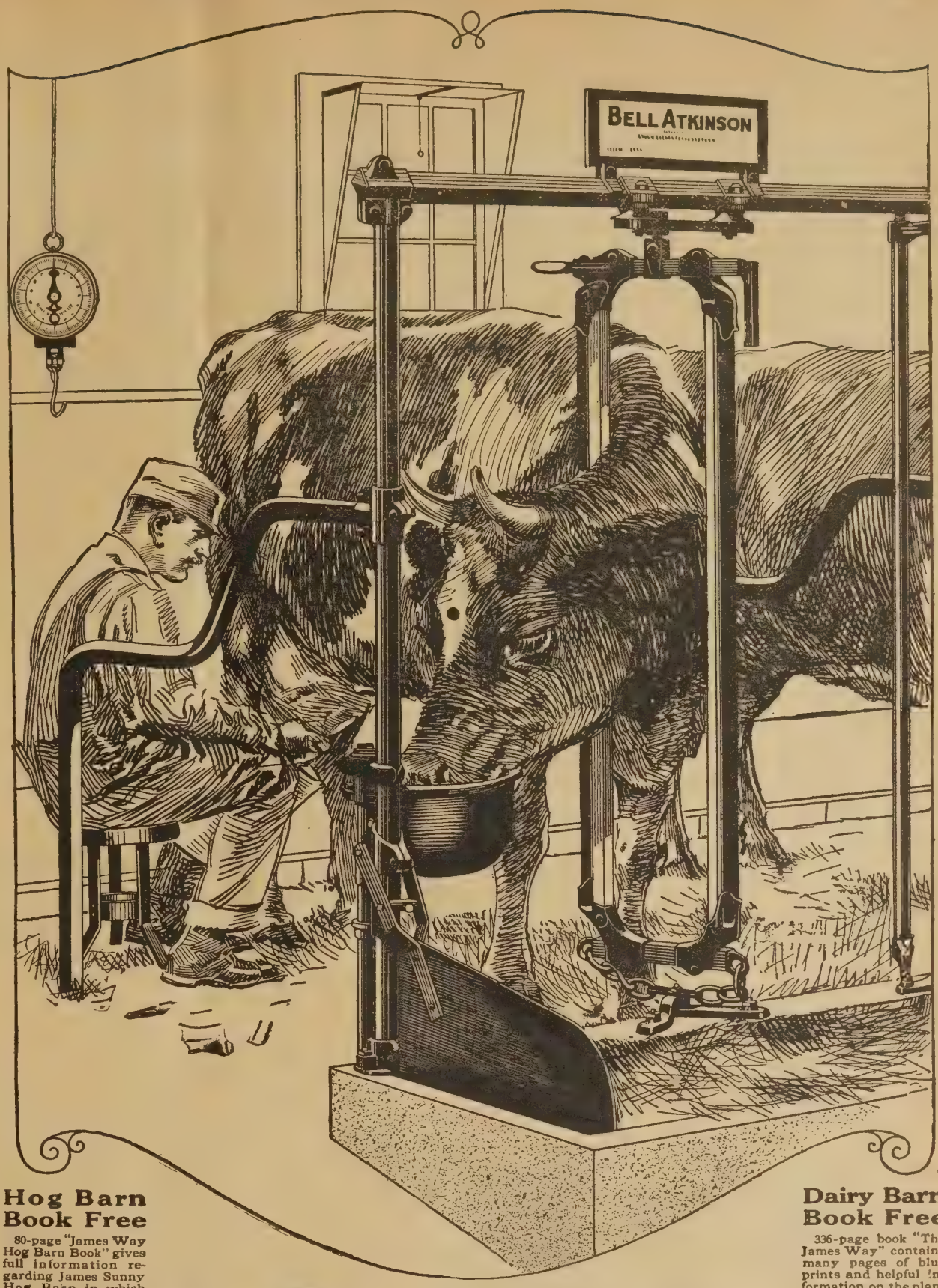
The plant is expected to be in operation in the course of a month. It is supposed to have a capacity much beyond a hundred thousand pounds of milk daily. Milk wagons are being made ready and, for that matter, I saw quite a number that are ready to start. Milk is to be delivered in the city.

The present dealers were offered milk at wholesale from this plant, but the offer was refused. There will be some competition when the farmers commence to deal direct with the consumers, but I have an idea what effect that will have on prices. Now the price of milk is 16 cents. Equipment is being installed to handle any surplus or the entire intake if necessary. The city is said to be a sufficient market to take all the products. There will be more to say when the venture commences to operate. It is only one more example of farmers doing their own business.

New York. H. H. LYON.

Feeding Stock in Transit

When the distance is such that a live stock shipment to destination can not be made within the time provided under the Federal 28-hour law, animals must be unloaded, fed, and watered. The railroads which have the heaviest long-distance shipments provide feed-in-transit stations for this purpose at intervals along their lines. Railroads which do a small live stock business often are without feed-in-transit stations, and the shipper patronizing these lines must make his own arrangements for feeding and watering.—Weekly News Letter, U. S. Dept. of Agriculture.



Hog Barn Book Free

80-page "James Way Hog Barn Book" gives full information regarding James Sunny Hog Barn, in which there is a spot of sun warmth on the floor of every pen two-thirds of the sun-lit hours. Also describes labor-saving equipment for hog barns.

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Want large farms highly improved, fully equipped. Receiving many inquiries for such—also for 80- to 160-acre farm.

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INDIANA STATE FAIR

C. R. GEORGE, INDIANA

ASIDE from the fact that Indiana lacks the physical equipment that is necessary for a really great fair, the 1920 show was all, yes even more, than could reasonably be expected. When at the 1919 show temporary lean-to sheds and tents had to be erected to accommodate almost one-half of the cattle and hog exhibits it was felt that the old equipment had done its best and that before a larger show could be staged new buildings would be necessary. However, building conditions were such during the past year that the board did not feel justified in a further building program and when the exhibitors began to arrive they found Cattle Superintendent Tom Grant with his old sheds all in place and more being constructed, for entries at the fair were never so great as this year.

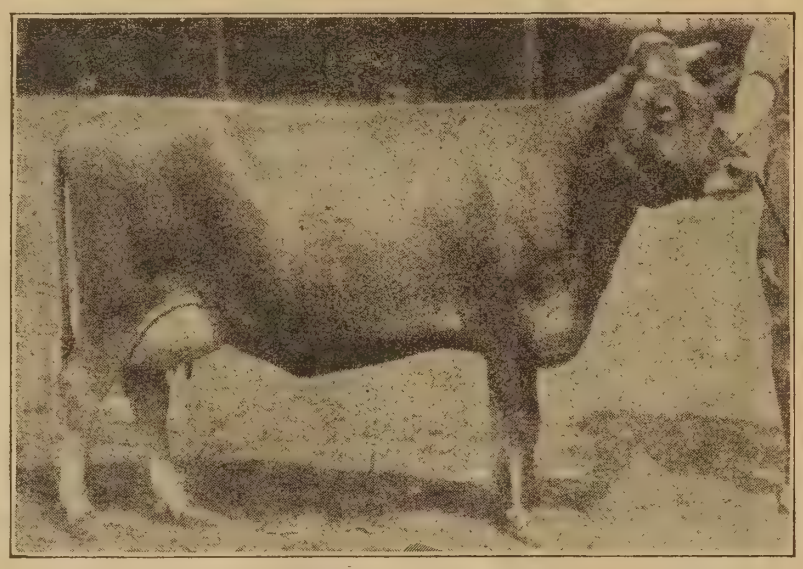
In spite of the crowded conditions there was a fine spirit among the exhibitors. The weather was good through Friday when the live stock exhibits broke up and the downpour on Saturday morning fell over empty pens and stalls. No small factor in the spirit of the stockmen was the promise that ere another year shall pass a new cattle barn will grace the grounds. This addition will place the management well along in their building program and by replacing the unsightly cattle sheds that are located in the very center of the grounds, will add much to the looks of Indiana's agricultural show ring.

The live stock exhibits were a true expression of the great growth of Indiana's live stock industry. And this was a growth not only in quantity but in quality. The porkers completely over-ran their quarters; the horses served a comeback notice that their day was not yet past by a larger entry than for several years; the dairy cattle exhibits were larger than ever before seen at an Indiana fair, but there was a noticeable shortening in the lines of beef cattle that have always been an outstanding feature of the Indiana show.

The Purdue Exhibit

The agricultural exhibit of the Agricultural Extension Department of Purdue University was an outstanding feature of this year's fair. More and more the Indiana farmer is coming to consider the two Purdue buildings on the fair grounds as headquarters for the most up-to-date ideas on improved agriculture. More and more they are coming to see the results of experiments and demonstrations that have been conducted during the year and usually every one who comes can carry away ideas that will be of great value to them on their farms. This year's exhibit was rather unique in that each division specialized on one problem and gave all of their space to featuring it in a big way. The dairy division featured the value of pure-bred sires, the horticultural division showed the results of hill selection of potatoes, the poultry division featured their culling work, and so throughout the entire exhibit one big idea was presented for each line of work. It proved to be a most effective way of reaching the people, for on every side those who have been regular visitors to the Purdue exhibit for several years pronounced this the most valuable exhibit they had seen.

The dairy division featured the value of a pure-bred sire by a small herd of Guernseys from the herd of Robert Black, a member of the Posey-Gibson County Cow Testing Association. The herd bull, Royal Trislettes Lord, with two of his daughters and their dams told a story that would mean thousands upon thousands of dollars to Indiana dairymen and farmers would they but hearken to it. The females had been tested in the cow testing association during the past year. The two daughters, Lord's Pearl and Lord's Alice, produced an average of 374 lbs. of butterfat and 7,120 lbs. of milk as two-year-old heifers. Their dams under the same care and management only made an average of 282 lbs. of butterfat and 5,793 lbs. of milk even though they were mature cows and at an age that they should be doing their best. The two-year-old daughters produced 92 lbs. of butterfat and 1,327 lbs. of milk more than their mature dams. To do this they consumed some $49 worth of extra feed but they paid for this feed and returned an additional income of $84.80 or $42.42 per cow more than their dams. Records from the cow testing associations were used to show that this increase of approximately 100 lbs. of butterfat per cow would reduce the feed cost of producing a pound of butterfat by at least ten cents.



ROCHETTES NOBLE NINA, SENIOR AND GRAND CHAMPION JERSEY COW AT INDIANA STATE FAIR
OWNED BY LONGVIEW FARM, MISSOURI

Four young bulls, one from each of the bull associations that have been organized during the past year, were included in the exhibit to demonstrate how the average Indiana farmer with a small herd of cows could purchase and have good bulls available for use at a reasonable cost.

Other divisions also featured work of great interest to the dairymen. The farm management workers showed the rearrangement of a southern Indiana farm to include more dairy cattle and produce larger returns, and the home economic workers featured in a very clever exhibit the food value of milk by showing enlarged pictures of two boys together with the food they ate, one including a plentiful supply of dairy products and the other a generous amount of substitutes. It presented the choice of the "coffee pot or the cow" in a very striking way.

Dairy Cattle Exhibit

When a very prominent live stock official, sitting in the judging arena at the state fair, asks why beef cattle were not so plentiful at this year's show, a very shrewd observer of the trend and progress of Indiana agriculture turned to the long lines of Holsteins and Guernseys that were showing in the arena and pointed to them as the reason. It was a good characterization of a change that is taking place in the cattle breeding business in Indiana.

The outstanding features of this year's show were the community exhibits in Guernseys and Holsteins and the Boys' and Girls' Calf Club exhibits in the Guernsey barn. Porter County brought two carloads and Lake County one carload of Holsteins and both counties made excellent exhibits, the quality of their exhibits being an outstanding feature. For the third year these counties have come with their Holsteins, first with poorly grown and unfitted calves for the futurity show, last year with more cattle in a condition that showed they had profited by the lessons of the previous show, and again this year with outstanding sires and well fitted cattle that were worthy of any show ring. It stands as a wonderful example of what can be accomplished by co-operation and community breeding.

The futurity show of calves and yearlings, limited to Indiana breeders, had taken its place as a permanent part of the dairy cattle show. It was but three years old at this fair but no three-year-old ever showed better form and more development. Among Holstein and Guernsey breeders, especially, it has accomplished wonders and the large showing and great interest in these classes are due to the influence of the futurity show quite largely. For some reason the Jersey breeders have not supported this feature as other breeds have and it is having its effect upon the Jersey show.

Holsteins

One hundred thirty-two head of Holsteins, 109 of which were exhibited by Indiana breeders, made a most excellent showing for the black and whites. The Cass farm herd was the only out of the state exhibitor but their 23 head took a goodly share of the premium money. The Porter County Breeders' Association exhibited 29 head and Lake County 23 head, most of these animals representing a number of smaller breeders rather than a few larger breeders. Purdue University made her debut into show ring circles with dairy cattle at this fair and with two Holstein bulls, a two-year-old and a junior calf, won two first prizes and a junior championship.

Exhibitors: (Out of state), Cass Farms, Iowa. (Indiana exhibitors), Morgan Bros., T. R. Keene, Francis Bushore, Chas. Ohlfest, C. M. Bottema, Glenn Reed, Ray Meeker, Miller Purviance, Schillo Bros.; M. J. Seberger, Mathias Seberger, Purdue University, I. F. Kiesling & Sons, Jacob Rosenbaum, Ed. Maybaum, Sam B. Woods, Dan Haxton, L. Neal Buchanan, Clark & Iddings, Otto Childress, Chas. Buckley, Albert Ziese, Geo. H. D. Schearer, Francis J. Hein, Peter Jensen, and Howard Burkley.

Judge: L. S. Gillette, Fostoria, Ia.

The awards follow:

Bull 3 years old or over—1, Cass Farm on King Aaggie Hengerveld; 2, Clark & Iddings on Sir Urmagel Beets Segis; 3, Morgan on King Korndyke Isabelle Veeman. Bull 2 years old and under 3—1, Purdue on Paul Febes Butter King; 2, Cass Farm on Aaggie Almeda Hengerveld; 3, Bottema on Fair Crest King Pontiac Gerben. Bull one year old and under two—1, M. Seberger on King Colantha Lyons Fraud; 2, Cass Farm on Bessie Homestead Alcartra; 3, Burkley on Rag Apple Posch De Kol. Senior bull calf—1 and 3, Cass Farm on Hengerveld Homestead Walker and Fayne Mollie Walker; 2, Woods on Woods Juperees Lyons. Junior bull calf—1, Purdue on King Segis Walker of Purdue; 2 and 3, Keene on Oakway Creamelle Champion and Oakway Creamelle Korndyke.

Cow 4 years old or over—1, Cass Farm on Lulu Baby Girl; 2, Ziese on Wythe Flossie De Kol 2nd; 3, Ohlfest on Jenny's Segis De Kol Burke. Cow 3 years old and under 4—1, Cass Farm on Pearl Johanna Pontiac De Kol; 2, Bushore on Unaland Pet; 3, Childress on Beauty Hengerveld Colantha Girl. Heifer 2 years old and under 3,—1, Bottema on Zelderrust Colanthus Segis 2nd; 2, Cass Farm on Aaggie Hengerveld Daisy Homestead; 3, Reed on De Kol Maple Crest Belle. Senior yearling heifer—1 and 3, Cass Farm on Bessie Homestead Jewell and Queen Waudande Beauty; 2, Reed on Kathleen De Kol Segis. Junior yearling heifer—1, Cass Farm on Bessie Homestead Walker Lyons; 2 and 3, Bottema on Butter Bred Fay Gladi and Zeldenrust Johanna Segis 2nd. Senior heifer calf—1, 2, and 3, Cass Farm on Fayne Giltha De Kol, Bessie Alcartra Pink, and Ormsby Bessie Johanna. Junior heifer calf—1 and 3, Cass Farm on Mervana Grace De Kol Fayne and Aaggie Hengerveld



FANCY FANNY OF BOONE, FIRST PRIZE JUNIOR HEIFER AT INDIANA STATE FAIR
OWNED BY MORRIS CRANE, INDIANA

Canary Pearl; 2, Rosenbaum on Rose Alcartra Pontiac De Kol.

Get of sire—1 and 3, Cass Farm; 2, Meeker. Produce of cow—1 and 2, Cass Farm; 3, Bottema. Graded herd—1 and 2, Cass Farm; 3, Bottema. Breeders' young herd—1 and 2, Cass Farm; 3, Bottema. Breeders' calf herd—1, Cass Farm; 2, Bottema; 3, Meeker.

Senior and grand champion bull—King Aaggie Hengerveld. Junior champion bull—King Segis Walker of Purdue.

Senior and grand champion cow—Lulu Baby Girl. Junior champion heifer—Fayne Giltha De Kol.

Futurity Classes for Indiana Breeders

Senior bull calf—1, Woods on Woods Juperees Lyons; 2, Bottema on Zeldenrust Mona Ormsby; 3, Meeker on Oaklawn Tidy Prince. Junior bull calf—1, Purdue on King Segis Burke of Purdue; 2 and 3, Keene on Oakway Creamelle Champion and Oakway Creamelle Korndyke. Junior yearling heifer—1 and 2, Bottema on Butterbred Fay Gladi and Zeldenrust Johanna Segis 2nd; 3, Keene on Beauty Creamelle Lass. Senior heifer calf—1, Ohlfest on Cloverleaf Colantha Ormsby; 2, Morgan on Bonnie Brae Lillia Pauline; 3, Keene on Oaklawn Princess Sadie.

County Breeders' Association herd (Five counties showing)—1, Lake County; 2, Porter County; 3, Marion County.

Guernseys

As visitors entered the Guernsey barn in which all of the Guernseys shown by Indiana breeders were exhibited, they were greeted with two pleasing features. The barn was well decorated and kept neat and clean, and on either side was an exhibit from the Boone County Guernsey Calf Club with the boys and girls from the club in attendance. They were showing 12 head, six yearlings from their second importation and six calves from their original calf club heifers. With these well grown and fitted calves they won their way to the head of one open class and stood at the head of two of the futurity classes for Indiana breeders. They took home with them some $250 of premium money and made an impression on visitors at the fair that will mean much toward the sale of stock in the future. In addition to this there were calf club exhibits from the Marshall and Huntingdon County Calf Clubs and a county exhibit from Hendricks. One hundred eight cattle all from Indiana except the Kingston and Cooper entries competed for the premiums.

Exhibitors, (Indiana Breeders):—R. R. McNagny, W. O. Mills, Norman E. Parsons, F. F. & L. L. Johnson, C. R. George, Jesse Hurdle, Clem Hershberger, Sol Johnson, R. D. Knight, R. & C. Nelson, Lyle Miller, Morris Crane, Arthur VanHuss, Areva Van Huss, Omer Lewis, Orpha Batton, Geneva Clark, Otis Reed, Lowell Denney, Dorothy Couchman, Howard Adair, Mrs. M. C. Johnson, Theodore Smith, Frank Thomas, Myrtle Hahn, Fred Halt, Robert Shirk, and C. Nunemaker. Out of state:—Goodhand Kingston & Son, Wisconsin; R. M. Cooper, South Carolina.

Judge: O. E. Reed, Martinsville, Indiana.

The awards follow:

Bull three years and over—1, Kingston on Hopeful of Edgemoor; 2, Cooper, on Lord Mar of Elmendorf; 3, McNagny on King Edward of Bellmont. Bull 2 years and under 3—1, Cooper on Senebel's Raymond; 2, Knight on Corporal of Mineral Home. Bull one year old and under 2—1, Cooper on Mars Sequel Boy; 2, Hurdle on Almira Prince of Clear Creek; 3, Mills on Meteor of the Ridge. Senior bull calf—1, Kingston on Steadfast of Muskego; 2, George on Waddington Captain; 3, Areva Van Huss on Dividends Kitchener. Junior bull calf—1 and 2, Kingston on Aristocrat of Muskego and Warrior of Muskego; 3, Cooper on Mars Kelsey of Minosa.

Cow four years old or over—1, Cooper on Rockingham Tulip; 2, Kingston on Imp. Violet of Tol Val; 3, McNagny on Gemsie O. K. Cow 3 years and under 4—1, Cooper on Mars Miss Violet; 2, Kingston on Raiders Surprise of Muskego; 3, McNagny on Colleen of Killarney Farms. Heifer two years old and under three—1, Kingston on Itchen Queen of Edgemoor; 2, McNagny on Sheila on Killarney Farms; 3, Parsons on Spotswood Sequels Isabel. Senior yearling heifer—(20 entries)—1, Kingston on Lillian of Edgewood; 2 and 3, Cooper on Tulip of Guernsey Home Farm and Dora of Minosa. Junior yearling heifer—1, Kingston on Wonder Girl of Muskego; 2, Cooper on Mars Lady Dixon; 3, Couchman on Boone's Princess Valentine. Senior heifer calf—1, 2 and 3, Kingston on Hopefuls Miss of Sunny Slope, Polly of Shady Gulch 2 and Mary Sumac of Edgemoor. Junior heifer calf—1, Crane on Fancy Fanny of Boone; 2, Cooper on Primrose of Minosa; 3, Kingston on Wonderful Dame on Muskego. Get of Sire—1, Kingston on get of Hopeful of Edgemoor; 2, Areva Van Huss on get of St. Austell Dividend; 3, Cooper on get of Lord Mar of Elmendorf. Produce of cow—1, Kingston on produce of Butterwich Surprise; 2, Cooper on produce of Imp. Francis Clara; 3, McNagny on produce of Gemsie O. K. Graded Herd—1, Kingston; 2, McNagny. Breeders' young herd—1, Cooper; 2, Mills. Breeders' calf herd—1, Kingston; 2, Cooper.

Senior and grand champion bull—Hopeful of Edgemoor. Junior champion bull—Mars Sequel Boy.

Senior and grand champion cow—Rockingham Tulip. Junior champion heifer—Hopeful's Miss of Muskego. Premier breeder—Kingston.

Futurity Classes for Indiana Breeders

Senior bull calf—1, Areva Van Huss on Dividends Kitchener; 2, George on Georgeland Hambro's Ace; 3, McNagny on Mr. Dooley of Killarney. Junior bull calf—1, George on Georgeland Hambro's Aristocrat; 2, Lewis on Boones Valentine; 3, McNagny on McNeely of Killarney Farms. Junior yearling heifer—1, McNagny on Patricia of Killarney Farms; 2, Sol Johnson on Ferns Bessie of Warren; 3, F. F. & L. L. Johnson on Hambro's Mist of Guernsey Farm. Senior heifer calf—1, Nelson on Boones Pansy; 2, Miller on Ruby Sunrise; 3, Arthur Van Huss on Dividends May Rose.

Jerseys

One hundred nine Jerseys passed before the decision of Judge C. I. Hudson, but of this number eighty head were shown by exhibitors from outside the state. Longview made the best showing of exhibitors taking all the firsts in the female classes and the groups and dividing those in the bull classes with the Reynolds' entries after MacGill's Indiana entry in the two-year-old class had taken the odd one. The MacGill bull, Fern's Golden Raleigh 2d, was made senior and grand champion while the Reynolds' yearling, Raleigh's Fairy Sultan, won junior championship. The championships in the female classes went to the Longview cow, Rochettes Noble Nina, and their junior yearling heifer, Raleigh's Royal Fairy, the older cow taking the grand champion award.

Exhibitors—Longview Farm, Missouri; F. S. Reynolds, Ohio; Myrtle & Earl F. Pyle, Ohio; A. M. McClenahan, Colorado. Indiana exhibitors: R. A. MacGill, C. R. Hinkle & Son, Edw. E. Zike, H. O. Shaw, H. C. Huber, M. E. Jones, Dearborn County Jersey Bull Association, Dearborn County Manchester-Hogan Jersey Bull Association, Jefferson County Jersey Bull Association, Perry Hunt.

Judge: C. I. Hudson, East Norwich, Long Island, N. Y.

The awards follow:

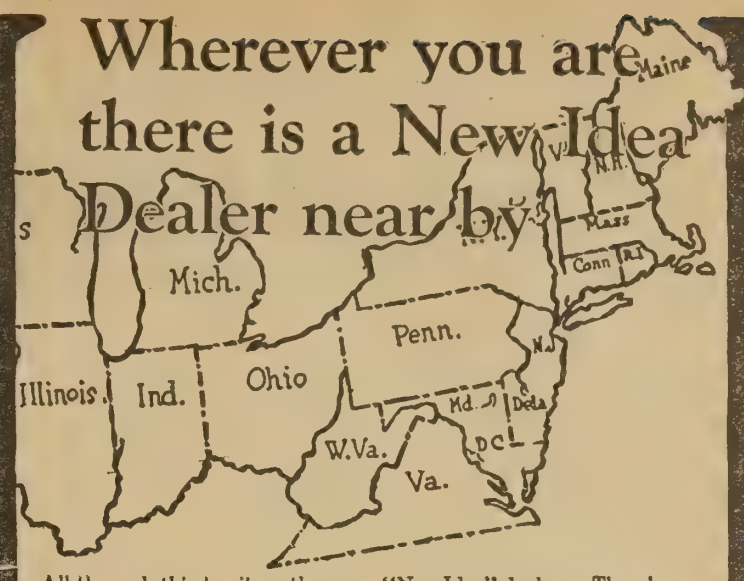
Bull 3 years old or over—1, Longview Farm on Chief Raleigh; 2, Zike on King Melia Anne's Jolly Boy; 3, Pyle on Sans Alois Niece's King. Bull 2 years old and under three—1, MacGill on Ferns Golden Raleigh 2nd; 2, Longview on Fairy Raleigh. Junior bull calf—1, Reynolds on Perfect Raleigh. Bull one year old and under two—1, Reynolds on Raleighs Fairy Sultan; 2, Pyle on Sans Alois Greatness; 3, Longview on Manoras Fairy Lad. Senior bull calf—1, Longview on Wolff's Chieftain 2nd; 2, Shaw on Togo's Golden Oxford. 3, Reynolds on Flowers Fair Raleigh. Junior bull calf—1, Reynolds on Bella's Perfect Raleigh; 2, McClenahan on Bostian Shy Duke; 3, Longview on Stars Fairy Lad.

Cow four years old or over—1, 2, and 3—Longview on Golden Matron, Queens Raleighs Nimay, and Raleighs Star of Peace. Cow three years old and under four—1 and 2, Longview on Rochetts Noble Nina and Fairy Flag; 3, McClenahan on Western Kings Floradora. Heifer two years old and under three—1 and 3, Longview on Raleighs Fairy Finance and Raleighs Queen Monora; 2, McClenahan on Jubliee Oxie. Senior yearling heifer—1 and 2, Longview on Raleighs Blue Feather and Raleighs Queen of the Night; 3, McClenahan on Majestys Financial Oxford. Junior yearling heifer—1 and 2, Longview on Raleighs Royal Fairy and Raleighs Golden Brightness; 3, Zike on Jerry's Prize Baby. Senior heifer calf—1 and 2, Longview on Raleighs Pretty Maiden and Raleighs on Raleighs Miriam; 3, McClenahan on Majestys Cowslip Feather. Junior heifer calf—1 and 2, Longview on Raleighs Royal Maid and Raleighs Starling; 3, McClenahan on Majesty's Feather Lads Friz.

Get of sire—1 and 2, Longview on get of Flora's Queens Raleigh; 3, Pyle on get of Sans Alois Nieces King. Produce of cow—1, 2 and 3,—Longview on produce of Royal

(Continued on page 457)

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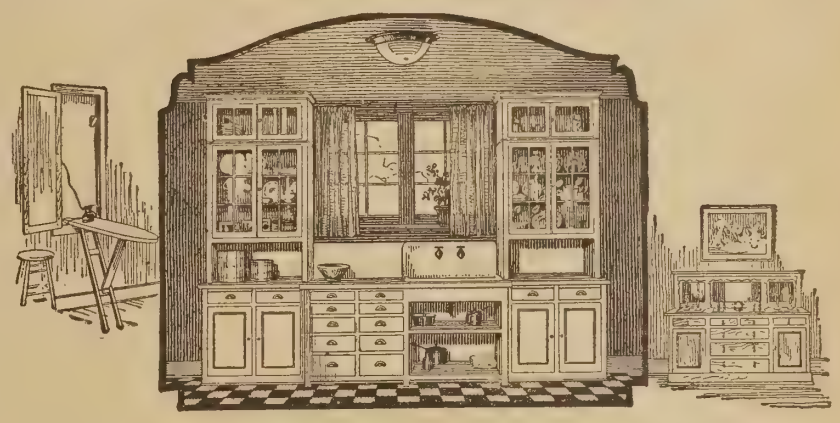
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EDITORIAL COMMENT



THE Twin City Milk Producers' Association has been wise in establishing creameries, cheese factories, or milk plants in the section supplying the Twin Cities with milk. Its plan gives the farmer an opportunity to take care of all so-called surplus milk and to turn his milk into dairy products which will return him the most money. It is the aim of this association to have the farmers in position to control their own business, direct their own affairs, and to be able to market their products to the best advantage.

During the month of August the Twin City Milk Producers' Association received a total of 7,617,965 lbs. milk. This was about 1,600,000 lbs. less than July, 1920, and about 300,000 lbs. greater than August, 1919. The distributors took 6,843,942 lbs. of this milk. This is about 12,000 lbs. more than the highest previous month and 1,700,000 lbs. more than August, 1919. Eight hundred fifty thousand pounds were sold to the condensery or put into butter and cheese in August as against 2,300,000 lbs. in August last year.

The present situation of those patrons in New York supplying the condenseries and the milk powder plants emphasizes the wisdom of the farmers having their own institutions whereby they can take care of their own products when the occasion demands.

A QUESTION

Who knows of even a single case in which adequate damages have been secured where a cow, pure-bred or grade, has been served by a neighbor's bull that has broken into the pasture? Inquiries as to what should be the settlement or how settlement can be secured are not infrequent.

Most states have laws requiring the safe confinement of the bull and establishing penalties for their violation. This does not help the farmer whose pure-bred dairy cow has been served by an inferior sire or a bull of another breed. He may institute suit for damages, but how can he prove to the satisfaction of a jury the amount of his damages? In most of the cases that have come to our attention, the only satisfaction the aggrieved owner gets is the language he is able to use in describing the event.

Again, can any one cite a case of where damages have been secured? If so, give us the details as to how they were secured, that we may pass it on to others.

NEW YORK MILK SITUATION

New York dairy farmers who have been supplying milk to condenseries and powdered milk plants have been advised by these institutions that after October 1st they will not buy their milk at any price. Market conditions for condensed, evaporated, and powdered milk products are such that these companies feel unwarranted in continuing their business. This condition places the patrons of these plants in a rather serious position for many of them have no other market.

This situation emphasizes the necessity of the development of more farmer co-operative enterprises. Dairymen are not placing themselves to take advantage of market conditions unless they own their plants where their milk may be manufactured into butter, cheese, powdered milk or some other product which may be in demand. It is only good business that the dairy farmers should have a place to take care of their milk when the price of market milk does not warrant them to sell it or when such emergencies arise as now confront the New York dairymen.

The board of directors and county presidents of the Dairymen's League of New York are doing everything they can to assist the members of their organization to take care of their milk and to provide a suitable market for it. The best they can do will not be satisfactory or will it return them as much for their milk as they could get if they had already established, throughout the section which supplies New York with milk and the whole state for that matter, institutions capable of handling the milk produced by the farmers. The milk question will never be settled rightly and satisfactorily until the farmers do place themselves in position to handle their own products.

NATIONAL DAIRY SHOW

The annual dairy exposition is an important event for the dairy industry of this country. It is an educational institution; it brings together the best dairy talent in this and other nations; it presents to the dairy farmers their achievements; gives opportunity to study all the various branches of this great industry and to behold its magnitude and its importance. Those who visit the Dairy Show will not only find useful information which can be applied to their business, but keen enjoyment and wholesome recreation.

The dairy farmer owes himself a vacation and opportunity to meet his fellow dairymen. His work is very confining and he finds it hard to leave his duties for a few days, especially now when there is an acute shortage of labor. We believe it is a mistake for anyone to apply himself so closely to his business that he does not embrace occasions that will help him to do his work better; to give him something to reflect upon and to give new inspiration and renewed courage. Life is something more than work, and every busy man must lay plans that will take him away from his work each year, even though it be only a few days.

The Dairy Show has been for several years a well developed institution and provides unusual opportunities for dairy farmers to see the best dairy cattle in the country; the numerous machines and devices for handling milk; to observe demonstrations of practical value to his business; to attend meetings where various dairy topics are discussed; in short, there is opportunity for the dairy farmers to interest themselves in many things of importance and value to them.

A trip to the Dairy Show will not be regretted.

A DECLINING AGRICULTURE

Some men hold that agriculture is on the decline because in the early days nearly all the people were engaged in this industry, but during the past fifty years the percentage of people engaged in farming has been constantly decreasing.

We see nothing serious in the fact that there are relatively fewer people engaged in agriculture now than 50 or more years ago. At the close of the Civil War great tracts of fertile land were opened for settlement and a large number of our citizens took advantage of this and secured good farms for themselves. A tremendous overproduction of farm products followed, and everything the farmer produced was sold at a ridiculously low price. Too many were engaged in agriculture. Agricultural implements were crude, requiring relatively more people to produce food and material for clothing than now with our labor saving machinery. It was but natural that some should leave this industry to engage in commerce as farm machinery improved and because of the overproduction of farm crops. Large cities sprang up everywhere in this country because of cheap food and because of better opportunities for making money than in farming.

Those who hold that agriculture is on the decline because not as many people, relatively, are engaged in farming now as there were 50 years ago, fail to take into consideration that with improved machinery less labor is required to produce a bushel of wheat or corn or any other commodity. Many of the men who have left the farm are helping to manufacture farm machinery and various other labor saving devices, and no one would deny that a harvester is a far better instrument for cutting grain than the sickle. This comparison may be carried throughout the entire improvement that has been made in machinery for preparing, seeding, harvesting, and marketing farm commodities.

We appreciate that the farmer, especially the farmer's wife, needs more help and farmers are working under rather annoying conditions because of incompetent help. Notwithstanding this, the stubborn fact remains that there has been produced in this country one of the largest corn crops, the fourth largest wheat crop, and the production of other cereals are exceptionally large. We have on hand over a billion bushels of wheat, which is nearly enough to supply us for two years. If there is anything serious about agricultural conditions, it is the fact that our crop is so large that the prices for agricultural commodities are likely to be relatively lower than other commodities. If agriculture is on the decline, it is not due to people leaving the farm so much as it is that the farmer has sold soil fertility and, because of the low prices of farm products, has not restored it to the land. He has been mining his soil which is not a commendable form of agriculture.

Agricultural conditions will be serious when our soils become so impoverished that the yields of farm products are below requirements to feed and clothe the people. We feel that those who hold that agriculture is on the decline fail to appreciate that improved methods of farming and improved farm machinery require relatively fewer people on the farm now than fifty or more years ago.

FORCING CO-OPERATION

Several weeks ago we discussed the undesirability of a law compelling every farmer in a community to support a co-operative enterprise which the majority might favor. We pointed out the advantages of co-operation but condemned any effort to force a farmer to co-operate in the support of any co-operative project which he did not desire to support.

One of our subscribers takes some exceptions to this editorial. He asks, "How about forcing a thief or a burglar to be good and quit thieving or burglarizing?" The thief or burglar is engaged in an industry to relieve others of their property. He is appropriating something for his use which has been created by another. It requires no argument to prove this is wrong and that laws are needed to protect society from thieves. The farmer, on the other hand, produces his milk. He owns it. It is a creation of his own labor and he is entitled to sell it on the market of his own choosing. It is clear that there is no comparison between the law providing penalties for a person who steals and one who would force a person to co-operate with another to sell his product to a co-operative enterprise favored by a majority.

Our correspondent also asked this question: "Why wouldn't it be all right to force a dairyman to patronize a pure-bred bull for breeding his cows?" We all agree that it would be better for the dairyman to breed his cows to a good pure-bred bull but it would be wrong, to our way of thinking, to force a dairyman by law to breed his cows to a pure-bred bull. This would be interfering with personal rights.

The trouble is so many of our people do not comprehend the difference between personal rights and public rights. A person who steals becomes a public menace; he is interfering with public welfare. The person who breeds his cows to a scrub bull is only carrying out his personal liberty, the right to conduct his business in his own way, and it does not directly affect his neighbor or society.

Again our subscriber questions, "Wouldn't you force a neighbor to co-operate in killing his thistles?" Yes. The neighbor's thistles become a public menace like the thief. If the thistles were to be confined only to the neighbor's land then it is an open question whether society would have a right to force the neighbor to clean his land of thistles. Another question, "Wouldn't you compel him to co-operate by sending his children to school?" Yes. Ignorant people, those unable to understand our government and to respect our laws, interfere with public welfare. We compel the education of

children that we may develop good citizens, that they may have regard for other people's rights and be capable of making and respecting law. A republic must have intelligent citizens.

We have laws which inflict penalties upon persons who violate the rights of society. We have no laws compelling persons to do right with themselves, but invariably these people pay a greater penalty by not doing right than the law inflicts upon them. We must have effective laws to protect society, to secure its progress, and to safeguard life, property, and the pursuit of happiness, but we can carry laws governing personal matters so far as to become positively injurious to the welfare of the nation.

Feeding Calves

Please give me a ration for calves about 5 months old.

Bloomer, Wis. H. T. M.

If there is a supply of skimmilk on hand we would advise feeding the calves 7 or 8 pounds of this twice daily. We know of no better way of developing strong, vigorous animals than through the use of a liberal quantity of skimmilk. If it can be spared, we consider it a good practice to feed skimmilk until the calves are at least one year old. The calf should be supplied with roughage, preferably alfalfa or clover hay. If legume hay cannot be supplied, then give it a liberal amount of whatever kind of hay is fed to the cows.

Calves at a very early age will eat considerable silage. It is well at first to give them the leafy portion until they become accustomed to silage and old enough to eat the stalks and pieces of ears as well as the finer portions.

There are a number of meal mixtures which may be suggested for the calf. Until the calf is six weeks old it can be fed whole corn and whole oats, equal parts by weight. After that time, both these grains should be ground. The calf will chew whole oats and corn when under six weeks of age very well and there will be very little, if any, waste. After this period the calf will not chew them so well and there follows a large waste of feed. In view of this fact, it becomes desirable to have these feeds ground. Whole grains fed to cows will cause a waste running as high as 20 to 25 per cent.

Bran is a good feed to mix with corn and may be used instead of oats. A mixture of 200 lbs. corn, 100 lbs. ground oats, 100 lbs. bran, and 50 lbs. of oil meal would make a very good mixture for young calves. At the age of five months, the calf can be given all the grain it will consume. It is the practice of good feeders to keep grain before the calf all the time until it is six weeks of age. After that it is well to feed what is necessary to keep the calf in good growing condition. At the end of two months the calf will consume one pound of grain per day, and a month later two pounds per day. At no time up to six months is it necessary to feed more than this amount, although, if it is desired to push the calves along rapidly, they may be given more up to the limit of their appetite.

Best Depth to Plow

Please inform me whether it is a good thing to plow deep. My soils are clayey and some are quite sandy. I have heard that deep plowing should be profitable.

New Denmark, Wis. C. N.

It has been abundantly proved that it is not good to plow a field the same depth from year to year. By plowing shallow or at a uniform depth, the soil cannot become mixed well and a hard bed is formed at the bottom of the furrow, which neither the air, water, nor the roots of plants will penetrate readily. A little subsoil turned to the surface occasionally allows the elements to act upon it freely, thus liberating food as it mingles with the surface soil and vegetable matter. In this way more valuable plant food and greater depth of soil is furnished the plants which grow upon it.

One quite frequently observes soils containing much plastic clay. In times of rain, the clay from the surface of these soils is washed away either into streams or it percolates through the soil and is deposited into the subsoil below. It happens in this way usually that subsoils contain more finely divided clay than do the loam which overlay them. Clay tends to retain moisture.

It is also true that these clayey soils appear dry at the surface at the same time when the subsoil is perhaps too moist for affording best condition for plowing. Plowing under such conditions may form a layer of puddled clay as it slips across the wet subsoil and in so doing brings about a very undesirable condition of the plowed soil.

For deep, rich soil, deep plowing, say from six to nine inches, is best in the fall of the year. The depth should be increased by one-half inch each succeeding year until the required depth is reached. Then return to the normal by gradually diminishing the depth from year to year. Light working soils, those running into sandy loam and sand, it is safer to plow shallower. For thin, clayey soils, and equally light subsoil, plow from five to seven inches; for small grains it is perhaps better than very deep plowing, because it does not turn the compact clay to the surface and it loosens the soil to a good depth. Of course, where root crops are intended to be raised, it is profitable to occasionally subsoil and plow deeper. Some farmers practice plowing a little deeper each year for several years in succession and then for one season plow at about half the depth of the deepest plowing in a series of years.

Wisconsin. J. F. WOJTA.

Storing Apples

Kindly inform me regarding the best way of keeping apples over winter. Would you advise pitting?

Alabaster, Mich. F. Y.

We take it that your Michigan subscriber wishes to store apples on the farm for use during the winter. It is difficult to state what is the best method for him to follow without knowing some of the conditions under which he is operating. Taking it for granted that he has a basement in the house, we would advise against "pitting" as a desirable method of storing fruit. Apples can be kept successfully in pits but they are practically unavailable for use during the winter. A room in the cellar, preferably without a floor, which has an outside window so as to aid in keeping the desired temperature and which can be kept at a temperature of from 32° to 40°, would make it possible to store apples and keep them in first class condition during the entire winter. Sometimes apples in storage in cellars shrivel. This is due to insufficient moisture in the atmosphere. This difficulty is easily overcome by occasionally putting a quantity of water on the floor. If the floor is of earth there will be less difficulty from the insufficient atmospheric moisture than if the floor is of cement or wood. The same method, however, can be used in overcoming the difficulty in either of the conditions.

Another method is to set a tub of water in the fruit storage. This not only assists in keeping the atmospheric moisture conditions right but also has a tendency to prevent the temperature from falling below the freezing point of the fruit. In cellars in which there is no furnace it may be necessary in very cold weather to take precautions about the temperature falling below the freezing point of the fruit. The temperature can go three or four degrees below the freezing point of water without injury to the fruit. If the temperature is falling too low, method of preventing the occurrence of injurious temperatures is the use of water as previously suggested. Spraying of water on the floor will also help. A lighted lantern may be used. As a rule, however, this special precaution will not be found necessary in the ordinary cellar. JAMES G. MOORE.

Wisconsin College of Agriculture.

Ration With Mixed Hay and Silage

Please balance a ration for me from the following feeds: Wheat bran, ground oats, ground barley, ground corn, linseed oil meal. We have plenty silage and good mixed hay of red clover and timothy. I am just going into the pure-bred Holstein stock and am not very well versed in feeding. Would you also tell me the amount of feed per pound of milk produced to give each cow?

Frazee, Minn. L. S. McC.

We suggest that each cow be fed daily about 30 lbs. of corn silage, or about 3 lbs. for each 100 lbs. of live weight, and all the clover and timothy hay she will consume without waste.

A mixture consisting of 200 lbs. ground corn, 200 lbs. ground barley, 200 lbs. wheat bran, 100 lbs. ground oats, and 100 lbs. oil meal will make a very good mixture to supplement the roughage. About 1 lb. of this mixture for each 3½ lbs. of milk produced will be required.

If oats is worth considerably more than bran, it may be omitted from the ration. If it is considered more advisable to use either corn or barley, then double the amount of corn or barley suggested.

It should be borne in mind that no hard or fast rules can be given in the feeding of animals. The feeder must vary the amounts of grain according to the needs and the uses the animals may make of the concentrates. Our suggestion is about the average practice which can be followed.

How Much Hay?

A question came up as to the average amount per day an 800-lb. Jersey cow would consume of alfalfa hay; no other feed and cow giving milk.

St. Joseph, Mo. F. P. H.

It is somewhat doubtful whether a Jersey cow weighing 800 pounds will consume to exceed 25 pounds of alfalfa hay per day. This amount of hay would scarcely be sufficient for the production of 20 pounds per day of average high testing milk.

We have had records of cows consuming very much more hay daily than given above, but they were not only larger animals but it is also quite probable that there was a greater or less amount of hay wasted. The amount of hay actually consumed by an animal, or rather fed her, will vary considerably according to its quality and as to whether the cow has been accustomed to this kind of feeding.

We do not recommend a dairy ration composed entirely of alfalfa hay. Although under certain conditions it may produce milk and butterfat somewhat cheaper, it will seldom bring the largest production. We feel quite certain that over a series of years such feeding will not produce milk as economically as a somewhat more mixed ration.

Resisting Improvement

HOARD'S DAIRYMAN:—One of the most striking observations that came to me during my first year as a dairy improvement agent, is the great indifference that most dairymen have towards their dairies. It is either indifference or lack of initiative, but either one is bad enough when a herd of cows is to be looked after.

Month in and month out, I have seen the old scrub bull, or worst yet, a pure-bred sire, stanchioned in the most convenient part of the barn, manure high on both sides of him, his bones prominent, and his skin tight and his whole being unsightly. Yet these very men have read and have been told time and time again that the herd sire affects every animal in that dairy and should, therefore, receive the best of attention.

Cows were retained that had for a long time proven themselves eligible for the stock yards. There was a small amount of money tied up in that scrub that was losing her owner money when he could have added a little to her value and had something that would make him money. Think of the hundreds of dollars that were wasted and the many hours of labor that were lost in raising calves from cows that had no place in the herd, and on calves that were given a flying start and neglected finish among the flies and in dry pastures.

Many of these acts we were able to reform during the first year, but as an agent I was discouraged because they were not 100% reformed. I could not understand why a dairyman, when once he knew that every part of his dairy was not up to standard, would not take the initiative to bring it up to standard.

East Aurora, N. Y. F. B. M.

Cutting Third Crop Alfalfa

I would like your advice in regard to a piece of alfalfa. We have taken off the first and second cutting of alfalfa not intending to cut it the third time. The third crop is very thick, stands about eighteen inches high, and has commenced to blossom. What would be the best for us to do?

Hartford, Wis. A. C. E.

Under Wisconsin conditions we hesitate to recommend cutting the third crop of alfalfa after the first week in September. If timely rains should come and fairly warm weather ensues, it is permissible to cut alfalfa later than this. However, there is always an element of danger in having either poor growing weather or an early winter without a good snow covering to protect the alfalfa.

If the field can be cut by the middle of September, it might prove highly practical and desirable to cut the third crop for hay. We are inclined to think that if the problem were ours and we felt the need of this extra hay, we would run a chance of unfavorable weather conditions. However, we suggest that the cutter bar be raised an inch or two so as to leave a somewhat longer stubble.

Almond Growers Act Like Real Business Men

They Fix Prices and Control Their Product and Have Run the Speculators to Cover

HERMAN STEEN, ILLINOIS

DURING the ten years from 1901 to 1910 the average retail price in the United States for almonds was 35 cents per pound. This varied little from year to year. The California farmers who grew the almonds received an average of eight cents per pound for them. The producers' share of the consumers' dollar was 22 cents.

That was before the almond growers organized. The low prices prevailing for almonds year after year so discouraged the growers that many groves were pulled out and the farmers turned their energies to endeavor that promised a profit. There had been no profit in the almond business—except for the fellows who bought for eight cents per pound and sold for 35.

Everything to Gain

It did no good to protest over the low prices for almonds, so some of the leading almond growers in 1910 took one desperate last chance and formed an association to market their product. "We had everything to gain and nothing to lose," says Geo. W. Pierce, now president of the California Almond Growers' Exchange, and a leader back in 1910. "We would have all gone busted anyway under the system then prevailing so we decided to take the one chance left to us."

During the eight years from 1911 to 1918 consumers still paid 35 cents per pound for almonds. The retail price remained practically the same from year to year. The almond growers received an average of 17 cents per pound for their product. The producers' share of the consumers' almond dollar was 47 cents. The 1919 crop was moved at a higher figure, due to a tremendous demand, the almond growers receiving about 27 cents and the consumers paying 45.

Growers Fix the Price

Since 1910 the price received by the growers for almonds has been determined by the growers themselves. The California Almond Growers' Exchange, which is nothing more or less than an organization of 3,700 almond growers whose purpose is to market the almond crop, each year fixes the price which the farmers receive for their crop.

Note that statement in the preceding paragraph—fixes the price. That does not refer to the steel trust, nor is it a mistake in print. The almond growers themselves, through their representatives on the executive committee of their organization, decide what their product is worth and then go ahead and sell it for the figure they fix. No, my dear corn belt reader, you are not dreaming nor am I telling a fairy story—the almond growers have been doing this for 10 years.

The Almond Grower's Dollar

A comparison of the figures for the 10 years before organization and 10 years after organization are illuminating. Consumers paid practically the same price for almonds during the whole 20 years (except in 1919, when everything, including almonds, was higher than ever before). The growers' slice of the consumers' dollar expanded from 22 cents before organization to 47 cents after organization. In other words, without charging the consumer a penny more for their product, the almond growers have doubled their returns. If that is not a proper line of activity for a farmers' marketing organization, I'd like to have somebody specify a better one.

What have been the general effects upon the almond industry from organization? I will let Geo. W. Pierce, president and a leading almond grower himself, answer: "The acreage devoted to almonds in California has increased between six and seven times since 1910," he says. "I have figures in my office to show that. In 1910, when we organized, the industry was on the decline. Many groves were abandoned, and many others were neglected, simply because none of us were skillful enough to make a profit in growing almonds for eight cents per pound. We were absolutely under the domination of a group of almond packing concerns which bought the crop as cheap as they thought they could get by with. Growers all over California were thoroughly discouraged, and in spite of the fact that it takes years to develop a good almond orchard they were quitting the business.

Profitable Price Insures Supply

"By organizing, the almond growers have been enabled to fix a price for their product which yields a fair return on their land and labor and pays a reasonable profit besides. That is the reason why there has been such a tremendous increase in the acreage devoted to almonds. Let me impress upon you that that principle applies to every product which will give the producer a fair profit and you will never need to have any fears about the supply."

There are 3,700 almond growers in the organization, or 90 per cent of all the almond growers in California. They are scattered all over the state, but usually in clusters in the areas suited to almond production. They are organized into 24 local associations which are organized on the nonprofit plan without capital stock. Each local association elects one director, and this body of 24 directors elects an executive committee of five who have the direction of the affairs of the California Almond Growers' Exchange.

How the Crop is Handled

When the almonds are harvested the growers deliver them to the warehouses belonging to their local associations. The nuts are there graded, processed, packed, and prepared for shipment. When they leave these local plants they are ready for the world's market.

Note that I said in the preceding paragraph, "the growers deliver them"—they don't sell the almonds to the association. The job of the local association is to prepare the almonds for market. Neither the grower nor the local association has one word more to say about selling the almonds than you and I have—except as he has a vote for director in his local association.

When the local association has the almonds ready for market, it ships them to any place indicated by the general manager of the California Almond Growers' Exchange, which is the central organization of the 24 local associations, and which is the only body with a word to say about the sale of the almonds. It is primarily and solely a selling organization, whose business it is to secure a good price for the growers' almonds.

Setting the Price

Each year there is a meeting attended by the directors from the 24 local associations, the general manager of the exchange, and a few experts hired by him. The meeting is held about the time the almonds are ready to move on to the market. These men, after taking into account the probable demand for almonds, the size of the crop, the size of the foreign crop, general business conditions, and a few other things of lesser importance, set the price on the almond crop. The general manager has authority to raise or lower this price at any time. Should demand prove greater than expected, he can increase the price, or should it prove less, he can lower it.

"We pay no attention to the cost of production," said T. C. Tucker, general manager of the exchange, in discussing the fixing of a price. "We set a price that we think will move the crop. For years we have maintained a salaried expert in Spain to report on the almond crop there. California produces only 20 per cent of the almonds used in this country, the rest coming from Spain. We depend on the information he sends, and upon our own information as to the size of the crop, probable demand, general business conditions, and then decide upon a price which we think will sell the crop for us."

The Same Price to All for Firsts

Here is another all-important point; Every grower gets the same price for the first grade of almonds of each variety. There is a considerable variation in the prices paid for different varieties. The uniform price within the variety is accomplished through what is called a pool. Each variety is a pool by itself, and all the first-grade almonds of each variety are pooled together. Second-grade almonds are not pooled, but are kept separate and sold for the account of the man who grew them.

Suppose an almond grower has 3,000 lbs. of Imperial almonds. When he delivers them to the local association he is credited with them. The central exchange sends him a sum of money equal to about half the sale value of these almonds; this money has been borrowed from the banks. Later, when enough Imperials have been sold to pay back the loan made to pay the advance and money begins piling up in the treasury, a further payment is made. Later as more Imperials are sold another payment is made, until all the Imperials are sold, then a final payment is made.

The past few years the harvest advance has been 10 cents per pound—



THESE HOLSTEIN ENTHUSIASTS OF OUTAGAMIE COUNTY, WISCONSIN, RECENTLY TOOK AN AUTO TRIP TO VISIT THE HERD OF JOHN ERICKSON, WAUPACA COUNTY. FIFTEEN GALLONS OF HOLSTEIN ICE CREAM, SERVED AT A PICNIC DINNER BY THE WAUPACA COUNTY HOLSTEIN BREEDERS' ASSOCIATION, EXPRESSED A WELCOME FROM THE WAUPACA BREEDERS

more than the growers formerly received altogether before the exchange was organized. At first, the directors had to borrow this money on their personal notes, but now the banks recognize the strength of the exchange and loan to it as they would to Armours or any other large borrower on its own note. Last year one bank loaned $1,040,000 to the almond exchange.

90 Per Cent of Growers in Association

Ninety per cent of the almond growers of California are members of the organization and turn their almonds over to it. The exchange does not guarantee any price; all it does is to take these almonds and sell them for the best available price and return that, less the cost of operation, to the growers. These growers must sign the by-laws which require each member to turn his almonds over to the exchange.

The almond industry is a small industry, but the lessons taught by the California growers who organized and put it upon a more solid foundation than it has ever known before are worthy of study by all whose thoughts run toward co-operative marketing.

This is the second of a series of 10 articles on co-operative marketing systems developed in California. The third will appear next week.—Copyright 1920. Standard Farm papers Inc.

Washington, D. C., Weekly News

(Special to Hoard's Dairyman)

Washington, Sept. 23—The newest feature which is of interest and a disturbing factor in the American butter market situation is the closing of the English contracts for Australian and New Zealand butter, and the effort which has been in evidence for the past ten days of the Australian exporters to seek an American market for their surplus. Cables have been received by a number of leading American houses seeking an American outlet, and the intimation is understood to have been given very broadly that the former English figure, which is approximately 45 cents at present rates of exchange, will secure the goods, carriage prepaid, to American ports. This figure is understood to be named as a minimum in requests for bids, purchaser to pay all duties.

There is a general feeling that this will prove an unsettling factor in the market for some time to come. There continue to be evidences of Danish and Holland imports, the best relief from this situation being the fact that these shipments thus far have gone into storage in the main, and the further fact that in spite of a gain in storage for the past month, with the exception of a single week, the amount of butter in the commercial storage plants is still below normal.

⚜

The Washington office of the National Dairy Union is putting out a statement this week reviewing the various government publications dealing with the subject of the food values of butter and dairy products. The best single document found, according to this statement, is the publication of the Children's Bureau of the Department of Labor, Care of Children's Series, No. 4—"Milk, the Indispensable Food for Children". It is recommended that this little circular be used generally by dairy interests seeking increased markets for milk and its products.

⚜

Announcement is made at the Department of Agriculture of the organization of a new division in charge of publications and information, to be in charge of E. B. Reid, who has been chief of the division of publications. Harlan Smith, well known to the agricultural newspaper fraternity, becomes head of the special information service, and Dixon Merrit of the Press Service. John E. Sanford, a former Detroit newspaper man, is added to the news service force by this change. This change, which increases the efficiency and activities of this publicity department is a direct result of the recent visit here of the Agricultural Association, and of Secretary Meredith's vigorous campaign to popularize the department and make it more generally effective in the broadest and best possible way.

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is solely due to the fact that they supply dairy cows with the most ideal combination of carbohydrates and proteins. This means the right nutrients for bodily maintenance, health maintenance as well as for maximum milk flow. With Schumacher Feed as the carbohydrate or maintenance part of the ration and Big "Q" the high quality protein feed for milk production. you have a combination which is ideal and easily proportioned to suit each individual cow to the best advantage. No guesswork—no undue mixing, labor or waste of time. You not only get more milk, but better health and physical conditions.

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The favorite cow is not always the most profitable producer. In untested herds sentiment often plays a large part in the selection of cows for production and breeding purposes. Cow testing, however, does away with any uncertainty on this score. What the cow testing association has contributed toward the betterment of herds in the Grove City, Pa., community is shown by the United States Department of Agriculture exhibit at the National Dairy Show. Grove City district has one of the 467 cow testing associations now at work in the United States.

Still I am learning.—MICHAEL ANGELO.

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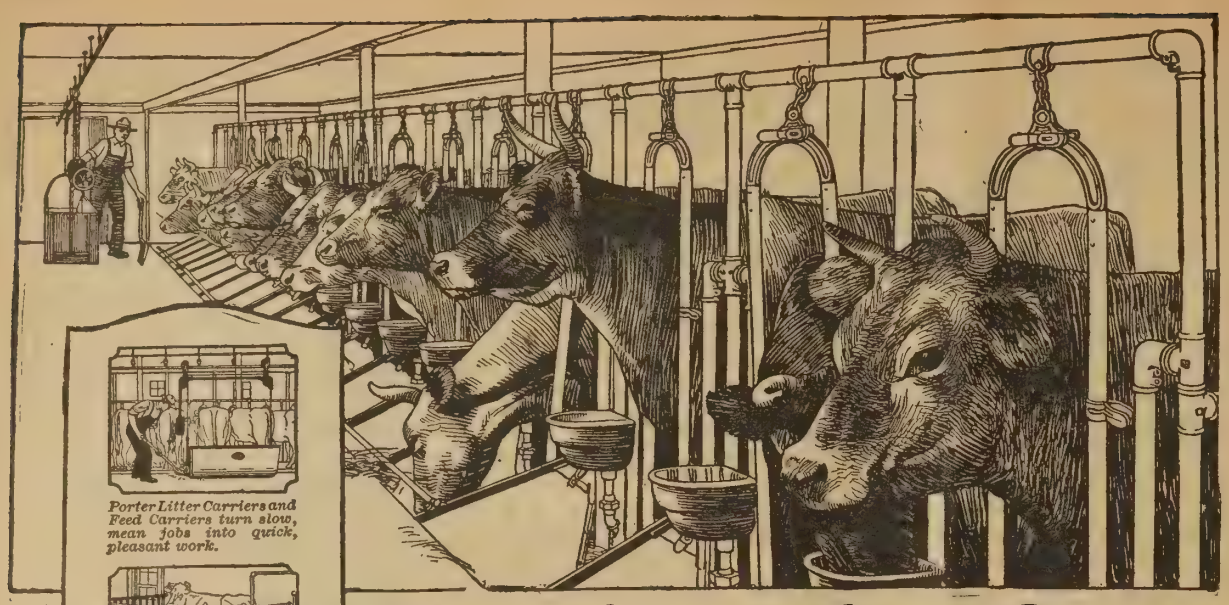
No Operating Cost

But see for yourself how easily, inexpensively sewage disposal can be secured. Ask for Free Booklet H. D-1.

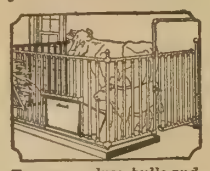


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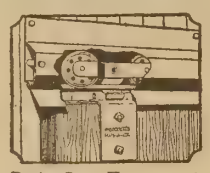
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¶ It doesn't matter whether your barn is large or small, old or new; whether your cows are pure-breds or grades; whether you are a professional dairyman or a general purpose farmer—Porter Tubular Steel Stalls and Stanchions will help you realize a more satisfactory profit, at a net cost of about 50c or 75c per cow per year.

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The Alfalfa Market

(Continued from page 425)

recently effective new tariff schedule amounts to as much as $6 a ton and in extreme cases even more. The increases in rates from producing districts of the Pacific Northwest across the country to the East and Southeast, which shipments are made on a large scale, amount to $8 to $9 and in extreme instances around $10 a ton on hay.

So it is not surprising that feeding interests took hold freely. Far greater quantities of alfalfa and clover could have been sold, or at least orders far greater in volume than the trade could fill were received. Many feeders at distant points even offered a premium for alfalfa where shipment was promised before the rate advances went into effect. The hay bought for shipment before August 26, the date when the new tariffs went into effect, represents the consumptive requirements thirty, sixty, and probably ninety days away, the trade already having on hand comparatively liberal stocks for prompt needs. Because of the accumulation of hay on hand, and the lack of an incentive to further buying, the market is feeling the weight of the absence of the usual early fall demand.

There is another influence in restricted buying of alfalfa in the West and Middle West by dairymen and other feeders of the East and surrounding sections. The advanced schedule of freight charges placed the net cost of hay on an abnormal basis, many points being forced to pay more than $50 a ton delivered. This figure is only a little less than the delivered cost of alfalfa in the East at the time alfalfa was selling on the Kansas City market around the record levels of $40 a ton. Buyers are very reluctant to take hold on this basis, and, while the argument is advanced that hay is bought only because it is needed, the high delivered cost of the forage will tend to reduce demand and increase so far as possible the consumption of native grasses. And the buying will be more evenly distributed, as dairymen will be unwilling to accumulate stocks at prices which they are now forced to pay, that is, including the higher freight costs.

The freight rate increases, however, cannot be considered entirely from a bearish angle, though this is probably the case for the immediate future. Higher tariffs will play an important part in the movement of alfalfa from the Pacific Northwest and other western producing districts to the Middle West, Central States, East and Southeast, and some observers of market conditions hold to the theory that the effect of a reduced movement will be sufficient to offset the lessened demand, if not ultimately result in a net rise in prices. The smaller movement will be brought about by the almost prohibitive freight rates on shipments from the distant producing regions. For instance, the freight charge on alfalfa shipped to Kansas City from the irrigated growing sections of Idaho, Utah, Wyoming, Montana, and Nevada amounts to around $14 a ton, with the rate from some points above $15 a ton. On the basis of the prices prevailing in Kansas City, Omaha, and eastern markets, dealers are unable to draw alfalfa from the Pacific Northwest in competition with the local buyers in that territory. Reports indicate that alfalfa is selling in Idaho and the surrounding states around $18 to $20 a ton, track, which is more than $5 a ton above a parity with Kansas City, not even including handling charges and a small margin of profit to buyers. It is questionable, of course, whether the prices being paid by the local buyers in the Pacific Northwestern region will be maintained above a parity with the larger markets of the Middle West and East, but so long as this differential is maintained, little if any hay will be drawn eastward. A year ago comparatively little Northwestern alfalfa moved to Kansas City and the East, owing to the California and Northwest drouth conditions, the bids from that territory having been more attractive, but during the fall of previous years enormous quantities of alfalfa were shipped out for ultimate consumption by dairy herds east of the Mississippi river. The absence of large quantities of the irrigated hay from this territory will doubtless be felt in price fluctuations.

The effect of a restricted movement of the choice quality Pacific Northwestern alfalfa is further strained by recent damage to hay in Colorado by rains. Large quantities of choice pea-green alfalfa were damaged or browned by the rains in many sections of the state, and, so far as Colorado is concerned, feeders depending on that state will be forced to draw the bulk of their requirements of choice hay from the third and later cuttings. This places the burden of meeting consumptive

requirements upon Kansas, Nebraska, and surrounding states to a greater extent than any time in recent years.

Reduced prices for cattle, hogs, and sheep on markets are an important influence which will tend to hold down the price of alfalfa hay. Tight money is seriously restricting the purchases of stocker and feeder cattle and feeding sheep and lambs on markets, and this will tend to lessen the consumption of the legume in feeding sections. The fact that large quantities of roughage, far greater than a year ago, are available on farms also will tend to hold down the demand for alfalfa hay. The supplies in producing areas are comparatively large, the holdings being greater than a year ago and the quality considerably better on the whole.

On the Kansas City market choice alfalfa hay is selling around $30 to $31 a ton for carlots, No. 1 at $27.50 to $28.50, the standard grade at $24.50 to $27, No. 2 at $21.50 to $24, and No. 3 down to $17.50. These prices are practically the same as prevailed at this time a year ago. An influence which is exerting tremendous pressure on prices is the recent sensational decline in the cotton market. The South is one of the largest consuming outlets for alfalfa in the United States, and a reduction in its purchasing power as a result of the depression in its staple commodity will be felt in a lessened demand for the hay. On the past crop, during which time cotton soared to the highest levels on record, it was not particularly a question of price, but of quantity and quality. The southern planters bought feverishly and they demanded none but the best grades. Their buying was responsible to a considerable extent for the strength in prices. Unless cotton enjoys a rebound, and this is very improbable, the South will be a more careful buyer and will not discriminate so much against the cheaper quality offerings.

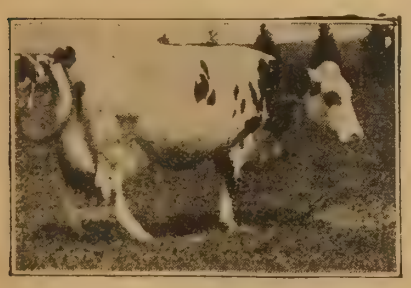
Alfalfa millers located at points away from producing sections have been heavy buyers of the "wonder plant" on markets, but their buying was based on the prospective rate increases and not on the prospects for any broad demand for their product, alfalfa meal. Sales of alfalfa meal thus far on the crop have been of a comparatively light volume, and the market price is below a parity with alfalfa hay, not affording the miller a sufficient margin to cover the manufacturing costs and other handling expenses. Absence of a broad demand for alfalfa meal is the result of a dearth of buying orders for alfalfa molasses and alfalfa grain molasses feeds. Alfalfa hay cannot share in any material upward price movements unless millers are more successful in the sale of their meal, and prospects for the immediate future are not encouraging. The enormous crop of corn now maturing, the abundance of oats and liberal production of other feed crops are holding down demand for alfalfa mixed feeds and thus restricting the sale of meal.

More or less attention is being given by market operators to the price movements in corn, cottonseed feed, and similar products. Cottonseed cake and meal, selling below $50 a ton for 43 per cent protein prime grades, basis Texas points, the lowest level for some years, already is considered well below a parity based on feeding values with alfalfa hay, and this is probably true, too, of corn. The generally downward tendency of prices for feedstuffs in recent weeks is being felt indirectly as a bearish factor in the alfalfa market.

The character of the late fall and winter weather will have much to do with the trend of values for alfalfa. Dairymen and other feeders also should not overlook the probable transportation situation as an influence on prices. Cars are freer in producing sections than at this time a year ago, and the view is almost generally expressed that the discontinuance of the government guarantee on railroad earnings and the advanced schedule of freight rates will have much to do in improving the traffic service of the nation. Cars, or the lack of cars, played a vital part in forcing alfalfa and other varieties of hay to the high levels on the past crop, while a more normal position of transportation, in prospect on this crop, will wield an opposite influence. Unless alfalfa undergoes a sharp setback soon, purchases on a large scale do not seem advisable. But hay will not go too low.



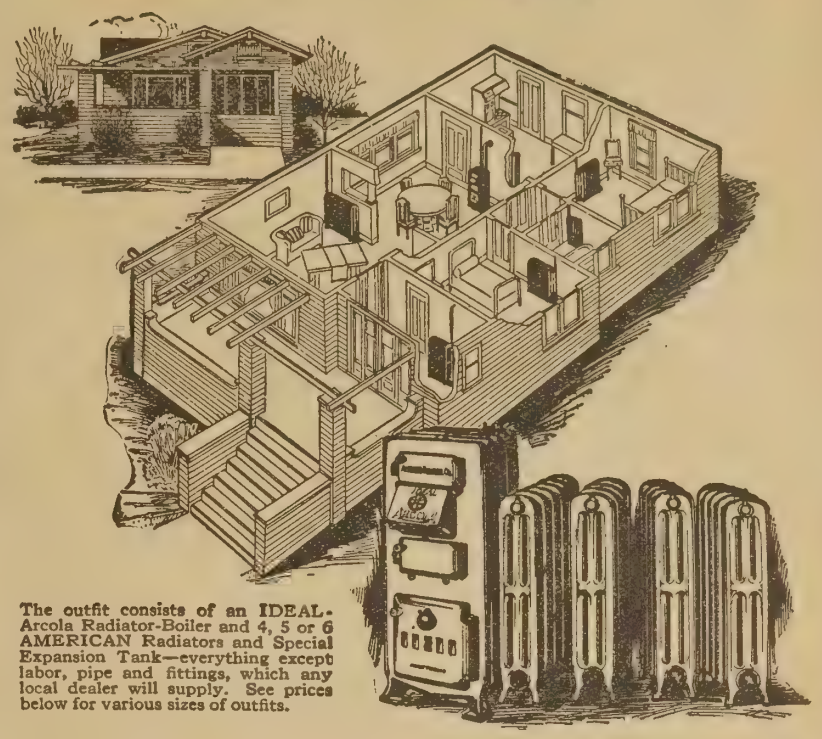
SENIOR AND GRAND CHAMPION HOLSTEIN COW, EDENVALE NELLIE VEEMAN PIETERTJE, AT THE 1920 NORTH DAKOTA STATE FAIR
OWNED BY MANKATO HOLSTEIN FARMS, MINNESOTA



HOLSTEIN COW, MISS JESSIE JOHANNA DE KOL
High cow in Monroe—Farmersburg, Iowa, Cow Testing Association for July. Record: Milk, 2,403 lbs.; fat, 86.5 lbs.
OWNED BY G. A. SABBANN

IDEAL-Arcola Radiator Boiler Farm Home Heating Outfit

(no cellar needed)



The outfit consists of an IDEAL-Arcola Radiator-Boiler and 4, 5 or 6 AMERICAN Radiators and Special Expansion Tank—everything except labor, pipe and fittings, which any local dealer will supply. See prices below for various sizes of outfits.

When the cost of your heating is figured on a yearly basis, the IDEAL-Arcola heating will be found to be the *cheapest heat* in the world, for it lasts forever—heats every room—uses no more coal than a stove, never needs repairs, is clean and easy to run. It gives you the same delightful warmth that city residences have.

Any dealer will furnish in sizes to suit rooms and climatic conditions.

For Soft Coal	No. 1-B Size IDEAL-Arcola with 100 sq. ft. of Radiation		$142
	" 2-B " " " " 150 " "		176
	" 3-B " " " " 200 " "		213
	" 4-B " " " " 250 " "		251
	" 5-B " " " " 300 " "		290
For Hard Coal	No. 1-A Size IDEAL-Arcola with 135 sq. ft. of Radiation		$163
	" 2-A " " " " 200 " "		206
	" 3-A " " " " 265 " "		251
	" 4-A " " " " 330 " "		299
	" 5-A " " " " 400 " "		349

Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

Shipped complete for immediate installation

The beauty of the IDEAL-Arcola method is that no cellar is needed. Everything is on one floor. The Arcola is placed in any room that has a chimney connection. No running to cellar. Same water is used over and over again for years. No fire risk.

Buy now at present attractive prices for outfits complete!

IDEAL-Arcola outfits consist of the boiler and radiators to heat various size houses. Write us your requirements! Unlike stoves, there are no coal-gas leaks in the living-rooms. The IDEAL-Arcola delivers the soft, radiant warmth of hot water—not the dry burnt-out atmosphere of stove heating. There is no fire risk to building—no danger to children—fire lasts for hours! The Arcola burns hard or soft coal

Catalog showing open views of houses, with the IDEAL-Arcola Boiler in position will be mailed (free). Write today

Sold by all dealers. No exclusive agents.

AMERICAN RADIATOR COMPANY

Write to Department F-20 Chicago

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KEYSTONE COPPER STEEL

Apollo

Full weight— Galvanized—

Roofing Products

In country or city—for farm buildings or residences, metal roofing is positively unequaled.



APOLLO-KEYSTONE Copper Steel Galvanized Sheets are the most durable, rust-resisting galvanized sheets manufactured. Actual weather tests have proved the superiority of this material for Roofing, Tanks, Culverts, etc. KEYSTONE COPPER STEEL is also unexcelled for Roofing Tin Plates. Look for the Keystone added below regular brands. Sold by leading dealers. Send for free "Better Buildings" booklet.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

The Fox and the Poultry

The Application of an Old Fable to the New York Milk Crisis

H. H. LYON, NEW YORK

THERE is the old story of the fox which rolled stones down the hill amongst the poultry until they came to observe that it is perfectly natural for stones to roll down hill; then the old fox rolled down himself, gobbled up a fine bird or two and ran off. In the earlier part of the year the milk dealers, apparent now, rolled stones amongst the dairymen and quite considerably frightened them. Twice we got ready to handle our own milk only to have the conference board of the dealers come around at the last minute and take the milk just as though nothing had happened. We are still wondering whether they meant a word of what they said. A Solomon to analyze the ways and the words of the managers of that conference board could do a good business these days.

By the time this can be read on October first we may know whether the "old fox" is coming himself or is simply having a little amusement in anticipation of something later and to just see the worry, the annoyance, and the burden of expense and trouble that is causing the thousands of hard-working, burden-bearing men and women on the dairy farms of our territory.

There is such a thing as a gun to be used in the defense of the flock. There is ammunition that can be gotten together and the gun fired. When it is fired it is pretty safe to predict that good aim will be taken. The cautious farmer may hardly get up nerve to fire until the old rascal gets pretty close, maybe not until neighbors and friends have been caught and received some rather rough handling from the cunning deceiver. All the same, the closer he gets and the more he hurts the harder he will get it "in the neck".

The big new gun is well polished and is a sure fire. We dairymen are a little slow acting to get the ammunition together, and I suspect we will never do it until the real danger comes. It is surprising though with what speed we can work when we get woke up to it. Our big League Co-operative is incorporated and manned. In now and then a corner a little of the "stuff" that tells has been put together and the machinery works very well. A little experience is being gained in handling the "outfit". Some say that the pooling plan of handling the milk of our 85,000 farmers may not bring quite so much to certain individuals as the way the business has been handled the past year or two. Others say that the co-operative in manufacturing can not measure up to the fluid milk business in the cities. In saying this they do not look far enough ahead. That is short sightedness and temporary at best, and may not be true at all.

Just now the condensors, evaporators, and dry milk men are telling us that they have enormous quantities of products on hand made under conditions of falling prices, for sugar at least, and that they prefer the dairymen should keep their milk for a few months, bury it or store it in the cellar, I suppose, and let them sell this high priced stuff before putting any more on the market. It matters not that farmers have been producing under conditions of high costs for supplies and sell at falling prices later on. Why should that matter? They, manufacturers and dealers, made enormous profits for a long time and they do not propose to let a little matter like fairness to the farmer interfere with their making a lot of money on the accumulations of products that they have on hand now. That is good business. It is said that farmers ought to learn business methods.

The "fluid" milk handlers say that they will not pay more for October than they have for September while the League has advanced the price twenty cents a hundred or less than a half cent a quart, about four-tenths of a cent I believe. While we know not what to look for, it seems more reasonable that these dealers may come up to the price set than that the manufacturers will come on the market and buy at all. All the same, the experiences of earlier in the year may make dairymen feel that the whole affair is a bluff, as indeed it may be. Personally I believe the dealers will call a lock out on milk and its price unless they fear the pooling plan and the co-operative plant plan will be put through and that such action will interfere with their profits.

It can hardly be out of place to recite rumors that are floating about. There may be little or no truth in them yet they are not unbelievable. The Bordens are said to be willing and perhaps a little anxious to sell their country milk plants. They have sold some. Then there is another report that the Nestles would now like to retire gracefully back to their original haunts across the Atlantic. To precipitate a blockade in the sale of the product of the dairy farms would almost certainly consolidate dairymen in the co-operative association, lead to the pooling of all milk, and to the purchase of plants and equipment for handling co-operatively. If enough of the dealers want this to bring about the blockade they may get it in this way. Or, if they are shortsighted and believe they can break the League they may bring on the crisis. At any rate, from certain viewpoints it would seem as though neither side is entirely averse to a showdown on October first. There are many on both sides who will not endorse such a procedure and a prediction of its coming may be a little rash. No harm can come from looking at this side of the situation anyway. There will be other crises if the matter is not settled in 1920.

Now a word or two on the advisability of entering the pooling plan. If we don't do it we split and the League cannot help us more, at least it looks so. If we do, what then? Take a look at it this way. New York City will have milk and it will be sold there. The remainder of the milk will be manufactured. It will bring less money. In my own town the milk may realize by manufacturing around $2.50 a hundred pounds, for we cannot condense or evaporate. Butter is not high comparatively and most likely it will go lower. In the next town there is a shipping station. There the farmers will get perhaps the full $3.80 a hundred. These farmers are neighbors. If we are all in the pooling proposition all the money will go into the central hands for distribution and all the farmers will get the same price, somewhere between $2.50 and $3.80.

It will be seen that my own town will get more for their milk than if they sold for $2.50. In the case of my neighboring town they will not like to take a price lower than they might have received by keeping out of the pooling plan. Therefore it might seem that they will refuse to enter the pool.

If we look again it will be evident that the neighboring town cannot continue to sell independently for if they do our town will join in and sell milk the same as they do and then their market price will be down to ours rather than ours coming up to theirs. That means that we no longer have a League and they in common with ourselves are without protection. For the safety of the favored and the unfavored we must all join in.

Dairymen in the League territory are aroused. They are holding county and local meetings in all sections of the League territory. The first county meetings are in my own county of Chenango and in Orange County. The following week local meetings are to be held. Orange County promises through its officers, John Arfman being the president, to put that county in line with the new movement at the rate of 100 per cent. In our county meeting the enthusiasm was strong, one member proposing to make it 125 per cent. In 1916 Chenango County under the leadership of Mr. Kershaw took the lead and has the credit of bringing in about the stand that was then taken by the League. It is unlikely that this county is going to fall down now that we are facing a new crisis.

Our directors voted to enter into the project as soon as 50,000 of our members have signed the new contracts uniting us into the co-operative project, for the pooling plan is no less than that. If this can be done by the 30th of September then we begin on October first. If delayed beyond the 30th but is then brought about we will enter the month following.

There are something like 1,100 branches and we are said to have 85,000 members. It is impossible for our directors and county presidents to attend all the branch meetings, therefore the local men with the help of the farm bureau men will be obliged to work out the job of securing signatures, and very likely this is best.

Why Cheesemakers Should Exhibit at National Dairy Show

R. B. Stoltz, superintendent of the Products Department of the National Dairy Show, has issued an appeal that should be of interest to every cheesemaker in the country. He points to the fact that foreign countries, including Denmark and Argentine, will have big exhibits at the show and that American makers should not miss the chance of meeting their new commercial foes face to face, and should have there a representative exhibit of their product. Denmark alone manufactures 200,000,000 pounds of butter a year and will have a large exhibit of both cheese and butter at the show.

Here is the appeal of Superintendent Stoltz, which every dairyman should heed:

"Last year at the National Dairy Show only 25 states entered American cheese and 23 states went without medals because they failed to enter. Don't allow this to occur this year.

"Pick out the best cheese you have and send it to the National Dairy Show, in care of Beatrice Creamery Company, 1526 State Street, Chicago, Illinois. It should be sent so it will arrive not later than Saturday, October 2.

"Last year the Swiss cheese sold for 55c per lb., the American, Brick, and Limburger at 33c per lb. which was enough over the market price to well pay the cheesemaker the express charges and the extra work of sending in the cheese."

"Fort of Ill Health"

Milk wins the war, and the fort of ill health falls before the onset of milk bottle soldiers with their bombardment of milk bottle shells and milk bottle bombs. A poster telling this story is among the exhibits at the Dairy Division of the United States Department of Agriculture at the National Dairy Show. In many communities there is need of increased consumption of milk, as a means of combating undernourishment and improving health, especially among children. Community milk campaigns have been especially effective for this purpose; and many of the progressive cities and towns, including Boston, Detroit, Pittsburg, Seattle, Spokane, and others, have already held successful campaigns. An exhibit shows just how the urban and rural campaigns are organized, and what they can accomplish toward increasing the use of milk in the home.

Order seed, lime, fertilizers, and supplies early; railway facilities do not seem to be getting better fast.

Butter Prices for August

From the daily quotations of the United States Bureau of Markets, we have compiled the following table giving the monthly averages of the daily wholesale prices for August 1919 and 1920 on 92-score butter (extras) in the four principal markets, together with the total receipts of butter at these markets:

	Ave. price		Receipts	
	Aug. 1920	Aug. 1919	Aug. 1920	Aug. 1919
	Cents	Cents	Tubs	Tubs
Chicago	54.23	53.31	282,024	247,406
New York	55.48	55.31	246,712	203,467
Boston	56.73	56.00	124,793	101,457
Philadelphia	56.30	56.27	65,642	58,081
Total			719,171	610,411

Ninety-score butter averaged 51.7c for August on the Chicago market, with centralizer butter, to which it is comparable, selling for 53c. Jobbers' prices on extras sold to retailers during August were 55.56c in Chicago and 57.62c in New York.

Cheese Prices for August

Cheese prices just about maintained their July average for the month of August. The daily quotations of the United States Bureau of Markets showed the following average quotations on cheese (style Twins) for three large markets in August 1919 and 1920:

	Average price	
	August, 1920	August, 1919
	Cents	Cents
Wisconsin boards	24.62	29.82
Chicago	24.45	30.14
New York	26.62	31.14

Longhorns averaged for August of this year 25.82c on the Wisconsin Board, which is slightly more than 1c above the price of Twins.

There would be more sympathy and understanding if every business man read a good farm paper, and if every farmer read a business journal.

Farmers must keep at work for good roads. The development of the motor truck makes them increasingly necessary.

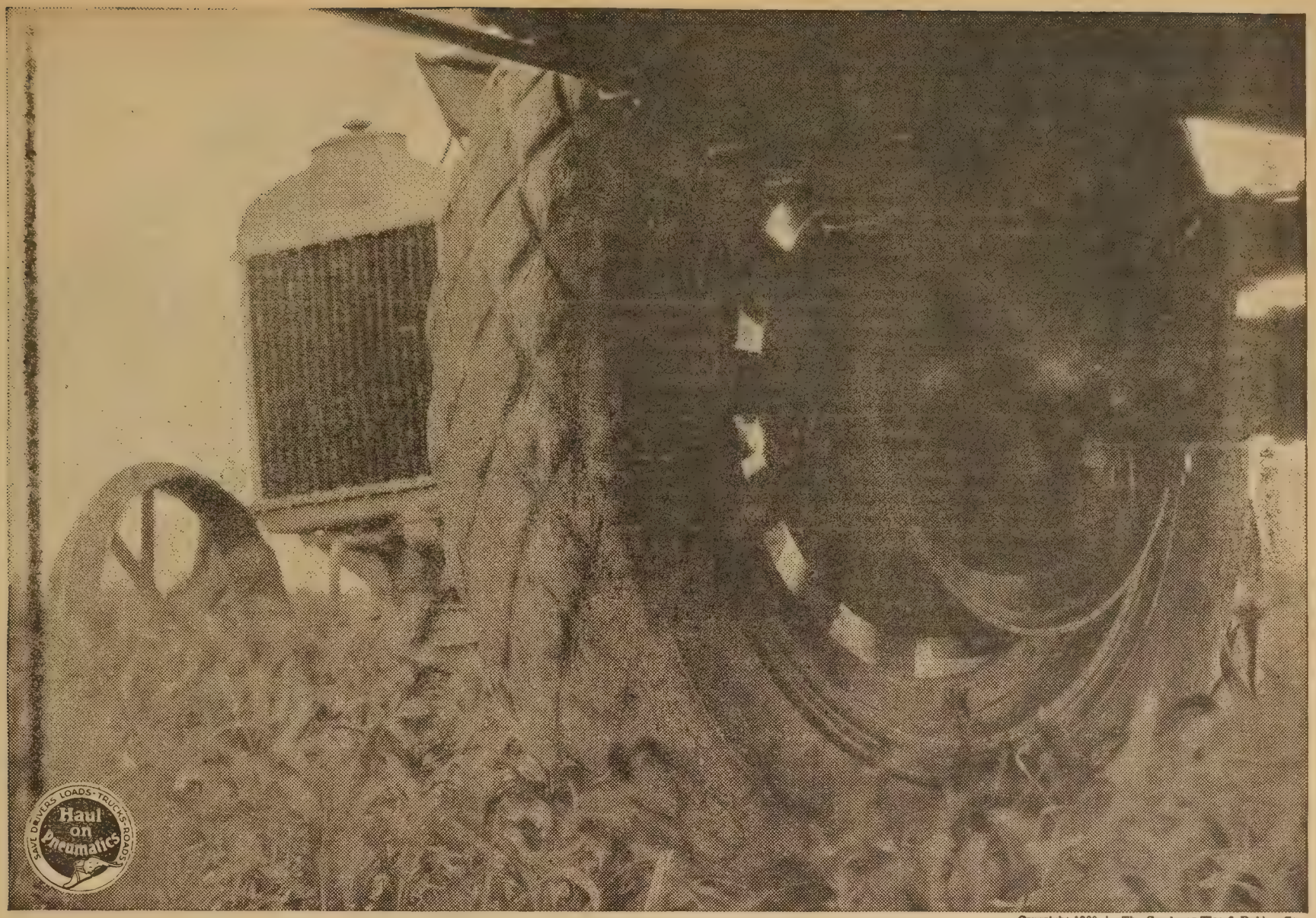
Coming Events

National Dairy Show, Chicago, October 7—16. W. E. Skinner, Manager.

Ninth Annual Convention, International Association of Dairy and Milk Inspectors, National Dairy Show, Chicago, October 11, 12, and 13. Ivan C. Weld, Secretary, 1120 Connecticut Ave., Washington, D. C.

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Louisiana State Fair, Shreveport, La., October 28 to November 7. W. R. Hirsch, Secretary.



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"Soon after I got my truck I made a big improvement by chan ing quickly to Goodyear Cord Tires. The pneumatics save time, fuel, repairs an l shrinkage in livestock—they have increased my hauling radius by 35 miles an l go anywhere on the farm. I figure the one truck equal to six teams on my place. Motorization offsets the labor shortage and pneumatics help the farmer to motorize properly."—Frank B. Williams, General Farmer, Cedar Bluffs, Nebraska

MANY a resourceful farmer, like this one, now saves labor, time and money by doing his farm hauling and market hauling on Goodyear Cord Tires.

He hauls steadily through plowed fields, barnyard mud, sand trails and melting snow because these tractive pneumatics grip firmly as they go.

He hauls eggs, fresh vegetables, delicate fruit and shrinkable livestock with utmost safety because these are cushioned properly on the big Goodyear Cord Tires.

He hauls quickly to pumping, grinding, shelling, harvesting and wood-cutting machinery because of the easy-rolling qualities of these helpful pneumatics.

Developed with the manufacturing care that protects our good name, the hardy strength of their Goodyear construction is repeatedly expressed in mileages of exceptional length.

Detailed information, concerning pneumatic-tired farm trucks and general farm motorization, will be sent you promptly on request by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR
CORD TIRES



This label stands for
House Paint that *Endures*

You can still get a house paint made of pure zinc, pure lead and pure linseed oil. In spite of the scarcity of raw materials and the high cost of manufacture, SWP is made on the same formula, from the same materials, and in the same thorough way as in the past.

Sherwin-Williams House Paint is a high gloss, heavy-bodied paint which covers 360 square feet per gallon with two coats, and protects the wood it covers from three to five years. When you paint, paint for the future: Use SWP, the most economical in the end.

***S-W* Commonwealth Barn Paint** is a bright, handsome red or gray which dries with a fine appearance. Works easily with free flow, giving unusual cover even on rough lumber. Ammonia-proof, durable and very economical.

***S-W* PORCH AND DECK PAINT** protects just where home wear is hardest, on porch and steps. Prevents warping and splitting, is economical, easy to apply, attractive in colors, water-proof and almost wear-proof.

***S-W* Preservative Shingle Stain** is a powerful wood preservative of creosote base. Protects shingle roofs and sidings against warping, splitting and wear. All S-W Preservative Shingle Stain colors are permanent, and rich.

SHERWIN-WILLIAMS PRODUCTS

Go to the Sherwin-Williams Dealer in your town. If he cannot supply all your needs with S-W Products, write us for booklets, etc., on your requirements. Address—
The Sherwin-Williams Co., 606 Canal Road, N.W., Cleveland, O.

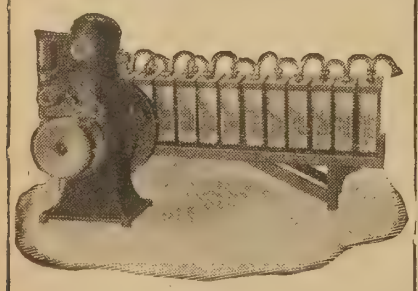
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Insecticides, Disinfectants and Cattle Dips

S-W Fly Spray protects cattle and horses from flies. Apply with spray or sponge.

F-23

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Taught by the practical method. By our plan you study at home and receive a part of the commission while learning. Enroll now and be ready for the fall business. Write for our free catalog. Address
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ALFALFA
The Leafy-Butter-Fat Kind
The H. M. Goldwood Co.
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Alfalfa Hay

We ship direct from producer to the consumer the grades that produce the most milk; also Bran and other feeds.

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KING SEGIS PATENT LOCK
Ear Tags, Bull Staff and Rings. Description and prices sent on application. 300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business.



H. A. Moyer, Syracuse, N. Y.

The Improved Humane Stanchion

is the handiest, strongest, and most practical Stanchion on the market. Write to Humane stanchion Works, Baraboo, Wis., for literature on a complete line of barn equipment.

Nebraska State Fair

(Continued from page 425)

fair management will soon be able to give the state dairy interests a new building which shall be commensurate with the bigness of the dairy business in Nebraska.

The state university maintained a booth which displayed food charts showing the value of milk and milk products. It was considered one of the most interesting exhibits on the fair grounds besides its great educational value. On the big days of the fair the space in front of the booth was jammed with people. Three young women were in charge of a booth at which the food value of dairy products was demonstrated, featuring cottage cheese.

Booths were maintained by Jersey and Holstein-Friesian breeders. The creameries were well represented. Nebraska claims to rank fifth as a butter manufacturing state and thirteenth in the number of dairy cattle.

A million dollars' worth of machinery was on the grounds and it covered thirty-five acres of space, the largest in the history of the fair. The display of tractors exceeded all former years and this was true of devices for promoting the dairy interests. Nebraska raised the biggest grain, corn, and forage crops in many years and an immense quantity of vegtables and the display of agricultural products taxed the space in the immense building erected eight years ago. Western Nebraska counties comparatively a few years ago, merely cattle ranges or poor crop producers, rivaled and even excelled the eastern counties with their high priced land in the production of grain, corn, forage, and potatoes. Some of these western counties reported wheat running as high as 58 bushels to the acre and many fields producing from 40 to 50 bushels.

To stimulate and encourage the rural districts to build homes and farm buildings and to show the wives of farmers how they might be saved much drudgery, models of dwellings and barns were exhibited by an enterprising lumber company. The cost and the labor saving devices was featured. It was one of the best drawing cards at the fair.

Nearly two hundred Nebraska boys from all parts of the state assembled as members of a boys' club on the fair grounds. They were the wards of the state board of agriculture, and they ranged in ages from fifteen to twenty. The boys were furnished with a camp equipped with suitable buildings. Agricultural experts from the state university farm provided an educational course. They were taken over the fair grounds and were made acquainted with the exhibits. They were also taken to see the manufacturing and jobbing plants of Lincoln. The boys slept in barracks and were furnished with plenty of plain and nourishing food. At night before retiring they enjoyed gathering around a big campfire. The board of agriculture is preparing to give a larger number of Nebraska youngsters an opportunity to become members of the club. Much time was spent among the live stock, the boys expressing the keenest delight in inspecting the beef and dairy cattle and the pure-bred swine. The old cattle barn which was burned down was replaced with a more modern building costing approximately $100,000, and the dairy stock were exhibited on the second floor instead of being mixed in with the beef breeds.

The fair took on something of the character of an inter-state exposition by the presence of representatives from many of the middle western states. Canada was also represented by commissioners from several fairs.

The Red Cross featured the work of sanitation and the care of the sick in the rural communities. Practical demonstrations were given how to care for the sick and the injured and how rural homes might be made more sanitary and therefore more healthful than the homes of city people.

State Show at La Crosse

After nineteen consecutive years in the capital city, the management of the Wisconsin State Experiment Association has awarded the State Corn and Grain Show to the city of La Crosse for 1921.

The Agricultural Bureau of the Chamber of Commerce of La Crosse has been placed in charge of arrangements, and preparations are being made for accommodations and entertainment which it is hoped will make this the most notable event of its kind ever held in the state.

Communications regarding the show should be addressed to General Committee, Corn and Grain Show 1921, Care Chamber of Commerce, La Crosse, Wis.

The virtue lies in the struggle, not in the prize.—LORD HOUGHTON.



INTERNATIONAL FEEDS *are* Made To Your Requirements

There is no guesswork about International Feeds. When an International Feed is offered it is not an experiment with a pet theory. Every feed in the International line has a known record. Its daily feeding performance justifies an organization of experienced feeding men in staking their capital and reputations on it. Under the International trade mark you are told in figures the feeding value of every feed. These figures mean a lot. They are required by law to be accurate. The U. S. Government has O. K.'d them.

What Do These Figures Mean To You?

For instance, when we tell you tnat International Diamond Dairy Feed contains 24% Protein, 5% Fat, 42% Carbohydrates, and 10% Fiber, do you really grasp the full importance of these figures. To do so entails a broad study of the subject of scientific feeding as developed by leading experiment stations and our own laboratories. To you the main thing is results. That's what you pay for. So when we tell you that International Diamond Dairy Feed is *guaranteed to produce more milk than any other feed you have ever used*, you get our meaning in language you understand. *Every* International Feed is guaranteed to give you satisfaction—to be your money's worth. Our success has been built upon the success of our feeds over a period of years. International Feeds are *made to your requirements.* Keep that in mind.

In the International line are guaranteed feeds for every farm and dairy purpose. Ask your dealer for them. Write us for full information if your dealer cannot supply you.

INTERNATIONAL SUGAR FEED CO.

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New York State Fair

NEW YORK held its eightieth annual state fair September 13—18. In spite of two days of rain, attendance was heavy and the week a better than average success.

Keeping up with the average of past years is not enough. The New York State Fair is in danger of losing step in the forward movement of agriculture. It fails in its recognition and appreciation of the high character and magnitude of the farming interests of the Empire State. It needs to purge its management of politics and replace it with agriculturalism. Specifically, more attention should center in live stock and farm products exhibits. Farm trained men in charge and larger premium lists would improve the entries. The splendid cattle barn, now erected, half accomplishes the purpose which could be carried out with a suitable judging pavilion. A plea for more time finds few patient hearers among exhibitors, for this year's is the eightieth fair. Open air judging or using the inadequate space of the cattle barn aisles gives justice to the statement of one who this year acclaimed it the "biggest county fair in America". Also, a provision that only tuberculin tested cattle can be shown would be in keeping with the standard which should be sought in the cattle show.

Dairymen's League

The Dairymen's League put its case clearly before State Fair visitors, showing what the organization has done and what it may yet do through co-operation. It has grown from a membership in 1907 of 691 with 14,719 cows to 85,304 members on September 1 of this year, organized in 1,112 locals and owning 909,618 cows. It was claimed for the League that it has secured better milk prices, obtained better cows, promoted more scientific dairying, made the farmer an independent business man, and saved the dairy industry for the people.

Cornell's Space

Cornell made good use of its space in timely exhibits. A graphic illustration was given of the causes of bad milk with the results in the quality of the milk from each cause and the specific remedy. A plea was made for more accredited herd tuberculin testing. Information was given of the nature of tuberculosis, the methods of its dissemination, the cost of diagnosis, the control of the disease, and the method of procedure in accredited herd work. One thousand New York breeders have made application for accredited herd testing and 361 have already passed the first test.

Charts set forth the error in the present scale of paying for fat in market milk above the minimum requirement. It was shown that from 100 lbs. of 3 per cent milk, 3.6 lbs. of butter can be made while 5 per cent milk yields 6 lbs. One hundred pounds of 3 per cent milk is required for 8.3 lbs. of cheese while 12.9 lbs. can be made from the same quantity of milk testing 5 per cent. It was shown that on the basis of $3.65 for 3 per cent milk, the September price, a differential of 6.4 cents should be made. At this rate the farmer delivering 3.8 per cent milk should receive $4.16 instead of $3.97; $4.29 for 4 per cent milk instead of $4.05; and $4.93 for 5 per cent milk instead of $4.45.

State Department Big Feature

The State Department of Agriculture has a big part in making the fair valuable to every farmer who attends. An exhibit of nine cows from the St. Lawrence State Hospital herd contained animals whose productions varied from 4,931 lbs. milk to 19,666. Jabez Smith & Son, H. N. Noyes, and Harry Yates each offered a Holstein bull calf as a prize to those who made the best placings on the cows. In 1919 the number who guessed in a similar contest was 7,305. One-third failed to give a single animal a correct rating, twelve placed five right, and no one placed as many as six correctly. Among those who tried were prominent breeders and professors of dairying. Two of the cows interchanged in ratings made a difference of over 16,000 lbs. milk in production and $375 in profit in a year.

The Department showed that while feed costs have increased 121 per cent and labor 133 per cent since 1913, the cost of milk to the consumer has increased but 78 per cent.

Nearly $2,000,000 worth of New York farms were sold by the Department last year. An exhibit was shown to prove that while Empire land is selling for low prices, the products of the state have a higher cash value than those of any other state.



FAUVIC'S NIC NAC, SENIOR AND GRAND CHAMPION JERSEY COW AT NEW YORK STATE FAIR
OWNED BY A. V. BARNES, CONNECTICUT

The 12,000-lb. cheese, made by Horace Reese, veteran New York State cheesemaker, and described and illustrated in the issue of Hoard's Dairyman for September 10, was sold in pound lots to fair visitors for 40 cents per pound. Lieutenant Governor Walker said, when he officiated at the first cutting: "We don't eat enough of it. It's healthful, palatable, and strength-building. No better cheese is made anywhere than right here in our own state. New York state cheese sells in the market for a higher price than the cheese of any other state. We ought to consume a large part of it among ourselves. This is a sample of the best cheese in the world. Try it, and keep on eating it. It's good for you."

Dairy Products Excellent

A splendid exhibit of butter and cheese was made; 112 creamery butter, 27 dairy butter, and 375 cheese samples being judged. George Connell of New York City did the scoring, awarding the gold medal for best butter to A. F. Scott on a sample scoring 96 and the silver medal to W. V. Price, the score being 95. H. J. Richardson, judging the cheese, gave I. V. Fortune a gold medal on export cheese with a score of 97¾ and S. T. Brooks a gold medal on home trade cheese scoring 98¼.

Oleo Among Those Present

A late editorial in a dairy publication proved to be over-optimistic in its statement that the 1920 New York State Fair would struggle along without giving space to oleo vendors. The imitation held forth in full glory in three different exhibits, so that people of this great dairy state had full opportunity to try the virtues claimed for this "just-as-good-as" product.

Holsteins

Bob Haeger judged Holsteins at Syracuse. This is the first year in fourteen that the "Haeger string" is not on the circuit and the first since 1912 it has not "cleaned up at Syracuse". In acquiring Haeger as a judge, New York breeders not only insured themselves of careful, expert placings, but they also kept the prize money for their own division.

The black and whites led the breeds in numbers with 182 head but fell far short of the quality necessary for a fair representation of the Holstein in New York State. Most of the cattle shown were rough, for the most part unfitted, some being in less than good milking flesh. The few animals which were exceptions took the ribbons. Camp Bell Farm showed two animals and won both grand championships, E. A. Vandervort showed one and was awarded a junior championship, and A. A. Hartshorn with one entry took a blue.

McKinley Pietertje Beets, long bodied, straight, and showy, easily led the males. He has a tendency to carry plenty of covering and lacks snap but was a popular grand champion. S. S. Whitford won in the three-year-old class and A. A. Button with a two-year-old. Echo Bell Model King, Vandervort's entry, led the juniors. Twenty-five aged cows, with better fitting, would have furnished a strong ring. Johanna Ormsby Countess won for Camp Bell Farm. She is a bit small but has udder balance and type enough to remind the ringside of a famous cow which has taken the championship in years past. Jabez Smith & Son held Katy Pietertje Paul 5th in second place. This cow made 25,000 lbs. of milk in a testing association. She led the Advanced Registry Class. Oneida Community won junior championship. In the groups, Bonalevo Farms won with exhibitor's herd, Oneida Community with breeder's young herd, calf herd, and get, Frank Ostrander winning with produce, and Jabez Smith & Son had the best group of four cows.

Haeger's placings are here listed:

Bull 4 years or over—1, Camp Bell Farm on McKinley Pietertje Beets; 2, Ostrander on Wolkspring Pontiac Korndyke; 3, Bonalevo Farms on Colantha Johanna Lad 8th; 4, Smith & Son on ——; 5, Upham on Waconda Sir Cornucopia Korndyke. Bull 3 years and under 4—1, Whitford on Clothilde Dutchland Colantha; 2, Oneida Community on Colantha Aaggie Clothilde; 3, Doran on King Cornucopia De Kol Paul; 4, Syracuse University on ——. Bull 2 years and under 3—1, Button on King Segis Paul Elma Queen Korndyke; 2, Bonalevo on King of the Butter Girls; 3, Smith & Son on ——. Bull 12 months and under 18—1, Vandervort on Echo Belle Model King; 2, Syracuse Uni. on ——; 3, Paddeford on King Pontiac De Kol Hilldoll; 4, Powell on Prince Pontiac Korndyke Pet.

Cow 4 years or over—1, Camp Bell Farm on Johanna Ormsby Countess; 3, Everingham on Blanche Segis Netherland; 4, Bonalevo on Beets Johanna Korndyke. Cow 3 years and under 4—1 and 4, Oneida Community on Pearl Lockhart Reliance and Glen Mount Polly Posh; 2, Potter on Pines Brebe Segis; 3, Potter on Pines Lady Lyons. Cow 2 years and under 3—1, Hartshorn Holstein Co. on Johanna Celeste Pontiac Alcartra; 2, Smith & Son on ——; 3, Powell on Mrytis De Kol Pontiac; 4, Morris & Son on Nuway Paulus Korndyke. Heifer 18 months and under 2 years—1, Borden's Farm Products Co. on ——; 2, Oneida Com. on Oneida Princess Korndyke; 3, Powell on Seneca Clothilde De Kol; 4, Munro on Drumlin Princess Korndyke. Heifer 12 months and under 18—1, Everingham & Son on Alfacrest Maroon Segis; 2, Oneida Com. on Onyx Lilith; 3 and 4, Bonalevo on Lady Nellie Rag Apple and Colantha Quality Lassie. Heifer 6 months and under 12—1 and 2, Oneida Com. on ——; 3, White on Maplewood Sarah Lyons; 4, Tanner & Snitchler on Fertiland Hamilton Clothilde. Heifer under 6 months—1, Everingham & Son on Alfacrest Kate's Princess Segis; 2, Powell on Model Alice Segis Erica; 3, Smith & Son on ——; 4, Bonalevo on Colantha Babe.

Exhibitor's Herd—1, Bonalevo; 2, Smith & Son. Breeder's Young Herd—1, Oneida Com.; 2, Powell; 3, Bonalevo; 4, Smith & Son. Calf Herd—1, Oneida Com.; 2, Powell; 3, White; 4, Bonalevo. Get of Sire—1, Oneida Com.; 2, Potter; 3, Smith & Son; 4, Bonalevo. Produce of Cow—1, Ostrander; 2, Everingham & Son; 3, Oneida Com.; 4, Van Buskirk & Son. Best 4 cows over 3 years—1, Smith & Son; 2, Pickering Farm; 3, Bonalevo Farms; 4, Button.

Senior and Grand Champion Bull—McKinley Pietertje Beets. Junior champion bull—Echo Bell Model King. Senior and Grand Champion Cow—Johanna Ormsby Countess. Junior Champion Cow—Oneida Com. on daughter of Ormsby Lilith Clothilde.

Ayrshires

J. C. McNutt made the awards in the best Ayrshire classes seen at Syracuse in many years. Eighty-four head made a showing which drew a goodly ringside throughout the judging. Blue ribbons were distributed among five breeders, Middlesex Meadows Farm of Massachusetts securing seven; Weymouth Farms of Massachusetts, three; Lippitt Farm, three; Monstone Farm, Massachusetts, three; and J. H. Stewart of New York, two. Each of the first three farms won two championships.

Auchenbrain Toreador well deserved the grand champion ribbon he won for Middlesex Meadows. He is difficult to defeat, and was at his best. He stands up well, is straight, and a show bull of unusual excellence. His closest rival was Lessnessock Genis Good Gift shown by Monstone and placed fourth because of lameness. This bull's strength and pronounced masculinity with scale, lines, and dairy form rate him as one of the great bulls in America. Lippitt Farm's yearling, Cavalier's Model Champion, was an easy leader of the juniors.

A great cow class of twelve entries made the breed's best exhibition. Henderson's Betty had a clear title to the blue and later brought the grand championship to Weymouth Farms. She showed the best udder in the class and a trimness and quality not to be denied. Stewart's Bonnie Lee Girl of Elmwood stood second with a well filled udder and a milky conformation. There were cows of better Ayrshire type below her, Duchrae Jenny in third place and owned by Monstone Farm being one of them. Stewart had an easy winner in the three-year-olds in Dot of Elmwood. In the younger female classes good numbers of well fitted, typy animals were brought out. Lippitt Farm won the junior championship with a junior calf, Lippitt Lady Stuart.

The detailed winnings follow:

Bull 3 years or over—1, Middlesex Meadows Farm on Auchenbrain Toreador; 2, Wey-

(Continued on page 448)

Continued Firmness a Feature of Butter Markets

Release of Storage Report Adds to Confidence—Production Close to Low Point

[Report by U. S. Bureau of Markets.]

The occurrence of two Jewish holidays, Monday and Tuesday, had the immediate effect of putting a check on butter trading and causing very slight price declines, but the depression was only temporary and trading during the week ending September 18 showed no great change from the previous week. The release of the American Warehousemen's Association report of September 1, which showed an apparent rapid cutting down of the shortage in cold storage holdings as compared with a year ago, served early in the week to make operators very cautious about buying, especially in view of the light exports of butter from this country this year. However, a correction of the figures given in this report and the release later in the week of the Bureau of Markets' report, covering all storages in the United States, served to restore confidence.

According to the bureau report, holdings for the entire country were lighter on September 1 than had been generally expected. It is reported commercially that England is short of her requirements of butter and may well come into our markets for a further supply before the season is over. Of course, such action is largely dependent upon the position of exchange rates, prices here, availability of butter from other sources, etc. If no exporting is done, and if no further importations are received, our storage holdings are likely to work out all right and the market to hold steady, as consumption continues excellent. Some Danish storage butter was used during the week at New York, most of it going into prints and at prices about 3 to 5 cents below prices of domestic fresh butter. No further purchases of new stocks of foreign butter are reported.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending September 18, were as follows: New York, 58.75 cents; Chicago, 56.14 cents; Philadelphia, 59.29 cents; Boston, 59.08 cents; and San Francisco, 65 cents. For the corresponding week last year the average prices at these markets were: 58.4c, 55.8c, 58.5c, 57.9c, and 60.7c, respectively. The receipts of butter at these five markets were 10,378,735 lbs. as compared with 9,886,409 lbs. for the corresponding week last year and 9,646,226 lbs. for last week.

Export Demand Expected by Cheese Trade

First Orders Already Placed—Closing of Condenseries Will Aid Production

[Report by U. S. Bureau of Markets.]

Little of unusual interest developed in the cheese markets during the week ending September 18. Markets generally retained a firm tone, and while trading was not on a real active basis, both buyers and sellers seemed to have confidence in the situation. The week opened with prices at Wisconsin primary markets showing a slight advance, which was in most cases maintained. Twins alone declined. On Longhorns the advances amounted to an average of three-fourths cent.

Receipts at the four principal eastern markets are holding up fairly well for this time of year, although considerably lighter than a year ago. At New York current receipts are especially light partly on account of the fact that the usual amount of cheese has not been made in New York State. Furthermore, just at present very little cheese is reaching that market from Wisconsin on account of prices. According to reports, the unfavorable condition of the condensed milk market will probably cause more milk to be diverted to cheese, and will have a tendency to reduce the local shortage at New York where much of this cheese will doubtless be marketed.

A further hopeful sign is the export demand. More trial shipments have been made, and during the week several good-sized orders from Continental Europe materialized mostly for Canadian Cheddars, but including some Wisconsin Twins. More business of this nature is anticipated; in fact, dealers are not pushing sales vigorously at present, as further price advances are expected on practically all styles.

Storage Stocks Reach High Point

The monthly cold storage report released by the Bureau of Markets shows that total storage holdings on September 1 were 60,530,000 pounds. This total is 16,000,000 pounds short of last year, but is only 6,600,000 pounds under the five-year average for September 1. This report indicates also that there was an increase of some 9,000,000 pounds during August this year. Holdings in the four large distributing markets showed a steady increase up to September 1, but that date seems to have marked the high point thus far this season in those markets, as during the first half of September, storage stocks decreased approximately 5 per cent. During the same period last year holdings were increased 10 per cent. Storage reduction this year may have been caused by the increased cost of cheese due to higher prices at primary markets and the increased freight rates, which make it more profitable for dealers to move stocks held in storage than to purchase new stock for filling current orders. These conditions may possibly be only temporary.

The average wholesale prices at the principal markets on American cheese, style Twins, for the week ending September 18, were as follows: New York, 27.65 cents; Chicago, 26.25 cents; Boston, 28.94 cents; San Francisco; 30.5 cents; and the Wisconsin primary markets, 26.16 cents. For the corresponding week last year the average prices at these markets were: 30.5c, 28.3c, 31.8c, 33.8c, and 27.7c, respectively. The receipts of cheese at these five markets were 2,877,590 lbs. as compared with 4,518,190 lbs. for the corresponding week last year and 2,664,990 lbs. for last week.

Current Feed and Hay Prices

[From Reports by U. S. Bureau of Markets.]

A general decline in the prices of all feeds continued during the week ending September 18. Railroad conditions are much improved and movement of cars from Minnesota to eastern points is said to compare favorably with the best of former years. For the first time in years some of the trunk lines are now soliciting business.

The wheat mill feed market remains dull, with current trade and future booking light. At Minneapolis bran is quoted at $38 and middlings at $46. Bran averaged $38 at Kansas City, $42 at Chicago, $49 at New York and Boston, and $52 at Los Angeles.

Cottonseed meal is also dull. Forty-one per cent is quoted at $55 in Kansis City, $62 in Minneapolis, $61 in Chicago, $64 in Boston, and $60 in New York. Thirty-six per cent sold at $51 at Memphis and Atlanta, with an average of $59 at other markets. Texas quotes 41 per cent meal at $48.50, which means $61 delivered at Chicago.

At Minneapolis prices on linseed meal hold firm at $63, while the tendency is for lower prices at the Atlantic sea board. Quotation range: $60 at New York, $63 at Boston, $66 at Chicago, and $70 at Omaha.

Because of the guaranteed price of gluten feed the market remained unchanged, with $60 at Cincinnati, $61 at Buffalo, and $59 at Chicago. Alfalfa meal is quoted at $34 in Kansas City and $37 in Chicago. At Chicago jobbers report sacked hominy feed for October delivery at $51, while brokers state that mills are anxious to sell at $49.75. Beet pulp ranges from $52 at Los Angeles to $55 at Minneapolis and $63 at Boston.

Timothy hay has averaged $35 for several weeks, which is about $4 higher than a year ago. Lack of demand and the poor quality of hay arriving is depressing the market. Quotations on No. 1 timothy are: $27.25 at Kansas City, $27 at Minneapolis, $32 at Chicago, $41 at Boston, and $49 at New York. Mixed clover and timothy, as also clear clover, rules about $4 under these prices.

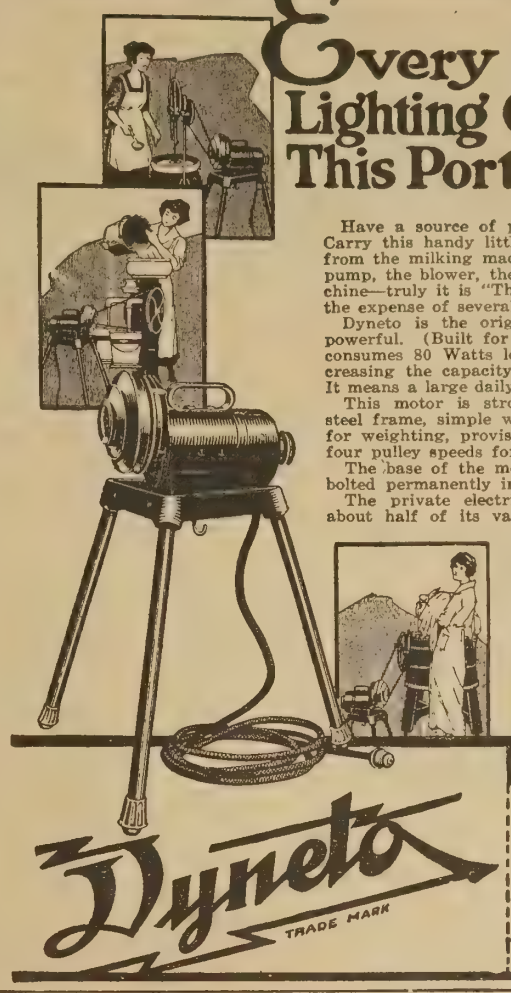
Prices of alfalfa have declined $1 to $2 during the week. At Seattle it is quoted at $24 and in the Yakima Valley at $19. No. 1 alfalfa is priced at $28 in Kansas City, $25 in Omaha, $28 in Minneapolis, $33 in Chicago, $33 in Memphis, and $40 in Atlanta.

Illinois Condenseries Close

Newspaper reports of September 24 state that orders have been received by the managers of plants of the Borden Company, milk condensers, to buy no milk after Sept. 30 until further orders. The result will be, it is stated, the closing of the plants at Belvidere, St. Charles, and Grangeville, Ill., and Orfordville and Monticello, Wis. On Sept. 1 a price of $3.70 per 100 pounds was posted. This was reduced to $3.35 on Sept. 15. A surplus of canned milk is given as the reason for the order to cease buying.

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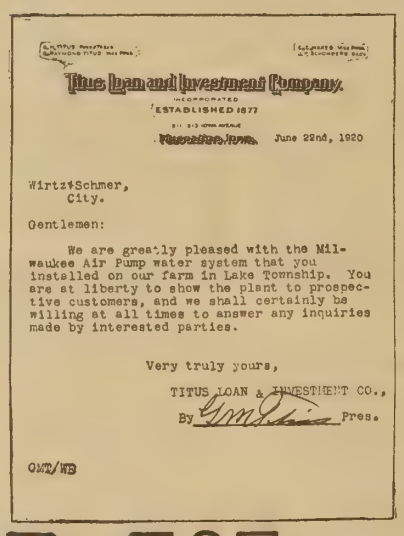
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Poughkeepsie Foundry & Machine Co.,
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N. Y. Farmer — Business Conference

(Continued from page 424)

fore necessary that we have agricultural organization. Agriculture must be prosperous enough to insure its perpetuity. The problem is too big for farmers alone to handle. It is a question of distribution quite largely. The spread between the producer and consumer is so great that agriculture is being irreparably harmed.

⚜

A shipper spoke of the difficulties of getting quick service in transportation. It is wrong to put a car of apples or of potatoes between a car of lumber ahead and a car of iron after and send the whole by slow freight. It ties up cars unnecessarily and there is loss of the commodity by delay. There should be a fast freight service of shorter trains for these and similar commodities.

⚜

Mr. Evans, of the New York Central R. R., stated some of the difficulties that the railroads have. Cars are not in full supply. Usually 1,500 or 2,000 or more cars are held in reserve for western New York but now there are much fewer. For all that it is likely that it will be possible to move the crops. Cars of the different roads have been pooled and the car service bureau takes them over and supplies cars as needed, no matter to which road they may belong. And a gentleman representing the Pennsylvania railroad, corroborated the statements. The production of the various sections is determined and the car service is to meet the needs. The company also tries to determine the markets and advise in making sales. There is little doubt but that cars will be furnished upon short notice for moving all commodities, according to these men. Several men, representing various roads, including the Erie, the Lackawanna, etc., spoke and gave assurance of their desire to assist, but I failed to note a large amount of certainty that cars can be always ready. Yet the statements were encouraging.

⚜

The barge canal has cost New York State people $150,000,000. Today there are less boats on the canal than there were on the old Erie canal. There may be a total of three hundred boats now. The boats make a trip from New York to Buffalo in six days. Breakage is largely eliminated. A 600-ton barge is about as large as can be operated well. Most of the boats have a capacity of half that or a little more. The boats are now operated at a fair profit. There is room for many more boats. The speaker does not see more boats coming quickly. The canal, according to general opinion on our farms, is a bill of expense to taxpayers and is of small use. The speaker hardly made a different situation apparent, but looks for something better later on.

⚜

Mr. Strivings has been traveling and speaking in the West in the interests of the farm bureau movement. He finds that westerners are becoming greatly interested in the outlet to the ocean by the Erie canal or otherwise. Some cheaper means of transit is needed. The subject was not further discussed at the meeting. It would almost seem that the state generally feels that the immense sum already paid is as much as we can afford and that further expenditure needs to be more from those who secure the benefits. This was not stated at the conference.

National Milk Producers' Federation

The attacks that have been launched against the Oregon Dairymen's Co-operative League, Inc., by the Advertising Committee of the Portland milk dealers is in the main the same as those made in previous years against most of the older producers' co-operative milk marketing associations in other sections of the United States. The nature of charges made are practically the same as those made against the New York Dairymen's League, Inc., and the Chicago Milk Producers' Association, when those organizations first began to function during the years 1916 and 1917.

Instead of succeeding in disrupting those producers' associations, however, the attacks of the milk dealers in New York and Chicago only serve to strengthen them. Today, the Producers' Co-operative Marketing Company, supplying the major portion of Chicago's market milk demands, is selling the milk of approximately 20,000 dairymen whose natural market outlet is Chicago or the condenseries, cheese factories, and creameries in the territory easily accessible to that city. The Dairymen's League of New York has now a membership of approximately 84,000 farmers, located throughout the territory that constitutes the natural source of the milk supply of metropolitan New York, Buffalo, Rochester, Utica, Albany, Newark, Patterson, and Wilkes-Barre.

Portland Prices Comparatively Low

The prices that have been paid during the recent months to producers supplying the Portland market are considerably lower than those prevailing in most of the important market centers of the United States. The Fluid Milk Market report issued monthly by the United States Bureau of Markets shows that, during May, June, and July, 1920, the prices for the standard grade of market milk testing 3.5% butterfat, delivered f. o. b. Portland, have been from 35 to 54 cents per hundredweight less than the average net prices received by producers generally in the Pacific Coast States for the same grade of milk delivered at local shipping points or at dealers' country stations.

G. P. WARBER, Manager.
The Nat'l Milk Producers' Federation.

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New York State Fair

(Continued from page 444)

mouth Farms on Ryanogue Gwynette's Boy; 3, Fenmore Farm on Iroquois Scotchman; 4, Monstone Farm on Lessnessock Gem's Good Gift. Bull 2 years, under 3—1, Weymouth Farms on Weymouth Surrel. Bull 1 year under 2—1 and 2, Lippitt Farm on Cavalier's Model Champion and Ringmaster's Bearn Burn Director; 3, Weymouth Farms on Irene's King of Weymouth; 4, Middlesex Meadows Farm on Cavalier's Buntie Lad. Bull 2 months and under 12—1, 2, and 3, Middlesex Meadows Farm on Middlesex Royal Champion, Nona's Middlesex Chancellor, and Nancy's Chancellor of Middlesex; 4, Weymouth Farms on Elsie's Spectator of Weymouth.

Cow 4 years or over—1, Weymouth Farms on Henderson's Betty; 2, Stewart on Bonnie Lee Girl of Elmwood; 3, Monstone Farm on Duchrue Jenny; 4, Middlesex Meadows Farm on Thistle Hobsland 2nd. Cow 3 years and under 4—1, Stewart on Det of Elmwood; 2, Weymouth Farms on Evanrere's Betty; 3, Middlesex Meadows Farm on Townfoot Barbara. Cow 2 years and under 3—1 and 4, Middlesex Meadows Farm on Ringmaster's Britta of Brae Burn and Cavalier's Buntie Belle; 2, Lippett Farm on Ringmaster's Margredel; 3, Monstone Farm on Hill Top August Lassie. Heifer 18 months and under 2 years—1 and 2, Middlesex Meadows Farm on Baron's Cherry and Middlesex Maud; 3, Monstone Farm on Rose Escape 2d of Weymouth; 4, Weymouth Farms on Lady Daisy Bett of Weymouth. Heifer 12 months and under 18—1, Middlesex Meadows Farm on Britta of Weymouth; 2 and 3, Lippett Farm on Ringmaster Bloom and Cavalier's Lady Awastatia; 4, Weymouth Farms on Sturdy Jean of Weymouth. Heifer 6 months and under 12—1 and 4, Monstone Farm on Monstone Heather Honey and Monstone Stately Maid; 2, Middlesex Meadows Farm on Alta Crest Mist; 3, Lippett Farm on Lippett Oldhall Beauty. Heifer under 6 months—1, Lippett Farm on Lippett Lady Stuart; 2, Middlesex Meadows Farm on Middlesex Henry; 3, Fenmore Farm on Fenmore Scotch Perfection; 4, Weymouth Farms on Weymouth Young Bonnie Jean.

Exhibitor's Herd—1, Middlesex Meadows Farm; 2, Weymouth Farms; 3, Monstone Farm. Breeder's Young Herd—1, Monstone Farm; 2, Weymouth. Calf Herd—1, Monstone Farm; 2, Middlesex Meadows Farm; 3, Weymouth. Get of Sire—1, Lippett; 2, Middlesex Meadows; 3, Stewart; 4, Weymouth. Produce of Cow—1 and 4, Middlesex Meadows; 2, Lippett; 3, Monstone. Best 4 cows over 3 years—1, Weymouth; 2, Stewart; 3, Middlesex Meadows; 4, Monstone. Best 4 females 2 years or over, bred by exhibitor—1, Stewart.

Senior and Grand Champion Bull—Auchenbrain Toreador. Junior Champion Bull—Cavalier's Model Champion. Senior and Grand Champion Cow—Henderson's Betty. Junior and Grand Champion Cow—Lippett Lady Stuart.

Jerseys

One hundred and one Jerseys put up a quality show in every class. No other state fair reported in Hoard's Dairyman this year has furnished an equal. In size and merit it lead the breeds, the Ayrshire being the only one of comparable show ring fitness. Five farms divided the first prizes and three the championships. J. C. McNutt made the awards.

Inderkill Farms, New York, acquired the highest award for males with Gamboge's Royal Majesty. The strongest contender was A. V. Barnes' junior champion, Fauvic's Western King, a yearling which bids fair to equal his famous sire, Fauvic's Prince, when he has matured. H. M. Kinne made but one entry, a bull calf, but he brought enough quality with him to win the blue in his class. P. H. B. Frelinghuysen of Virginia won the two-year-olds with Fern's Noble Oxford Sultan.

Nesta's Lass maintained her record of winning by bringing the blue in the aged cow class to the Virginia herd but she lost in the championships to the Barnes entry, Fauvic's Nic Nac. This three-year-old was easily the best thing in the show, and there were many good ones. Beginning at twenty-four months she made 500.18 lbs. of fat in a year. Her udder is near perfect and her style and strong lines make her the best three-year-old on the circuit thus far. Barnes had the winnings his way in the next three classes of females with Prospect Farms of New Jersey taking the firsts in the two calf classes and winning the junior championship on Prospect's Fairy Glenn.

The awards by classes follow:

Bull 3 years or over—1, Inderkill Farms on Gamboge's Royal Majesty; 2, Cowden on King Aire of Elm Place; 3, Mansfield Hall Farm on Mansfield Squire Blossom; 4, Woodburn Hall Farm on Frederick Duke. Bull 2 years and under 3—1, Frelinghuysen on Fern's Noble Oxford Sultan; 2, Prospect Farms on Hauterville's Fountaine; 3, Roberts on Majesty's Aire of Elm Place; 4, Cowden on Rosaire of Elm Place. Bull 1 year and under 2—1, Barnes on Fauvic's Western King; 2, Cowden on Majesty's Prince of Elm Place; 3, Frelinghuysen on Dairylike Fern's Financier; 4, Mansfield Hall on Marjorie Double Finance. Bull 2 months and under 12—1, Kinne on Raleigh's Fairy Knight; 2, Roberts on Selma's Abe; 3, Inderkill Farms on Sybills Beans Count; 4, Frelinghuysen on Princess Golden Fern.

Cow 4 years or over—1, Frelinghuysen on Nesta's Lass; 2 and 4, Inderkill Farms on Heather Countess and Tiddledywink's Stella; 3, Barnes on Fauvic's Duchess. Cow 3 years and under 4—1, Barnes on Fauvic's Nic Nac; 2, Inderkill on Golden Lustre; 3, Frelinghuysen on Oxford Pretty Maid; 4, Arlington Farms on Bunbury's Oxford Duchess. Cow 2 years and under 3—1, Barnes on Combination's Bright Baby; 2, Inderkill on Oxford Majestic Beauty 2nd; 3, Mansfield Hall on Dominco Finance; 4, Frelinghuysen on Netina's Golden Maid. Heifer 18 months and under 2 years—1 and 2, Barnes on Oxford Nic Nac and Fauvic's Gipsy Maid; 3, Mansfield Hall on Finance Double Cream; 4, Prospect Farms on Fairy Glen's Cherita. Heifer 12 months and under 18—1, Barnes on Fauvic's Cherry; 2 and 3, Inderkill Farms on Lucinda's Princess Matilda and Miss Warder's Sybil; 4, Roberts on Jennie's Amelia Stoke. Heifer 6 months and under 12—1 and 2, Prospect Farms on Majesty's Miss Daisy and ——; 3 and 4, Frelinghuysen on Ruby's Golden Maid and The Cid's Sea Lass. Heifer under 6 months—1, Prospect Farms on Prospect Fairy Glenn; 2, Inderkill on Dairylike's Pretty Princess; 3, Mansfield Hall on Double Finance Snowdrop; 4, Barnes on Fauvic's Ivy.

Exhibitor's Herd—1, Barnes; 2, Inderkill; 3, Frelinghuysen; 4, Mansfield Hall. Breeder's Young Herd—1, Barnes; 2, Mansfield Hall; 3, Cowden. Calf Herd—1, Frelinghuysen; 2, Barnes; 3, Mansfield Hall; 4, Inderkill. Get of Sire—1, Barnes; 2, Mansfield Hall; 3, Inderkill; 4, Cowden. Produce of Cow—1, Barnes; 2 and 4, Cowden; 3, Frelinghuysen. Best 4 cows over 3 years—1, Barnes; 2, Inderkill; 3, Frelinghuysen; 4, Arlington.

Senior and Grand Champion Bull—Gamboges Royal Majesty. Junior Champion Bull—Fauvic's Western King. Senior and Grand Champion Cow—Fauvic's Nic Nac. Junior Champion Cow—Prospect Fairy Glenn.

Guernseys

The Guernsey showing did not well represent the quality of the breed in New York State. The interest of breeders was centered in a state consignment sale held September 18 rather than in exhibiting. A total of seventy-nine were shown. V. A. Woodbury II of Vermont brought in the only out of state entries and won twelve firsts and five championships, losing only three firsts and female junior champion to Emmadine Farms, two firsts to Fralick and Smith, and one first to T. H. Munro. A number of entries were seen which should not have left pasture.

John Clark of Mixter Farms, Massachusetts, did pleasing work in tying the ribbons.

Pencoyd Secret Marose won the purple among the males for the Vermont herd. He shows as a three-year-old and is inferior to Inspector of Indian Bridge, Emmadine Farms' older sire, in scale, capacity, and in clean cutness in his rear quarters. He is better over the shoulders and has more style in the ring. The two were close. Deanie's Marose, junior champion, gave his senior close competition for the grand.

The aged cow class was disappointing but the three-year-olds brought out a cow of choice type and production form in Duchess of Prospect. She was a worthy grand champion. Her chief contest came against the junior champion, Emmadine Adah, a pleasing junior calf of good promise.

The placings by classes follow:

Bull 3 years or over—1, Woodbury on Pencoyd's Secret Marose; 2, Emmadine Farms on Inspector of Indian Bridge; 3, Kelley on Paddy McCue of Maple Glen; 4, Fralick and Smith on ——. Bull 2 years and under 3—1, Woodbury on Rose's Golden Cherub; 2, Stebbins on Coralie's Wilma Boy; 3, Duguld on Langwater Trogan. Bull 1 year and under 2—1 and 3, Emmadine Farms on Emmadine's May King and Gay Lad of Emmadine; 2, Woodbury on Cherub's Popeep Prince of Appletree Point; 4, Fralick and Smith. Bull 2 months and under 12—1, Woodbury on Deanie's Marose of Appletree Point; 2, Duguid on Sunny Hill Pioneer; 3, Emmadine Farms on Emmadine King; 4, Syracuse University.

Cow 4 years or over—1 and 4, Woodbury on Follyland Rose Queen and Morning Glory of Appletree Point; 2, Fralick & Smith; 3, Kelly. Cow 3 years and under 4—1, Woodbury on Duchess of Prospect; 2, Kelly on Louise of Springwater; 3 and 4, Munro on Louise of Munroholm and May Queen of Munroholm. Cow 2 years and under 3—1, Fralick & Smith; 2, Woodbury on Justice's Early Rose of Appletree Point. Heifer 18 months and under 2 years—1, Woodbury on Flora of Buena Vista Farm; 2, Kelly on Padde's Lawn of Seneca River; 3, Dixon & Son on Aleta of Valley View; 4, Fralich & Smith. Heifer 12 months and under 18—1 and 4, Woodbury on Golden Secret's Polly of Appletree Point and Nancy's Betsey of Bellview; 2 and 3, Emmadine Farms on Emmadine Laura Belle and Masher's Gladys of Emmadine. Heifer 6 months and under 12—1, Woodbury on Golden Secret's Duchess of Appletree Point; 2, Fralick & Smith; 3 and 4, Emmadine Farms on Emmadine Gladys and Emmadine Buttercup. Heifer under 6 months—1, 3, and 4, Emmadine Farms on Emmadine Adah, Emmadine Mary Ann, and Emmadine Daisy; 2, Woodbury on Appletree Point's Aimable.

Exhibitor's Herd—1, Woodbury; 2, Kelly; 3, Fralick & Smith. Breeders' Young Herd—1, Emmadine; 2, Fralick & Smith; 3, Munro. Calf Herd—1, Woodbury; 2, Emmadine; 3, Fralick & Smith; 4, Munro. Get of Sire—1 and 3, Woodbury; 2 and 4, Emmadine. Produce of Cow—1, Munro; 2, Emmadine; 3, Woodbury; 4, Kelly. Best 4 cows over 3 years—1, Woodbury; 2, Fralick & Smith. Best 4 females, 2 years or over—1, Fralick & Smith.

Senior and Grand Champion Bull—Pencoyd's Secret Marose. Junior Champion Bull—Deanie's Marose of Appletree Point. Senior and Grand Champion Cow—Imp. Duchess of Prospect. Junior Champion Cow—Emmadine Adah.

Brown Swiss

Three breeders of Brown Swiss, Hull Bros. of Ohio and Forest Farms and Albert E. Dean of New York, put on a first class exhibition for the breed. The Ohio herd won the bulk of the blues, having thirteen of the sixteen awarded, and the six purples but had very worthy competition. Bob Haeger tied the ribbons.

Vogel's College Boy led the males. His handling quality and dairy form, with his scale, gave him favor over Forest Farms' Roman, a younger bull which will improve as he fills out. Gold King, a calf, was junior champion. The aged cow class pleased the ringside. Eleven milky matrons gave telling evidence of the producing qualities of the breed. Swiss Valley Girl 9th won over her older sister, Swiss Valley Girl 7th, in a close decision. She lacks the older cow's development but was given preference in udder, style, and top. Breithorn, Forest Farms' three-year-old, and the two-year-old,



A 25 to 50 bushels per hour GRIST MILL right on your own farm. NO BELT TO BUY. Connected in less than ONE MINUTE to practically any make car. GRINDS CORN ON COB as well as all small grain.

FIFTEEN DAYS FREE TRIAL. LET US SEND YOU ONE TODAY. ONLY $49.50.

County and State Agents Wanted

Lawrence Auto Power Sales Co.
202 W. 3rd St. St. Paul, Minn.

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

Under Auspices Fond du Lac Poland-China Association

GREAT OFFERING

BIG TYPE — RAINBOW-BACK POLAND-CHINAS

Sired by that great son of "Clansman"

MUSKATEER

His sire, "CLANSMAN" once sold for $15,000—but now priceless.
His dam, "FASHION GIRL" sold last fall for $17,200.
Full brother, one year younger, to the $30,000 DESIGNER.
Full brother, one year younger, to the great LIBERATOR.
Litter mate to CAVALIER, who sold for $5,000.
Litter mate to PIONEER, who sold for $5,000.
His litter—six pigs—sold for $15,800.
Liberator sired REVELATION, $8,700,—LIBERATOR BUSTER, $6,100.
Send bids to BURLIE DOBSON or R. H. DYAS.
Greatest opportunity to purchase this type breeding ever offered by

Lone Tree Farm of Green Lake, Wis.

AT SALES PAVILION

Fond du Lac, Wisconsin
October 8th, 1920

Forest Girl 7th, were defeated for the senior championship. Hull Bros.' Sophia of Lakeview, junior champion, left the premier honor to her senior.

The following details the placings:

Bull 3 years or over—1, Hull Bros. on Vogel's College Boy; 2 and 3, Forest Farms on Roman and Brieg. Bull 2 years and under 3—1 and 3, Forest Farms on Tarasp and Linard; 2, Hull Bros. on Ethel B's Militor. Bull 1 year and under 2—1 and 3, Forest Farms on Corvo and Bossons; 2, Hull on Prince of Lakeview; 4, Dean on Jura Mc's King. Bull calf 2 months and under 1 year—1 and 3, Hull on Gold King and Jerry of Lakeview; 2 and 4, Forest on Riffiehorn and Ardetz.

Cow 4 years or over—1 and 2, Hull on Swiss Valley Girl 9th and Swiss Valley Girl 7th; 3 and 4, Forest on Constance and De Laura. Cow 3 years and under 5—1, Forest on Breithorn; 2 and 3, Dean on Master's Beauty Collier 2d and Gallatin Girl. Cow 2 years and under 5—1, Hull on Forest Girl 7th; 2 and 3, Forest on Alpina and Realp. Heifer 18 months and under 2 years—1 and 2, Hull on Sophia of Lakeview and Nettie of Lakeview; 3 and 4, Dean on Bob's Perfection and Bob's Gallatin Girl. Heifer 12 months and under 18—1 and 2, Hull on Loretta of Lakeview and Lucille of Lakeview; 3 and 4, Forest on Ambri and Gallina. Heifer calf 2 months and under 1 year—1, 2, 3, and 4, Hull on Lottie of Lakeview, Dottis of Lakeview, Vogel's Valley Girl 6th, and Mercy of Lakeview.

Exhibitor's Herd—1, Hull; 2 and 3, Forest. Breeder's Young Herd—1 and 2, Hull; 3, Forest. Calf Herd—1, Hull; 2, Forest. Get of Sire—1, Hull; 2, Forest; 3, Dean. Produce of Cow—1, Hull; 2, Forest; 3, Dean. Best 4 cows over 3 years—1, Hull; 2, Forest.

Senior and Grand Champion Bull—Vogel's College Boy. Junior Champion Bull—Gold King. Senior and Grand Champion Cow—Swiss Valley Girl 9th. Junior Champion Cow—Sophia of Lakeview.

Small savings are like stones in a bridge; they build a firm support to carry one over the flood of an emergency.

Guernsey Products Win

From the California State Fair comes the news that the Elliott-Brant Rancho won both first prizes in the classes of guaranteed milk and guaranteed cream. Adohr Stock Farm, owned by the Adamson Corporation, won first prize in the certified milk class. The winning products were all produced by pure-bred and registered Guernseys.—American Guernsey Cattle Club.

MARKETS

CHICAGO, Sept. 23—Butter—Creamery, extras, 57½c; standards, 53¾c; dairy, firsts, 48@56c; seconds, 43@47c.

Eggs—Ordinary, 48@50c; firsts, 53@54c.

Cheese—Twins, 24¾c; Young Americas, 26c.

NEW YORK, Sept. 23—Cheese—Firm; state milk; common to specials, 20@29½c; skims, common to specials, 5@17½c.

Butter—Strong, receipts 9,683; creamery, extras, 61@61½c; state dairy, tubs, 46@60½c; imitation creamery, prints, nominal.

Eggs—Firm; receipts, 18,309; nearby white fancy, 83@85c; nearby mixed fancy, 54@73c; fresh firsts, 57@65c.

MILWAUKEE, Wis., Sept. 23—Butter—Creamery, tubs, 56½c; prints, 57½c; extra firsts, 55c; firsts, 51@52c; No. 1 packing stock, 34@35c; No. 2 do, 20@30c.

Eggs—Fresh firsts, recandled for city trade, 56@57c; current receipts, country candled, 50@51c; checks, 31@34c; dirties, 35@38c.

Cheese—Twins, 25½c; Daisies, 26¾c; Longhorns, 27c; fancy Brick, 26c; Limburger, new, 1 lb., 25½c; Limburger, new, 2 lbs., 24½c.

PHILADELPHIA, Sept. 23—Butter—Higher; western creamery, extra, 63½c; nearby prints, fancy, 71@74c.

Eggs—Higher; nearby firsts, 62@64c; do current receipts, 61c; western extra firsts, 62@64c; do firsts, 60@61c; fancy selected, packed, 73@74c.

Cheese—Higher; New York whole milk, fancy, flat, 29½@29¾c; do common to good, 25@29c; Longhorn and single Daisies, 29½@30c.

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

West Michigan's Great Sale of 114 Registered Holsteins 114

West Michigan State Fair Grounds

Grand Rapids, Mich. - October 18

A splendid lot of carefully selected cattle to choose from, where the buyer can select anything he wants from a choice heifer calf to an unusually good 32-lb. YOUNG HERD SIRE.

Among our offerings will be about a carload of very desirable yearlings and two-year-old heifers from the noted Traverse City State Hospital Herd. Most of these Traverse City heifers are safe in calf to an $8,000 Grandson of MAY ECHO SYLVIA.

H. A. Washburn will disperse his entire Government and State Accredited Herd of 25 head of cattle, including a 29-lb. cow and her 6-month-old bull calf.

Monroe & Lewis will also disperse their entire Government and State Accredited herd of 15 good females including two splendid daughters of a 28-lb. cow.

Clarence Bisbee will disperse his little herd of five females, including a 29-lb. daughter of a 34-lb. sire, and a 24-lb. daughter of a 30-lb. cow safe in calf to a 33-lb. bull.

We will also have a carload or two of good fresh milch cows of good type, and a carload of springers due to freshen in November and December.

We will offer a carload or more of good cows due to freshen during the winter or early spring; also about a carload of good yearling heifers, and a carload of choice heifer calves. These yearling heifers and heifer calves are good individuals; most of them are out of high record sires and a number of them are from good A. R. O. dams.

There will be two 29-lb. cows in the sale, a 25-lb. cow, a 24-lb. daughter of a 30-lb. cow and other good A. R. O. cows that space does not permit us to mention.

The 32-lb. bull calf is sired by a 30-lb. son of King of the Pontiacs and is one of the best young bulls ever offered in a Michigan sale ring. We also have a 31-lb. 2-year-old bull in the sale, two desirable 29-lb. bull calves, a splendid yearling bull out of a 26.88-lb. cow and a 31-lb. sire and several other good bull calves out of high-class sires and good A. R. O. dams.

Nearly all the cattle in the West Michigan Sale at Grand Rapids come from herds that are tuberculin tested regularly under the Government and State Accredited Herd plan, and a number of these herds are "Fully Accredited".

Sale Catalogs out October 1st.

W. R. HARPER, Sale Manager, Middleville, Michigan

R. Austin Backus, Pedigree Expert. Col. D. L. Perry, Auctioneer.

OTHER MICHIGAN SALES:
Oct. 16—Jno. B. Martin, Dispersion, Grand Rapids.
Oct. 19—Michigan State Sale, Jackson.
Oct. 20—Lansing—Oct. 21, Owosso—Oct. 22—Howell.

Lake County Holstein Breeders' Sale

Libertyville, Illinois October 18th, 1920

A Sale of 65 Registered Holsteins

Every one personally selected and every one up to a high standard for type. They are tuberculin tested and sold subject to a 60-90 day retest guarantee.

The sale includes some excellent cows with good A. R. O. records and some particularly promising heifers—heavy springers. They are, so far as type and breeding are concerned, good enough for any state sale and they give every promise of making good records if given a chance.

Write for catalog to

Illinois Holstein-Friesian Breeders Association

R. N. Thompson, Sec., 130 N. Wells St., Chicago, Ill.

Two Holstein Opportunities

October 23

J. B. Ruffner Dispersion, Lebanon, Ohio

As a result of injuries received in the army must go to the hospital for a serious operation. Therefore will sell whole herd, without reserve, for the high dollar. Lots of 33-lb. breeding.

October 25-26

Wellington District Guaranty Sale, Wellington, Ohio

Flint, Mays & Garver will disperse entire herd.
J. G. Beal " " " "
M. L. Fuller " " " "

Besides these three great herds, 35 other consignors offer one or two of their VERY BEST.

The Best Cattle From Ohio's Oldest Holstein Districts

Under management of

Ohio Holstein Association

Howard C. Barker, Field Sec'y, Tiffin, Ohio



HOARDS DAIRYMAN JUNIORS



A DEPARTMENT FOR THE DAIRY FARM BOY

For Pig Club Juniors

It may seem to many of you juniors that an article of this kind is a little out of place at this time of the year since so many of the fairs are over with. But since some of the big shows will come later on, even running well into the winter months, we think it is important for those juniors who are interested in hogs to know some of the points that are necessary to fit a hog for the show ring.

First of all, we will assume that pig club juniors are interested only in pure-bred pigs of good family breeding or in well bred grades. Now, if you have a pig which is of good breeding and shows good type, there are still many things which you will want to consider to make him show off to the best advantage before the eyes of the judge. Exhibitors who pay attention to these things are usually the ones who are awarded with at least a fair portion of the prizes offered.

A glossy coat of hair, we have learned, adds to the general appearance and neatness of calves and it makes their qualities stand out much more prominently. We usually refer to the hair of a pig as bristles. I think this is entirely out of place and we should expect that well bred hogs should have a good coat of hair and not the coarse bristles which the old razor back type of hog has. A pig well fitted for the show ring will show a glossy coat of hair. Some show it more than others but it is a pretty safe guess that a little attention given to this matter will produce good results. It is known that a small amount of linseed oil meal added to the ration during the month or six weeks previous to showing will make the hair more silky. The amount of linseed meal may not be large, either. You would be safe in using about one-half pound of linseed meal per day for each one hundred pounds of live weight. This should be sufficient and a little less might suffice. But this is only one thing to do and perhaps it is too late for you to do this before showing your pig. It will be well to give him a thorough washing and brushing with a coarse brush before taking him to the show. Do not be afraid to use plenty of soapy, warm water to remove stains of all kinds and this is especially true if you have a white breed. After they are thoroughly dried a little oil on a woolen cloth well rubbed into the hair gives it a more glossy appearance. If you neglect to do this, no matter how good type your pig shows, he still may look a little rough and coarse and the judge notices all of these things.

Another thing that needs attention are the hoofs. These should be closely watched and if you find that they have tended to grow too long or that they are ill proportioned they may be remedied by trimming away all of the objectionable parts. Any roughness which comes as a result of trimming may be smoothed down with a file and finished off nicely with a fine grade of sand paper or emery cloth. You may say that, why be so particular about the hoofs—that the judge does not see them anyway. If you have an opportunity to ask a good judge what he thinks about fitting a hog for the show ring, he will be sure to tell you that the hoof should be looked after carefully.

Then, the ears should receive some attention. Sometimes they are covered with a growth of coarse hair on the inside. The appearance of the head can be improved a great deal if these coarse hairs are removed. This may be done with clippers or shears and don't forget when you are washing Mr. Pig to give the inside of his ears a little attention, also. Remove all the dirt that you possibly can.

We should also take it for granted that no pig will be exhibited that is not free from lice, but experience has taught us that this is not always the case. There is no excuse for pigs having lice especially those which we intend to show. Crude oil is a very satisfactory remedy for killing lice and besides it has a beneficial effect on the coat of hair. It may be applied in many ways but we think that an ordinary coarse brush will rub it in about as well as anything.

Is your pig a trained pig? By this we mean, is he one that is easily driven and easily controlled without an undue amount of excitement resulting? The training which a pig should have for a show ring should have been going on all through the summer months. It is pretty late in the day now to give that feature much attention but judges do not like to judge pigs that are wild and unruly in the ring.



CHAMPION DUROC-JERSEY PIG IN BOYS' AND GIRLS' CLUB EXHIBIT AT OHIO STATE FAIR
OWNED BY HARROLD ELLIOTT, OHIO

The Pig in the Show Ring

Did you ever watch a good judge at work in the ring with all the animals in a class before him? If he is a well seasoned judge, he stands back ten or fifteen feet from the animals and looks them over in a general way for the points that go to make up their general appearance, breed type, and quality. This is a very important point with a good judge for it gives him a general impression of the class as a whole and at the same time if the class is large, a number of the animals will be eliminated in this first stage of judging because he is able to see that they cannot compete with the better ones which are always bound to be on hand. This leaves only the best pigs for him to judge and by moving them about so that the better ones are near each other, he will be able to eliminate others.

We sometimes wonder what the judge is thinking about and what he is looking for as he looks over each class. To many people, a pig is a pig and to them all pigs look alike. But to experienced juniors the matter is entirely different, because we all know that pigs from the same litter are very different many times in both size and conformation. The judge looks for a wide back and a loin which shows a good spring of rib and he looks for a wide chest girth between the front legs. He also notices the width and length of the head and looks for good width between the eyes. A long, strong, and well arched back that blends uniformly into a long, level, and deep rump is also expected in the good show type. Deep and wide shoulders and hams which are supported by straight, strong legs is also another feature which he will look for. When he thinks about the quality of the animal before him he will determine that by the size and strength of bone and joint, the fineness of the coat of hair, and the smoothness and firmness of the flesh. These are among the more important things which you can expect your pig to be judged for. It might be very interesting for you to take a little time off and make a special study of these very points on your own pig and when you go to the show and see all the others with which he has to compete, again, it would be well for you to make a careful comparison just as the judge is going to do. This will give you some first class information which may come in very handy at another time.

Then, there is another matter which concerns itself with showing hogs, and this is of no small importance, either. It is well for you to know at least the approximate time that your pig will be called to the judging ring. This will give you an opportunity to see that he has had plenty of fresh water and a light feed before entering the contest and will also give you sufficient time to give him a little extra brushing up. The feeding should not be overdone—just enough to make him look well filled out and keep his disposition good for the hour that he is under the eye of the judge. If it is necessary for you to handle your pig while in the show ring, there are also some points worthy of your consideration about this matter.

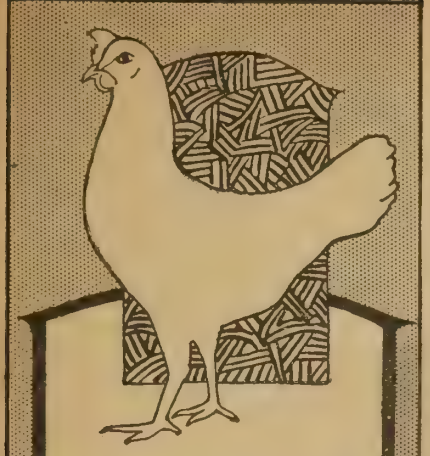
Never stand between the judge and your pig. Watch the judge closely and when you find him studying your pig, be sure to see that the pig is showing off to the very best advantage. For instance, a slight touch with a stick may make him show the arch of his back to much better advantage and it is well to allow him to move about the show ring a little because if the judge takes much time the pig is liable to become tired and when this happens, his back is liable to sag a little and his pasterns tend to grow weak.

Then, again, some pigs show a tendency to a sway back if they are not allowed to keep their noses close to the ground.

Sometimes an enthusiastic junior likes to engage himself in conversation with the judge while the judging is going on. This is not good politics, juniors, and never indulge in a conversation with a judge unless he invites it. If he asks you questions in the show ring about your pig, answer him briefly and politely. Remember that a good judge is under a mental strain all the time that he is judging because he is trying to do a very fair and impartial job and if he is inter-



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rupted by an exhibitor it only makes his task more difficult.

It is bad policy to protest a judge's decision when he once makes it, for it usually reacts with discredit to the one entering the protest and is otherwise disagreeable to everybody concerned. The best policy is to play the part of a good loser if you do not win a prize and spend what time you can in learning from the judge and others wherein your pig was excelled. This will put pep and enthusiasm in your determination to come back next year with a prize winning pig.

Tennessee Club Activities

Through July and August the club boys and girls in Tennessee have been attending camps and short courses and doing what work was necessary during midsummer. Now that the camps are over all club members are at home getting ready for county contests and fairs. All have had instructions selecting and preparing exhibits, in getting their live stock ready to show and in preparing their record books.

Over 100 Attended Blount Co. Short Course

The Blount County short course was held at Maryville College and was attended by more than 100 boys and girls from the various parts of the county. No county in the state has held a more interesting short course, for here the officials of Maryville College turned the entire institution over to the boys and girls. The camp fire, basket ball, volley ball, dodge ball, rope jumping, and singing club songs were the leading forms of amusement. The instructional work covered all phases of club activities, health, and character building.

Camp Charles A. Keffer

In Montgomery County the club boys used the scout camp. The boy scouts from Clarksville had been camped for two weeks and the club boys planned theirs just following. The scouts left their tents and other equipment so that all the club boys had to do was to step in and have a good time. They went swimming in Red River each day, played dodge ball, visited nearby club projects, and had moving picture shows at night. These boys had a touch of real camping and all enjoyed it.

A Junior Dairy Club Member

Clinton Moore of Cordova was one of the first boys in West Tennessee to enter the junior dairy club with a young pure-bred calf. Most boys begin with weaned calves, but since Clinton's father, Mr. A. L. Moore, operates a good dairy farm it offered him the opportunity to begin with a young calf and get the experience of raising it from the beginning

Clinton "made the team" in the live stock judging work when County Club Leader Hardy was selecting a team to represent Shelby County in the club boys' stock judging contest to be held at the Tri-State fair in Memphis. His grade was 81¼% and was next to the highest made in the county.

Clinton takes a keen interest in all the work on his father's farm and in return his father gives him every possible assistance. When a party of club boys recently visited Mr. Moore's farm to judge Jersey cattle, he said, "I didn't know I could miss that boy so much until he went away to the county short course for a few days, but I am glad he can go and be with the other club members."

Madison Club at Crawford Springs

The Madison County Club boys and girls held their second annual camp at Crawford Springs with 95 in attendance. It was a week of recreation and entertainment. Some instructions were also given but were made so attractive that the club members never considered it work.

Shelby County Holds Its First Camp for Club Boys

The Shelby County club boys held their first camp or short course at the West Tennessee Normal School August 9 to 13. The program consisted of judging live stock, instructive lectures, and recreation.

On Tuesday morning the 10th, Poland-China hogs on Davis' farm near Neshoba were judged. After a sumptuous picnic dinner served by the Neshoba people the boys spent the afternoon on Duntreath farm where they placed a ring of Duroc hogs and inspected the entire herd.

Wednesday was devoted more to the study of dairy cattle. A visit to A. L. Moore's farm at Cordova was a real treat to those who admire good dairy cattle as well as a good general farm. The entire forenoon was spent on this farm. A ring of Jersey cattle was placed and considerable time was spent studying approved types of Jerseys. After refreshments were served, the boys returned to the normal school for lunch.

The normal school owns a two-year-old Duroc boar that the club boys had admired since they first arrived. The entire club studied him during the afternoon with score cards. This was more detailed work than the placing of a ring of four animals as was done on the other farms.

On Thursday, the last day of the meeting, two rings of Holstein cattle were placed. These were from the herd on the normal school farm.

From the work in this camp the boys obtained some splendid experience in judging two breeds of cattle and two breeds of swine. Their score cards and place cards were sent to the University of Tennessee to be graded. From these competitors, a team of three boys was selected to represent Shelby County in the judging contest at the Tri-State fair.

Assistant County Agent Hardy contemplates giving this team further instructions in the study and placing of various breeds of live stock and there is no reason why the Shelby County club team should not be a strong competitor in the club boys' judging contest at the Tri-State fair.

G. L. HERRINGTON,
State Club Leader.

Junior Letters

Hoard's Dairyman Juniors:—I received the fob, button, and creed and am very pleased with them.

I feed my pigeons wheat or rye. I have a coop about 4 ft. by 4 ft. I let them fly all over. One pair is setting on eggs.

I live on a 130-acre farm. We have 15 cows and young stock, 4 horses, and 16 hogs. We also have about 80 Rhode Island Red chickens.

Good luck to all the juniors. I wish some of the juniors would write to me and I will answer every letter. My address is R. R. 1, Box 78, Denmark, Wis. Maynard Larsen.

Hoard's Dairyman Juniors:—I live on a 200-acre farm. I am 10 years old.

My creed, fob, and button came last week. I believe every word on my creed is true. I am in the sixth grade.

We have two Jersey calves and two Brown Swiss. We traded a bull for a heifer and a cow for a heifer. We have three horses. Their names are Betty, Molly, and Lena.

Point Arena is a little coast town in Mendocino County. We have about six stores here.

I have six sisters and one brother, a niece and a nephew.

I want some of you juniors to write to me. My address is Point Arena, Calif.

Irvin Ledford.

Hoard's Dairyman Juniors:—Hello. This is my first letter to the juniors.

We have 5 head of horses and 16 head of cattle. I have a fine Guernsey heifer. She is 15 months old and a pure-bred, too. She is half white and half red. We have 17 hogs of which one is mine. I live on a 159-acre farm in Main township, Columbia County. We have had the Gloria light system in for 4 years. We have to watch our cows of which I do mostly.

I wish some of the juniors would write to me My address is Catawissa, Pa.

Chas. A. John.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MILKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HODSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

For Sale—26 Holstein heifers 2 and 3 years old, to freshen this fall and winter, at $90.00 per head. Wm. H. GIBSON, Brodhead, Wis. 8-4

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

For Bargains in registered and high grade Holsteins try us. LOVELAND FARM, Holland, Ind. 9-3

Carload choice grade Holstein springers. All young. Type registered Holstein bulls, 8 months old, 30-lb. sire. Price, $100. JOHN ZENTNER, Kilbourn, Wisconsin. 10-2

Registered Holstein 31-lb. herd sire, young bulls and calves for sale. PHILIP LEHNER, Princeton, Wisconsin. 10-2

Having rented my farm will sell entire herd of 26 registered and high grade Holstein cows and heifers, result of years of careful selection and breeding. Most of them to freshen by February. All bred to grandson of K. K. S. V. 27.43-lb. herd bull. Bull also included if desired. Sold reasonable if taken at once. E. M. BICKFORD, Plain View Farm, Neponset, Illinois. 10*

See my calves before you pay for them. I offer extra choice high grade Holstein heifer calves at $25.00. Registered bull calves $40.00. C. O. D. Safe delivery and satisfaction guaranteed. J. M. McFARLAND, Watertown, Wisconsin. 10-2

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

For Sale—50 head of registered Holsteins, 25 cows aged 3 to 7 years, sired by a 26-lb. and bred to a 30-lb. bull. Start to freshen September. Also 25 heifers, 1 to 2 years old. ARTHUR N. BIRKHOLZ, New Buffalo, Michigan. 10-2

Registered yearling Holstein bull—Sir Johanna Fayne breeding. Priced right. LYONIAN HOLSTEIN FARMS, Lyons, Iowa. 10-2

Holstein Bulls—Ready for service, 37-lb. sire. IDEAL STOCK FARM, Dexter, Iowa. 10-4

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

For Sale—Registered Holstein bulls from tested dams. High class herd. Tuberculin tested. Full particulars on request. ARTHUR C. DAILY, Springfield, Mo. 10-3

For Sale—Seventy head of close up springer cows and three-year-old heifers, $125 to $145 per head. These are good, high grade Holsteins, nicely marked. BRAZELTON MURDOCK CO., Route 3, Morocco, Indiana.

2,000 pure-bred and grade Holsteins including entire herds, Federally tested. What do you want? Inquire at our offices. WISCONSIN LIVE STOCK ADVERTISING CO., Pioneer Bldg., Madison, Wis. 11-2

For Sale—Four pure-bred Holstein heifer calves from two to six weeks old, mostly white, from good producing dams. Sire's dam has over 1,000-lb. record. Price, $100.00 each if taken at once. Also two bull calves at $45.00 each. E. J. STERNS, Elkhorn, Wisconsin.

STOCK FOR SALE

Twenty good dairy cows all soon due. Twelve are old fashioned Durham, and eight are grade Holsteins, all big milkers. $2,500 takes the bunch tested and loaded. Good ages and sound. F. G. KNAPP, Hudson, Michigan.

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Serviceable sons of King Bess Burke Ormsby, a 42-lb. bull, out of tested and untested dams that are by a grandson of Homestead Junior De Kol. Price, $150 to $300. MILFORD MEADOWS STOCK FARM, Lake Mills, Wisconsin.

For Sale—Fifty head of high grade Holstein cows, well marked, three to seven years old. Will freshen in September and October. A. A. SANDERS, 218 Wooster St., Elyria, Ohio.

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—Eight high grade perfectly marked heifers. Yearlings coming two this fall, just being bred, also three last spring heifers. They are from high producing dams. Pathfinder and Sensation Duroc boars. Write for details. L. E. GRUNENWALD, Livingston, Wisconsin. 10-2

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

Guernsey bull calves. Grandsons world record cow. Advanced Registry dams. RICHARD F. KLEMM, Baraboo, Wis. 3-8

For Sale—A carload of high grade Guernsey cows made up from the pick of Polk County Guernsey herds. What you want in grades. Polk County Guernsey Breeders' Association, J. H. STEWART, Sec., Clear Lake, Wis. 8*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

For Sale—To avoid inbreeding I offer for sale a handsome Imp. show bull, sired by the prize winning Island bull, Emperor of Inesard. I have used him 3 years and have only one bull calf. His heifers are show animals with fine udders. Also a fine yearling granddaughter of Imp. Sailor Boy and a granddaughter of Gov. of the Chene. Young bulls of all ages. E. M. FITZMAURICE, Berlin, Wis. 11-2

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

For Sale—Registered Guernsey bull, three years old. Good breeding. Also bull calf, five months old. NELSON PECK, Doylestown, Wis. 11-2

One-year-old May Rose Guernsey bull for sale, Edwin of Linwood. Grandson of Imp. Clara's Sequel, who has 30 A. R. 500-lb. daughters. Edwin of Linwood's dam is a daughter of Langwater Frederick. She is finishing class F. F. with 565 lbs. fat 3rd place. Write quick if you want him. HOMER RUNDELL, Livingston, Wisconsin.

For Sale—Pure-bred Guernsey bull, one and two-thirds years old, with papers and pedigree. Well marked, guaranteed breeder, good individual. JOS A. TRAXEL, Route 4, Almond, Wis. 8-4

For Sale—Twenty head high grade, tuberculin tested Guernsey heifers and young cows, nearly all bred at this time to pure-bred Guernsey bulls. If interested address A. W. BROWN, Rhinelander, Wisconsin. 8-4

For Sale—Cows, bulls. Registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wisconsin. 10-5

Guernsey bulls for sale two months to eighteen months old. From A. R. cows. May Rose and Sequel breeding. Send for sale list. Also several big type Poland China boars, sired by The Comet and he by Liberator. Real boars at reasonable prices. DALE E. RUNDELL, Ore Hill Farm, Livingston, Wis. 10-4

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

For Sale—Some good quality registered Jersey cows, newly freshened. PARKER DOW, Whitewater, Wisconsin. 8-4

Grade Jersey cows for sale in carlots. Prices reasonable. TRIMBLE BROTHERS, Trimble, Ill. 8-4

Sophie Tormentor Jersey bull calves 6 to 8 months old, 75 per cent Hood Farm blood. ROY J. GUYER, Linneus, Missouri. 9-3

We have a few young registered Jersey cows and heifers for sale. Write for particulars. SHARON HILL FARM, Coraopolis, Pa. 10-5

Federally tested Brown Swiss bulls. A. W. WILLMANN, Hawkeye, Iowa. 9-4

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

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For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

Shropshire rams of best breeding, also few Oxfords. GEO. McKERROW, Pewaukee, Wisconsin. 9-3

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

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Hampshires. Registered stock, either sex, all ages. State fair winners. GLEN EYRIE FARM, Delavan, Wis. 7-5

For Sale—Eight-week-old pigs. Reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 8-8

Pure-bred, big type, Chester White boars. Excellent breeding. LLOYD NESBIT, Barron, Wis. 10-3

For Sale—Some Duroc spring boars. Sired by the world's greatest boars and out of the largest and best sows in the state. Several by Pathfinder that sure are killers. BRIAN L. RUNDELL, Livingston, Wis. 5-spl

Berkshire pigs of August farrow, strong in the blood of Rival Champion and Lord Premier Successor. Shipped when weaned at only $10.00 each. Also few spring boars. LOUIS FAWCETT, Stanley, Wis.

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50 Single Comb White Leghorn Cockerels for sale. $1.50 each. HUBERT A. NEIHOFF, Horicon, Wisconsin. 10-2

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

FERRETS

Ferrets—Good rat, rabbit hunters, etc. ARTHUR J. BRADY, Medford, Minn.

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Ill. 8-4

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 7-5

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

SEEDS

Wisconsin grown winter sand vetch. VAN LOON, La Crosse, Wis. 8*

Guaranteed Seeds—High germinating alfalfa, $12.00 bu.; red clover, $25.00; sweet clover, $15.00; timothy, $5.00; rye, $2.25; sugar, $17.50 cwt. Bonds accepted. MEIER SEED COMPANY, Russell, Kansas.

FEED BAGS

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

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Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

TOBACCO

Tobacco—Kentucky's Best Leaf, chewing or smoking, all tobacco, no dope. Direct from farmers. Trial offer, 2 lbs. $1.00 postpaid; 10 lbs. $4.50. KY. TOBACCO ASSN., Dept. L, Hawesville, Ky. 11-4

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

BEES

Italian Bees $12.00 colony. Queens $2.00 each. $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MACHINERY

For Sale—Single cylinder 10-20 International tractor; good condition and must sell. J. A. MARTINY, Baraboo, Wisconsin. 10-2

Sharples Milker—Two single units, pump, tanks, gauges, and piping. Complete for twenty cows. Good condition. Price, $200. ALFRED FISHER, North Loup, Neb. 11-2

For Sale—Sharples milking machine, four single units, pipe lines, vacuum tank and pump, complete for 60 cows. Have used only a short time. Also new set of tubes and rubbers for same. Price, $400.00. THE FLOREX GARDENS, INC., North Wales, Pennsylvania. 11-3

Empire Milker Unit, 70-lb. pail. Double unit. Price, $65.00. SUMMIT DAIRY, Stockton, Ill.

For Sale—3 single-unit Hinman Milker, with extra pail. ORRIE STEELE, Evansville, Wisconsin.

FARMS WANTED

Want large farms, highly improved, fully equipped. Receiving many inquiries for such—also for 80 to 160-acre farm. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

DAIRY FOR RENT

Dairy for rent on shares to party with cows; fifty-fifty basis; fine climate, good market. ANDERSON CREAMERY CO., Anderson, S. C. 11-2

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Corn Farms—Extra good bargains. A. W. BLANCHARD, Beloit, Wis. 24*

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying High for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

High Class Virginia Bluegrass stock, grain and dairy farms. Near Washington and best markets. Mild climate. Write for free booklet. CAVINESS REALTY CO., Leesburg, Virginia. 8-5

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

Must sell 70-acre farm adjoining city limits with all personal property, $16,000. Further particulars, write WM. ALBRECHT, JR., Wausau, Wisconsin. 9-4

Maryland: Beautiful country home and modern dairy farm, 120 acres, every known convenience, mansion house, 12 rooms, tenant house, five rooms, on main line two railroads. Everything new and recently painted white. Address OWNER, 1721 Tribune Building, New York City. 10*

If you are looking for good, black prairie, alfalfa, corn, clover, stock and dairy land, come to Aberdeen; most beautiful city and best farming section in the South, where Lincoln Harbold of Iowa, largest hog feeder in the world, has located; 3 railroads, creameries, good water and schools, hard roads, magnificent climate, hundreds of Northern farmers; improved and unimproved farms; easy terms. WISHART REALTY CO., Aberdeen, Mississippi. 10-2

For Sale—100 acres in Glen, Montgomery Co., N. Y. Four miles from R. R., 3 from church, fair buildings. Price, $4,000.00. D. E. VOORHEES, Plainville, N. Y. 10-2

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

Would you like fine farm near city markets, among western people; good soil, for cost of buildings? Write NEW YORK FARM AGENCY, Westfield, N. Y. 11-spl

We are offering three of our farms for sale. One farm of 680 acres, well improved on good gravel road. Good land, half in cultivation, balance fine blue grass. Will sell on reasonable terms at $90.00 per acre. Another farm, 620 acres finely improved, all in cultivation. No better in the country. Will take $145 on very reasonable terms. Another farm of 620 with $75,000 worth of improvements, 1 mile from station, four hundred acres in cultivation, balance as fine blue grass as can be found. Will take $160.00 on very reasonable terms. There is no encumbrance on any of these farms so we can arrange terms to suit you. BRAZELTON MURDOCK CO., Route 3, Morocco, Ind.

Dairy Farm—167 acres adjoining splendid town, rich, black land well improved, for sale at bargain price. Write for description and list. THE MANSFIELD LAND & LOAN CO., Ottawa, Kans. 11-2

For sale for $14,000, productive farm, 141 acres, good buildings, in Pennsylvania on line between Philadelphia and New York. Write for particulars. HENRY WYNKOOP, Yardley, Bucks Co., Pa. 11-2

For Sale—Improved 20 acres, Lake Co., Illinois. Or exchange equity into larger equipped farm. A. TURNER, Gurnee, Illinois.

For Sale—Fine 1,500-acre ranch near Denver, Colorado; also 100 head dairy stock. GEO. B. OWEN, Mt. Morrison, Colorado.

63-acre farm for quick sale. MRS. ED. JARMON, Waukesha, Wisconsin.

For Sale—Eighty acres one-half mile from city limits. Ten-room brick house, 38x48 basement barn, two silos and other buildings. Clay loam soil. 40 acres under plow, 24½ acres pasture. Woodlot. Farm, live stock, machinery and crop, $18,000.00. Now is the time to look this over. Write or see. D. POWERS & SON, Fremont, Michigan.

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard. $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

310 acres, $4,500, with 34 cattle, horses, sheep and hogs, all farm machinery and tools, fodder, etc.; last year's income, $4,775; dark loam fields, 50-cow spring-watered pasture, 300,000 ft. timber, 3,000 cords wood, good market nearby, large fruit orchard, 1,300 sugar maples, complete equipment; 14-room house, 100-ft. basement barn, 125-ton silo, spring water; many other buildings; all conveniences near; settling estate forces quick sale at low price, $4,500 for all, part cash, balance easy terms. Details page 26 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

South Dakota has 1,000 farms ready now, on which it will loan up to $10,000.00 to new settlers. This is your opportunity to own a farm. South Dakota produces more agricultural wealth per capita than any other state. Write today for information. IMMIGRATION DEPARTMENT, Capitol F-15, Pierre, South Dakota.

200-acre farm near Ypsilanti, Mich., for rent or on shares to responsible party. Good stream running through farm and the best of land. Address ROOM 204, 90 Griswold St., Detroit, Mich. 11-2

Oklahoma farms. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Oklahoma.

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 1*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 11-4



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—Married herdsman for semi work. State records you have made in first letter. W. B. BARNEY & SONS, Chapin, Iowa. 8-4

Single herdsman wanted to take charge of small pure-bred Holstein herd near Chicago where Advance Registry Official work is done. Good opportunity with excellent living connections for energetic, ambitious man. Address ROOM 1005, 112 West Adams St., Chicago, Illinois. 9*

Herdsman wanted—To take charge of about 80 head Holstein cattle (about 20 registered) and help on a general plan to have all registered stock. Fair wages and a good per cent of the farm profits. THOMAS A. SOPER, 2516 Wabash Ave., Chicago, Ill. 9-3

Wanted—Man to operate my 200-acre farm situated near Oshkosh, Wis., on interurban road. Must thoroughly understand soils, rotation of crops and the care of a first-class dairy herd. A splendid opportunity for the right man as there is great activity in this county with pure-bred stock and pedigreed seeds. Address BOX 363, care Hoard's Dairyman. 9-3

Wanted—October 1st, young married man for dairy and farm work and interested in Holsteins. 135 acres, up-to-date equipment, good house, village adjoining farm. Good wages and opportunities. WAYSIDE STOCK FARM, Fond du Lac, Wisconsin. 10-2

Herdsman single or married, experienced in handling pure-bred cattle on test for Advanced Registry. Capable and experienced in producing special grades of milk including certified milk. Must be energetic and able to look after all details observed where good animals are kept and good milk produced. Steady employment and opportunity for advancement. State age, experience and references, as well as compensation expected, noting whether single or married. CRESTMONT FARM, 31 N. Fourth St., Sunbury, Pennsylvania. 10*

Wanted—Single man to work on dairy farm. Work all year and good wages. References required. Young German or Swiss preferrred. P. A. KUMMROW, Ceylon, Minnesota. 10-2

Wanted—Reliable, single man, general farm work and milking. Pure-bred stock, steady employment. Good home, near town. W. J. MARTIN, Darlington, Wisconsin. 10-2

Wanted—Man to do general work on Holstein farm. Good wages. W. J. PESTER, Whitewater, Wis. 10-2

Middle-aged couple for small retail dairy farm. No children unless capable boy about fifteen. Woman do housework. Live with employers. Married or single men. Write PEARSON DAIRY FARM, Owosso, Michigan. 10-2

Wanted at once—Herdsman to care for Guernsey cattle on A. R. test. SUGAR RIVER STOCK FARM, Allic S. Knudson, Prop., Route 5, Brodhead, Wisconsin. 10-3

Wanted—Man and wife on dairy farm. $100 per month, house, garden and milk. ALONZO DRAKE, Bedford, Ohio. 10-2

Wanted at once—An experienced dairyman and farmer to fit for herdsman. Holsteins. State wages. BELVOIR FARMS, Lake Geneva, Wisconsin. 10-2

Wanted—Married man for farm work. House furnished, family to board extra help. Steady position to right man. Must be experienced in handling cattle and hogs and willing to work. W. S. HILL, Mitchell, S. Dakota. 10-2

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Guernseys. Work to begin at once. Write inclosing salary desired and credentials to NORTHLAND COLLEGE, Ashland, Wis. 10*

Farm Superintendent. Agricultural college graduate preferred. To take charge of farm in Butler County about fifty miles from Pittsburgh. Must be familiar with general farm work but especially qualified to take care of orchard, cattle, poultry, and garden. State experience, references, age, size of family and salary expected, and also date services will be available. CARROLL MILLER, Union Bank Building, Pittsburgh, Pennsylvania. 10-2

Wanted—Milker. GEO. B. OWEN, Mt. Morrison, Colorado.

Wanted—Energetic married couple for 160-acre, modern equipped stock and dairy farm near Detroit. State experience, references, number in family, ages, and salary expected. Wife may have to board two or three men. Address G. W. SLAUGHTER, Birmingham, Michigan. 11-2

Wanted at once—Married man for herdsman. Good wages and living conditions. Pure-bred Holsteins. Write stating wages and reference. A. J. DAUGHERTY, Streator, Ill. 11-2

Wanted at once—Competent married man as test cow milker and assistant to experienced herdsman in pure-bred Holstein herd on yearly test. Modern conveniences, electric lights, etc. Must furnish references. State wages expected. Steady work for dependable man. H. O. NIEMANN, Avoca, Iowa.

Wanted at once—One clean, honest worker and experienced farm hand on 400-acre Holstein dairy farm. City 5,000. Board, room and washing furnished. State wages and references first letter. STEVENS STOCK FARM, Sycamore, Ill.

HELP WANTED

Wanted—Single man on a private place for creamery work and assist milking pure-bred Guernseys. Creamery experience desirable, but not essential, but he must be a very good milker, very neat about his work, willing to learn and of high character. State full particulars, how soon can come with copies of references and wages expected with board and room. JOHN J. COSTOFF, Beechwood Farms, Sharpsburg, Pennsylvania.

Wanted—A good man for milk delivery wagon. Address BENHAM & SONS, Lock Box 80, Montevideo, Minnesota.

Wanted—Man for general farm and dairy work. Permanent place. No booze or cigarettes. Give age, experience, nationality, wages asked. H. E. PRESTON, Elgin, Minnesota.

Wanted—Single man as feeder and milker in dairy. G. M. STADELMAN FARMS, Hartville, Ohio. 11-2

Wanted—A herdsman. Guernsey herd. One from Wisconsin or nearby state preferred, but no one barred. State experience, references and salary desired in first letter. GEORGE C. COOPER, Superior, Wisconsin.

Herdsman to raise Guernsey calves. Southern Pennsylvania. Address BOX 388, care Hoard's Dairyman. 11-2

Herdsman wanted—Married man with small family for a pure-bred Guernsey herd, where A. R. work will be soon done. Must be experienced, of good character, willing and obliging worker and have references. State all particulars, how soon can come and wages expected to WILLIAM FLINN, 1942 Forbes St., Pittsburg, Pa.

Wanted at once—Single herdsman to take charge of herd of 20 cows and 15 young cattle, Jerseys and Holsteins. State wages and experience. RAY McCAULEY, Hicksville, Ohio. 11-2

Wanted—First class herdsman for pure-bred Holsteins. Single. Thoroughly experienced and willing worker. State experience and wages first letter. Cigarette smokers need not apply. DR. J. VAN HOUTEN, Valley City, No. Dakota.

Wanted at once—A good, reliable single herdsman, one who is steady and understands feeding and taking care of cows to get the large flow of milk. Must be a good dry hand milker. I have a milking machine. Everything handy in barn and best of feed furnished. Steady job to right party. Middle aged man preferred and a man with practical experience. State wages in first letter. C. H. HICKS, Marshalltown, Iowa.

Wanted—Reliable young woman for private home in the country as assistant to the cook, excellent opportunity, good wages, references required as to character. GREEN MOUNTAIN FARMS, care Perkins Corporation, Mishawaka, Indiana.

Single man at once by month or year for general farm work. Must be good teamster. State wages expected. No quitter need apply. WALTER SCHMIDT, Eyota, Minnesota.

Wanted—Boy 16 to 18 years old on small dairy farm. State age and wages expected in first letter. FARNERHOLM DAIRY FARM, Colfax, Wis. 10-3

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Two young men, Hollanders, single, want positions on dairy farm to work in cow barn or field. Good milkers. State wages in first letter. Address BOX 360, care Hoard's Dairyman. 8-5

County agent for three years wants position as farm manager after November 1. Agricultural training and experience. Single, 26 years old. Prefer Virginia. BOX 243, Campbellsville, Ky. 10-2

Position wanted—Swiss, single, in dairy, milking, feeding cows. Have had eight years experience, good milker. Go anywhere. State wages in first letter. ADOLPH KOBEL, Allen Dale Farm, Shelbyville, Ky.

Wanted—By married man, position as working manager or foreman of dairy farm after November 1b. Would consider good position as herdsman. Write BOX 236, University Stock Farm, Laramie, Wyoming.

A middle aged lady wants a position as housekeeper, references given. MISS E. E. THOMPSON, Slaughter, Louisiana.

Position wanted—As manager of a large dairy and stock farm by young veterinary surgeon with agricultural college training and nearly four years experience as herdsman and assistant herdsman on large farms. Experienced in A. R. work and very successful stock raiser. Excellent references. Address BOX 389, care Hoard's Dairyman.

Farm manager wants position. 30 years old, married, 8 years in present position as manager of large farm, graduate agricultural college. Experienced in general farming. A. R. O. work, stock raising, fruit growing, soil improvement, drainage, handling of men, farm accounting. Excellent references. No small proposition considered. Address BOX 376, care Hoard's Dairyman.

Position wanted as veterinarian to one or more large stock or dairy farms or breeders' association. Two years experience in general practice, one year experience in exclusive cattle practice. Good references. Illinois or Wisconsin preferred. DR. JAS. D. YOUNG, Genesee Depot, Wis.

New York Butter Market

NEW YORK CITY, SEPTEMBER 21:—The recent overturn of the condensed milk market is leading dealers in butter to wonder regarding the effect on the butter market of the conversion of milk, which has heretofore been used by condenseries, into other dairy products. The report is quite general that condenseries throughout the country will accept no more milk for a period of several months. The reason for that, rather indirectly, is the decrease in the cost of sugar. Several of the large corporations, which own strings of condensed milk manufacturing plants, have vast quantities of the finished product stored away. It is reported that one of the largest of such corporations has fully 75 million dollars tied up in finished condensed milk. As the greater part of that was manufactured when sugar was at the top price, it follows that a large loss will be entailed if the company continues to manufacture condensed milk with cheaper sugar. The companies naturally feel that the prices of condensed milk which now obtain must continue in order that they protect themselves on the high priced stocks which they have on hand. For that reason additional stocks of condensed milk will not be manufactured until the present supply is exhausted.

It is not unreasonable to suppose that much of the milk that is at present going to supply condenseries will be converted into cheese as that is the most available market for whole milk when farmers are not prepared to utilize skimmilk at home. However, it is very probable that much of the cream will be manufactured into butter. There is, of course, no method by which one can determine how much butter will be made from that source of supply, hence dealers are in somewhat of a quandary in their efforts to determine whether or not the present state of the condensed milk industry will have a decided influence on the butter market. It is self-evident that farmers who have patronized condenseries during their times of prosperity are now confronted by a real problem.

The butter market is in a rather unsettled condition at the present time. There is an unlimited demand for butter of high quality, while the demand for undergrade butter is at the minimum. Dealers at present are beset with two worries, one being the result of an inadequate supply of high quality butter and the other resulting from the gradual accumulation of large quantities of poor butter. It seems that the consumer must eventually become less critical of his butter and be content to use a fair grade of butter instead of only that of top quality. It is true that a very small percentage of the butter being received will score 92 points or above. That is a condition that is always found at this season of the year. While, with the approach of cooler weather, the quality of butter will improve, that will not remedy the condition of over-supply of undergrade butter that prevails at the present time.

Last week Monday and Tuesday were holidays for the Jewish trade, it being the Jewish New Year. With that class of trade off the market for two days, the price declined ½c. However, on Wednesday with the return of Hebrew buyers the market began to strengthen and since that time there has been an upward tendency to prices of high quality butter. That tendency, because of no demand, has not obtained with butter that scores below 91. The result is that the margin of prices of undergrades and fancy butter has constantly widened. While the consumer may be forced to buy butter of mediocre quality it is doubtful if the margin becomes any narrower during the weeks to come. Since last week Wednesday, the quotation on high quality butter has advanced 2c, and the price will undoubtedly go higher. Established quotations today are: Extras (92 score), 61c; higher scoring than extras (93 score or higher), 61½@62c; firsts (90—91 score), 55½@60c; firsts (88—89 score), 51½@54c; and seconds (83—87 score), 48@51c. W. B. LIVERANCE.

Saves Good Bulls from Slaughter

That bull associations are important in the development of a community is indicated by results at the Grove City, Pa., dairy community, where there are two associations—one a Holstein and the other a Jersey. The results of the work here are shown in the exhibit of the United States Department of Agriculture at the National Dairy Show. The reduced cost of providing good pure-bred bulls is an advantage of the association that first appeals to the dairyman; but the outstanding advantage is that bulls owned by the association are kept until their daughters are tested. Bulls of great value, owned individually, have frequently been slaughtered before their value was known. Through the bull associations, however, bulls worth thousands of dollars have been saved for use as long as they live.

Jersey Cattle Notes

For week ending Sept. 17:

Number of animals registered: Bulls, 276; cows, 689; total, 965. Number of transfers recorded: Bulls, 207; cows, 473; total, 680.

When the get-rich-quick plan comes in the mail, remember two things; either put your money where you can watch it, or trust it to Uncle Sam, who doesn't need watching.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

"Kant-Suk" Calf Weaner



LIGHT—strong—humane! Cannot possibly injure cow or calf. Being made with a hinge-joint, it swings out of the way when calf eats or drinks, but absolutely prevents sucking. Extremely easy to put in place. Endorsed by dairymen everywhere. At dealers. Sent Prepaid: Calf size 45c; Cow size 60c



Wagner Specialty Co.,
Dept. F. Burlington, Wis.

Dispersal Sale Guernsey Herd

I desire to close out my entire herd consisting of ten fine registered Guernseys and twenty-five full blood grades, at once. Also dispose of Dairy farm one-half mile from Quincy, Illinois. This herd contains two advanced Registry cows purchased of W. D. Hoard. The herd bull sired by Bob Rilma's Monogram, owned by Ralph Tratt, Whitewater, Wisconsin, some fine females purchased from other noted herds. The grades were all selected by expert Dairymen and are high class. The entire herd or any part thereof are for sale.

W. Emery Lancaster, Quincy, Illinois

$200

Buys This Ten Months Old Bull

If you like deep middles, straight rumps, square udders with well placed, easy milking teats, in your herd—*BREED FOR THOSE POINTS.* Be sure it is in the dams back of your herd sire. It's all there in this bull; we've bred three generations of his dams, and his dam is a 19-lb. cow. This calf is good all over and nicely marked. Send for his pedigree and photo and see.

Just the bull for a good grade herd.

A. J. Lashbrook, Northfield, Minn.

(*Federal Accredited Herd*)

Bred in the Purple $200

Holstein bulls up to 9 months old.

Sire—Joh Segis—whose 15 nearest dams average over 30 lbs., and whose own dam made over 700 lbs. milk in 7 days.

Dams—A. R. O. cows up to 24.74 lbs. mostly all 2nd and 3rd dams A. R. O. cows.

One of these royally bred youngsters can belong to you for only $200.

Federally Accredited herd.

Henry J. Karpinski, Route 7, Oswego, N. Y.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,957 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

When Cows Freshen

They may ABORT; may RETAIN the AFTER-BIRTH; May FAIL TO BREED

Hood Farm Antiseptic Breeding Powder is the best remedy for these troubles.

The best cows frequently have **Milk Fever.** Hood Farm Milk Fever Outfit never fails to cure milk fever.

All cows are subject to **Garget.** Hood Farm Garget Remedy will save the udder and the cow.

Calves may have **Infectious Diarrhoea** or White Scours soon after birth. **Jermkil** kills the germ before the germ kills the calf.

Calves often have **Scours** caused by indigestion. Hood Farm Calf Scour Remedy, and Digestive Powder will save the calves.

It is Safe and Wise

To have the above named Remedies on hand. Order today before your cows begin to freshen.

C. I. HOOD CO., Lowell, Mass.



ABSORBINE
TRADE MARK REG. U.S. PAT. OFF

Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, or Muscles. Stops the **lameness** and **pain** from a **Splint, Side Bone or Bone Spavin.** No blister, no hair gone and horse can be used. $2.50 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse **Book 2 R Free.**

ABSORBINE, JR., the antiseptic liniment for mankind, reduces **Strained, Torn Ligaments, Swollen Glands, Veins or Muscles; Heals Cuts, Sores, Ulcers. Allays pain.** Price $1.25 a bottle at dealers or delivered. Book "Evidence" free.
W. F. YOUNG, Inc., 254 Temple Street, Springfield, Mass.

A GUARANTEED REMEDY FOR CONTAGIOUS ABORTION



Save calf, cow and herd by the use of *Aborno.* Easily administered by hypodermic syringe. Kills abortion germs quickly without injuring cow. Write today for free booklet with letters from users and full details of our moneyback guarantee.

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis.



America's Pioneer Dog Medicines

BOOK ON
DOG DISEASES And How to Feed
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She has been dehorned with a KEYSTONE DEHORNER, making her gentler, safer and more profitable. This also applies to steers. We make Keystone Dehorners, Bull Staffs, and other appliances for dairymen and cattlemen—all sold on a money back guarantee. Write for circular.

JAS. SCULLY, Box 109, Pomeroy, Pa.

Fistula 10,000 horses successfully treated last year with **Poll Evil**
Fleming's Fistoform $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Fistula and 200 other Horse and Cattle Diseases.
FLEMING BROTHERS, 255 Union Stock Yards, Chicago

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Milking Tube

Long time ago I had a hollow needle to run up into a cow's teat when it was cut and could not milk without much discomfort to the cow. Please write me where I can buy one and what one will cost.

Hot Springs, Ark. J. H. R.

A milking tube often may be had from a local graduate veterinarian or may be ordered through the druggist, or bought direct from a mail order house or veterinary supply house.

Sores on Udder

I have a little trouble with my cows. They have a scab on their udder, looks like a wire cut when it is healing up. It is on hind quarter of udder and inside of her leg. Do you think this would help to dry them up?

Denmark, S. D. H. P. R.

Such sores often are caused by rubbing of the distended udder against the hind leg when the cow walks or runs. Milk affected cows three times a day. Cleanse sores perfectly and paint once with tincture of iodine. Afterward apply benzonated oxide of zinc ointment twice daily. If that does not suffice apply iodine ointment once or twice daily, as found necessary.

"Forcing Co-operation"—How About It?

HOARD'S DAIRYMAN:—I was greatly interested in an editorial on "Forcing Co-operation" in Hoard's Dairyman Aug. 27, 1920. I'm afraid I don't fully agree with the idea expressed in the following sentence: "We do not believe in laws which force the individual to do certain things even though the doing of them would be to his advantage."

Let's see about that. How about forcing a thief or a burglar to be good and quit their thieving or burglarizing? Why wouldn't it be all right to force a dairyman to patronize a pure-bred bull for breeding his cows, by keeping such a bull himself or making it illegal to keep a scrub bull? There are always some bull-headed people (and they are sometimes found among farmers, unfortunately) who naturally and unreasonably want to "buck" certain progressive movements, and I, for one, would favor forcing them either to support them or move on, by preventing them from doing their own (to them) sweet (or sour) way.

Wouldn't you force a neighbor to co-operate by keeping his thistles and other noxious weeds cut before they bloom and "go to seed" and spread all over your farm and the surrounding country? I would. Wouldn't you compel him to co-operate by sending his children to school, and not have them grow up ignoramuses? Of course you would.

Even with all the suggested "forced co-operation" there would still be plenty of room for untrammeled and misdirected individual effort, such as the conduct of the farm, the growing of farm products, improving the home, etc. In those things there would be freedom enough to do a lot of useless and unprofitable work by the individual.

But why not compel people to do what is right, at least where there is no question, or "no two ways about it"? Wouldn't you compel people to act on the belief that 2 times 2, either when added or multiplied, gives a result of 4? I would.

A good many people are only big, overgrown children, and what the majority of really educated, sane folks agree upon, it would seem the minority might safely be forced to submit to. Oh, yes, I know the majority of us were forced to submit to liquor saloon domination for a long time, and it was mighty unpleasant, but we are talking about forcing right things upon only a few people, for surely only a small minority would be found to stand against anything that makes for real progress and success!

I believe I am in favor of forcing upon some folks the things that everybody knows are good for them, for doubtless very soon those few benighted folks would see that they were mistaken, and would turn around and thank the very people that compelled them to see things straight. Why, there are a lot of saloon-keepers that are rejoicing now in having been forced to become respectable citizens instead of robbers or unconvicted criminals. They would be the last to vote the return of saloons. No doubt they would now join the dairymen in compelling people everywhere to use milk as a beverage, and especially to see that all the growing children get all the milk they should have. There are a good many ignorant parents who ought to be forced to supply their children with the milk they need to insure their proper physical development, instead of feeding them on tea and coffee and other less nourishing foods and drinks.

But this is a big subject, and I confess that I don't know enough to treat it in an adequately scientific and comprehensive manner. But I believe there is a safe and sane position that one could take, and also an extent or limit to which one could go, in forcing certain unquestionably wholesome things upon the misguided and misinformed citizens, that would result in not only great benefits to them but to everybody else. Then why not try to discover those generally beneficial objects, and also if there is not some satisfactory way in which they can be attained, even if a little moral as well as legal force has to be applied?

I would not want to injure any one in any way, but if a thing is unquestionably right and beneficial to all concerned, then I believe I would help establish it even if it rubbed on some one's corns—corns that they should get rid of instead of continuing to cultivate and keep them growing.

Washington. GEORGE W. YORK.

Paint is costly, and so is labor; but paint prevents decay, and is a form of insurance against more expensive repairs.

Sale Announcements

Oct. 4—Holsteins. D. W. Field Farm Co., Montello, Mass.
Oct. 4—Holsteins. Summit Co. Holstein Breeders' Ass'n. Sale at Akron, Ohio. Wm. F. Cook, Hudson, O., Mgr.
October 5—Guernseys. Blue Earth County Breeders. Mankato, Minn. Dr. M. B. Wood, Mankato, Minnesota, Sale Manager.
Oct. 5—Holsteins. Wright County Holstein Breeders' Sale at Houard Lake, Minn.
Oct. 5—Holsteins. Hall Bros., South Denver Station, Denver, Colo.
October 6—Guernseys. Guernsey Breeders' Association of Northern Minnesota and Northern Wisconsin, Tristate Fair Grounds, Superior, Wisconsin. E. P. Gibson, Sale Manager, Duluth, Minnesota.
Oct. 6—Holsteins. Dispersion of H. G. Cox herd of Registered and Grade Holsteins at St. Charles, Minn.
Oct. 6-7—Hornless Holstein Farms. Geo. E. Stevenson & Sons Sale at Clark's Summit, Pa.
Oct. 7—Holsteins. Consignment Sale in sales pavilion, Marshfield, Wis. J. P. Heintz, Sale Mgr.
Oct. 7—Holsteins. Columbia County Fair Sale, Portage, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 12-13—Holsteins. The Pure-bred Live Stock Sales Co. Sale at Brattleboro, Vt.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 14—Holsteins. Warren County Holstein-Friesian Association's third consignment sale at Belvidere, New Jersey. Arthur S. Parr, Sec'y.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 18—Holsteins. Lake County Holstein Breeders' Sale at Libertyville, Ill. R. N. Thompson, People's Life Bldg., Chicago, Mgr.
Oct. 18—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 16—Holstein Dispersal. John B. Martin, Grand Rapids, Mich.
Oct. 19—Holsteins. Jackson, Mich. Second Michigan State Holstein Sale.
Oct. 19—Holsteins. West Concord Security Sale at West Concord, Minn.
Oct. 20—Holsteins. East Lansing, Mich. Central Michigan Holstein Breeders.
Oct. 21—Holsteins. Carver County Breeders' Sale at Waconia, Minn.
Oct. 21—Holsteins. Owosso, Mich. Shiawassee County Holstein Breeders.
Oct. 22—Holsteins. Ashtabula Co., Ohio, will hold sale at County Fair Grounds, Jefferson, O.
October 22—Holsteins. Central Pennsylvania Holstein-Friesian breeders' second annual sale at Hughesville, Pa.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 26—Guernseys. Jones & McKerrow Quality Sale at Waukesha, Wis.
Oct. 27—Guernseys. E. J. Himmelberger's complete dispersal sale of registered Guernseys at Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Mgr.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
October 28—Guernseys. F. G. Eberhardt complete dispersal sale of registered and grade Guernseys at Mishawaka, Ind. F. E. Fox, Sales Mgr., Waukesha, Wis.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 30—Holsteins. Daniel S. Johnson's Holstein Sale at Rockdale, N. Y.
Nov. 3—Holsteins. Waukesha County Holstein Sale at West Bend, Wis.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.



Protect Her Health

DON'T risk losing a valuable animal. A Pilling "Easy-to-Use" Cattle Case will equip you to relieve promptly milk fever, bloat and other cattle troubles. One animal saved will repay you many times. Prepare *now* for emergencies.

Pilling "Easy-to-Use" Cattle Case

Case No. 2 contains a complete milk fever outfit, syringes, cattle trocar for bloat, several special instruments for treating teat troubles and other helps for the stockman. Purchased separately, these would cost $18. Price, complete with case and "Easy-to-Use" directions, $12.50, delivered by parcel post. Order today. Send for booklet on Cattle Instruments—describes Milk Fever Air Treatment.

G. P. PILLING & SON CO.
Instrument Makers for More Than a Century
2300A Arch Street Philadelphia, Pa.

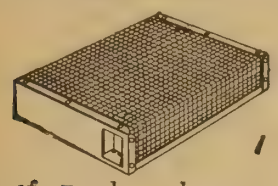


Cattle Case No. 2

Inventions and Appliances of Interest to Agriculture

Chick Feeder

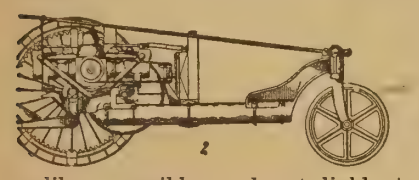
The object of this feeder is to permit little chicks to feed without interference from larger chicks, for this purpose the door is made so small that it admits only the small chicks. The ends and bottom are made of sheet metal, and the top and sides of wire mesh. The ends and bottom could be



made of wood, and more doors would give freer access. (Cyclone Mfg. Co., Urbana, Ill., U. S. Patent, 1,334,182).

Tractor

The reach and traverse strut of this tractor are tubular and the machine therefore, has, it is claimed, a maximum of strength with a minimum of weight; and its frame is compact,

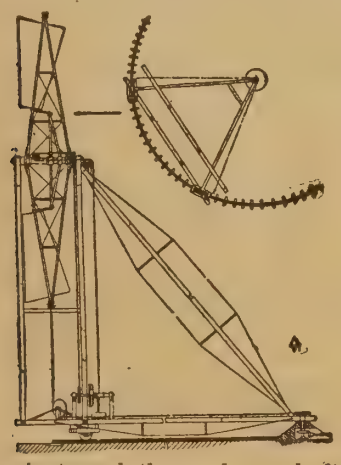


readily accessible, and not liable to breakage.

(La Crosse Tractor Co., La Crosse, Wisconsin. U. S. Patent 1,318,785.)

Power Windmill

This self-regulating windmill is designed particularly for irrigation, drainage, and grinding. It is mounted on a central pivot, and a circular track, and it so moves that it is always on the lee side of the pivot. Its power is carried by a rope belt from the rim of the wheel to a pulley at



the pivot, and thence by a shaft to the pump or grinder.

(Union Land and Power Co., North Yakima, Wash. U. S. Patent, 1,329,-299).

Canada. C. J. LYNDE.

BROWN SWISS

Brown Swiss Cattle

Stock For Sale

Correspondence Solicited

HULL BROS., Painesville, Ohio

JUBILEE FARM

Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.

RA INMAN, Secretary Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

JERSEYS

$250.00
Buys Jersey Bull Calf
Dropped May 30, 1920

$300.00
Buys Jersey Bull Calf
Dropped Jan. 24, 1920

These bulls are rich in the high producing Sophie Tormentor blood, Register of Merit ancestry on both sides. For extended pedigree and description, write

HOOD FARM, INC.
Lowell, Mass.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Cedar Crest Farms

Offer Jersey Bull

Noble's Fontaine Chief 185637, dropped August 12th, 1919. Sired by Fairy Boy's Gamboge Lad 141747. Grandsire Imported Hauteville Fairy Boy 90952 (20 daughters in Register of Merit). Out of Nobles Matchless Pride 271104, entered Register of Merit at five years four months. Producing 8,160 lbs. of milk, 561.05 lbs. 85% butter.

First $250.00 takes him.

J. K. Dering, Lake Villa, Ill.

Fewacres Farms

Offer a fine young Jersey bull of Majesty breeding. Born January 8, 1920. Will soon be ready for service. Tested dam and grandam. Write at once for price and particulars. The pedigrees are ready.

FEWACRES FARMS
90 W. North Ave., Wauwatosa, Wis.

$500—$500

Delivered at Your Station

We offer two very choice registered Jersey heifers, two and one-half years old, lately fresh. We will pay express to any station.

H. E. ANDERSON, Whitewater, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

JERSEYS

How Much Milk Should a Cow Give?

IT depends on the size of the cow. An overgrown cow that eats her head off sometimes can't give enough milk to pay her feed and labor bills. The reason is that however much of her feed goes to the milkpail, more of it goes to build up useless hulk. She skims her milk for her body—and that's expensive for you.

Jerseys, on the other hand, are always profitable. They are more udder—less cow. They concentrate on butterfat—the profit part of the milk—not alone on mere bulk. A pailful of Jersey milk contains almost twice as much butterfat (5.37%) as that of other breeds, and people are glad to pay more for it.

Write to the Jersey Information Bureau for the facts on how to make dairy dollars. Get the books that tell how others have succeeded with Jerseys and how you may succeed.



"The Profit Breed"

The American Jersey Cattle Club

324-E West 23rd St., New York

An Institution for the Benefit of Every Jersey Owner

NEW JERSEY ESTATE

For Sale By Public Auction

TUESDAY, OCTOBER 12, 1920

at 10 o'clock A. M. (Eastern Standard Time)

This Estate, located at Lawrenceville, near Trenton, New Jersey, on the Lincoln Highway 56 miles from New York and 34 miles from Philadelphia, comprises three farms totaling 435 acres of the most fertile land east of the Alleghanies.

Also the entire personal estate, consisting of Horses, Mules, Cattle, Swine, Machinery, Tools, Wagons, Grains, etc. etc.

For descriptive circular giving full details, also terms and conditions of sale, address

Leander F. Herrick, Sale Manager, 405 Main St., Worcester, Mass.

Registered Bulls — $100 and Up

West View Farm offers registered Jersey bull calf, born April 15th, 1920, solid color and a good one. Dam now on test and making a good record. Double grandam made 609 lbs. butter in one year. Price $100.00 f. o. b. here. Also other bulls one to nineteen months old. Good ones priced right.

Registered Berkshire pigs eight to ten weeks old, $15.00 either sex. Also yearling sows. For size, type, and prolificacy you can't do better.

W. C. BROOKOVER, Route No. 1, Chandlersville, Ohio.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors

ULSTERDORP FARMS Highland, N. Y.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion. Address: J. Q. Emery & Son, Edgerton, Wis.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY. BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right – put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd



A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals.

Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.
JOHN R. VALENTINE, Prop. PHILIP C. PALMER, V. S. Mgr.



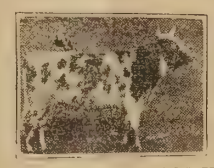
LIPPITT FARM

OWNERS OF

Cavalier's Kilnford Ringmaster

Sons for Sale from the Best Type Cows We Could Purchase.

R. R. STATION, HARRIS. P. O. HOPE, R. I.



Milking Cows

Fresh and Bred Heifers and Sons of Ringmaster's B. B. Diplomat For Sale

DUNCRAGGAN, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed.

L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.



Willowmoor Miss Carston

Build Your Herd on a Gossard Foundation

We specialize in furnishing complete foundation herds of Ayrshires and Berkshires skillfully selected and mated by experts. The Gossard herds are built on superior, practical milk and pork producing qualities bred into the stock for generations. Isn't that the kind you want? Write us for details.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES



NANCY'S MINT MASTER

Idlewood Farm offers at private sale these Ayrshires

The great bull, NANCY'S MINT MASTER No. 20151, junior and grand champion at National Dairy Show in 1918, and first prize senior calf in 1917 (was not shown last year) said to be the most perfect type Ayrshire bull ever bred in America.

FIVE FRESH COWS; with four heifer calves and one bull calf at sides, the five calves sired by this grand champion bull. One cow is a Roll of Honor cow and a great show cow as a heifer, and the others are highly bred young cows ready for test.

Eleven Head in All

Nancy's Mint Master, undefeated in the show ring in America, was sired by Howie's Mint Master, also grand champion bull in America and Scotland, with a long line of undefeated ancestors, sire of A. R. daughters. This wonderful bull, only four years old on August 14, 1920, was purchased by Idlewood Farm at the 1919 National Ayrshire Sale at the highest price ever paid for an Ayrshire bull at public auction. He is easy to handle—a child can lead him about—and is in excellent, practical breeding condition. In August births, four of his five calves were heifers. If you want to build up a herd with the best bull in America, here is your chance. Price and other information desired will be furnished on application.

T. J. Murphy, Owner, Devon, Pa.

Middlesex Meadows Ayrshires

No matron stays in the herd that does not make an A. R. record of 10,000 lbs. or better. Most of them have records far exceeding this standard. Their bull calves by our herd sires are for sale.

A. Henry Higginson SOUTH LINCOLN, MASS.



FOR SALE

Barclay's "Herd Laddie" 23548

Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.

Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.

BARCLAY FARMS, - ROSEMONT, PENNSYLVANIA



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.

Ayrshire Cattle For Sale

Choice Registered Ayrshire cows, heifers, and calves of either sex. Single animal or carload. Herd tuberculosis free accredited.

F. D. Stowell, Black Creek, N. Y.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

When writing advertisers please mention Hoard's Dairyman.

Tschudy Ayrshires at Public Auction

Edelweiss Farms Annual Offering of Superbly Bred Ayrshires

Sale to be held in the Fair Grounds Sale Pavilion

Monroe, Wisconsin

Saturday, October 16, 1920

Following National Dairy Show at Chicago

51 Head An offering of Ayrshire cattle bred on Edelweiss Farms—every lot offered rich in high class milk and butter breeding. **51 Head**

AN auction principally of young females out of A. R. O. cows and sired by peerlessly bred herd bulls! The richest bred offering of Ayrshires ever entering a midwest sale ring!

Do you want individual quality? Do you want breed characteristics? Do you want milk and butter breeding? Then you will find it in this offering! Every one of the right type and individual quality to please the most exacting buyer!

In order for you to appreciate the rich breeding and individual quality of the females that comprise this superb draft of Ayrshire cattle, first read what outstanding sires have been usd in this herd:

Beckey's Majestic 10774, sired by Howie's Majestic Imp. who is the sire of seven A. R. daughters with fourteen completed records that average 10,218 lbs. milk, 402.44 lbs. fat, among whose daughters is Miss Letta with a record of 14,007 lbs. milk, 506.26 lbs. fat.

There are four cows in this offering sired by Beckey's Majestic, one of them, Viola of Edelweiss 49464, has for her dam Cold Spring Queen 3d, A. R. 10,179 lbs. milk, 338.18 lbs. fat. Cold Spring Queen 3d is sired by Joe Jefferson 8233, sire of eight A. R. daughters whose records average 11,162 lbs. milk, 394.62 lbs. fat. One of the cows sired by Joe Jefferson is Lady Lincoln A. R. 14,778 lbs. milk, 511.57 lbs. fat.

You will find the name of Joe Jefferson appears a great many times in the tabulations of this offering, he being the sire of the dams of a large portion of the young cows and heifers that comprise this offering.

Duke of Edelweiss, 18279 sired by Beckey's Majestic dam, Majesty's Princess by Howie's Majestic, mentioned above, is the sire of eight cows and heifers in this sale.

One of the cows sired by Duke of Edelweiss is Sweet Pea of Edelweiss 2d 49195, whose dam, Sweet Pea of Edelweiss 40210, is sired by Matie's Earl, the sire of five A. R. daughters. The dam of Sweet Pea of Edelweiss 40210, is Sweet Pea 19947 A. R. 11,649 lbs. milk, 398.11 lbs. fat.

Matie's Earl 12550, sire of five A. R. daughters whose records average 7,698 lbs. milk, 284.34 lbs. fat, is sired by White Prince of Almond. The dam of Matie's Earl is Matie of Sand Hill 23323, A. R. record 13,897 lbs. milk, 593.16 lbs. fat, sired by Earl's Choice of Spring Hill 8289, sire of forty-two A. R. daughters with sixty-eight completed records that average 9,045 lbs. milk, 379.75 lbs. fat.

Matie's Earl 12550 is the sire of four cows in the offering; one of them being Rose Spot of Edelweiss 49194, whose dam is White Rose Spot 2d sired by Joe Jefferson, and out of White Rose Spot 18207 A. R., 10,393 lbs. milk, 377.62 lbs. fat.

Cavalier's Kilnford Chaumier 18659, sired by Bargenoch Gay Cavalier Imp. sire of nine A. R. daughters with ten completed records that average 8888 lbs. milk, 357.60 lbs. fat. Bargenoch Gay Cavalier was grand champion at the National Dairy Show 1912-13; also sire of Cavalier's Lord Stuart, Junior and Grand Champion National Dairy Show 1917; sire of Cavalier's Lord Roseberry, many times champion and sire of the first prize get of sire class at the National in 1918 and 1919.

The dam of Cavalier's Kilnford Chaumier is Kilnford Bell 3d Imp. A. R. 13,525 lbs. milk, 532.98 lbs. fat; Grand Champion over all breeds at the National 1913-14, and winner of Valentine Silver Trophy; dam of Cavalier's Kilnford Bell 3d, Senior and Grand Champion female National 1919.

Where could you find better milk and butter breeding than this? Cavalier's Kilnford Chaumier is the sire of sixteen females in this offering, ranging in age from one year to three and four years old, and all out of well bred dams.

Cavalier's Goldfinder 21214, sired by Cavalier's Lord Roseberry by Bargenoch Gay Cavalier Imp. is the sire of four heifers in the Edelweiss farms sale offering. Cavalier's Lord Roseberry was many times champion and sire of first prize get of sire class at the National Dairy Show 1918 and 1919. The dam of Cavalier's Lord Roseberry is Beuchan Dorothy Imp. 32720, first prize two- and three-year-old at the National Dairy Show 1912-13, A. R. 9,289 lbs. milk, 385.45 lbs. fat, and full sister to Beuchan Ermine, ex-world champion senior two-year-old with a record of 15,186 lbs. milk, 516.64 lbs. fat.

Heifers with such breeding as this on the sire's side should be an attraction, especially since their dams are also sired by such sires as Joe Jefferson, Beckey's Majestic, and Matie's Earl.

Cavalier's Beuchan Silver Tips 20249, sired by Bargenoch Gay Cavalier, sire of nine A. R. daughters with ten completed records averaging 8,888 lbs. milk, 337.60 lbs. fat; Grand Champion National in 1912-1913; Champion show and breeding bull of America for the last eight years, and sire of more prize winners than any bull of the breed.

Cavalier's Beuchan Silver Tips is one of the present Edelweiss Farms herd sires. His dam is Beuchan Dorothy Imp. 32720 by the great Beuchan Peter Pan, sire of 52 A. R. daughters with 66 completed records that average 10,299 lbs. milk, 407.98 lbs. fat. Beuchan Dorothy Imp. was first prize two- and three-year-old at National 1912-13. A. R. record 9,289 lbs. milk, 385.46 lbs. fat. She is a full sister to Beuchan Ermine A. R. 15,186 lbs. milk, 516.64 lbs. fat; ex-world champion senior two-year-old.

Cavalier's Beuchan Silver Tips is the sire of four of the younger heifers in this sale, and he is bred to fifteen cows and heifers of breeding age.

In the offering also are some splendid young herd headers sired by Cavalier's Beuchan Silver Tips and Cavalier's Kilnford Chaumier and out of well bred dams.

NO matter what sales you have attended or what you have previously added to your herd, or how good you think your herd is, you should not miss this sale! Positively every animal offered will be sold to the highest bidder. Absolutely nothing reserved. A sale backed by the Tschudy & Sons square deal, fair dealth method of selling.

Inspection of the catte invited at any time.

ASK NOW FOR CATALOG—DON'T PUT IT OFF!

Every Ayrshire breeder should have copy of this catalog, not only for the information it contains concerning this sale, but to keep his records of Ayrshire events complete. A postal card gets it. Send your own name and address and that of an Ayrshire breeding neighbor if you have one, and we will be glad to forward him a copy of the catalog at once.

Address the sale manager for catalogs.

Auctioneers: Geo. W. Baxter, Elmira, New York, assisted by Edgar Eells, Freeport, Illinois.

FRED TSCHUDY & SONS

Edelweiss Farms - - Monroe, Wisconsin

Sale Manager: Amos Burhans, Waterloo, Iowa.

Indiana State Fair

(Continued from page 433)

Guides Warder Girl, produce of Imp. Blue Feather and Imp. Star of July. Graded herd—1, 2, and 3, Longview. Breeders' young herd—1 and 2, Longview; 3, Shaw. Breeders' calf herd—1, Longview; 2, McClenahan; 3, Zike.

Senior and grand champion bull—Ferns Golden Raleigh 2nd. Junior champion bull—Raleighs Fairy Sultan.

Senior and grand champion cow—Rochetts Noble Nina. Junior champion heifer—Raleighs Royal Fairy.

Futurity Classes for Indiana Breeders

Senior bull calf—1, Shaw; 2 and 3, Zike on Edna's Jolly King and Colonels Jolly Boy. Junior bull calf—1, Zike on Jolly Duke of St. Lambert; 2, Shaw. Junior yearling heifer—1, Zike on Geneva's Gift; 2, Shaw on Leader's Princess Mabel; 3, Hinkle on Miss Japalpha. Senior heifer calf—1 and 2, Zike on Geneva's Gift and Jolly Lady Paton; 3, Jones on Rex's Pansy.

Ayrshires

But one herd of Ayrshires, that of Adam Seitz of Wisconsin, made its appearance at this year's show. Judge Gillette of Iowa made the awards. Cavalier's Lord Rosebury won the senior and grand champion honors in the bull classes and the senior bull calf, Cavalier's Sherry Redman, was made junior champion. Cavalier's Silver Actress maintained her supremacy in the female classes and was made grand champion, while the junior heifer calf, Cavalier's Ella, was made junior champion.

Dairy Products

Ten pounds creamery butter—1, Wray Bros.; 2, Otto Walters; 3 and 4, Schlosser Bros.; 5, The Wadley Co. Five pounds dairy butter—1, John Conger; 2. D. R. Jones; 3, Emma Raub; 4, L. D. Gleason; 5, M. K. Gleason. 4 pints market milk from producers—1, A. D. King; 2, Henry Lahrman; 3, M. K. Gleason; 4, Emma Raub; 5, P. H. Crane & Bro. 4 pints market milk from distributors—1, Milk Producers' Union; 2, Sanitary Milk Products Co.; 3, Ballard Ice Cream Co.; 4, Weber Milk Co. 4 half pints sweet cream, from producers—1, P. H. Crane & Bro.; 2, M. K. Gleason; 3, Emma Raub; 4, Mrs. J. M. Smock. 5 pounds cottage cheese—1, Mrs. J. H. Drake; 2, P. H. Crane & Bro.; 3, Emma Raub; 4, John Conger.

GUERNSEYS

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 860 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

For Sale

That wonderfully bred and prepotent sire
AZUCENA'S STANDARD NO. 25537

One of his daughters, Linden Lass of Harbor, Hill 65958, now on A. R. test, in 87 days has produced 3,539.30 lbs. milk, 145.29 lbs. fat in Class C; another daughter, Some Pumpkins of Little Farm, has produced in 219 days 7,841.60 lbs. milk, 315.34 lbs. fat, Class D.

Also sired three of the four heifers in the 3rd prize calf herd at the National Dairy Show, 1916. Price $500.

F. G. COMINS, East Greenwich, R. I.

FOR SALE

A registered Guernsey bull 18 months old, a sure breeder. Also an 18-month-old heifer bred June 5, 1920. Their grandams were imported. Price for the two $350.00.

John Walls, Mystic, Iowa.

For Sale

Ten registered Guernseys, nine females and bull, Azucena's Standard, an A. R. Sire, half brother to Azucena's Pride II, a double class leader. Eight of the females are bred and will calve from now to spring. Every animal is straight and tested. Price for quick sale, $3,000.

F. G. COMINS, East Greenwich, R. I

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price—May Rose and Glenwood strains—write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd.

August Ziesing, Deerfield, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 532 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

FOR SALE

Registered Guernsey Calves

At Bargain Prices

10 Bred Heifers

6 Bull Calves (2 Ready for Service)

STOCKDALE FARMS

Hynicka Bros, Lebanon, Pa.

Guernseys for Sale

Twenty females, cows and heifers, a number of May Roses. Mostly bred to Laverna's Ultra May King 24660 and Gerar Pearl's Royal 58411, who is full brother to three class leaders. Also several sons of Langwater Royal, Langwater Raritan and Laverna's Ultra May King from A. R. cows or cows on test, several ready for service. All are priced to sell.

M. T. Phillips, - Pomeroy, Pa.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

May Rose on both sides. Dams in A. R or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

At The GUERNSEY SALE

Superior Fair Grounds

Superior, Wis., October 6, 1920

I am offering Four Females

Imported Daisy Moon VI, daughter of the famous Daisy Moon, ancestor to Daisy Moon III, 928 pounds fat; Daisy Moon IV, 639 lbs. fat; Daisy Moon IV is perhaps the best type of any of the daughters of the great Daisy Moon.

No. 2: Lady Fredericka of Craigamoor, a cow of France and May Rose breeding, which has just completed a record of 642 lbs. fat.

No. 3: Craigamoor Margaret, out of the same dam as Craigamoor Phoebe, who will make from 650 to 700 pounds, barring accidents this year. Her sire is Craigamoor May King, daughter of Raritan's Daisy Moon of Craigamoor, 778 pounds fat.

No. 4: Craigamoor Grace, a beautiful yearling heifer, double granddaughter of Austerlitz. Sire, Craigamoor May King.

I am also offering at the state sale at Madison, on October 13th, 2 heifers, Craigamoor's Galaxy's Daisy Moon, born March 1919, sire, Craigamoor May King, dam, **Craigamoor Galaxy, full sister of Craigamoor Cosette**, who has completed a record of 676 pounds fat.

No. 2: Craigamoor Cherry, yearling daughter of Craigamoor May King and Lady Fredericka of Craigamoor. The dam and sire's dam of this heifer have records averaging 710 pounds fat.

I also will sell at private sale a young sire between 13 and 14 months old out of an untested heifer, daughter of Lady Fredericka of Craigamoor and sired by Craigamoor May King. $400 will take this young sire.

Geo. C. Cooper, Superior, Wisconsin

CITY VIEW FARM

Purebred Guernseys

Consigned to the

State Sale at Madison, Wis.

October 13th, 1920

Bell Buoy of Linda Vista (19430)

and two of his daughters

Miriam's Rosella of City View (105172)

Miriam's Marcella of City View (105171)

full sisters to

Miriam's Pride of City View (63409), who sold for $1,300.00 at the Dunn County consignment sale at Eau Claire, Wis., June 1920.

A. R. Daughters of Bell Buoy of Linda Vista (19430)

		Dam's Record Lbs. B. F.
1.	Dairymaid of C. V. (61806) A. R. 6462	388.25 G. 380.86 C.
2.	Rosebud of C. V. (57925) A. R. 6463	476.60 G. 388.71 C.
3.	Princess of C. V. (59646) A. R. 6480	371.08 G. 352.07 C.
4.	Miriam's Pride of C. V. (63409) A. R. 7111	521.49 G. 483.57 C.
5.	Bell Buoy's Golden Lassie of City View (69848) A. R. 7434	489.37 G. 474.48 D.
6.	Dairy Girl's Bonnie of City View (68950) A. R. 7575	563.85 G. 388.86 C.
7.	Miriam's Tulip of C. V. (60272) A. R. 7112	494.25 F. 407.96 C.
8.	Lannie of Grenwode (45215) A. R. 7109	484.35 B. no record
9.	Bell Buoy's Nancy of C. V. (61807)	477.40 D. 552.50 D.
10.	Dora of C. V. (58111)	477.74 C. no record
11.	Flossie of C. V. (60268)	402.47 D. 367.03 C.
12.	Migit of C. V. (59650)	418.76 D. no record
13.	Lily of C. V. (59649)	628.13 D. no record
14.	Nellie of C. V. (59648)	527.82 D. no record
15.	Mollie of C. V. (58399)	367.96 C. no record
16.	Laura of C. V. (56132)	392.50 B. no record

Records to July 1st of Daughters of Bell Buoy, now on test

	Lbs. Milk	Lbs. B. F.	Days
Miriam's Grace of City View (77018)	2166.90	92.58	51
Dairymaid of City View (102815)	6181.30	338.73	191
Flora's Cream Cup of City View (99113)	8077.50	442.53	295
Cherry's Ada of City View (61806)	4212.50	213.50	168
Bell Buoy's Violet of City View (69086)	8003.30	439.80	274
Primrose's Lucy of City View (81634)	5337.40	260.29	201
Cherry's Trixey of City View (63408)	3955.60	168.84	91

Bell Buoy's Buttercup of C. V. (61070), now on test and doing fine. Double granddaughters.

Topsy of City View (77019)	8447.80	345.27	182
Dairymaid of City View 2nd (100930)	4952.20	286.05	197

YOUNG BULLS FOR SALE

O. R. Schwalen, Prop., Roberts, Wisconsin

Upland Farms Guernseys



THE GET OF LANGWATER CAVALIER NO. 21012

Langwater Cavalier is *Breeding On* in a remarkable way. His Granddaughters as well as his daughters are proving that he is a sire of sires.

Can you afford to overlook this point in selecting your *Herd Sire?* Write us for particulars about bulls that will *sire show winners* and *producers.*

F. P. FRAZIER & SON, Owners. W. K. Hepburn, Mgr. Ipswich, Mass.

Appletree Point Farms



PENCOYD'S SECRET MAROSE 48332

The "Get" of this bull is being exhibited along with the rest of our show herd at the New England Fair in Worcester, Mass.; Connecticut State Fair at Hartford; New York State Fair at Syracuse; Eastern States Exposition at Springfield, Mass.; Waterloo Dairy Cattle Congress at Waterloo, Iowa; and National Dairy Show at Chicago. Write for information about bull calves and a few females, some being daughters of Langwater Peerless.

U. A. WOODBURY, II, Burlington, Vermont

Choice Breeding

I have six choicely bred Guernsey bull calves ranging in age from one to eighteen months, mostly out of Advanced Registry cows, which I will sell at very reasonable prices, from $75.00 up to $250.00.

L. S. Meyer, - Springfield, Mo.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.

R. R. Station—Owasco Lake

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr.**

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

Grape Lawn Guernseys

For Sale—Three bull calves, seven months old, of the May Rose, Golden Secret Cross, sired by Grape Lawn May King and he by Langwater Cavalier that is considered to be the outstanding May Rose bull of the day. One of his daughters sold at the last combination sale for $8,000.

The dams have the following credits in A. R.:

No. I, Class C, 198 days, 7,694.4 lbs. milk, 372.72 lbs. fat.

No. II, Class C, 144 days, 6,206.1 lbs. milk, 290.56 lbs. fat.

No. III, Class A, 138 days, 7,778.1 lbs. milk, 289.05 lbs. fat and are sired by Mota's Golden Secret and Gold Noble II.

ACCREDITED HERD

WM. H. GOULD - - Burkeville, Va.

HILLSCROFT FARM

Offers for Sale Guernsey Bulls

HILLSCROFT'S PROUD WARRIOR

Dam, Felice of Falcon's Flight 71209. Sire, Falcon's Proud Warrior 47559. Born March 31st, 1920. The dam f this bull is now producing 40 lbs. of milk.

BULL CALF

Dam, Florham Bell 2nd of Oakhurst 54984, A. R. record. Sire, Rosie's Golden King of Oakhurst 31630. Born August 9th.

E. W. Simons, Bantam, Conn.

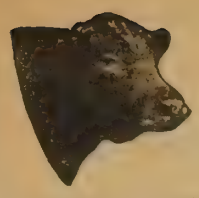
A Great Sire IS FALCON'S PROUD WARRIOR

considered by many to be

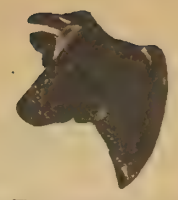
The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.



Economy in Production ← GUERNSEYS → Quality of Products



Ten years ago an Ohio boy invested $87 in a registered Guernsey heifer. Today the boy is one of Ohio's prominent Guernsey breeders. Let us tell you how you can become a Guernsey breeder.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 84, PETERBORO, N. H.

READY FOR SERVICE



DISTURBER OF PROSPECT 61173
DROPPED OCTOBER 4, 1919

Sire—Anton's King Confidence No. 43517. Dam—Sally of Prospect No. 49680, A. R. 5593.

Besides having six May Rose crosses this young fellow is a wonder for type and individuality.

His sire's dam has a record of 764.65 lbs. of butterfat as a junior four-year-old. Disturber is priced to sell quick and guaranteed in every way.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

An Exceptional Opportunity

to secure the Foundation of a Registered Guernsey Herd. $1,200.00 buys three two-year-old heifers, bred to the first prize bull of the 1919 Wisconsin State Fair. This bull is of exceptionally good breeding. If you want them, act quick.

WILD WOOD POINT FARM

Nashotah, Waukesha County, Wisconsin

45 Guernseys 45

At Mankato, Minn., Oct. 5, 1920

In the New Sale Pavilion

The offering will consist of 20 pure-bred cows and heifers, 6 pure-bred bulls, and about 20 splendid high grade cows and heifers, all consigned by Blue Earth County breeders. Cattle will be tuberculin tested and sold under the standard guarantees. Catalogues September 15th. Write for one to

DR. M. B. WOOD, Mankato, Minn., Manager of the Sale.

Oliver S. Johnson, Auctioneer. First Nat. Bank of Mankato, Clerk of Sale

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.

Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN.

Guernseys At Auction

Second Annual Consignment Sale

Guernsey Breeders' Ass'n of Northern Minnesota and Northern Wisconsin

Tri-State Fair Grounds, Superior, Wisconsin
Wednesday, October 6, 1920

A QUALITY SALE A GUARANTY SALE

Auctioneers: Love, Benjamin, McGuire

For catalogue write to

E. P. Gibson, Sales Mgr., 310 Court House, Duluth, Minnesota

LONE TREE FARM

GREEN LAKE, WIS.

Has in its Herd 15 A. R. Guernseys and 11 R. of M. Jerseys
And Carries About 16 Cows on Test.

To inquiries for BULL CALVES we give full, honest particulars and stand behind every animal sold.
Jersey Sire—A Son of Pogis 99th. Guernsey Sire, Langwater Islander.

WHEN IN THE MARKET FOR

REGISTERED GUERNSEYS

"MAY ROSE" BREEDING

WIRE OR WRITE FOR PRICES AND PEDIGREES

Bay Cliffs Stock Farm, Big Bay, Mich. Jay B. Deutsch, Owner

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

One Year Old May Rose

Guernsey bull for sale, Edwin of Linwood. Grandson of Imp. Clara's Sequel who has 30 A. R. 500-lb. daughters. Edwin of Linwood's dam is a daughter of Langwater Frederick. She is finishing class F. F. with 565 lbs. fat 3rd place. Write quick if you want him.

HOMER RUNDELL, Livingston, Wis.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.

Send for sale list.

M. L. Welles, Rosendale, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Herd Bull For Sale

5 years old, well bred, a sure breeder and a dandy individual. His 3 nearest dams average 617 lbs. fat. All records made under 5 years old.

Also young Bulls from 2 to 15 months old from cows with and without records. Prices from $100.00 up.

Grover Kull, Mariondale Farm, - Genoa Jct., Wisconsin

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac, Wis.

Wisconsin Guernsey Breeders' Ass'n

Second Annual Guaranty Sale

October 13 - - - Madison, Wis.

A Sale of the Best that Could be Selected from the Good Herds of Wisconsin—*the Foremost Guernsey State*



LAMONT OF MAPLE HILL 69744
9,897.1 lbs. milk, 570.87 lbs. fat at 2½ years. A daughter of May King's Vrangue of Ingleside 15430. Consigned by Fruit Bros.



BELL BUOY OF LINDA VISTA 19430
Sire of 16 A. R. daughters—4 others on test. One of the best proven bulls in Wisconsin, as he sires both type and production. Included in State Sale.



FLOSSETTE OF GRAYSIDE 73407
2nd Prize Iowa State Fair, 1918. 5th Prize Waterloo Dairy Congress, 1918. Now on test and will finish with about 500 lbs. fat. Included in State Sale.

BULLS Very few bulls have been selected for this sale, but those few are good ones, fit to head good herds. They include both proven sires and young bulls.

Bell Buoy of Linda Vista, that already has 16 A. R. daughters will be sold together with two of his best daughters. His get are proving themselves in the show ring as well as on official test.

Elsir of Glenburnie, a son of Itchen Daisy 2d (702 lbs. fat as a 2-year-old.) Two of his daughters are also consigned.

Lady's Rex of Maple Hill, a son of Rex of Rich Neck and out of Norwood's Lady Makefield (629.2 lbs. fat.) His two nearest dams have more high record daughters than have the first two dams of any other Guernsey sire.

A son of Ne Plus Ultra.

FEMALES The female list includes an excellent lot of A. R. cows, among them:—Craigamoor Cherry with 642 lbs. fat in Class A.

Lamont of Maple Hill, 570.87 lbs. fat, Class F. She is a daughter of May King's Vrangue of Ingleside.

Maiden of Homestead, now finishing a record above 500 lbs. fat.

Belle of Forest Lodge, on test, and will finish with about 560 lbs. fat.

Open and bred heifers will include:

Two daughters of that National Dairy Show winner, Hopeful of Edgemoor.

Two daughters of Dairymaid Criterion of Iowa.

Three daughters of Langwater Frenchman.

Two daughters of Craigamoor May King.

Two daughters of Ultra King of Edgemoor.

Two daughters of Florham Victor.

The Wisconsin State Guernsey Sale is in charge of the following committee: James H. Murphy, Delavan; G. R. Ingalls, Eau Claire; Lloyd Rundell, Roberts; Gavin McKerrow, Pewaukee; Clifford Capener, Baraboo.

The sale entries have been inspected by these men personally. Every entry is sold subject to a 60-day retest for tuberculosis.

On the evening previous to the sale a meeting of Guernsey breeders will be held in the Y. M. C. A. building in Madison to which all interested are cordially invited.

Sale will be held in the Stock Pavilion at the College of Agriculture

Send for your Catalog today to

James H. Murphy, Delavan, Wisconsin

Southern Wisconsin Guernsey Breeders'

First Annual Sale

October 14 - - - Janesville, Wis.

75 Registered Guernseys of Quality

These Guernseys were all Inspected by the Sale Committee
They are Sold Subject to the Following Rules—

1—No female under six months of age, or male under eight months of age will be sold.

2—No animal consigned may be sold previous to the sale.

3—Every animal entered must be accompanied by a certificate of health. Consignors agree to the sale of all animals subject to a 60-day retest for tuberculosis.

4—Every animal is guaranteed to be as represented. The consignor will be responsible for such representations.

5—In case any animal sold is announced as bred and proves not to be in calf, she can, at the option of the consignor, be returned to him and the purchase price refunded; or when returned, kept by him for a reasonable length of time in order to get such animal in calf, but if within such reasonable time, she fails to get with calf, the consignor must then refund the bid purchase price.

6—No person consigning animals to this sale will be allowed to bid on his own animals or permit any person to bid for him.

7—All females three years old or over must have dropped a normal calf within fifteen months previous or be within three months of calving, the last calving date in each case to be published in the catalog.

8—The Secretary will withhold the purchase price from the consignor until registration paper and transfer properly signed are turned over.

The Sale Includes



FLORHAM VICTOR 37061
An outstanding son of Ne Plus Ultra. Several of his get are included in the Southern Wisconsin Sale.

some very high class bulls; 6 out of dams with over 600 lbs. butterfat, several of them grandsons of King of the May.

A number of A. R. cows including Ladysmith of Grafton (603 lbs. butterfat) and Roselle of Fox Valley, now on year test and finishing with over 600 lbs. fat.

An excellent selection of heifers, bred and open sired by such bulls as Florham Victor, Sailor Lad of the Fontaines and others.



ROSELLE OF FOX VALLEY 61739
Now on test and will make over 600 lbs. fat. Included in Southern Wisconsin Sale.

October 15—60 Excellent Grade Cows

A few high class registered bulls will be sold on the 15th, the day following the pure-bred sale.

These are top notch grade cows, good, healthy producers.

Sale Committee

James H. Murphy, Delavan.
W. A. Munn, Janesville.
Ralph Tratt, Whitewater.
P. C. Burchard, Fort Atkinson.
Otto Onstad, Cambridge.
A. S. Knudsen, Brodhead.
Grover Kull, Genoa Jct.
T. Ridge, Whitewater.

For Catalogs Write JAMES H. MURPHY, Delavan, Wisconsin

Dairying Thirty Years Ago

In the production of poor, cheap, summer butter lies involved an enormous loss to the farmers of the United States. It is a tremendous tax imposed by indifference and a lack of dairy intelligence. Good posting and good thinking and a little old time Yankee energy would, in a short time, avert the payment of this fearful tax. Curiously enough we do not hear of any petitions being sent to Congress for relief from this tax.

Where is the Overproduction?

For years we have listened to the never ending refrain, "You will overdo the dairy business." Every depression in the price of dairy products is a signal for this outcry. The present price of strictly first-class butter ought to be a sufficient answer to that senseless cry. The men who utter it are surface reasoners. To speak the strict truth, there has never been an overproduction of really fine goods. The overproduction consists in the cheap and unskillfully made article. It is very hard to get this fact into the comprehension of the average farmer.

⚜

The Fort Atkinson creamery paid one patron last year, who followed winter dairying, $63 per cow for the milk of his herd of thirty-five cows. It paid another patron, who was bound to follow summer dairying, $40 a head as the earnings of his herd of fifteen cows. That was the difference in the reward of one patron's labor over another by the use of judgment, thought, skill—in a word, brains.

Death in a Silo

A very strange accident occurred at Niles, Michigan, by which a prominent and very highly respected citizen, Mr. Edward M. Ballard, lost his life; and in trying to rescue him, two others came near sharing the same fate. It seems to us, after being made acquainted with the composition of silo pits, that it is a case, over again, of carbonic acid gas settling in the deep pit, the same as it settles in wells sometimes.

⚜

News comes to us through Mr. Geo. A. Dewinton, of Butte City, Montana, of a terrible condition of things in that city growing out of the most outrageous abuse of the cows of the place that are suffered to run at large, night and day, and allowed to consume the garbage that is thrown into the back alleys. The milk had thus become so poisoned that the death of no less than 27 young children that had been fed on the milk was directly traceable to that one cause. The people were up in arms about it; and the result came that no one was allowed to make or sell milk who did not keep his cows on wholesome food, and keep them in cleanly places—all subject to the supervision of competent persons.

Dairy Cattle at the State Fair

There was a fine show of specific dairy cattle at the state fair. Of the Jerseys Liefeber & Johnson, of Milwaukee, had 27 animals, C. N. Griffith, Whitewater, 15, Gen. Geo. W. Burchard, Fort Atkinson, 14, and L. W. Smith, Whitewater, 11. F. W. Tratt, of Whitewater, had about 20 Guernseys. At the head stood the magnificent bull, "Squire of Les Vauxbelets 4th, No. 771", formerly the property of the late I. J. Clapp. He has been a prize winner wherever exhibited since 1884. He seems to be perfect and as sound as when he was born. T. L. Haecker of Madison had both Jerseys and Guernseys in the herd he had on exhibition. Among the Holstein-Friesians Gillett & Son, of Rosendale, and Rust & Bros., of North Greenfield, had large and magnificent herds. "Oakland Chief", at the head of the herd of Gillett & Son, is a very fine animal, weighing 2,210 lbs. He has become noted as the sire of great butter-producing heifers, as the records they have made as published in the Dairyman within the year attests. The cows, heifers, and young things were fine specimens of the breed. The same may be said of the herd of Rust & Bros.

Grandsons and Granddaughters of
Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

Holstein-Friesian Bulls
sired by
"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd
"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich.

THE TRAVERSE HERD
We have what you want in
BULL CALVES
the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address
C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

Yearly Record
ZEHRINGHURST HOLSTEIN FRIESIANS
Accredited Herd

Zehringhurst Farm
Offers

A few splendid young bulls that have show ring type that are backed by short and long time records and by the best productive breeding Ohio has produced.

They are guaranteed right and are priced to sell.

Oscar O. Zehring, Prop., Germantown, Ohio

Three Great Days in Michigan
Home of Healthy Holsteins

Jackson, Tuesday, October 19
Second Michigan State Holstein Sale

70 of Michigan's best, selected only from herds that have passed at least one clean test under state and federal supervision. All with high records.

East Lansing, Wednesday, October 20

75 carefully selected animals from Central Michigan herds, including two complete dispersals.

Owosso, Thursday, October 21

80 head selected from herds of Shiawassee County, including one entire herd headed by one of the best sons of Hengerveld De Kol. Records to 32 pounds.

225 Choice Registered Holsteins 225

Sold with 60-90-day retest privilege

Sales Managed by
The Michigan Holstein-Friesian Association
H. W. Norton, Jr., Field Secretary
Old State Block, Lansing, Mich.

Pabst Stock Farm
First Semi-Annual Sale

40 Bulls

On June 15th, all private sales were discontinued at Pabst Stock Farm. This was done with the sole idea of having two sales a year to dispose of all surplus stock, thus offering bulls with a very wide range of value. Such a sale must necessarily include the very greatest calves born on Pabst Stock Farm as well as those of more average quality. Old established breeders and beginners will thus find in this first annual sale, bulls qualified to head their herds, regardless of the sum they feel disposed to invest in such animals.

5 Ready for Service
35 from Three to Eleven Months

One by Korndyke Segis Johanna; 12 by Creator; 2 by King Pontiac Champion; 9 by Pabst King Pontiac Lad; 12 by Woodcrest Clyde.

With but one or two exceptions all of the bulls are by sires that have been in use in the Pabst Stock Farm herd, and are from dams, practically all of which are present members of the herd and will be developed year after year.

A very large majority of the bulls are from daughters of King Pontiac Champion or Korndyke Segis Johanna and almost one-third of them are by Creator. Several of them are three-fourths brothers to Creation that sold for $20,000, and in some instances are backed by two generations of 30-lb. dams and succeeding generations of long distance dams. Perhaps as notable a collection of young bulls as was ever put on the market by any breeding farm at a single time. Coming just at the time of the National Dairy Show, it affords breeders a wonderful opportunity to combine the two events.

Oct. 9th AT THE FARM

The Class Of Bulls We Will Sell

A ten months old son of Creator from a 27.97-lb. 2-yr.-old with 32.55 lbs. as a 3-yr.-old.

A yearling son of King Pontiac Champion from a sister to the heifer that sold for $30,000 at St. Paul.

A son of Creator from a 34-lb. daughter of King Pontiac Champion with 667 lbs. milk.

A nine months old son of Pabst King Pontiac Lad from a 33.99-lb. 4-yr.-old.

A six months old son of King Pontiac Champion from a 32.82-lb. senior 3-yr.-old, next dam 34 lbs.; all with good year records.

A son of Creator from a 22-lb. 2-yr.-old daughter of King Pontiac Champion and sister to a two times 30-lb. cow with over 768 lbs. milk.

Send for pre-sale bull list. Catalog furnished at sale.

Don't Forget the Date

Oconomowoc, Wis. 10:30 A. M.

Columbia Co. Fair Sale

Portage, Wis., October 7

50 Head Pure-bred Holsteins

to be sold under a 60-day guarantee

Included is the dispersal of the wonderful Elmcourt Farm herd, owned by W. O. Briggs, Briggsville, Wis. A high class herd, in every sense, and the best of breeding the country affords.

Elmcourt herd is headed by

Pabst Korndyke Blackberry

a fine 3-year-old sire, whose breeding is well-known in Holstein circles. Will be a "Luck Bringer" to the man who buys him.

His dam has 31.68 lbs. in 7 days, 638.68 lbs. in 365 days. His two nearest dams average 36.59 lbs.

His sire, Korndyke Segis Johanna, is also the sire of Pabst Korndyke Cornflower, 38.43 lbs., who holds the Wisconsin state record for 7 days and the world's record for 30 days. This remarkable heifer was sold in the National Sale in June for $30,000.

Pabst Korndyke Blackberry, the head of the Elmcourt herd, carries 75% the same blood as this heifer.

There are 6 fine cows bred to this bull, one a 16.32-lb. junior 2-year-old; a 14.817-lb. junior 2-year-old; a 23-lb. 3-year-old, due to freshen Oct. 23, every dam in her pedigree over 20 lbs., and she herself capable of making 30 lbs.; one from a record dam and sired by a grandson of King Segis Pontiac; and two daughters of Elm Court Pontiac Burke, a son of a 23-lb. junior 2-year-old.

5 nice calves sired by this bull, one a male calf old enough for light service, and whose 4 nearest dams average 28 lbs.; one a good, light colored heifer whose 4 nearest dams average over 28 lbs.

Also a very well bred bull calf, nine months of age, whose dam, Elm Court Johanna Pearl 2nd, had the distinction of having her milk record the 2nd highest in her class in the state of Wisconsin, and her butter record the 4th highest, at the time they were made. This calf will make a first class sire for a good herd.

There will be a heifer calf, good type, sired by the well-known bull, King Korndyke Haidee Ormsby, who recently sold for $8,500.

Also a fine, straight 3-year-old, due to freshen next month to this same bull.

A show cow of great size and conformation sired by Artis Walker Pietertje; dam, Lady Mooie De Kol Greene; and bred to Elm Court Pontiac Burke.

A heifer, nicely marked, sired by Bluebird Canary Butter Boy, the 31.50-lb. grandson of Canary Paul Fobes Homestead. The sister to this bull sold in the last state sale for $3,600. Her dam is Colantha Piebe of Elm Court, a show cow, 27.70 lbs. in 7 days and 808.82 lbs. in 365 days.

Two splendid heifers, sired by Beauty Walker Pietertje King 4th, the show bull recently sold in the Fischer Dispersal in excess of $6,000.

Two 4-year-olds, dandy cows, capable of making large records, in calf to Beauty Walker Pietertje King 4th, and due to freshen about the same time. Should go together. Entire herd recently tested, and sold under the guarantee outlined in the catalog.

October 8th

35 Head Registered Shorthorns

of excellent breeding, including a dandy lot of cows, some with calves at foot, others to freshen soon. From the most noted breeding in the country.

A pure-bred Clydesdale stallion, Nobleman 14136, sired by Laureate 12661; dam, Young Bessie 12654.

Also a pure-bred hog sale. Don't miss it.

Separate catalogs for the Holsteins and Shorthorns. Haeger and Everson to sell the Holsteins.

R. H. Dyas, Wisconsin Farmer, to sell Shorthorns and hogs.

Write for Catalog to **- F. H. EVERSON, Lake Mills, Wis.**

Fifth Semi-Annual Guarantee Sale

Holstein-Friesians

75 Females 75

to Freshen this Fall and Early Winter

Alfakorn Farms

October 8, 1920, Evansville, Wis.

A Sale of Production, Breeding and Quality

More high record and richly bred ones than we have ever offered before. REMEMBER the DATE and COME.

FIFTEEN RICHLY BRED HEIFERS

All from A. R. O. dams, seven are half-sisters being granddaughters of King Segis Pontiac. All bred to our Junior herd sire, a 35-lb. son of King Segis Pontiac Alcartra; some are granddaughters of King of the Pontiacs.

Two granddaughters of **Maud Burke** and from **A. R. O.** dams.

A yearling daughter of a **40-lb. bull** and bred April 9th to a **42-lb. bull,** and a wonderful individual.

Also a granddaughter of **The Milk and Butter King,** and every dam in four generations is A. R. O.

Also a half-sister to **Carnation King Sylvia, every dam A. R. O.** and a heifer of wonderful quality.

Also two daughters of **King Pontiac Reliance,** a 33.16-lb. sire. These two are bred to our Senior sire, (dam 38.54).

A granddaughter of King Korndyke Sadie Vale from a 31-lb. sire and a 24-lb. cow.

A yearling daughter of a 37-lb. bull. A. R. O. springer cows.

Thirty Yearlings and Heifer Calves
A Few Extra Well Bred Bulls and Real Bulls

Remember the Date and Come

Alfakorn Farms

F. B. Green & Sons **Evansville, Wis.**

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Rock River Stock Farm -Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.
OTTO F. BRANDT, - HORICON, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 to 9-month-old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

7-MONTH-OLD BULL—$150.

Marked more white than black. 27-lb. sire. Dam a 1700-lb. cow. Will be tested when she freshens in January. Rich in Homestead Breeding. Herd tuberculin tested annually. Check or bond takes him. **Chic Dairy Farm, - - Juneau, Wis.**

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs. Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

Get One of These Good Grandsons of K.K.S.V.

for Your Next Herd Sire

No. 1—Summit Fyke De Kol, born Oct. 10, '19. A good individual, son of Circe Fyke Canary De Kol, 16.86-lb. 3-year-old just now finishing a very good year record.

No. 2—Summit Rag Artis, born Oct. 25, '19, from Queen Rag Apple Colantha, 16-lb. 2-year-old now finishing a good year record.

These are both sired by King Pontiac Artis Sadie Vale, 34-lb. son of the great King Korndyke Sadie Vale. **They are priced to sell.** Write



KING PONTIAC ARTIS SADIE VALE

Hollyhock Farms, Dousman, Wis.

GUSTAVE PABST, Owner FRED SOUTHCOTT, Manager

Waukesha County Holsteins

For Sale

10 carloads of pure-bred bulls of serviceable age and younger at prices ranging from $100 up. Will ship satisfaction.

18 carloads of grade Holstein cows fresh and springing at prices ranging from $140 to $250.

Several herds of choice pure-breds at farmers' prices. If you want foundation stock of any kind, write for information or come and see Waukesha County. (32,000 head of tuberculin tested cattle.)

Waukesha County Holstein-Friesian Breeders' Association

Office 254 Broadway - Waukesha, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**



Want this Son of Sir Bess Ormsby Fobes?

He is a year old, straight as a line and very well marked.

His dam is a 17.39-lb. 3-year-old granddaughter of Pontiac De Nijlander.

"Bess", his sire, is the 1,152-lb. son of S. P. O. M. 37th, recently sold to Hollyhock Farms for $25,000.

Better write at once.

Linden Lawn Stock Farm, B. W. Rabenhorst, Prop., Jefferson, Wis.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

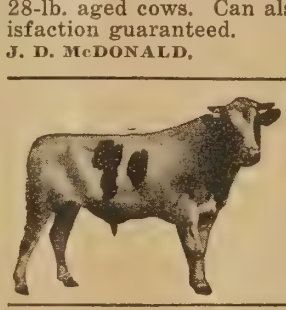
Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN



Here's Another Good Son

of Sir Bess Ormsby Fobes, the $30,000 son of "37th". He is Ureeka Dio Dandy Sir Bess, born Feb. 6, well grown and a splendid individual like his sire.

His dam is a 21-lb. 3-year-old daughter of a 24-lb. heifer.

This bull is not a cheap one but he's priced reasonable. Write us today about him.

UREEKA STOCK FARM,
Otto W. Schinke, R. 1, - Jefferson, Wisconsin

HOLSTEIN BULLS

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke age over 37 lbs. butter in 7 days. Come

WISCONSIN STAR STOCK FARM,

AND HEIFERS ! !

dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams aver- and see them or write to

ED. M. SHULTZ, HARTFORD, WIS.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

Waupaca County Holstein Breeders' Association

1. Where the largest breeders can secure their choicest herd sires.

2. Where the average breeder can buy those animals of high class breeding that will build up his herd.

3. Where the beginner can obtain that good foundation stock with most excellent type and good records at moderate prices.

Buy that carload in Waupaca Co., the county noted for its large number of Federal Accredited Herds.

Stock for sale at all times. Write to

A. B. Rowe, Sec'y, Waupaca, Wisconsin

Wayside Lawn Farms

offer

Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 8 to 9 months old. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association.
A. F. Gafke, Secretary, Jefferson, Wis.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

BULLS

from tested dams from 2 to 10 months old, sired by our Jr. Sire, two nearest dams average over 32 lbs., and 10 nearest dams over 29 lbs. in 7 days. A few females bred to the above bull, also two heifer calves about 6 weeks old. Call or write

Sedgland Farms, H. J. Sedgwick, Limeridge, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9th, 1920

Sale will start at 10:30 A. M.

Oconomowoc, Waukesha County, Wis.

ORMSBY BULL - Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 28.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

O. P. V. Silage

A few years ago Professor J. M. Trueman, of the Nova Scotia Agricultural College, began experimenting with a mixture of oats, peas, and vetches for ensilage purposes. This mixture has now been tried out extensively, not only on the college farm but by numerous farmers over the province, and it has been proven that this crop will grow well and yield satisfactorily when many other crops are almost a failure. The crop was first grown on a commercial scale on the college farm in 1914 when 5.7 acres of land produced 65 tons of green feed, or at the rate of 11.4 tons per acre. The first three acres cut gave 45 tons, or at the rate of 15 tons per acre. The following year the average yield in the field crop was a little less than ten tons per acre and it has since been the general experience in Nova Scotia that on good land in proper condition they can easily raise twelve tons or more of O. P. V. ensilage per acre. This ensilage contains over eight per cent more dry matter than corn ensilage grown under the same conditions and in an average year the total amount of dry matter per acre will be more than the amount of dry matter per acre in corn.

The general run of soil in Nova Scotia tends to a light loam. There is very little heavy clay. On the college farm the soil is a gravelly loam, so I presume that the seeding mixture which has proven most satisfactory in Nova Scotia will be equally satisfactory for the light soils. It is two and one-half bushels of oats, three-quarters of a bushel of peas, and one-third of a bushel of vetch, making a total of a little more than three and one-half bushels per acre. The green material is cut just as the oats are about ready to enter the dough stage and before they begin to turn yellow. It is blown into the silo with the regular ensilage cutter. All kinds of stock eat this ensilage greedily and it is giving universal satisfaction. Common vetch is the kind usually used, but I see no reason why hairy vetch might not be substituted and perhaps it would make an even more satisfactory growth than common vetch on light, sandy land.

The mixture of peas, oats, and vetches is certainly a tangled mass, but this is one of the features which makes it easy to handle in harvest. Anyone who has forked green oats alone knows how slippery and difficult they are to handle. The mixture of oats, peas, and vetches clings together and is handled as easily as it very well could be considering its weight. If the crop is very heavy it is most easily handled by forking direct from the swath to the rack. If light, it might be gathered in windrows with a hay rake. One farmer in Ontario who has experimented with a mixture similar to this for the silo, loads it directly from the swath with his hay loader, thus getting the crop into the silo with a minimum of hand labor.

This crop is at its best for silage when the land is given good preparation and manured just as heavily as it would be for corn. There is an opportunity to clean the land either by summer fallowing early in the season and then sowing the O. P. V. mixture, or by sowing early and following the crop with fall cultivation. Land may be seeded down to clover or grasses with this crop quite as well as with the grain.

Ontario. F. E. ELLIS.

A great stride will be made toward the highest conservation of human energy when we learn that it is easier and better to keep folks well than to cure them when they're sick.

The Holstein Breeders' Sale Co.

Fond du Lac, Wisconsin

will sell on

October 15, 1920

80 Head of Pure-bred Holsteins 80



The new $35,000 Sale Pavilion where the Holstein Breeders' Sale will be held. "The best arranged sale pavilion in the country."

The sale will be held in our new sale pavilion, where you will be comfortable, no matter what the weather. We will protect the buyer by handling all the papers, and if we cannot secure the papers, will return the purchase price. We will sell 40 cows that will be fresh or heavy springers, 20 of them with A. R. O. records from 14 to 31.46 lbs. butter in 7 days.

Fairview Milla Korndyke 2nd, a 31.46-lb. daughter of Rag Apple Korndyke 8th, bred to Erricson's Marathon Bess Burke bull whose 4 nearest dams average 1,220 lbs. in 365 days.

Piebe Wayne Clover Lawn out of a 784-lb. dam due Nov. 3rd to King Longfield Pearl Vale. The 11 dams of the calf she is carrying will average 1,041 lbs. butter in 365 days.

A 21.73-lb. cow due in December. A 19.33-lb. cow due sale time. We will sell 2-year-old heifers due to freshen out of dams up to 26 lbs. also a fine bunch of yearling heifers. These cows are bred to some of the best bulls in the state, such as Marathon Bess Burke, Pabst Pontiac Adonis, son of Pabst Korndyke Cornflower that sold at the National for $30,000. Meadow Holm Ona Button Hartog, one of the best bred yearly bulls in the state out of a 1,223-lb. cow. We will sell 20 bulls, most of them ready for service, including 2 herd bulls. A 3-month-old son of the 31-lb. cow mentioned above and sired by a 37-lb. bull. Twin bulls out of a 28-lb. cow and sired by 37-lb. sire, 3 sons of Pabst Pontiac Adonis and 2 sons of Pabst Johanna Pontiac, 2 grandsons of Sir Pietertje Ormsby Mercedes 37th, and Johanna King Segis, whose dam was a 40-lb. cow. 2 herd bulls, one whose dam is making 900 lbs.

Catalogues ready October 1st. Sale will start 10:30 a. m. sharp. Dinner served in dining room.

Auctioneers: Mack, Pohlman and Wolf. Frank Everson in the Box

S. H. Bird, Sales Manager, South Byron, Wis.

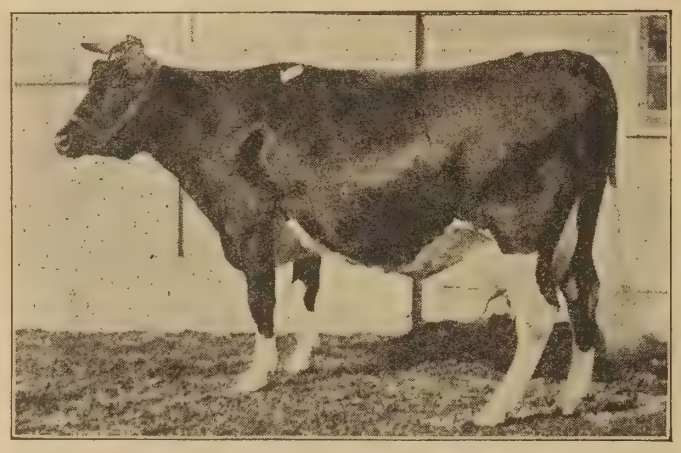
Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

A Son of this Cow for Sale

Born December 25, 1919



GLEN CANARY ORMSBY MERCEDES

Butter 365 days at 5 yrs.	722.60
Butter 7 days	27.94
Butter 365 days at 2 yrs.	550.86
Butter 7 days	20.71

She is a full sister to Glen Canary De Kol 2d, the junior four-year-old that last year made 1,323 lbs. butter for the year. She is sired by Sir Pietertje Ormsby Mercedes, the greatest sire of yearly producers and show ring winners in the world. Her dam is Glen Canary De Kol, former world's champion with 34.59 lbs. butter in 7 days and 139 lbs. in 30 days. She is by Sir Johanna Canary De Kol and from the grand champion, Glen De Kol Artis 3d, a daughter of Homestead Jr. De Kol.

THE SIRE OF THE CALF

is Uneeda King Alcartra. He is from a 33-lb. daughter of Johanna McKinley Segis, the only 40-lb. son of King Segis. His sire is the $50,000 bull, King Segis Pontiac Alcartra, a son of King Segis Pontiac and from a world's record daughter of King of the Pontiacs.

Price on this Calf is $1000.00

E. C. SCHROEDER FARMS,

Moorhead *(A Federal Accredited Herd)* **Minnesota.**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

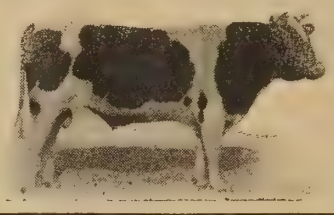
M. L. ENRIGHT, - - - - - - - E. GRAND FORKS, MINN.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota



THE LASHBROOK HERD

Headed by SIR WALKER SEGIS HOMESTEAD, first prize yearling bull, Chicago and Waterloo, 1919. His dam, Beauty Beets Walker Segis, made 25,343 lbs. milk, 1,040 lbs. butter in one year, World's Record for Senior two-year-old heifer. Her sire, KING SEGIS PONTIAC COUNT. We have several choice bull calves, two to five months old, from A. R. O. cows or cows on yearly test. $400—$500 apiece. Send for pedigrees and photos.

A. J. LASHBROOK, NORTHFIELD, MINN.
Herd Federally Accredited

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Hitch Your Wagon

to a STAR. If you want the blood of King Segis Pontiac Count and haven't the money to get a son, investigate King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired." Our bull circular is stamped. We are waiting for your address.

FLECKS FARMS, Faribault, Minn.

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d, a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

Wright Co. Holstein Breeders' Sale

65 head, bulls, cows and heifers with excellent type, guaranteed absolutely right in every way. Don't forget the date, October 5th, 1920. Howard Lake, Minn. Sale in New Sale Pavilion, at Fair grounds. Send for Catalogue.

Chas. Oby, Maple Lake, Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**

H. R. Searles, Mgr. Rochester, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

Oak Dale Farms



King Oak Segis Pontiac

King Oak Segis Pontiac—159556—was born March 11, 1915, sired by the wonderful King Segis Pontiac Count, the most sensational sire of the breed today.

As a four-year-old, his dam formerly held the world's record for year milk production. His sire's dam was the first to produce 1,000 lbs. of butterfat in a year and to make 37 lbs. of butter in seven days.

Come to Oak Dale Farms or write us and learn more about this sensational sire.

Oak Dale Farms
INCORPORATED
AUSTIN, MINNESOTA

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm
William Schmidt, Prop. St. Peter, Minn.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN.

Grandsons of Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Foundation Breeders' Sale

October 28-29 At the Minnesota State Fair Grounds

How Would You Like to Select Foundation Stock from Among the Good Ones Owned By:

ARDEN FARMS
W. S. MOSCRIP
LONG LAKE LIVE STOCK CO.
GEO. H. ELWELL
J. B. IRWIN
MINERAL SPRINGS STOCK FARM
ED. KIEKENAPP
H. P. FISCHER
THE E. C. SCHROEDER FARMS

You can do it and buy them at your own price on Oct. 28—29. It will be a sale of strictly high class consignments from these herds.

Watch later issues for more complete information.



For catalogs address

The Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Building, Minneapolis, Minnesota

West Concord Security Sale

October 19th, at West Concord, Minn.

70 Registered Holsteins 70

This is a sale of young cows and heifers, many of them due to very well-known sires this fall and early winter. They are a typy, handsome lot that will undoubtedly sell within the reach of any man able to handle pure-breds.

This is a good opportunity for the ambitious dairyman to get foundation stock at reasonable prices.

Every animal is guaranteed absolutely right.



Write for your catalog today. You will find among the entries several of interest to you.

The Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Building - - Minneapolis, Minnesota

Carver County Holstein Sale

October 21 at Waconia, Minn.

56 Registered Holsteins
30 High Grade Holsteins

The Holstein breeders of Carver County will hold their first county consignment sale on the 21st. The 56 pure-breds are straight, healthy, well bred stuff, some with official records, many with C. T. A. records.

In the selection of these entries, the sale committee has made every effort to make them representative of the herds of Carver County. They have selected the cattle to meet the demands of the breeder who wants clean, well bred females that will sell for average rather than extremely high prices. If you want that kind, don't fail to attend.

The 30 grades are top notch cows and heifers, most of them bred for fall and winter freshening. A great many of them have excellent C. T. A. records. All of them are the result of the use of very good pure-bred sires for several generations. Get your catalog at once from

The Minnesota Holstein-Friesian Breeders' Ass'n
406 Market Bank Building - Minneapolis, Minnesota

Complete Dispersion
of the
Spring Meadow Holstein Herd
Oct. 6 at St. Charles, Minn.
22 Registered Holsteins
50 High Grades

The Oldest Herd of Holsteins in Union County

This herd was established in 1880 and since that time has continued to be improved by the use of the best of pure-bred sires,—bulls that have always been selected for type and production.

The females, both grade and pure-bred are bred for fall and early winter freshening.

Write me for more complete information and remember the sale will be held at the farm October 6th.

HARRY G. COX, Proprietor

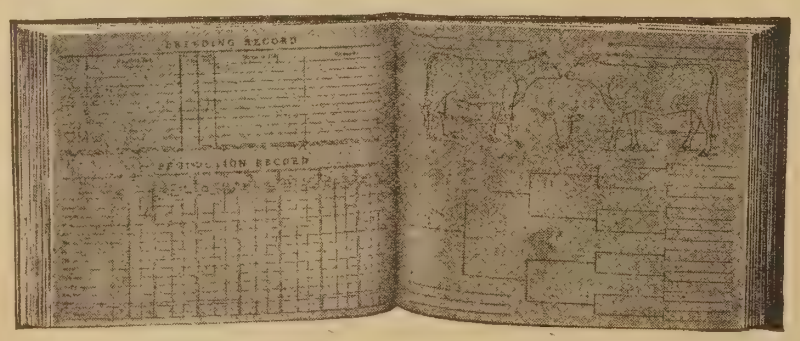
St. Charles - - - - Minnesota

R. W. CULBERTSON, Auctioneer

Mr. Breeder of Registered Cattle

Here's something Hoard's Dairyman has worked out for your convenience! It gives you a neat, handy place for

All the Records You Need To Keep



Breeding Record **Four Generation**
Production Record **Pedigree**

In a Book You'll Be Glad To Show

96 Pages **Indexed**
"A-No. 1" Paper **Bound in Buckram**
Lettered in Gold

Price $2.50 postage prepaid. Just what you've been looking for! Make checks and money orders payable to—and mail order direct to

HOARD'S DAIRYMAN, **FORT ATKINSON, WISCONSIN.**

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Consignment Sale, Oct. 6-7

of Registered and A. R. O. Holstein-Friesian Cattle, at the
Hornless Holstein Farms, Clarks Summit, Pa.

10 Miles North of Scranton, Penna., on the D. L. & W. Railroad and Northern Electric Ry.

—ABOUT 100 HEAD—

Many of them sired by the **BEST DAMMED BULL** of the breed, a son of the **WORLD'S RECORD SENIOR 4-YEAR-OLD, KEYSTONE BEAUTY PLUM JOHANNA**, with 25,787.5 lbs. of milk, 1,294.7 lbs. of butter, strictly official in a year, 4% **IN LONG TIME TEST.** Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30-lb. cows; son of a cow with 1,056 lbs. in semi-official test. 100 animals from herds under Federal supervision. Some of the consignments sold on a 60-day re-test. Many animals **NATURALLY HORNLESS.**

GEORGE E. STEVENSON, **SCRANTON, PA.**

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **C. I. Reamer, North Liberty, Ind.**

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

Facts in BLACK & WHITE

Ten Pure-bred Holstein Cows Against 20 Scrubs

Two neighbors, on adjoining farms—one milks 20 scrub cows—the other 10 pure-bred Holsteins. They care for their cows in the same way; they get almost the same amount of cream and the same sized check from the factory where both sell their milk. Though both men take in the same amount of money, the man with the scrubs uses the whole of his receipts to pay running expenses, while the Holstein man lays aside nearly half. Another item; The Holstein man feeds his skimmilk to pure-bred calves; the other man feeds his to scrub calves. It costs no more to raise a $100.00 pure-bred than to raise a $30.00 scrub.

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

DAIRY SALE

ABSOLUTE DISPERSAL

At SEDALIA, MO.,

Wednesday, October 6, 1920

150 High Grade 150

Holstein, Jersey and Guernsey

Cows and Heifers

This is all high class stock of our own raising and will be a golden opportunity to secure good dairy cows as foundation stock. A few high grade Hereford stock, cows and heifers.

1 Extra good Registered Guernsey Bull
1 Extra good Registered Holstein Bull out of A. R. O. cow.

Sale to be held at Farm known as the B. W. Gorrell Farm, 4 miles northeast of town. (Rain or shine.)

Sale Opens at 10:00 o'clock Sharp—Dinner on the Grounds

H. E. & HARRY COLVIN

AUCTIONEERS:
Charley and Kemp Hieronymus and Clay Harned



A GRANDSON OF "COUNT"

from a 28.5-lb. dam that is now on yearly test.

His sire, Sir Johanna Fayne Segis Pontiac, is by King Segis Pontiac Count and from one of the best daughters of Oak De Kol Ollie Homestead.

His own dam produced 28.5 lbs. of butter from nearly 700 lbs. milk in 7 days and is doing very well on semi-official test.

The calf himself, herd No. B. 55, is a dandy and one we know will suit. First check for $600 takes him.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

Now Is the Time

To select your bull for next winter's use.

Select a son from Woodcrest Pietje Clyde, our herd sire.

7 days	365 days
33.07 butter	970.48 butter
523 milk	22,558.40 milk

He has 4 20-lb. Junior 2-year-olds including one 26.58-lb. Illinois State Champion. They are from *A. R. O. Dams* up to 27 lbs. butter and 636 lbs. milk. Prices reasonable.

JOHN SEXAUER & SONS
BELVIDERE, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

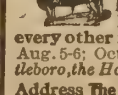
A. F. Randolph, Prop., CANTON, ILL.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS, - - CADDOA, COL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont**, the **First Tuesday and Wednesday of every other month**, Feb. 4-5; Apr. 1-2; June 3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

Our Twenty-Sixth Sale

October 12 and 13

will consist of choice selected Holstein-Friesian cattle free from all blemishes or defects, in fine condition. No animal over eight years or under six months. This will be a distinctly

Quality Sale of Foundation Stock

The Purebred Live Stock Sales Co. of Brattleboro, Vermont, Inc.

Two-Year-Old Sire

His two nearest dams average for 7-day production nearly 34 lbs. butter. For yearly production they average better than 1,000 lbs. butter.

He is well grown, a show animal, and free from disease. Worthy to head a top notch herd. Priced for quick sale.

He has been used in a small registered herd the past year. We want him placed in a herd where his daughters will be tested. If you need a herd sire, with 7-day and yearly production, combined with good individuality, here is your chance.

Don't delay, write us.

Hargrove & Arnold, Norwalk, Iowa

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Two Ormsby Bulls

Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

Both tuberculin tested and guaranteed right.

Pinehurst Farms Co., Sheboygan Falls, Wis.

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

M&P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Sons of a 37-Lb. Ormsby Bull

whose dam, full sister, three-fourths sister and maternal sister have all held state records. Herd under Federal supervision.

BLUEBELL FARM. RICEVILLE, IOWA.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Grandson of Sir Pietertje Ormsby Mercedes 37th

Born May 15, 1920, out of a daughter of Sir P. O. M. 44th. This royally bred calf is a fine individual and priced right for the farmer or small breeder. Let us tell you about him.

CERRO GORDO FARMS, Mason City, Iowa

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

HOME FARM HOLSTEIN FRIESIANS

A Son of Woodcrest Sir Clyde

born March 1920, three-fourths white and straight as a line.

His sire is a son of the great 33-lb. and 970-lb. cow, Alma Clyde. His dam has 26.43 lbs. in 7 days, 105.6 lbs. in 30 days, 98.8 lbs. milk in a day. She has 3 records averaging 25 lbs. and 3 daughters with 2-year-old records of 20.2 lbs. 18.38 and 18.2 lbs. in 7 days.

Write for photo, price and pedigree.

W. B. BARNEY & SONS - - - - - Chapin, Iowa

When writing advertisers please mention Hoard's Dairyman.



The National Dairymen's Sale

Chicago, October 13 and 14

In Connection With The National Dairy Show

A Quality Sale of National Proportions Representing the Best in Black and White Cattle that all America can offer

The Consignors—

Jno. A. Bell, Jr., Coraopolis, Pa.
Iowana Farms, Davenport, Ia.
Dr. B. B. Davis, Omaha, Neb.
Bloomingdale Herd, Somerville, N. J.
Jno. M. Tobin, Allegan, Mich.
Antrim Farms, Syracuse, N. Y.
Brentwood Farm, Abington, Pa.
Arden Farms, St. Paul, Minn.
Loeb Farms, Charlevoix, Mich.
Geo. P. Appleman, Mulvane, Kans.
Bridgford Holstein Co., Patterson, Cal.
Stubbs Farm Co., Mulvane, Kans.
W. D. Robens, Poland, N. Y.
Allana Farms, Dixon, Cal.
W. H. Mace, Cortland, N. Y.
Toyon Farm Ass'n, San Francisco, Cal.
French Bros., Shipman, Ill.
Dr. Egil Boeckman, St. Paul, Minn.
J. B. Irwin, St. Paul, Minn.
H. Morgenthau, Jr., Hopewell Junction, N. Y.
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Schmitt & Shafer, Evansville, Ind.
W. B. Barney & Sons, Chapin, Ia.
Morgan Farms, Chesterton, Ind.
R. G. Williams & Sons, Canton, Pa.
Tousey Farm, Hinsdale, Ill.
Jno. R. Stephenson, Holton, Kans.
Bert Irwin, Mt. Carroll, Ill.
Lilliberk Farms, Homer, Mich.
E. E. Muirhead, Clarkson, Ont.
F. S. Stimson, Hollywood, Wash.
W. S. Moscrip, Lake Elmo, Minn.
Ramsey County Home, N. St. Paul, Minn.
Yates Farms, Orchard Park, N. Y.

The distinguished breeders here listed are bringing together for this sale an array of individuals of Dairy Show Quality—The World's Greatest Producers and America's Finest Show Animals.

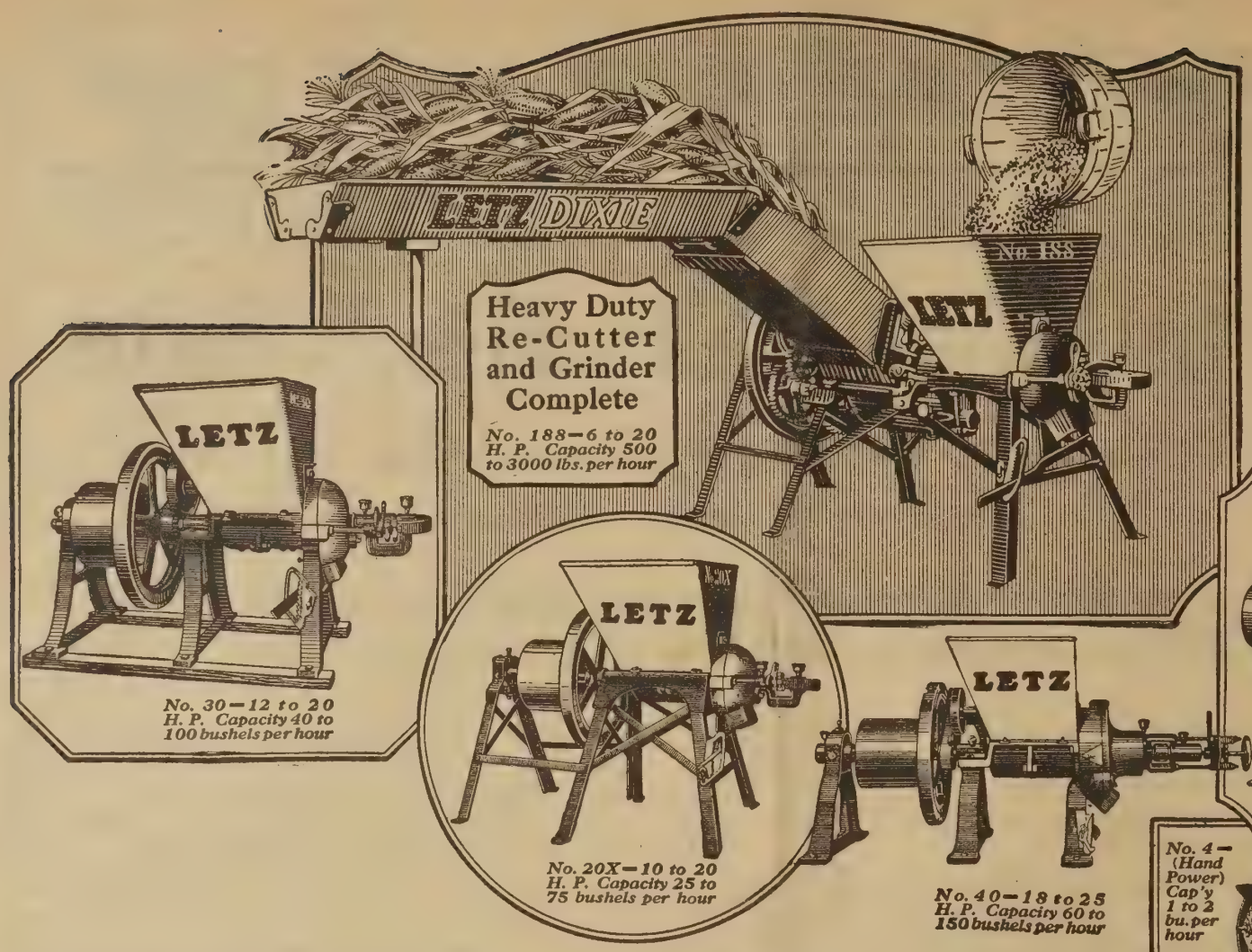
In the sale will be such outstanding attractions as 20,000-lb. yearly producers in considerable number including several 2-year-olds that have crossed and are soon to cross the 20,000-lb. mark; splendid sons and daughters of 20,000-lb. yearly record cows and heifers; 1,000-lb. yearly butter record cows and heifers and sons and daughters of these and like extraordinary producers; many of the leading present-day prize-winners in prominent state fairs and cattle congresses, with a goodly proportion of the sale animals entered to compete for prizes at the National Dairy Show.

Has a Sale of this character ever before been staged?

Come to The National Dairy Show and judge for yourself.

A 60-day Guaranty Sale of the World's Greatest Producers and America's Leading Show Cattle

THE NATIONAL DAIRYMEN'S SALE—E. M. Hastings Co., Managers, Pulaski, New York



America's Only Complete Line of Hi-Efficiency Feed Mills

FOR thirty years we have been manufacturing feed mills for the farms of America and Foreign Countries.

Today, hundreds of thousands of satisfied users attest to Letz supremacy.

During all these years, we have constantly striven to improve our product—to add to our line—to broaden its sphere of usefulness. And now, with the advent of the Letz DIXIE, the wonderful combined *re-cutter* and *grinder* above, our line is complete, including, as it does, a mill for every grinding purpose.

This means that regardless of your locality or grinding requirements, you can have a mill built for your purpose by America's best-known specialists, to do your particular kind of grinding—and a mill that does it with greater speed, ease and economy than any other known process.

Letz Feed Mills are famous for their grinding plates. These plates have thousands of keen-cutting, scissor-like edges that cut, grind and pulverize all in one operation. No process equals them in fine-cutting, light-running, durability, and capacity.

These plates are self-sharpening—grind anything grindable—are guaranteed to outlast any three sets of ordinary grinding plates.

Letz Feed Mills enable every feeder to realize fully upon the profit-advantages of feeding ground feed as compared with whole grain. In reduced feed costs and fatter cattle, the Letz Mill soon pays for itself. Every farm should have one. Investigate!

Free. Two books that every feeder should read—one, our catalog; the other, "Scientific Feeding." Write for them today. Address

AUTHORIZED AGENTS



Buy at this "Sign of the Letz" and get dependable grinder service. Displayed by leading dealers everywhere.

LETZ

America's Leading Feed Mill

LETZ MANUFACTURING COMPANY · 219 EAST ROAD · CROWN POINT, IND

Wholesale Distributing Houses in 46 States Insure Prompt Service Through Letz Dealers Everywhere

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX — FORT ATKINSON, WIS., OCTOBER 8, 1920. — Number 12

YOU GET WHAT YOU ADVERTISE

A Plea for Telling the Bright Side of Farming

CHARLES G. MORRIS, CONNECTICUT

SUPPOSE Jones, who runs a glass foundry, advertises for help as follows: "Wanted—Men to work in a glass foundry where they make milk bottles. The work is cussed hot. There is so much dust and smoke that the men must keep on goggles and wear heavy, dirty, working clothes. It takes a rugged man to stand up to the heat and dirt. When the men leave the foundry at the end of a shift they are pretty well exhausted and as it is a continuous business, they have to be on the job seven days a week. Applicants are sorely needed as we are always short of help." How would that do as an advertisement to bring out assistants?

This imaginary advertisement doesn't say that though the work is hot, the foundry keeps an unlimited supply of cold drinking water always available. It doesn't say that though it takes a rugged man to stand up to the heat and dirt, the foundry furnishes free a house physician who is on hand all the time and examines every employee from time to time to see that every one of them is in a condition to take no harm from the work that he must do. It doesn't say that the foundry pays the premium for the health insurance of every employee, to protect them if they do break down. It doesn't say that though the men are exhausted when their shift ends, it is an eight-hour shift only, with ten minutes out of each hour for rest and a cigarette if they choose. It doesn't say that though it is necessarily a continuous business while the work is on, the men get two full months' lay off under pay during the summer months when the weather makes glass making impractical. It doesn't say that because the work is unpleasant the pay is high.

If the advertisement was run as I first stated it how many boys would leave the farm for that glass foundry? Why should they not? Jones would have told the truth and nothing but the truth. He needs labor. His industry is an essential. If it slows down the cities will suffer, among other things, for want of milk. Jones rather appears to be entitled to special government favor in the way of getting him help, does he not?

Come back now to the farm. There is no way of selling a product like advertising it, and what is sufficiently advertised is to a large measure believed if it has a foundation of truth. How many farmers are in the habit of advertising for help in their business on the same lines as I have imagined Jones advertising his?

Take a long time to think that last question over. Read a farm paper, or two, or three. Take a pad of writing paper and write down all the names you think of where you've heard the owners of the names "knock" farming. (Mr. Editor, please leave a white space here for those who do stop to think it over, to write down the names of the farmers they can remember who advertise all the advantages of farm life in glowing terms and who never tell of the disagreeable part of farm life without showing promptly the compensating joy or offset. The space I ask for won't have to be very large.)

Now if you have done as I asked you to do, is it necessary for me to ask you why the farm labor problem is acute? In my judgment it is not because farm labor is hard. Many kinds of city labor are harder. In my judgment it is not because the farmer has to do without certain things. In the city you have to do without everything you can't pay for. You can also buy everything you need in the country if you have the money and time to get it. The farm labor problem is not acute because the life is lonely. Any farm boy who has gone to the big city will tell you that in spite of the lights and the possibility of excitement and entertainment in the city, there is no place in the world so lonely for a stranger as the city. A stranger on the farm soon finds good friends at every turn. A man may be practically alone in a city for months or years before he finds a real friend. The farm labor problem is not acute for lack of play hours or for something to do in them. Farm boys and men play differently from city boys and men, of course, but no boy in the country ever stood as city boys often stand in their "play time" on a street corner for hours with absolutely nothing to do because they don't know of any game they will be permitted to play in the street and there is nothing else to do but stand around idle unless they have the money to buy entertainment with. They are not permitted to throw a ball, they can't fly a kite, they can't so much as run a decent race or try out long jumps without making a special expedition to a park or public playground where a lot of other boys may fight them for the use of the space they need to play in.

In my judgment, the farm labor problem is not acute because the hours are long. They assuredly are long at certain seasons of the year but at other seasons of the year the actual hours spent in work on most farms is amazingly short. May I hazard the guess, and I'll allow anybody to come back at me with sworn figures to the contrary without getting mad—so long as he gives full details—may I hazard the guess that the average farmer spends less time in actual, constructive work in a year than the average man does in the city who works both with his hands and his head. I will admit that at every season of the year a long time passes between the first task of the morning and the last task of the evening, but there are at certain seasons of the year many idle hours or large parts of hours between the two.

I also refuse to credit the farmer —any more than I do the city man— with the time he spends in household duties. By specifying household du-

(Continued on page 498)



International Film Service

COMING HOME FROM SWISS PASTURES AT MILKING TIME

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
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Subscription Rates

Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Yields Increased by Good Rotation

Oats in a four-year crop rotation at University Farm, Minnesota, yielded 23.5 per cent more than the same crop grown continuously, and oats and corn, alternated, yielded 25.9 per cent more than the same crops grown on the same land year after year.

Corn grown in rotation at the station yielded approximately 25 per cent higher than corn grown continuously.

"At this rate," says A. C. Army, head of the section of farm crops at the station, "approximately one-fourth of a farm could be cropped to clover hay and still secure the same number of bushels of oats or of corn as if the entire acreage were planted to those cereals. The beneficial effect of the cultivated crop on the oat crop following was very marked."

Select Seed Corn From Healthy Stalks

The high yielding qualities of pure-bred Wisconsin corn can be maintained at their high level of productiveness by careful seed selection.

"The ears should be selected in the field from large healthy stalks," says E. D. Holden of the agronomy department of the University of Wisconsin. "Weak or sick stalks pass on these characters to their offspring. It is just as important that the ears come from good stalks as it is that the ears themselves are well shaped and healthy. The curing of the corn for seed is equally important. Seed ears hung up indoors and dried by artificial heat are the best guarantee of a strong germination and a vigorous stand next spring."



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Hobgoblin Time

The yellow corn shocks in the field,
Like ghosts, raise waving arms in air,
And there are goblin-folk concealed,
That speed about, each rubber-heeled,
With strange low calls and flowing hair.
When dusk comes on and pale moons rise
We see the glitter of their eyes.

Each pumpkin has a sort of face
That grins at you with yellow cheeks.
And fairies, winged and full o' grace,
Along the wind-blown meadow race
Whence green has gone these many weeks.
The night is heavy with the sighs
Of autumn, as its pulse-beat dies.

Across the lawn and down the lane,
You see a wraith—a filmy thing
That sobs as if it was in pain,
Then hides behind the stacked-up grain.
It is dead summer time a'wing.
And from the north and grey-dark skies
The first frail little snowflake flies.

The Oldest Dairyman's Philosophy

Just when you begin to think that everything has gone to pot, you see a county fair with all the year's bounty, and you know that the world hasn't changed much.

Measles are purty bad, and I never cared for smallpox, but farm machinery pitted with rust has got 'em both beat.

Living in the country really begins to seem beautiful after you have lived in the city.

Mother's milk is powerful hard to beat—but a pedigree cow is a substitute you needn't be afraid of.

Jones—"How were your crops this season just past?"

Smith—"Well, we had a handsome yield of summer boarders and that prize bull of mine kept three hundred and twelve automobile picnics out of the apple orchard."

His Nightmare

The farm hand had been given a nice room on the second floor. And at one o'clock morning, the folks down stairs heard him moaning and groaning. Farmer Brown hustled up to see what was happening.

"Hey, wake up," he called, nudging the hired man in the ribs, "you have a nightmare, I guess. What's the matter?"

"Oh, it was awful," exclaimed the hired man, rubbing his eyes and sitting on the edge of the bed. "I dreamed I got up at half past five and worked steady, right on through to six in the evening, without complainin'."

The Resting Time

The resting time is here at last,
When heavy crops and chores are past.
When barns are bulging with the hay
And every place is packed that way.
At night, get out the checker-board,
And drink sweet cider from a gourd.

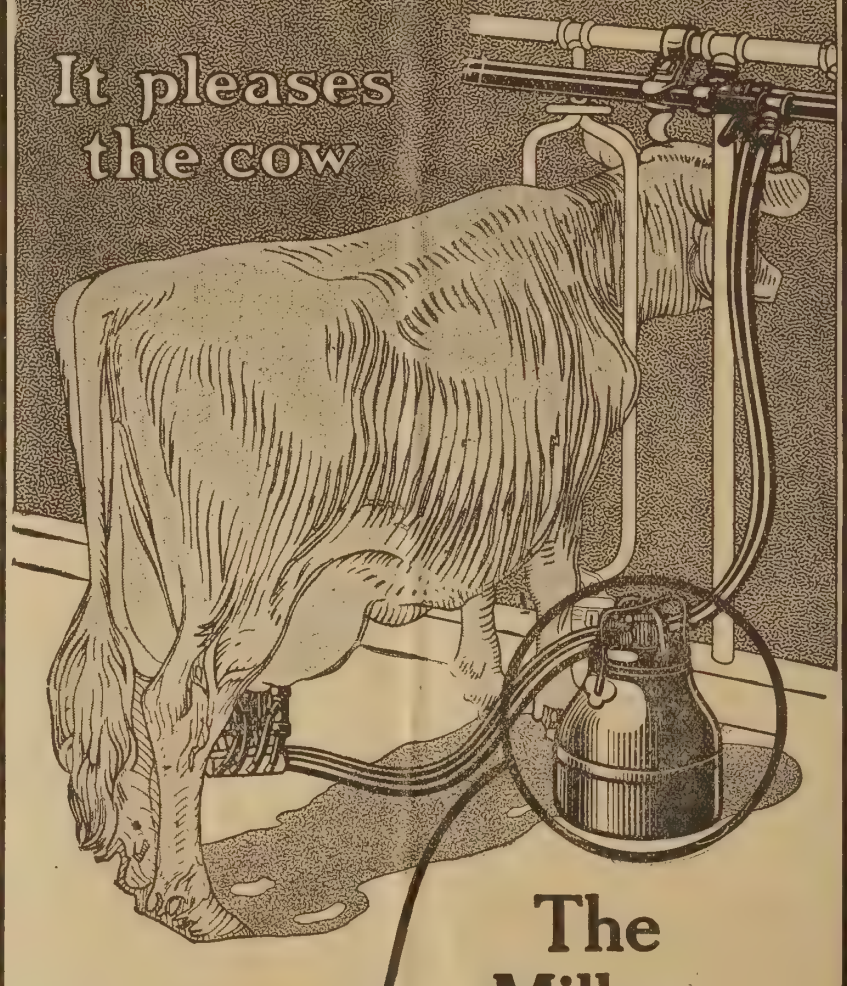
The resting time is here, when we
Can go upon a movie spree,
And sign for every dance in town,
And buy the wife a nice new gown.
It pays to work because, in time,
You know that loafin' is no crime.

A Jersey farmer has made a collection of all the different bugs and slugs and beetles that bother a farmer. When you see the collection, you are willing to believe that one Irish potato is worth its weight in gold.

The oldest dairyman says that a calf has plenty of good common sense, but its legs is just naturally too weak to stand the strain.

The De Laval Milker

It pleases the cow





The Milker Pail

The De Laval Milker pail embodies several important and distinctive features, making it unusually substantial and serviceable, as well as easy to keep clean. The pail is made of sanitary white metal, with nickel-plated brass fittings. It is of sanitary design with no crevices or sharp corners where bacteria might congregate, and is heavily reinforced and protected where the wear comes — made to give long and satisfactory service as other De Laval products.

The De Laval Milker unit is designed to milk one cow at a time and the pail is therefore of a size to be conveniently handled and cleaned, and permits the keeping of each cow's individual records.

The De Laval Milker is positive and uniform in action from day to day, and it is faster, more reliable and more sanitary than any other method of milking.

Wherever cows are milked the world over, the name "De Laval" stands for quality and highest value to the user.

Write to nearest De Laval office for Milker Catalog, stating number of cows being milked

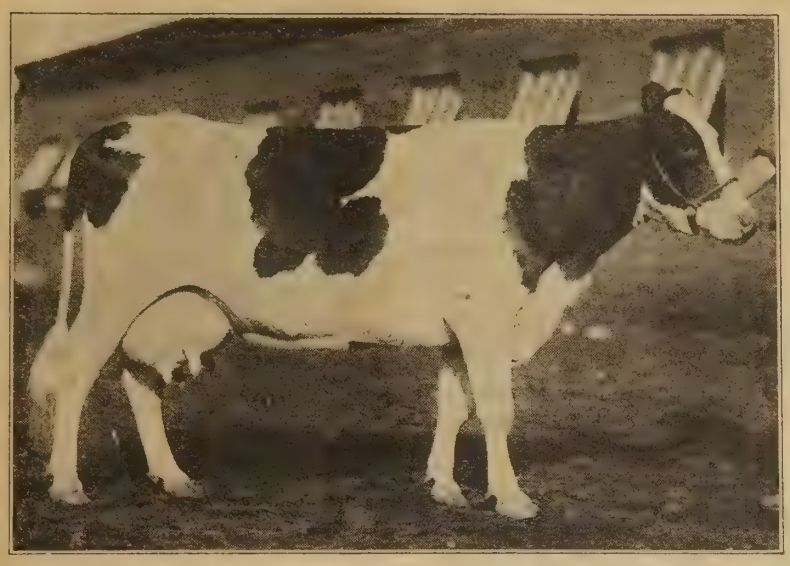
The De Laval Separator Co.

165 Broadway New York
29 East Madison Street Chicago
61 Beale Street San Francisco

COW TEST COWS AT WISCONSIN

THE "Farmers' Barn" at the Wisconsin State Fair this year was crowded as never before with people who came to see and stopped to learn something of the lessons taught by cow testing associations. The exhibit this year attracted larger numbers because the lessons of common sense handling and breeding cows for economy in milk production were presented more graphically and so as to arrest attention.

The exhibit was gathered together by Messrs. Cramer, Searles, and Sutton, the men in charge of the organization and supervision of the Wisconsin cow testing associations. They had the assistance of many visiting testers and association members who gathered there, as is the way of all men interested in the same thing. The discussions of these men were a liberal education in cow management. Such gatherings not only bring instruction and information, but they create an interest in the job that is, perhaps, quite as important in any successful business.



WISCONSIN CHAMPION COW TEST COW

For the second time "Aggie", a grade Holstein owned by Huenink & Lubach of the Cedar Grove Association, takes the blue ribbon for the highest producer in Wisconsin Cow Testing Associations. Her last record is 16,742 lbs. milk containing 689 lbs. fat. Did it pay to feed Aggie? It cost $277, but her 8 tons of milk brought $566, to say nothing of the value of her heifer calf and the $120 in prize money she has won in the past two years.

Five distinct exhibits were shown. These included the high record cow in association work, four daughters of a sire that increased their production over that of their dam, two cows from the same herd that showed a marked difference in production, three generations of females sired by bred-for-production bulls, and three cows with calves by their sires to indicate the value of purchasing bred-for-production calves, even though they be grades.



THEIR SIRE WENT TO THE BUTCHER

These four daughters of Eggler Mercedes, owned by H. A. Brace & Sons of the Buena Vista—Richland Association, averaged 86 lbs. fat more than their dams. This was an increase of 35 per cent that is ascribed to their sire. He was sold for beef and brought a high price ($160), yet his former owners would value him at $2,000 if they could have his services now. Who will invent a workable system to keep these good bulls in the community?

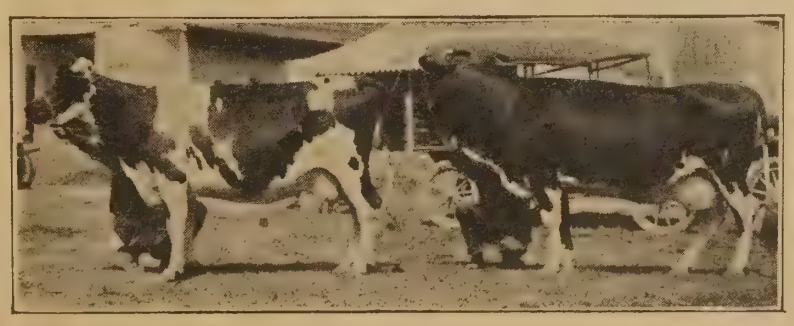
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Aggie, a grade Holstein, received the blue ribbon and the $60 prize money as the highest producer last year among the 52,000 cows on test in the 115 cow testing associations in Wisconsin. Her production totaled 16,542 pounds milk containing 689.2 pounds fat. For three successive years in association work, Aggie has an average of 15,659 pounds milk containing 634.6 pounds fat. The value of her milk last year was $566 and the feed cost was $277, leaving a profit of $288 above cost of feed. During her association year she received 2 tons of alfalfa hay, 4 tons of corn silage, and 2½ tons of grain, in addition to 150 days on pasture. Her grain mixture consisted of 200 pounds of bran, 150 pounds of ground oats, 100 pounds of gluten, 100 pounds of corn meal, 50 pounds of oil meal, and 25 pounds of cottonseed meal.

This seven-year-old cow, owned by Huenink & Lubach of the Cedar Grove Association, was also shown last year as the high cow and is to be exhibited again this year at the National Dairy Show in Chicago. At this year's state fair a special exhibit booth was set aside for Aggie that attracted so much attention that the alleyway was continually crowded with interested spectators. Bales of hay, sacks of grain, a small silo, and a plot of grass were used to picture to the eye and to emphasize her large consumption of feed, while her production of eight tons of milk was driven home by the use of large milk bottles presumed to hold 8,000 quarts. It was at once an exhibit of the cost of milk production and the profits that can be realized with high producing cows.

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The Cedar Grove Association is proud of its record and its members believe in advertising their good cows. They made a special exhibit of three cows and three calves to illustrate the value of association records and the difference in the productive ability of cows that is not always apparent to the eye. This association is selling its surplus heifer calves on the basis of the records made by their dams, fixing basic prices for each calf and then adding a certain amount for each ten pounds of fat the dam makes above a certain minimum. This exhibit was in charge of the tester, Herbert Molter, and the owners of the cattle shown were Mrs. Van Dries, Henry Navis, Ben Wissink, C. Olson & Sons, and Huenink & Lubach. Representatives of this association were on hand at all times to talk about the exhibit and the value of cow testing association records. They distributed the annual report of the association, showing the average production of all cows for the past year to be 9,024 pounds of milk containing 329 pounds fat, with 79 cows qualifying for the Wisconsin Register of Production with over 365 pounds fat.



"BALDY" AND "CURLY"

These two cows, owned by J. Reid & Sons of the North Lake Association, were fed practically alike and were both good cows. One cow made $158 more profit over cost of feed than the other. Can you pick her?

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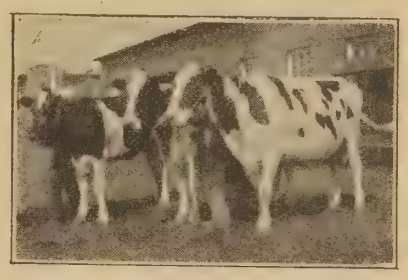
The old story of the sire that was found out too late was illustrated by four cows owned by H. A. Brace & Sons of the Buena Vista Association. These cows averaged 82 pounds fat more than the dams, an increase of 35 per cent in production that is ascribed to the milk prepotent qualities of their sire, Eggler Mercedes. Before his full worth was known, he was sold to the butcher for $160, but if his owner had kept possession of him, he would now be valued at not less than $2,000.

"Baldy" and "Curly" were loaned by W. Reid & Sons of the North Lake Association that they might tell their story to the thousands of Fair visitors. Although these two were both good producers and were fed practically the same amount of feed, Baldy made more than twice the profit that Curly did. Here are their records:

	Baldy	Curly
Milk, lbs.	14,679	8,947
Fat lbs.	594	274
Value of fat	$438	$251
Cost of feed	$166	$137
Income over cost of feed	$272	$114

⚜

Another argument for the use of bred-for-production bulls was that of the three cows from the Allenton—Kohlsville Association. Three generations of grade Holsteins consisting of dam, daughter, and granddaughter were shown. The dam, owned by Louis Pamperin, has a record of 12,237 pounds milk containing 410 pounds fat. Her daughter, owned by John Meyer, has a record of 12,752 pounds milk containing 467 pounds fat. The granddaughter has not freshened but shows in many ways greater promise than her dam or grandam. In this exhibit, however, attention was drawn to the desirability of keeping both type and production in mind. The granddaughter lacks somewhat in type and indicates the desirability of choosing a sire that will transmit to her offspring a straight topline. This exhibit was in charge of Mr. L. Henderson, the tester for this association.



THREE GENERATIONS—DAM, DAUGHTER, AND GRANDDAUGHTER

The daughter made 56 lbs. more fat than her dam. The granddaughter is off type, probably due to use of poor type of sire.

Pasturing Alfalfa

HOARD'S DAIRYMAN:—I notice in the Dairyman a little item to the effect that experiments are being conducted to determine the injury done to alfalfa when used for hog pasture.

Here at Shadeland Farm we have about four and one-half acres which has been used as a hog pasture for six or seven years. Last year I had 110 head on it. I cut about three tons of hay at the first cutting last year, a scant ton at the second cutting, and did not attempt to cut again at all. The hogs ran there and ate the grass to the ground and then rooted into the ground after the alfalfa roots.

The hogs had the run of the alfalfa until I disposed of them in January and at that time the field looked almost as though it had been fall plowed. There was scarcely a sign of grass anywhere. I thought the alfalfa was ruined and expected to plow it in the spring and plant corn.

The next spring was very wet and our work was delayed, so I did not get to it as soon as I intended. In the meantime I noticed a film of green all over the field. The alfalfa came on nicely and the rough treatment given it by the hogs seemed to do it good. About 20 head of pure-breds run in that field this summer, have cut about four tons the first time, about three the second, and will have couple or more tons when I cut it the third time as I shall in a few days. The pigs have no doubt done it injury but the gains more than offset it.

Nebraska. E. E. CARTER.

OHIO'S CORNFIELD DAY

CLARENCE M. BAKER, OHIO

OHIO farmers have been accustomed for many years to make pilgrimages to the Ohio Experiment Station during the last week of June to view at that place plots of wheat growing in fertility experiments which are second in importance to only one experiment station in the world, that of the Rothamsted Station in England. These pilgrimages have so increased that a new annual event has been established—that of Cornfield Day. Such a day was held at the Ohio Experiment Station, September 10.

While the northern half of Ohio has produced enormous quantities of wheat ever since the completion of the Erie Canal in 1825, its importance as a corn growing state has never been lessened. The fertile river valleys of northeastern Ohio have been producing wonderful crops of corn, while, of course, the western portion of Ohio is the beginning of the great corn belt. Experiments with corn, however, have never been regarded with so much interest as that of wheat until the past few years when the price of corn had advanced materially and the problems of wheat growing had become more complicated.



THE EFFECT OF FIVE TONS OF BARNYARD MANURE ON CORN PLATS AT THE OHIO EXPERIMENT STATION



CHARLES E. THORNE, DIRECTOR OHIO EXPERIMENT STATION, ADDRESSING FARMERS ON CORNFIELD DAY

Ohio has seen a general shifting of the wheat crop to land adapted and fitted to this crop particularly, so that up to within a few years ago the corn crop was forced to take second place; but with the advance of live stock husbandry, particularly dairying, corn in Ohio has been receiving much attention.

An early record of Ohio farming shows that corn was valued from 4 to 6 cents a bushel, the bushel being figured in the early days in liquid form; that is, by the amount of whisky that it would produce. Only a few years ago corn was selling for almost $2.50 a bushel, still going to distilleries.

No other crop furnishes so much potential food as corn for the Ohio farmer. Corn supplemented with tankage makes an ideal ration for fattening hogs. Corn may also form the basal part of the ration for laying hens. When ensiled, the corn plant, of course, furnishes an excellent form of roughage for the dairy cow, while the ground grain is valuable for producing milk.

The average yield of corn in Ohio is about 34 bushels. At the Ohio Experiment Station, however, where corn is grown in regular rotation followed by oats, wheat, and clover, a field of 10 acres has averaged 75 bushels for the past 18 years. This has been done on clay loam soil with underlying sandstone rock but a few feet from the surface. The fertilizer applied to maintain this average consists of 8 tons of manure each on the corn and wheat, with the addition of 160 pounds of acid phosphate to those crops. Lime is also applied at the rate of 2 tons per acre of ground limestone to the rotation. In the spring an application of nitrate of soda or dried blood is made to the wheat to guarantee plenty of fertility

(Continued on page 491)

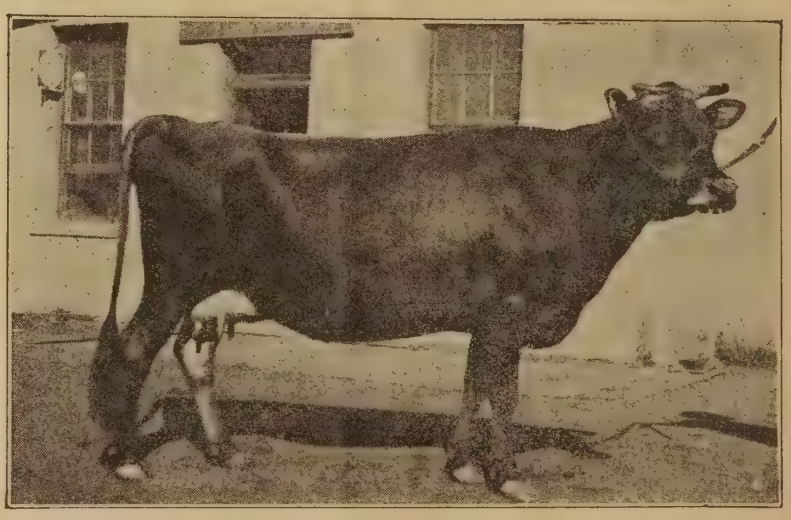
Kansas Shows Good Herds

FRANK M. CHASE, KANSAS

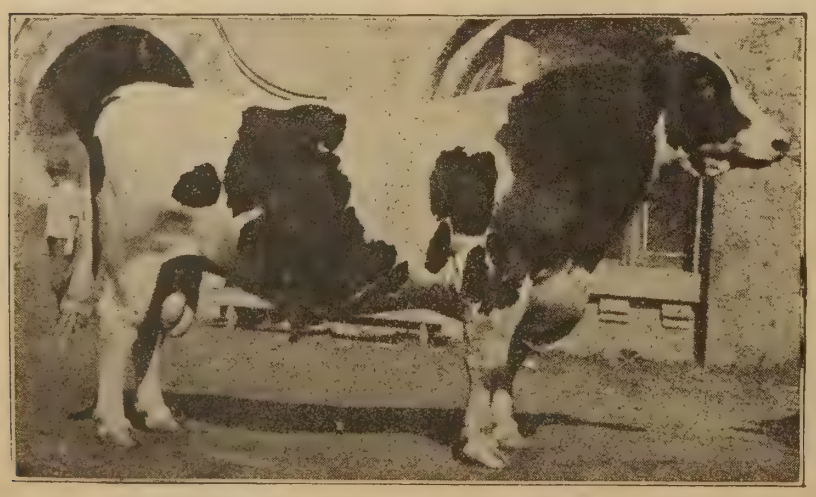
THE dairy cattle exhibit at the Kansas Free Fair, held at Topeka Sept. 13 to 18, was the best representation of the state's milk making industry that has ever appeared. This was the natural result of both the strides which the Sunflower State is making in dairying and of some well-placed breed promotion work.

Most striking of all was the pronounced rally of the Jerseys. In former years so many of the prizes offered at the Kansas Fairs went to Jersey entries from outside the state that little but discouragement was left to the home breeders. The annual Jersey show at Topeka, in fact, had come to be largely an exhibition of animals from other states. This year the Kansas Jersey breeders resolved to bring out more home breeding and, as an extra measure of their enthusiasm, to "beat the Holsteins". Though they did not quite succeed in the latter, in point of numbers, they did bring to the fair more exhibitors and more entries than ever before. The quality also was as good as in any previous year.

There were eight exhibitors, seven being from Kansas. Five of them never had shown at either of their state fairs before. The Kansas breeders practically monopolized the show, permitting but one championship to leave the state. Seventy-eight head of the Channel Island cattle were shown.



COUNTESS LAD'S ROSEBUD, SENIOR AND GRAND CHAMPION JERSEY FEMALE AT KANSAS FREE FAIR
OWNED BY R. A. GILLILAND, KANSAS



JOHANNA BONHEUR CHAMPION 2D, SENIOR AND GRAND CHAMPION HOLSTEIN BULL AT KANSAS FREE FAIR
OWNED BY U. S. DISCIPLINARY BARRACKS, KANSAS

Jerseys

Much of this extraordinary increase in Jersey interest has been due to the activities of F. W. Atkeson, who has been serving as field man for the Southwest Jersey Cattle Club, with headquarters at Kansas City, Mo., since June 1. The offering of $150 in Kansas special prizes was also a drawing card for entries. Of this amount the American Jersey Cattle Club provided one-half, the remainder coming from the fair association.

The Jersey exhibitors of Kansas were T. F. Doran, R. A. Gilliland, E. L. M. Benfer, J. T. Herold, Frank Knopf, W. R. Linton, and Dr. Parker, and LaForce Farm of Missouri. L. S. Gillette of Iowa served as judge.

The aged bull class, containing seven animals, was probably equal or better than this class at any other western state fair this year. LaForce Farm won first in this class with Oxford Majesty Gold Medal, this bull also being senior and grand champion. Knopf was second with Countess Lad's Majesty; Gilliland third on Fern's Interesting Count. An unnamed junior calf won the junior bull championship for Linton.

Countess Lad's Rosebud won first in aged cows. She was exhibited by Gilliland, subsequently being made senior and grand champion female. Fleurete's Queen and Oxford's Victress, both shown by La Force, were the second and third prize aged cows. Owl's Financial Viola, a senior year-

(Continued on page 490)

TWELVE ACRES IN ARKANSAS

R. L. FOSTER, ARKANSAS

HOT SPRINGS, Arkansas, may be noted for its hot baths, health resorts, beautiful golf links, and mineral waters, but a mile and a half north of the city lies a little 12-acre farm which is attracting the attention of all those interested in agriculture from the entire state because of the fact that it is returning a net profit of $350 monthly to the owner. The owner of the farm is Harry Jones, owner of the Majestic Hotel of Hot Springs.

Good dairy cows, pure-bred Duroc-Jerseys, and White Leghorn hens are demonstrating to Arkansas that good stock properly cared for is a sound and profitable investment. The same methods by which Mr. Jones progressed from a dishwasher in a small hotel to owner of the largest hotel in Hot Springs is making his little farm such a success. These methods are sound business principles, knowing where the money is being made, and watching for a chance to improve the business.

The twelve acres of the farm are the typical rocky formation of the Ozarks and the land is very poor. No pasture of any value is growing on the farm at present. All feed for the cows and chickens has to be purchased. This fall Mr. Jones plans to put all manure he can secure on the land and plant it to a crop of rye.

Ask Mr. Jones the record of any of his cows for any day or month since they came to his farm and he can tell you to the pound what it is. If you want to know how much it costs him to produce a gallon of milk he can tell you. He knows how much it costs to put fresh eggs in his kitchen, also that the best pork he ever hung up in his refrigerators costs him practically nothing—but that comes later in the story.

When he found that his cooks were having to break from ten to a dozen eggs to get one that would stand up and keep its eye open for "eggs up", Mr. Jones started thinking. Then one day a year ago when a poultryman was guest at his hotel and said that Arkansas could be made a great poultry state because of cheap land so well adapted to poultry raising, the thinking broke into an idea. Why not produce his own eggs? And the 12-acre farm is the result. To the flock of chickens was added a herd of Holsteins and a herd of Duroc-Jerseys. And now fresh eggs, pork, and milk make satisfied guests in his hotel each day. Although eggs and pork from the farm are not quite enough to supply the entire demand the dairy herd furnishes enough milk for the dining room and ice cream parlor run in connection with the hotel.

For the eggs and milk he pays the farm the same price as he would have to pay for these products on the local market. For his pork he pays the farm the central market prices.

A herd of 13 of the finest Holstein cows has been established within a year. Six of the cows are registered. One of the cows is Johanna Aconeth Plymouth Korndyke, who at the age of two years and four months produced 316.6 lbs. of milk and 9.195 lbs. of butterfat on a seven-day test. Bersheba Netherland Lass is another who at seven years produced 511.1 pounds of milk and 16.097 pounds of butterfat on a seven-day test.

All feed for the cows is bought. Alfalfa, cotton seed hulls, and a commercially prepared feed constitute the ration. The milk produced by the herd costs from 21 to 24 cents a gallon when retail milk is selling for 65 cents a gallon. During last April six cows of the herd prodcued 6,883 pounds of milk and one cow was nearly ready to turn dry when the record was taken.

The dairy barn will accommodate 24 head and is built for cow comfort. It is equipped with steel stanchions and has a cement floor which is washed daily. During the day the cows are given the range of a five-acre lot.

A six-month-old registered bull has been purchased. He is out of Elmview Spot Ormsby whose record at 4½ years is 579.7 pounds of milk, 22.38 pounds of butterfat on the seven-day test. The entire dairy herd is being tested for entry on the tuberculosis free accredited herd list.

Eight registered Duroc-Jersey sows and a registered herd boar form the basis for the swine herd. A veritable hog's paradise is the observer's thought when he sees the excellent care given this herd. Well ventilated hog houses, a cement wallowing hole with running water, and cement feeding floors with plenty of room for movement for the herd constitute the equipment of the hog lot.

Contrary to the opinion of many swine feeders and breeders Mr. Jones is raising his hogs on nothing but the slop and garbage from the hotel. No grain is fed except to the sows which are about to farrow. Three weeks before farrowing grain is added to the sow's ration which is continued for about two weeks after the litter comes. Garbage is hauled from the hotel twice daily. Extra care is shown that no rotten or soured material is in the garbage when fed. It is given to the hogs in steel troughs on a cement feeding floor which is washed frequently to insure cleanliness. All the hogs are in fine condition and fatten easily on the slop ration, declares Mr. Jones. He recently butchered 9,600 pounds of pork for his hotel from the herd which he says is the finest he ever brought to his hotel. The carcasses averaged 175 pounds and the best part of it was that it cost practically nothing to produce this pork as it worked what otherwise would have been total waste into money.



THESE SOWS ARE FATTENED WITH THE GARBAGE FROM THE HOTEL DINING ROOM

One of the most attractive features of the farm and the one that makes the poultry enthusiast stop his car at the gate and inspect the farm is the beautiful flock of White Leghorns. When he started the farm Mr. Jones purchased 265 hens that laid an average of 193 eggs monthly during February, March, and April of this year. Now the flock contains 500 of the best hens and 450 of the finest pullets to be seen anywhere in Arkansas. And the eggs they furnish to the hotel keep their eyes open when "Adam and Eve come out on a raft."

The present flock is still failing to supply the entire demand of the dining room as the hotel when running full capacity requires from 800 to 900 eggs for breakfast alone. But within another year Mr. Jones plans to increase the flock to meet his entire demand. All young roosters of course go to furnish the guests with real southern fried chicken dinners.

The flock, during the first six months of this year, produced eggs for 17.5 cents a dozen. The chickens are fed a specially prepared mixture, a commercial scratch feed, and bread scraps. Feed is thrown to them on a cement floor covered with straw.

The poultry house is 120 by 20 feet and built of the very best material. The building when completed cost $2,200 and is modern to the last word in poultry houses. It has a concrete floor and is divided into six units 20 feet square open front type. It is equipped with self feeding and self watering devices. The hens have quarters almost in keeping with the guests who stop at the hotel. In front of the building a young orchard has been planted. Five acres or more are available for range with an abundance of shade. Windows which light the poultry house are glass alternated with screen and equipped with canvas cover which can be drawn over the open windows in storms or bad weather.

Every fixture of the entire farm is the very best. The farm has been made attractive by the consistent color and arrangement of the buildings. From the cottage occupied by the manager, Carl Hirshfield, to the pump house the buildings are neat and well taken care of.

Mr. Jones does nothing in a slip shod manner. He says he is not yet satisfied with his farm and is going to increase his stock and make it still better. He has just purchased enough land adjoining his farm to total 65 acres which he intends to furnish to capacity. When one has become acquainted with Mr. Jones no doubt remains but that he will accomplish his purpose. Coming to Arkansas 20 years ago when Hot Springs had more gambling houses than bath houses, he has had a chance to see Arkansas come from its lethargy to take its rightful place in the ranks of the states. He is interested in farming, farmers, and farm boys and girls. He is never too busy to follow the work of the club boys and girls of the state. The club members and county agent can always depend upon Mr. Jones being behind them morally and financially.

As Mr. Jones further improves his farm and live stock, Hot Springs need not only boast of her wonderful health resort, but may also point with pride to another practical demonstration of the success that can be gained with enthusiasm and good methods.



THIS HERD OF HOLSTEINS FURNISHED THE ENTIRE MILK SUPPLY FOR MAJESTIC HOTEL AND THE ICE CREAM PARLOR OF HOT SPRINGS

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A High Grade Milk Can at a Low Cost

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THE ELGIN PATTERN is a shipping can. Has Guardian bottom, patented hoopless, heavy gauge, one-piece, double rimmed Paragon cover. Will stand up under severe treatment. Price, 5 gal. $4.30, 8 gal. $5.90, 10 gal. $6.15

THE CLIMAX PATTERN is a long-lived can for delivering milk or cream. Lighter than Elgin but is strongly constructed, heavily tinned, and smoothly soldered. Has 20th Century handles, Paragon covers. Price, 5 gal. $3.80, 8 gal. $4.65, 10 gal. $4.85. All cans F. O. B. Chicago or nearest branch. *Send for Big Mail Order Dairy Catalog.* Prices guaranteed until Nov. 8, 1920.

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The Creamery Package Mfg. Company

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CHICAGO.



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Carbola kills lice, mites, fly-eggs, etc., and helps prevent the germs of contagious diseases—roup, canker, mange, glanders, white diarrhea, contagious abortion, etc.—from getting a start and spreading through flocks and herds. It is harmless to the smallest chick or stock that licks a painted surface. It makes it easier to do work that must be done and it works day and night—a constant protection for your profits.

Use It Instead of Whitewash and Disinfectants

to paint health and sunshine into the dark corners of poultry houses, stables, pig pens, cellars, garages, warehouses, factories, out-buildings, etc. Used regularly by Experiment Stations, Agricultural Colleges, and by thousands of poultry, dairy and breeding farms, because it gives good results and saves time, labor and money. Get some today—have it on hand when wanted. It doesn't spoil.

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Uncle Sam's Hired Men Who Serve You

Dr. Wm. A. Taylor, Chief, Bureau of Plant Industry, Works Quietly, But See What Has Been Done

W. J. MADDOX

This is the fifth of a series of articles this publication is running, in co-operation with the U. S. Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the Department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITOR.

THE club itself, together with its high sounding name—Pathological Seminar—has become but little more than a memory, except in the minds of the handful of men who in the early days of the United States Department of Agriculture met at one another's homes in Washington to discuss various questions connected with their work. They were all young men, at the outset of their careers—a group destined to produce some of the foremost leaders in their respective lines of work.

Among the men who forgathered at these informal talks was a quiet, thoughtful, painstaking young fellow, fresh from the fruit country of Michigan. He brought to the discussions not only the theoretical knowledge gained from a course at the Michigan Agricultural College, but the actual practical experience in fruit growing obtained on a real fruit farm where he spent most of his youth. He was a good listener, and soon gained among his companions that confidence usually given to quiet men of his type. His comments, when he made them, were well thought out and aptly put, a characteristic that has marked his utterances ever since.

A Thorough Investigator

This man was Dr. William A. Taylor, who was to become one of the department's most efficient administrative officers, Chief of the Bureau of Plant Industry, and a man recognized throughout the country as one of the highest authorities on the growing, storage, shipment, and handling of fruits. He is known as a very thorough investigator, one who carefully weighs all essential factors before arriving at a decision.

While Dr. Taylor came to the department shortly after graduation from college, he brought with him a great store of practical farming knowledge gained as a boy, which has stood him in good stead upon many occasions in making his bureau of actual, first hand aid not only to the farmers of the country but to the people generally.

One very striking instance of this is revealed in the part played by the group of workers of which he had charge in coming to the aid of the orange shippers and the railways, who for a long time were at odds over the heavy deterioration of oranges during transit. The loss averaged about 20 per cent of the fruit shipped, due chiefly to blue-mold. The railways and the shippers appealed to the Department of Agriculture. It was found that many slight abrasions were made in the fruit in picking and handling it. At the suggestion of department specialists the sharp points on the instruments used in cutting the fruit from the trees were filed down; the oranges were cut close without stems, and workers who handled the fruit were provided with gloves. By these measures the loss was cut down from 20 to 2 per cent. At that time the orange crop was valued at about $30,000,000 a year.



JOHANNA MUTUAL GIRL, GRAND CHAMPION HOLSTEIN COW AT 1920 MICHIGAN STATE FAIR
OWNED BY MICHIGAN AGRICULTURAL COLLEGE

Among the important accomplishments of the bureau under Dr. Taylor's direction is its work to improve methods of handling, transportation, and storage of fruits, vegetables, and other agricultural products. It demonstrated the importance of precooling fruit before shipment and the necessity of shipping in ventilated cars. Its specialists worked out improvements in the construction of refrigerator cars to insure the necessary ventilation. This not only greatly reduced the cost of transportation, but also greatly lessened losses of fruit and vegetables in transit.

Notable Work With Cotton

The bureau has done notable work in the breeding and distribution of superior varieties of cotton. These have been established in commercial



DR. WM. A. TAYLOR, CHIEF, BUREAU OF PLANT INDUSTRY, U. S. DEPARTMENT OF AGRICULTURE

cultivation in different parts of the cotton producing areas to which they are specifically adapted. The most important varieties bred and distributed are the Lone Star, Trice, Acala, Columbia, Durango, Meade, and Pima. The value of this work can be realized when it is known that the present annual production of these varieties is estimated at between $200,000,000 and $300,000,000.

Among the new varieties of grain introduced and developed in this country by the bureau is the famous durum wheat. This achievement met with rapid success, and durum wheat is now grown on a large scale. The 1918 crop was estimated at slightly less than $100,000,000. Not only this, but an entirely new industry for this country, the manufacture of macaroni, for which this wheat is particularly suitable, was established.

Not Measurable in Dollars

These are only a few examples of what Dr. Taylor and the highly efficient organization of which he is the administrative head is accomplishing for the producers, and consequently for the consumers of the country. It is impossible to estimate the value of the work of the Bureau of Plant Industry to the people of the country in dollars and cents. We can point to any one case, such as that of the orange growers, and show what it meant to them to have their losses cut down from 20 per cent to 2 per cent. The immediate, obvious gain is to a very small group of interests, but there is no calculating the indirect benefits to business and the public generally. It requires nothing short of a Benthamite mathematician to reckon them. It is very much like the dropping of a stone into a pool of water. The ripples spread in all directions and their impulse is felt over a wide area. There is no telling where the commercial ripples from this pebble do not touch—the banks, the railways, the manufacturers of the many supplies incident to the business and others almost without end. With our present complex commercial life, it would hardly be an exaggeration to say that there is no line of business that does not feel the influence in some way.

The password of the bureau is "science for service". The bureau stands ready at all times to place the knowledge and labors of its highly skilled specialists at the disposal of any individual or group of citizens who seek such advice upon any subject connected with plant industry—and this covers a very wide field, indeed. It includes investigations of the causes, prevention, and treatment of diseases of plants, including fruit, ornamental, shade, and forest trees; the introduction of new varieties of plants; the improvement and utilization of grazing lands; use of irrigated lands; soil fertility; and the improvement and production of cereals. Many others could be mentioned, for the work touches plant life in all its relations to agriculture.

Heads Large Staff

Under Dr. Taylor's direction, there are approximately 2,103 employees, 868 of whom are located in Washington, D. C., and 1,235 engaged in the work of the bureau outside of that city. As occasion arises representatives are sent out to various foreign countries on exploration work in search of new plants that can be introduced and developed profitably in the United States, or to study plant diseases where there is danger of introduction to this country.

Among the important field activities of the bureau is that of investigating and studying methods for eradication of plant diseases. It endeavors to diagnose and determine the cause of new plant diseases just as soon as they develop or are introduced into the United States so that measures can be taken without delay for checking their spread or means advised for restricting their further introduction. Notable work along this line has been done with regard to diseases of wheat, cotton, vegetables, and fruit. Closely connected with this is the work of stamping out carriers of destructive plant diseases such as the common barberry which is considered responsible for the epidemics of black stem rust of wheat which so greatly reduce the crop of spring wheat in some seasons.

It is as head of a work of such scope that Dr. Taylor is in a position to place his great talents at the service of the country. He was born at



BRIARBANK QUEEN 2D, GRAND CHAMPION GUERNSEY COW AT 1920 MICHIGAN STATE FAIR
OWNED BY W. T. BARBOUR, MICHIGAN

PRIMROSE User Wins Grand Champion Butter Prize

[NEWS ITEM]

"Mrs. Ada Willbanks, of Fancy Prairie, Illinois, was awarded the Grand Champion prize for farm dairy butter at the 1920 Illinois State Fair at Springfield. Mrs. Willbanks' bulk butter tested 93½ and her prints tested 93¾."



Mrs. Willbanks uses a

PRIMROSE Cream Separator

What does her achievement signify to you? To the State Fair judges it, no doubt, signified, among other things, that the PRIMROSE not only gets all the cream but recovers it in perfect condition for prize butter making. Low speed and perfect bowl construction insure cream that makes good butter.

Your nearby International full-line dealer will be glad to explain PRIMROSE *butter-fat-saving efficiency to you. See him.*

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92 BRANCH HOUSES IN THE UNITED STATES

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At a Cost of 1½c a Cord!

Send today for Big Special Offer and Low Direct Price on the OTTAWA, the One-Man Saw, the first made and sold direct from factory to user. Greatest labor saver and money-maker ever invented. Saws any size log at the rate of a foot a minute. Does the work of ten men. As easily moved from log to log or cut to cut as any wheelbarrow. 4-Cycle Frost Proof Engine has balanced crank shaft—pulls over 4 H-P. Magneto equipped; no batteries needed. **Special Clutch** lever controlled enables you to start and stop saw with engine running. Automatic Speed Governor. Easy to move, costs less to operate. When not sawing, engine runs pumps, feed mills and other machinery. Pulley furnished.



Cuts Down Trees Level with Ground Leaving No Stump.

OTTAWA LOG SAW

Cuts Down Trees—Saws Logs By Power
Patent Applied For



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Write at once for Free Book and Low Price.

Cash or Easy Payments Shipped direct from factory.
30 Days Trial No waiting—no delay. Let the OTTAWA saw your logs and pay for itself as you use it. **10-YEAR GUARANTEE.**
See the OTTAWA at work on your farm once and you will never give it up. Thousands in use, every owner a booster. Out-saws any other on the market. Send today for FREE BOOK and Special Offer.

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The ACORN Drinking Bowl

permits her to obtain fresh water by simply poking her nose into the bowl—valve opens automatically giving fresh flow of water. Write for circular.

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Cotton Seed Meal

OWL Brand *DOVE Brand* *BAR-Z Brand* *JAY Brand*

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Established 1875 Incorporated 1915
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Branches: Dallas, Atlanta, Chicago.
Our Brand on the Tag Means Quality in the Bag.



Buy Extra Miles

Racine Country Road Fabric Tires are built for severe country road service. That's why

"Country Roads" for Country Miles

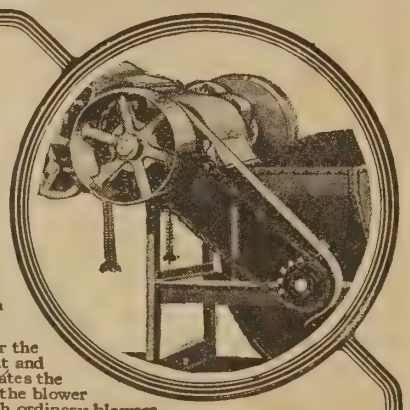
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Racine Tires—Country Road Fabric and Multi-Mile Cord—are Extra Tested so that all Racine Tires are perfect tires. Racine Absorbing Shock Strip is an added insurance of extra miles because it welds perfectly the tread and carcass of Racine Tires. Be sure the name RACINE RUBBER COMPANY is on every tire you buy.

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Racine, Wis.

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RACINE RUBBER COMPANY EXTRA TESTED TIRES
COUNTRY ROAD FABRIC
TIRES

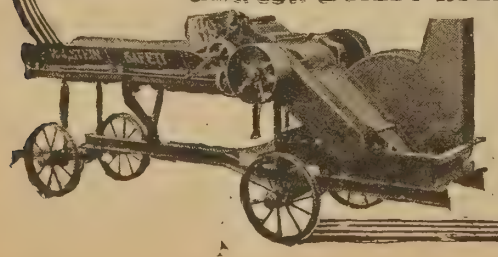
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In the Holstein method of driving, the sprocket is connected direct to the pulley, securing the advantage of uninterrupted drive of blower should cutter head be thrown out of action by safety-stop device.

Hence the blower continues to operate after the knives stop, thoroughly emptying the spout and fan chamber of all cut silage. This eliminates the annoyance of opening up and cleaning out the blower before starting up again as is necessary with ordinary blowers.

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For the information of progressive farmers we have published an interesting booklet on modern ensilage cutting devices. It's yours for the asking. Send for it today.

The Meili-Blumberg Company
Dept. B New Holstein, Wis.

Chelsea, Michigan, June 23, 1863. He was graduated from the Michigan Agricultural College in 1888 with the degree of B. S., receiving his doctor's degree from that institution in 1913. Before entering the government service he managed a fruit farm and nursery in Michigan. He entered the Department of Agriculture as an assistant pomologist in 1891 and served successively as assistant chief of the Division of Pomology, pomologist in charge of field investigations, and as assistant chief of the bureau until his appointment as chief in March, 1913.

Montana State Fair

Though the 1920 Montana State Fair at Helena on September 13—18 was an outstanding success as an agricultural exposition, the dairy cattle division gave a sharper indication than ever before that the farmer-dairymen and breeders of the state find it hard to show and keep work going on at the same time at home. Breeders of dairy cattle who attended but were not showing have expressed a determination to back up the fair with an entry list next year that shall be representative in number as well as quality of the dairy interests of the state.

There was merit and good type in the showing of Holsteins and Jerseys at the state fair. No outside herds showed. The two breeds constituted the entire exhibit. Ribbons were placed by Oscar Tretsven of Bozeman.

Holsteins

Exhibitors:—J. A. Woll, Helena Holstein-Friesian Co., Louis N. Hall, C. E. Davenport, L. B. Ryman, Albert Woolf, and Delbert Woolf, all of Montana.

The awards follow:

Bull three years or over—1, Woll on Sir Korndyke Louis Beets; 2, Helena Holstein-Friesian Co. on King Netherland Zozo De Kol. Bull two years and under three—1, Helena Holstein-Friesian Co. on Pet Ondine De Kol. Junior yearling bull—1, Helena Holstein Co. on Junior Yuka Boone De Kol. Senior bull calf—1, Hall; 2 and 3, Helena Holstein Co. on Prince Seges Mountain De Kol, King Seges De Kol Otsego. Junior bull calf—1, Davenport on Lyon's Fayne Posch Pietertje; 2 and 3, Hall.

Cow four years or over—1 and 3, Hall on Butter Dorinda Echo and Butter Echo Sadie Vale; 2, Helena Holstein Co. on Daisy Katrina Otsego. Cow two years and under three—1, Hall on Epimenthens Finsk Korndyke. Senior yearling heifer—1, Hall; 2, Helena Holstein Co. Junior yearling heifer—1, Ryman. Senior heifer calf—1 and 3, Ryman; 2, Davenport. Junior heifer calf—1 and 3, Woolf; 2, Hall.

State Fair Holstein Special—Limited to breeders who have never shown cattle at Montana State Fair—Helena Holstein-Friesian Co. for bull two years and under three, Pet Ondine De Kol.

Senior and Grand Champion Bull—Pet Ondine De Kol. Junior Champion Bull—Fayne Posch Pietertje. Senior and Grand Champion Female—Butter Dorinda Echor. Junior Champion Cow—Elsie Korndyke De Kol.

Jerseys

Exhibitors:—Roy Van Horn, Louis N. Hall, and Mable Woods, all of Montana.

The awards follow:

Bull three years or over—1, Van Horn on Mona's Noble King. Senior yearling bull—1, Hall. Senior bull calf—1, Hall; 2, Van Horn. Junior bull calf—1, Hall; 2 and 3, Van Horn.

Cow four years or over—1, Hall on Dorothy Priscilla; 2 and 3, Van Horn on Mountain Ivy Beautie and Broadwater Hillman. Cow three years or over—1 and 2, Van Horn on Lively Brookside Maid and Ivy's Brookside Rose. Cow two years and under three—1, Van Horn, on Noble King's Lamberta. Senior yearling heifer—1, Van Horn on Noble's King's April Beauty. Junior yearling heifer calf—1, Mable Woods on Martha Washington; 2 and 3, Van Horn.

Graded herd, calf herd, get of sire, produce of cow, and state fair Jersey special—Van Horn.

Senior and Grand Champion Bull—Mona's Noble King. Junior Champion Bull—Hall. Senior and Grand Champion Cow—Dorothy Priscilla. Junior Champion Cow—Noble King's Lamberta.

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Healthy Grain

Seeds grow faster and mature into healthy grain when first freed from smuts by using *Formaldehyde*. This powerful disinfectant also destroys all grain rust and fungus growth.

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And butter so protected from dirt, dust and bad odors, brings top market prices.

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Write for free samples and book, "Better Butter". Full of valuable information for every dairyman.

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THE PATERSON PARCHMENT PAPER CO. PIONEER PASSAIC N.J. TRADE MARK

Silos At Half Price

I must clear my present warehouse before winter. About 200 silos left, which I will sell at half price as long as they last. Silos are well known make, new, built of genuine Clear Oregon Fir, and absolutely first class in every way. You have as good a chance at these as anyone else if you get your order in before they are gone. No partiality shown big buyers. Everybody treated fairly. Orders filled in order of their receipt. Prepared to make immediate shipment.

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118 Flood Building
MEADVILLE, PENNSYLVANIA

Meridale Jerseys Sold

Sixty-two Meridale Jerseys sold for $49,825, an average of $803, in the farm's first annual sale, September 17. One cow brought $6,600, one $3,600, and fourteen $1,000 or more each.

T. S. Cooper paid the top price of the sale for Jap's Mertha Lass, a seven-year-old daughter of the Imported Jap and a granddaughter of Spermfield Owl. This cow has four AA Register of Merit records, the best being 15,615.8 lbs. milk containing 803.76 lbs. fat and is now making her highest production. B. H. Bull and Son of Canada made the last bid before the selling price. The Canadian farm took the second high animal of the auction, Cid's Darling, a two-year-old daughter of The Cid, with Mr. Cooper the runner up. Geo. D. Taylor of New York secured ten head for an average of $565. Mr. Cooper's total purchase included six animals averaging just over $2,000. F. H. Berger bought four head for Jersey Crest Farm, Wisconsin, for $5,100.

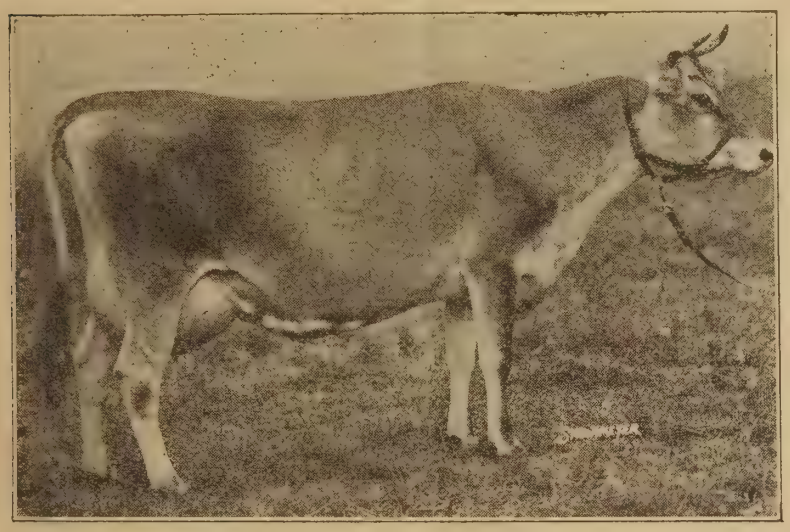
This was the first annual sale at Meridale Farms. The weather was favorable and a goodly crowd filled the new auction pavilion erected for this use. Here Jerseys have been bred for more than thirty years. No haphazard intermingling of blood lines has been followed, but a carefully planned program of constructive breeding. For ten years Register of Merit records have served as a guide and a measure of progress, the average of the 152 made in 1919 being 8,908 lbs. of 5.53 per cent milk, thirty-five being on cows two years old or less. There was sold in this auction some of the best production Jersey blood in America.

The attendance and the average selling price are tributes of confidence in this great breeding institution. The importation which was to be included was yet in quarantine. It was replaced in the auction by a selection of imported animals from the herd.

Owners of American bred Jerseys will find encouragement in the average reached. The top cow, for example, was bred in this country, as was her dam, though her sire came from the Island. Her records went a long way in selling her though her individuality was an important factor. Tom Dempsey said of her, "In my judgment Jap's Mertha Lass is the best cow, utility and beauty combined, that has ever been produced at Meridale Farms." But the high record blood in this sale did not bring the proportionate values with those placed on imported animals of type but without proved production. It was not fully appreciated. "Owl Interest" breeders failed to back up their convictions in bidding on a number of rightly bred animals of this family.

Tom Dempsey managed the sale and George Bain sold.

The following lists the animals selling above the average ($800) and gives their buyers:



JAP'S MERTHA LASS, PURCHASED FOR $6,600 BY T. S. COOPER, PENNSYLVANIA, AT THE MERIDALE JERSEY SALE

Brooks and Barker, Ohio	
Jap You'll Do	$1,200
T. S. Cooper, Pennsylvania	
Japs Mertha Lass	$6,600
Cid's Lady Nixey	1,000
The Cid's Karnak	2,500
Jap's Owl's Surprise	1,000
H. S. Rosenthal, New Jersey	
Pennithorpe's Patricia Imp.	$2,000
Edmund Butler, New York	
Meridale Stars and Stripes	$1,000
Oxford Carteret	1,000
B. H. Bull & Son, Canada	
Cid's Darling	$3,600
Jap Owl Wilhelmina	1,100
F. H. Berger, Wisconsin	
Sayda's Meridale Hester	$1,700
Crystal Achsa Belle	1,000
King's Koneta	800
Jap's Eminent Bess	1,600
W. A. Brewerton, Illinois	
Owl's Oxford Matilda	$1,500
Geo. D. Taylor, New York	
Heir's Achsa Belle	$950

National Dairy Banquet

We, the undersigned national organizations of the dairy industry representing every branch from production to final distribution, hereby join in call for a "get-together" banquet to be held Wednesday evening, October 13th, 7 p. m., at the La Salle Hotel, Chicago, Ill.

This will be the first occasion for many years when all branches of the industry have gotten together around the banquet table for a heart to heart conference and consideration of this great industry. Speakers of national prominence will be present and it will be an occasion long to be remembered in the annals of dairy development.

Every progressive man and woman interested in the development of this vital industry is cordially invited and urged to be present at this banquet. It is important that those in charge of the arrangements of the banquet be notified as early as possible for seat reservations. All are therefore earnestly requested to write the National Dairy Council, 910 South Michigan Ave., Chicago, for reservations, so that they will be received not later than October 9th, 1920.

NATIONAL CREAMERY BUTTERMAKERS' ASS'N.,
AYRSHIRE BREEDERS' ASSOCIATION,
ALLIED STATES CREAMERY ASSOCIATION,
BROWN SWISS CATTLE BREEDERS' ASS'N.,
AMERICAN ASS'N. OF CREAMERY BUTTER MFGS.,
NATIONAL DAIRY SHOW ASSOCIATION,
HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA,
NATIONAL DAIRY UNION,
AMERICAN JERSEY CATTLE CLUB,
NATIONAL DAIRY PRODUCTS COMMITTEE,
AMERICAN GUERNSEY CATTLE CLUB,
INTERNATIONAL MILK DEALERS' ASSOCIATION,
NATIONAL MILK PRODUCERS' FEDERATION,
NATIONAL DAIRY COUNCIL,

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That instrument is the Victrola. It is specially made to play Victor Records, and similarly Victor Records are made to be played on the Victrola. No combination of substitutes will enable you to hear the great artists of the world as they themselves have chosen to be heard.

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Victor Talking Machine Co., Camden, N. J.

Thousands of Happy Housewives in WESTERN CANADA



are helping their husbands to prosper—are glad they encouraged them to go where they could make a home of their own—save paying rent and reduce cost of living—where they could reach prosperity and independence by **buying on easy terms.**

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years has **yielded from 20 to 45 bushels of wheat to the acre.** Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. With such crops come prosperity, independence, good homes, and all the comforts and conveniences which make for happy living.

Farm Gardens—Poultry—Dairying

are sources of income second only to grain growing and stock raising. Good climate, good neighbors, churches, schools, rural telephone, etc., give you the opportunities of a new land with the conveniences of old settled districts.

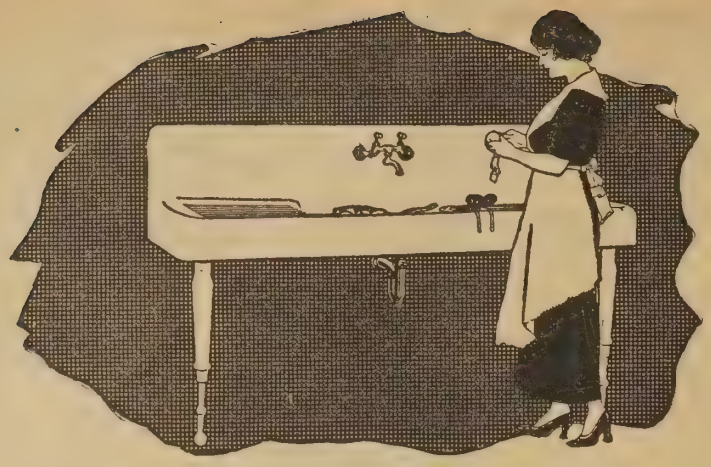
For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, and Alberta, reduced railway rates, etc., write Department of Immigration, Ottawa, Can., or

GEORGE A. HALL
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MILWAUKEE, WIS.
Canadian Government Agent.

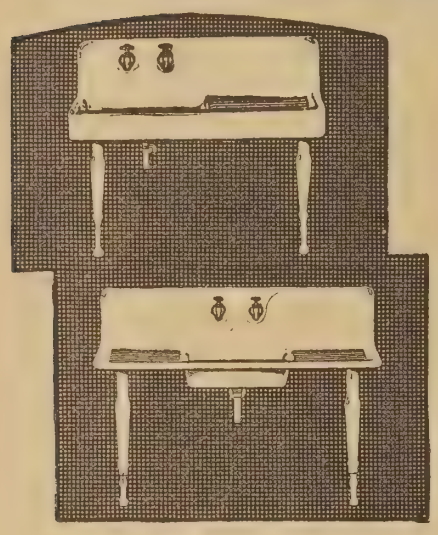
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Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. **Hoard's Dairyman, Fort Atkinson, Wis.**



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Why not make the kitchen more attractive? Install a "Standard" One-Piece White Enameled Sink—have hot or cold running water ready instantly when wanted—save yourself that disagreeable trip of running out to the well—save time in preparing meals and washing dishes.

You can install "Standard" Sinks in any home. Ask a Contracting Plumber or write us for color-printed catalogue of "Standard" Plumbing Fixtures for the Farm.

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"Standard" KITCHEN SINKS

"Here's Real Tobacco"

says the Good Judge

That gives a man more genuine chewing satisfaction than he ever got out of the ordinary kind.

Smaller chew, lasts longer—so it costs less to chew this class of tobacco.

And the good, rich tobacco taste gives a world of satisfaction.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles



W-B CUT is a long fine-cut tobacco
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Only $2 DOWN ONE YEAR TO PAY

$44 Buys the New Butterfly Jr. No. 2½ Light running, easy cleaning, close skimming, durable.

NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on

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30 DAYS' FREE TRIAL

and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (21)

ALBAUGH-DOVER CO., 2161 Marshall Bl. Chicago



Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

Fifty-one New York Guernseys Average $831

New York Guernsey breeders sold 51 selected animals in their second annual sale at Henry M. Sage's Fenbrook Farm, September 18, for $42,420. Geo. M. White's daughter of Ne Plus Ultra, More Confidence, topped the auction at $4,900, going to Highlands, owned by W. H. Gratwick, New York. Five others brought $2,000 or more each and twelve sold for $1,000 or more. Wm. Flinn of Pennsylvania bought six for $5,325; H. Bailey of New York, three for $5,450; and Geo. A. Cluett of Massachusetts four for $6,100.

The average quality of the consignment was high, superior to that of the sale a year ago. Yet the average of $831 received falls short of that in 1919 for $300. Several factors accounted for this, according to consignors—"tight money", the Langwater sale following the next week, and the fact that there were fewer beginners buying foundation stock this year. Extremely low prices were reached by a number of very high class animals, most of which were not popularly bred.

A list of animals selling for $650 or more is given below with their buyers:

Chilmark Farm, New York	
May King's Chenette	$2,250
W. H. Gratwick, New York	
More Confidence	$4,900
D. F. Clark, Wisconsin	
Rosemary of Pine Valley	$675
Wm. Flinn, Pennsylvania	
King Itchen's Galore	$1,000
King's Antoinette	1,650
Linden Lass of Harbor Hill	875
Saugerties May Jewel	650
E. F. Price, New York	
Imp. Wyebrook Moss Rose	$900
H. Bailey, New York	
Lenore's Golden Glow of High Point	$2,350
Sunset of High Point	1,100
Saugerties May Clyde	2,000
Harbor Hill, New York	
Lady of High Point	$1,450
H. H. Buckley, New York	
Proud Don's Flora	$650
G. B. Agnew, New York	
Proud Don's Buttercup	$700
Broad Acres Cherry	700
Geo. A. Cluett, Massachusetts	
Katonah's Glorianna	$700
Coronation Queen of Beaver Ridge	2,100
Governor's Iantha of Onisquethaw	1,650
Saugerties May Flower	1,650
H. E. Glazier, New York	
Imp. Durrington Lily 3rd	$800
E. B. Cadwell, New York	
Esther of Trout Brook	$700



MORE CONFIDENCE, DAUGHTER OF NE PLUS ULTRA, SOLD BY GEORGE WHITE TO W. H. GRATWICK, NEW YORK, FOR $4,900. THIS WAS THE TOP PRICE AT THE NEW YORK STATE GUERNSEY SALE

Our First Silo, Thirty-four Years Ago

As the silo filling season approaches, I am reminded of that first silo of ours way back in 1886. It was on our old Wisconsin farm not far from Madison that my father, some thirty-four years ago, called us boys to one side and proceeded to talk about a silo. He told how they were able to preserve corn so that it would be succulent and green even in winter. He said that the Wisconsin Experiment Station had thoroughly tested it out and demonstrated that they could keep silage in good condition for a year or more. He also spoke about silage being a very cheap feed and one that would be most productive when acres were considered. He figured how it would be possible to get from fifteen to twenty tons from an acre of corn and that this feed was high in carbohydrates. To balance the carbohydrates he would get cottonseed meal from the South, which in those early times was a very cheap by-product principally used for fertilizer. He also told how silage could be fed with clover hay and make a splendid balanced ration. I was a pretty young boy to take much interest but I do recall that in a very short time I was nailing boards on some 2x6's set upright in the barn. As I recall this room it was something like sixteen feet square. We boarded up with matched flooring two layers, putting tarred paper between. This made a bin sixteen feet square and about twenty feet high. We had a cutter which had a short carrier. I think it would lift the feed about eight or ten feet and in order to elevate the corn to the top of this bin it was necessary to shovel onto a second platform. The silage corn had been planted in the spring and a southern variety had been used, my father having in mind that he would build a silo and, if not, the corn would make a splendid lot of forage. This corn, as I recall it, was from twelve to fourteen feet high about the tenth of September. It was on a fertile piece of ground, sandy in character, and had been liberally spread with well rotted barnyard manure. I believe it did grow fifteen to twenty tons to the acre.

Of course, the news spread through the country about this silo, for certainly it was the first one anywhere around. At filling time we had quite an audience and some good old corn raisers were in the crowd. All were thoroughly convinced that the whole thing would be a failure. They had it planned that the silage would be smoking and rot; others, that it would cause spontaneous combustion and blow up, taking the roof off the barn and such other equipment as might hang to the timbers. Others believed it would poison the stock while still others only groaned and bewailed the fact that it was a terrible waste of good corn. There may have been a few who had faith that the scheme would work. If there were

they did not make it known to me, or at least I did not hear them commenting.

It was quite a job to fill this silo. I remember the fellow up on the scaffold had to use a scoop shovel and throw it up into the silo. We could cut faster than he could scoop and he would give out. I must admit that it was a job that required a stronger back than mind. It was easy to see that a few feet added on to the carrier would do away with two men and many slowdowns and rest periods. The corn was cut with a sled having big knives on each side. This we discovered was far superior to the hand corn knife system. The silage was thoroughly packed, mostly by boys, yours truly included, who wrestled or did gymnastic stunts on the surface. After all the corn was in we covered the top with tar paper and laid a lot of boards and lumber over this. I recall my father said the usual custom was to put on a few tons of rock but he was going to experiment and use a less weighty but more practical method.

This first silage proved to us that the silo was practical, economical, and altogether wise for the feeding of both beef and dairy cattle. We gave it a pretty good trial, wintered some colts and a mare or two, and only used a little straw and occasionally some hay. We fed several steers and produced very economic gains. Their ration was forty pounds of silage and two or three pounds of cottonseed meal per day. They also had access to good oat straw. The dairy cows received from twenty-five to thirty-five pounds and a grain ration with good clover hay. Of course, this silo did not keep the silage well. Much spoiled in the corners, but it demonstrated to us that the process was all right and it is gratifying to know that the good old state of Wisconsin now claims the use of more silos than any other state, perhaps double. I think that they are now using close to seventy-five thousand silos in Wisconsin and still it is one of the best states in the Union in which to sell silos. Though this silo experience was thirty-four years ago I am inclined to believe that from this early test we can still draw some valuable conclusions. It will take about thirty-four years more to get some men to see the benefit of the silo but they are few—practically all of the thinking, reading men of today recognize the value of the silo and know of its true worth. They have learned that it is the cheapest source of carbohydrates, which is the bulk of the ration for our animals. They know that it is best fed with some high protein feed in roughage such as alfalfa, clover, or cowpeas. With grain and concentrates it can be balanced by oil meal and cottonseed meal or bran and oats.

Improvements in machinery have made the silo much more valuable. The light tractor will soon be pulling the corn binder and I believe will elevate the corn to the wagon. The same tractor will pull this to the cutter and the cutter will cut and elevate the feed so that the heavy work will all be done by machinery. This wonderful new era which we are approaching demands that we study carefully this great feeding question and we will have to meet the present high costs of both labor and living. Machinery and economic production must be used to their limit. The cow keeper must figure carefully the earning of his acres. The summer silo is sure to replace much of our present pasture land. Fighting flies in a dry, weedy pasture is not only detrimental to the cow but is questionable economy from an acre earning standpoint. With a summer and winter silo and some good, fertile ground put into corn, and that in the silo, wonderful improvements can be made in profitable dairying.

Nebraska. A. L. HAECKER.

Work

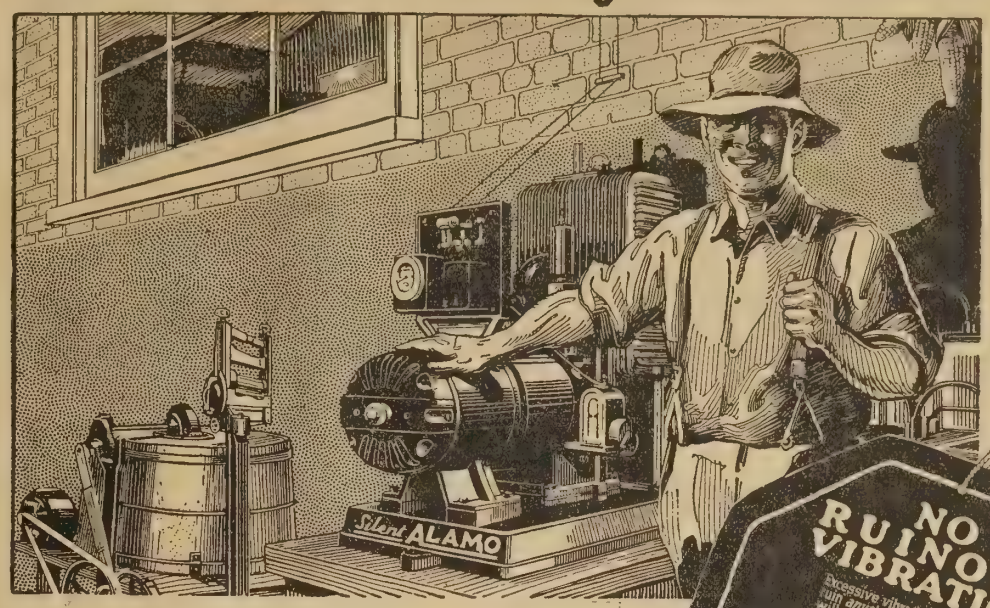
From forge and farm and mine and bench,
Deck, altar, outpost lone—
Mill, school, battalion, counter, trench,
Rail, shelter, sheepfold, throne—
Creation's cry goes up on high
From age to cheated age,
"Send us the men who do the work
For which they draw the wage."

When through the gates of stress and strain
Comes forth the vast event—
The simple, sheer, sufficing, sane
Result of labor spent—
They that have wrought the end unthought
By neither saint nor sage,
But men who merely do the work
For which they draw the wage.

Wherefore to these the fates shall bend
(And all old idle things)—
Wherefore on these shall power attend
Beyond the grasp of kings:
Each in his place, by right not grace,
Shall rule his heritage—
The men who simply do the work
For which they draw the wage.

—Rudyard Kipling.

LIGHT *and* POWER *for the* FARM



"I would rather give up my car and keep the Silent Alamo"

On thousands of farms the Silent Alamo has become absolutely indispensable. The comfort of having safe, brilliant electric light everywhere; running water in the house and for the stock; power to operate the churn, separator, washing machine, sewing machine, electric iron, etc., etc., is such a supreme joy that almost anything else would be sacrificed.

Mr. Bipes of Brownton, Minn., puts it this way. He says: "I can, on the strength of my actual experience, recommend the Silent Alamo as the best of all farm light plants today. I would rather give up my car, and keep the Silent Alamo, realizing the many more advantages derived from it."

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Look for the tag on every genuine Silent Alamo

The wonderful efficiency and reliability of the Silent Alamo is largely due to the total absence of excessive vibration—the most ruthless enemy of mechanical things. All that terrible jarring and rattling and banging is gone. Read the "No Ruinous Vibration" tag at your dealers. It is attached to each Silent Alamo. It tells the whole story.

The Silent Alamo is so perfectly designed that it will operate efficiently without being anchored to a special foundation. Starts at the press of a button. Delivers a tapered charge to the batteries. Motor automatically stops when batteries are full. Motor automatically stops when oil gets too low—also when water gets too low.

Practically impossible to overheat or burn out a bearing. All parts fully enclosed. Has famous Ide Super-Silent Motor (Rotating Sleeve Valve.) Write us for The Silent Alamo book, also for complete data on "No Ruinous Vibration" and what it means. Write today. In the meantime, visit the local Silent Alamo dealer.

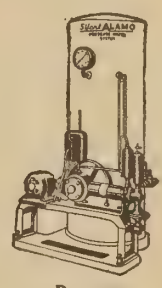
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***Plant at* Hillsdale, Michigan**

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Any Silent Alamo dealer can take your order for the accessories illustrated here, and many others. See dealer or write us for a complete list of Silent Alamo electrical conveniences or for any special device you want.

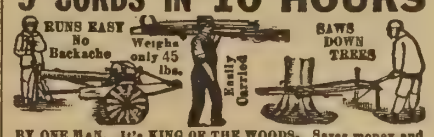
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PIONEERING ON THE PATH OF CO-OPERATION

The Story of the California Fruit Growers' Exchange

HERMAN STEEN, ILLINOIS

BACK in the early nineties there was money in the orange and lemon industry of Southern California. The foundations for many large fortunes were laid in those days. These fortunes, however, were not made by the growers, but off of them. The men best known to the receiving tellers of the banks were those whose business was to handle the fruit on its journey from the producers' orchard to the consumers' table. The growers were apparently known only to the money lenders.

The farmers had trouble enough, goodness knows, in growing the fruit, with frost, bugs, flood, drought, and a few other things to overcome. But growing the fruit was a snap compared to selling it to good advantage. The growers were 3,000 miles from the Atlantic seaboard, their principal market, and their product was highly perishable, and the best transportation service was rather indifferent; their fruit was not well established on the eastern market, and had to compete with the well known Florida oranges and lemons; the system of distribution was so inefficient that growers often had to pay the freight bills and give away the fruit. Above all, the market was ruled by speculators and commission men. The future for the growers was painted in black and mounted in an ebony frame.

Upon Sound Economic Basis

Today there is no farming industry in America upon a sounder economic basis than the citrus industry of southern California. In five years out of six, prices are secured equal to, or well above, the cost of production. The growers are prosperous and are increasing their holdings. As evidence of that fact, remember that good orange land around Los Angeles sells from $1,500 to $5,000 per acre, and a large share of the orchards pay a reasonable return upon these tremendous valuations. The consumer has not suffered, for he is today using two or there times as many oranges and lemons as he did a quarter of a cenutry ago; in fact, the consumption of these fruits is increasing year by year.

This transformation of the citrus industry from the verge of ruin to the acme of success is one of the marvelous stories of American agriculture. It is a story of pioneering along the paths of co-operation, a story of men with courage and a big idea that triumphed over obstacles that towered the skies. It is a story of success without the assistance of good luck and Heaven-sent help, except as such help comes to those with stout hearts.

Doing the Job Themselves

The big idea that saved the citrus industry was, "Farmers must do the job themselves". Out of that idea was born the California Fruit Growers' Exchange, the largest and best known co-operative marketing organization

(Continued on page 488)

Langwater Sets Guernsey Sale Record

Fifty-one Head Average $2,865. Warrior's Get Bring $5,532

FIFTY-ONE Guernseys sold at Langwater Farms, Massachusetts, September 21, for $146,125 and set the record average for the breed of $2,865. Eleven brought $5,000 or more each and thirty-three, $1,000 or more. Twenty-six animals bred at Langwater averaged $4,120, sixteen of them being the get of Langwater Warrior and bringing the high valuation of $5,532. Eleven females by this sire netted an average appraisal of $6,438.

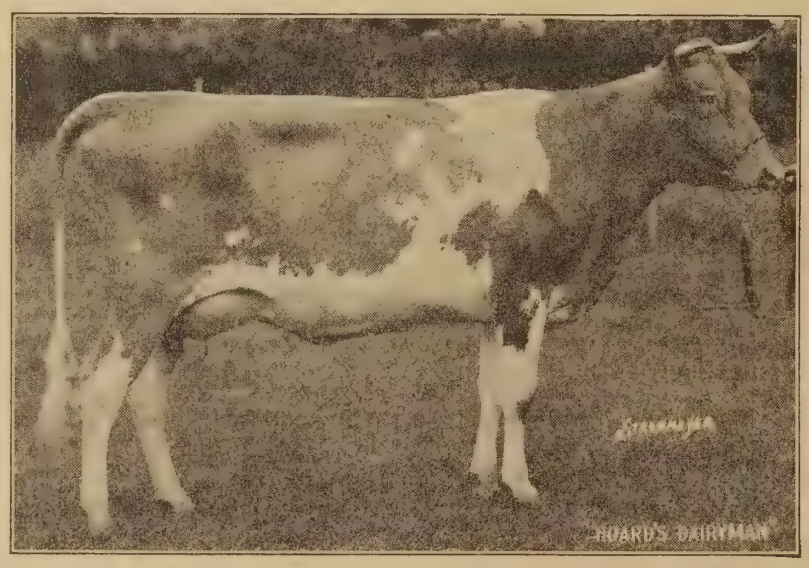
Langwater Helpmate topped the sale at $15,000. Geo. W. St. Amant of Massachusetts made that bid for a choice between this three-year-old daughter of Langwater Warrior and her dam, Langwater Heroine, a daughter of Imp. King of the May and the third cow in class D with a record of 16,221.1 lbs. milk, 805.64 lbs. fat. This sale was made after John S. Ames of Massachusetts paid $11,000 for Langwater Queen of the East by Langwater Warrior which he preferred to Langwater Cleopatra, her dam, by Imp. King of the May. The daughter has a 648.81-lb. fat, Class G record and the dam is third in Class B with a production of 15,364.7 lbs. milk, 792.51 lbs. fat. The third highest price of the day was reached by the bull calf, Langwater Eastern King, out of Langwater Cleopatra. Wm. Flinn of Pennsylvania was the successful contendor—the bid being $9,600. In each of these sales Florham Farm of New Jersey was runner-up. The New Jersey estate took three for $22,500; Geo. W. St. Amant, 8 for $31,325; Wm. Flinn, 4 for $21,000; R. S. Benson, New Jersey, 4 for $14,400; R. M. Macintosh, Massachusetts, 5 for $12,000; and E. F. Price, New York, 5 for $8,250. Langwater Steadfast, out of Langwater Dairymaid, went to Geo. A. Cluett of Massachusetts at private treaty for $25,000, a sum not included in the auction total of $146,125.

In all American live stock history few auctions rank with the 1920 Langwater sale. It was a triumph for the breeding genius of this great institution. Breeders of dairy cattle have paid no higher tribute to an individual than is constituted in the averages reached by the Guernseys F. L. Ames has so wisely and farsightedly bred. When he pinned his faith on Langwater Warrior four years ago, there were few who could foresee the excellence of form and the power of production of the get which have set price as well as butterfat records. F. L. Ames has given new proof of his unquestioned rank as the premier breeder of Guernseys in America.

L. F. Herrick managed the sale.

The following lists the animals selling for $1,000 or more and gives their buyers:

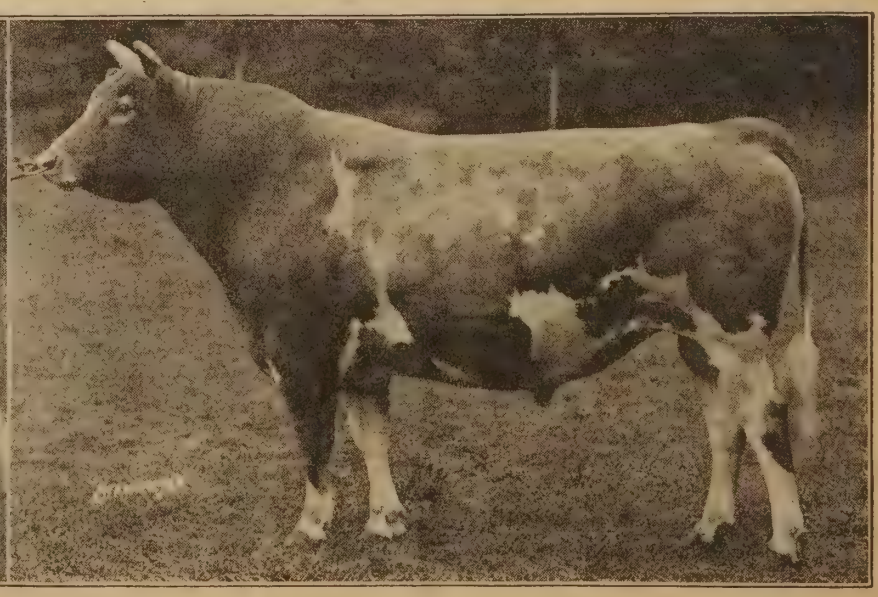
Geo. W. St. Amant, Massachusetts	
Langwater Roseleaf	$2,000
Langwater Remembrance	4,200
Langwater Crystal	1,500
Langwater Leading Lady	2,000
Langwater Gentle	3,700
Langwater Helpmate	15,000
Langwater Fortunate	2,000
Oaks Farms, Massachusetts	
Cramond Chieftain	$5,500
E. F. Price, New York	
Langwater Aurora	$2,525
Imp. Hayes Duchess VI	1,600
Langwater Mirth	2,650
R. L. Benson, New Jersey	
Cramond Dolores	$5,200
Mottled Gold of Langwater	5,000
Bull Calf No. 25	1,000
Langwater Comely	3,200
Florham Farm, New Jersey	
Langwater Syborita	$8,100
Langwater Queenly	6,300
Langwater Fairy Queen	8,100
Wm. Flinn, Pennsylvania	
Langwater Gay Laura	$1,500
Langwater Woodbine	3,000
Langwater Forever	6,900
Langwater Eastern King	9,600
R. M. Macintosh, Massachusetts	
Cramond Victor	$1,700
Langwater Alga	1,500
Imp. Alderney of Oaks Farm	1,300
Cramond Victoria	4,000
Poppy of Langwater	3,500
Hillswold Farm, Massachusetts	
Langwater Kitchener	$2,500
H. H. Buckley, New York	
Langwater Andromeda	$1,625
John S. Ames, Massachusetts	
Langwater Queen of the East	$11,000
G. L. Stone, Massachusetts	
Langwater Vision	$1,025
W. D. Mahon, New York	
Imp. Polly of the Pouchez	$1,050
H. G. Lapham, Massachusetts	
Langwater Rosemary	$5,200



LANGWATER HELPMATE, TOP PRICE ANIMAL AT LANGWATER SALE AND SOLD FOR $15,000 TO GEO. W. ST. AMANT, MASSACHUSETTS



LANGWATER WARRIOR, SIXTEEN OF WHOSE GET SOLD FOR AN AVERAGE OF $5,532 AT THE LANGWATER SALE



LANGWATER STEADFAST SOLD TO G. A. CLUETT, MASSACHUSETTS, AT PRIVATE SALE FOR $25,000 AT TIME OF LANGWATER SALE

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Wis.	Whitewater	A. F. Probst	Aug.	383	10	55.9	Eri Lewis
"	Rock Prairie	W. J. McKee	Sept.	377	14	63.5	J. Wehinger & Son
"	Rockfield	Wm. F. Liesener	Aug.	260	8	57.3	Mrs. C. Hoe...
"	Hebron	John Vanderberg	"	400	4	53.0	Ed. Brewin
Pa.	Juniata	Karl A. Fettig	"	300	10	58.6	G. O. McClure
Wash.	Whatcom Co.	John Vickers	"	529	119	98.8	Piet Bergsma
Tenn.	Wilson Co.	St. L. Brown	"	364	19	103.1	Adams & Suddarth
Minn.	Dodge Co. Central	Maroy A. Melin	Sept.	489	3	43.68	Roy McMartin

Association Notes

Whitewater, Wisconsin:—This association has just finished its first six months. The leading cow is a registered Guernsey owned by H. Ridge & Sons, making 328 lbs. fat from 6,970 lbs. milk. Members that have silage show a 30% increase over those who have none. August market milk testing 3.5% sold for $3.35 per cwt. and 4c per point above. Milk retails for 14c per quart, butter for 65c per lb., and cheese for 27c per lb. The creamery paid 74c per lb. for fat. Feed prices are: Oats, 70c per bushel; bran, $45 per ton; oil meal, $66; gluten, $65.

Rock Prairie, Wisconsin:—September milk testing 3.5% sold for $3.70 per cwt. and 4c per point above. Milk retails for 16c per quart, butter for 65c per lb., and cheese for 35c to 38c. Bran is rated at $54 per ton; oil meal, $82; oats, $2 per cwt.; barley, $2.25.

Hebron, Wisconsin:—As quite a number of cows are dry or going dry at this time, the association average is at its lowest for the year. The herd of Taylor & Northey has recently passed its second tuberculin test and is now eligible to the accredited herd list. One member has installed drinking cups and several others are planning to make the same improvement in the near future.

Juniata County, Pennsylvania:—Two unprofitable cows were sold in August. Pasture in general is good and cows are keeping up a normal flow. Our county fair was held at Port Royal, September 7-10. Five members had 17 head of registered Holsteins there, taking first and second prizes in every division. One of our association bulls, weighing 2,300 lbs., has six daughters that are milking better than their dams. August market milk sold in this community for $3.97 per cwt. The creamery paid 75c per lb. for fat. Milk retails for 14c per quart and butter for 70c per lb. Feeds are listed as follows: Hay, $25 per ton; green corn, $6; corn and cob meal, $45.80; ground oats, $56.20; bran, $60—$65; cottonseed meal, $75.30; oil meal, $73; Union Grain, $82; Larro Feed, $78.

Whatcom County, Washington:—August market milk sold for $2.90 per cwt. Of the 34 members in this association, 27 have silos.

Wilson County, Tennessee:—Many members are contemplating feeding balanced rations this winter. Several unprofitable cows were sold and three pure-bred Jerseys were purchased during August. A new milk house was built and another remodeled. Feed prices are: Cow Chow, $85 per ton; Schumacher, $63; Dairy Feed, $65; oats, 70c per bushel; bran, $3.50 per cwt.; pasture, $1.50 per month. Almost all of the herds were low in milk flow, due to rains and lack of feed.

Dodge County Central, Minnesota:—Twenty-two head of cattle from the association will be shown at the county fair. During September, 33 cows were sold as unprofitable producers. The feeding of balanced rations is now being practiced by the majority of the members. The creamery paid 60c to 62c per lb. for fat and the cheese factory paid 50c to 58c. Butter retails for 73c per lb. and cheese for 27c per lb. Bran is rated at $48 per ton; oil meal, $66; cottonseed meal, $80; oats, 56c per bushel; corn, 89c per bushel.

Judges at the 1920 National Dairy Show

The men selected to judge the rings of cattle this year at the National Dairy Show do not bring any new faces into our show yard work, but a new method of judging will be introduced at this Show this year that will lighten the burdens of the judges in charge without lessening their responsibility.

Two men have been selected by the executive committee of the Show to judge each breed. One of these men is in the exact relative position occupied by the judge under the one-judge system, i. e., he is in full charge of the work and is entirely responsible for the placing of the ribbons. The other man is in an advisory capacity, it being his duty to go over the rings of cattle in each class and to be prepared for a conference with the judge at any moment on close and final judgment, or any other subject the judge desires conference upon in connection with the ring before them. Both of these men, as will be noted by the selections for the year as given hereunder, are judges of national repute, so that all exhibitors of nervous tendency, when leading their cattle into a ring of perhaps fifty or more entries, may feel such added assurance against misfortune as a second pair of eyes in the ring will afford.

A truly conscientious and competent judge is more concerned over his work than any exhibitor need be, and this method will no doubt add to his comfort; and, let it be said, the service such a judge renders is one wholly of sacrifice laid on the altar of benefit to his fellow men, and no kind of a judge other than this is ever selected to render this service at the National Dairy Show.

The Judges and Judging Program

Jerseys—Wednesday, October 13th, Hugh G. Van Pelt, Judge; John A. Lee, Advisory Judge.

Holsteins—Tuesday, October 12th, W. S. Moscrip, Judge; Peter Small, Advisory Judge.

Brown Swiss—Tuesday, October 12th, Geo. C. Humphrey, Judge; J. P. Allyn, Advisory Judge.

Guernseys—Monday, October 11th, H. H. Kildee, Judge; James Robertson, Advisory Judge.

Ayrshires—Thursday, October 14th, Judge from Scotland, acceptance not yet received, and associate yet to be named.—Publicity Department.



Always Attractive and Comfortable

YOU will find in *Martha Washington* shoes that rare combination of style, beauty and comfort which delights every woman.

You can always be sure that your *Martha Washingtons* add the desired touch of graceful style which completes an attractive costume.

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—with facts, figures, and photos, showing how installations have been made satisfactorily and economically under conditions like yours,

—with the enthusiastic support of scores of users right near you,

—he will be on hand, glad to see you and to explain all details—

At the Following Fairs:

Wisconsin—Milwaukee, Aug. 30 to Sept. 4
Iowa—Des Moines, Aug. 25 to Sept. 3
Nebraska—Lincoln, Sept. 5 to Sept. 10
Illinois—Springfield, Aug. 20-28
Minnesota—Hamline, Sept. 4 to Sept. 11
Dairy Cattle Congress—Waterloo, Iowa, Sept. 27 to Oct. 3
National Dairy Show—Chicago, Oct. 7-16

If you "can't make the fair," let us send you the name of a Water Expert near you

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After smoking meats, use for Store House. Absolutely bug and mite proof. Keeps meat without sacking. Worth its price many times over—for this storage feature alone. Made in 3 sizes. Fireproof. Guaranteed.

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EDITORIAL COMMENT



A STATE dairy council in soliciting funds from the board of directors of a co-operative creamery found in the membership of the board a dairy farmer who boasted that he was purchasing and his household was consuming 100 lbs. of oleomargarine each year. He was not in favor of making any contributions to the state dairy council for the purpose of educating the people regarding the food value of butter, cheese, and milk.

It is hard to understand men who cannot be loyal to an industry in which they are engaged. Here is a dairy farmer whose income depends upon people consuming dairy products and he himself boasting that he purchases oleomargarine and is unwilling to have his creamery support an institution that is attempting to build up a better and more remunerative market for dairy products. Such men are invariably the ones who complain mostly about the price of the products they sell. They not only fail to do anything to improve their own business but actually do what is within their power to undermine it. It requires a heap of patience to tolerate men of this narrow vision.

"EGYPT"

In Southern Illinois, in the section known as "Egypt" because in the early days it produced such bountiful crops, there is an organization known as the Southern Illinois Development Association whose purpose is to institute ways and means to improve its agricultural practices. The agricultural slogan for the upbuilding of Southern Illinois is "Limestone, Legumes, Live Stock, and Phosphate Rock. We believe in Hard Roads, Better Schools, More Fruit Farming, and the Elimination of the Scrub Bulls." It has been shown by the Illinois Experiment Station that through the use of limestone, legumes, live stock, and phosphate rock these soils may be made more productive and more remunerative than they are at the present time.

In order to bring about a changed system of agriculture in any section it requires the co-operation of all men interested in its welfare. A few cannot accomplish a task of this kind. Such effort as is being put forth by the Southern Illinois Development Association can be recommended to all sections of the country. This association will not only interest itself in bringing about a better system of agriculture but it will also emphasize the importance of educational, social, and moral agencies for the improvement of the entire community. Its plan is to make the community successful, not only from the standpoint of making money, but also by creating a wholesome and enjoyable life for those who dwell there.

DAIRYING THIRTY YEARS AGO

For the past few weeks we have been bringing forward statements under the caption, "Dairying Thirty Years Ago", which were made in Hoard's Dairyman thirty years ago. The purpose of this is to place before our readers discussion, points of view, and advice as it was given to the dairy farmer more than a quarter of a century ago. Those who have read this column since it started will note that dairymen were admonished to secure better cows, to treat them more kindly and to feed them better, and urged to produce a higher quality of dairy products and to form co-operative enterprises in order to protect their industry.

It is our plan to present from week to week under the title "Dairying Thirty Years Ago" the most useful and striking statements made at that time, the purpose being to point out that the problems we have now are similar to those dairymen had at that time and, also, to show that progress has been made in the dairy industry.

It requires about a span of twenty years to note any great changes, but as we study our issues of thirty years ago we are impressed with the advancement that has been made by the dairy farmer. We find, too, that we have many of the same conditions to contend with now as then, such as the opportunity of improving the quality of dairy products and preventing outside agencies getting control of them; in short, human tendencies for selfish advancement. Undue advantages are the same today as they were thirty years ago, and in order to meet them effectively, we must have a comprehensive understanding of such forces, how they operate, and know how to conduct our business.

BELIEVE IN YOUR JOB

No one will ever attain true success unless he believes in his job and he will find little happiness unless he likes his job. To make money brings a certain amount of satisfaction but it fails to satisfy and to lead to enjoyment. Happiness and satisfaction cannot be obtained through money, power, or distinction, but rather in doing some useful work that is in keeping with the taste of the person doing it.

There is altogether too much pessimism in our country, too much fault finding, too much discontent. Why, there was never a period in American history when all classes of people enjoyed so many luxuries as they do today. It is unfortunate that we are ever comparing ourselves with the other fellow, especially of our own class or those engaged in different occupations. We too often consider the other fellow's job better because we do not know of its perplexities and irritations.

The farmer does not take enough pride in his job. He does not realize all its opportunities and too often dwells upon the job of the city man who apparently has an easier one because his hours seem to be shorter and because he wears better clothes. Such farmers little appreciate the struggle in the city, especially in the large city. The eight-hour day seems shorter but they forget to take into consideration the time expended in going to and from work, and the steady grind of the average factory man or miner, or those engaged in any other of the many trades. If the farmer would consider his freedom, his independence, the open air, and his occupation with its various kinds of work, which gives interest and opportunity for relaxation, he would be better satisfied. If he only knew it, he is engaged in a great constructive enterprise which gives opportunity for bringing forth splendid results from honest labor and intelligent thinking.

Elsewhere in this issue will be found an article by Mr. Charles G. Morris entitled, "You Get What You Advertise". It is a plea for telling the bright side of farming. It sets forth in a most striking manner the opportunity for optimism on the farm and for believing in your job, pointing out clearly some of the disadvantages of pessimism and how the farmer should consider his occupation.

CO-OPERATION AND SKILL

Since the inception of Hoard's Dairyman we have pointed out the advantages of intelligent co-operation among farmers, and have placed before our readers the advice and opinion of the leading men in agricultural thought. More than thirty years ago Professor J. W. Robertson, an outstanding leader in agricultural affairs in Canada, pointed out in an address some of the fundamentals necessary to successful co-operation. What he said at that time applies today and shows that problems now are not so different as they were then. He said:

"Too much stress cannot be laid upon the importance of co-operation. We must co-operate if we are to hold our positions in the agricultural world. When we say 'we want to go into this business', and if we say 'we can' and 'we will', when we have done that, we will have waked ourselves up to the prospect of prosperity in agriculture. We can do that by co-operation. Some men want a division. They may be correct, but co-operation is always good and always successful when it operates toward a good end. They say the farmers have no cohesiveness, and therefore they will stand apart. When farmers learn to co-operate, all the manufacturing combines and all the commercial combines that injure their interests and make our men complain of hard times will be broken up, and they will have liberty and wealth because they will have skill.

"When a man sells anything that he farms, he sells a threefold commodity—material, labor, skill, and the strength of the old sun.

"I know a man who in 1888 had 32 bushels to the acre, weighing 66 lbs., whereas his neighbor had 19 on better land, and this vast difference is traceable to the fact that his neighbor did not put skill into the soil. When a man sells hogs that weigh 250 lbs. at 12 months of age, he is not putting skill into the business. The hogs have boarded on him too long. If a man keeps the wrong kind of a hog, whose main occupation is to move around the front yard and furnish music for the family at dinner time, he is not selling skill that way; he is trying to sell squeal and squeal is unmarketable.

"It is very much harder to sell skill than to sell material, but only the things that are hard to do are worth doing, so every man in dairy farming who sells skill through these avenues, will not only benefit his land and enrich his pocket, but he will make himself a more skillful man, and the man who does that through dairying will have the highest reward."

It should be noted that Professor Robertson not only points the necessity of farmers co-operating, but that skill, intelligence, must be put into their farming practices. If farmers are to organize and pull together co-operatively they must select wise, competent, and honest leaders and they themselves must be ready to serve, to learn, and to sacrifice. They must learn how to co-operate. They must have skill.

KEEPING REACTORS

Breeders who have valuable animals hesitate to dispose of them when they react to the tuberculin test. Certain blood lines in every breed are exceptionally desirable to perpetuate, and to destroy the choicest of animals of such blood means a large sacrifice. In view of this they are led to take chances and usually the reactors are separated from the rest of the herd in order to prevent the spread of further infection. Tuberculosis is so insidious that this is a dangerous practice and has in many instances led to disappointing results. It is possible, through separation, to prevent infection from spreading from the tubercular animals to those that are clean, but it requires unusual plans and practices when kept on the same farm.

We doubt if there is one breeder in ten who appreciates the many agencies for carrying tuberculosis germs or the care that must be exercised in handling reacting animals in order to prevent the healthy ones from being exposed to the disease. On the average farm the same attendant must care for all the animals and this becomes a source for spreading the disease. If care is taken to change clothes and to disinfect hands, there would be little, if any, danger of the attendant carrying infection. In the rush of farm work it is expecting too much that a man take this precaution. Here, then, is an opportunity for spreading the infection. Rats, mice, and birds can be controlled to a certain extent, but it would require the greatest vigilance to control them wholly. Other agencies could be mentioned which would emphasize the task of keeping reactors on the same farm and without endangering the healthy animals.

The safest and best way is to establish farms where all valuable reactors can be sent. Under such conditions they can be properly handled and the danger of spreading infection from such sources would become very slight. It seems to us that breeders who have exceptionally well bred animals and desire their blood to be saved should form a company and establish a place where such animals may be kept. We do not believe it would cost any more to handle animals on this plan than to keep them in separate places on the farms with healthy herds, and it would be far safer.

Cost of Producing Corn-fed Cattle

According to the cost of production investigations conducted by the United States Department of Agriculture in co-operation with the University of Nebraska in parts of Nebraska during the past two years, the average cost of corn-fed cattle laid down at market was $14.91 per hundredweight for 2,293 head fed in the winter of 1918-19, $13.83 for 3,041 cattle in a survey study during the winter of 1919-20, and an average of $13.39 for an additional 795 cattle upon which detailed cost figures were secured during the same winter. The costs upon some droves were found to vary widely from these average figures, with the major portion going to market the first winter (1918-19) carrying an expense bill of from $13 to $18 a hundredweight, while in 1919-20 the costs of most of the cattle were between $11 and $17. The facts thus far brought out by the investigation would indicate that during the past two years, in the district covered by the survey, cattle feeding was a precarious venture, more likely to be unprofitable than not. There was an average loss per head of $3.17 on the cattle for which records were obtained in 1918-19, and of $10.69 and $14.57 on two groups for which records were obtained in 1919-20.

The greater part of the Nebraska cattle covered in the survey work of 1918-19 made their gains at a cost of from 20 to 35 cents per pound, with extremes ranging from 12 to 48 cents, while of the cattle covered the next year the greater part made their gains at from 15 to 35 cents per pound, with an extreme range at from 8 to 53 cents. While economical feeding is shown to be the major factor in the cost of fattening after the steer is bought, the investigation substantiates the fact that feeding usually plays a minor part in determining profit or loss, and that buying right and selling right are more often the controlling factors.

Feed, the most important factor of the cost of fattening the steer after purchase, was found to constitute from 75 to 90 per cent of all the expense involved in handling the steers after being put on feed. In a great number of cases the feed charges ran from 85 to 90 per cent of the operating expenses. The cost of man labor and horse labor constituted from 7 to 8 per cent.

In the final computation of net cost, allowance was made for pork and manure, two by-products of the feeding business which are credited to the steer. Under the two conditions that prevailed where this study was made, these credits covered on the average slightly more than all expenses of fattening, other than feed. Hogs can not be expected to make such a good showing, however, if ground corn is fed to the steers, or if the ration is one in which corn does not have a major place.—U. S. Department of Agriculture.

Cheese Making in Holland

HOARD'S DAIRYMAN:—The most profitable branch of farming in Holland at the present time is the making of full cream cheese for export, principally to Germany. The prices paid for this cheese are very high. Market conditions at the present time will allow cheese of inferior quality to sell at 30 to 35 cents a pound, while first quality cheese sold here last week for 60 cents a pound.

Most of the cheese exported is sent to Germany, and before it reaches the table of the German family the price has gone as high as 80 cents a pound. Holland does not understand how it is possible that a country having such a low exchange rate and that is so impoverished is still able to afford such a luxury. However, the German merchant says: "Give me the cheese, the price is immaterial."

Owing to the fact that so much cheese is exported, there is little for sale in Holland itself. Because of this condition, the government has lately restricted the amount that can be exported.

The largest part of this valuable product is made on the farm by the wife of the Dutch farmer. The big secret of the good quality cheese produced is the understanding of these farm women of what cleanliness means in their work. I have visited several of these farms and have noted that cleanliness is followed from A to Z throughout the whole cheese making process. The milk is made under the most cleanly condition and the equipment is kept in clean condition. The milkers and workers in the dairy wear clean clothes, but they are of blue cloth rather than white.

Immediately after milking, the warm milk is poured into a large wooden tub having a round bottom. The wooden tub is used because it is believed it will not give off any odor to the milk and that the wood itself keeps the milk from changing temperature quickly. The fresh milk, as it is poured into the tub, is at a temperature of about 90 degrees F. To every hundred pounds of milk there is added 8 grams (or a small spoonful) of pure rennet. There is also added 50 grams (5 spoonfuls) of a starter consisting of pure buttermilk or pure lactic acid bacteria, and an eggspoonful of cheese coloring. As soon as these three ingredients are added, the milk is stirred for a couple of minutes and then covered so as to lose the least possible heat. It is allowed to stand undisturbed until the rennet has completed its process, which usually takes about thirty minutes. After the thirty minutes is up, the cheese maker runs her forefinger straight into the curd and then bends it up so that the curd will break. If the whey is clear and not milky and if it does not stick to the finger in flocks, it is considered ready to cut.

In cutting the curd, the cheese maker uses a rake having 18 to 24 long knives set at a distance of about one-half inch apart. The curd is first cut lengthwise and then crosswise so that it is left in small cubes. This cutting is done very carefully and slowly, for unequal cutting or careless cutting will cause much loss of curd and fat. The cutting is stopped when the whey begins to rise and the curd is settled at the bottom. It is then allowed to settle for about five minutes, after which a little of the whey is removed. The cheese maker then adds as much hot water to the mass as will bring it to a temperature of 98 degrees F. In the meantime she cuts or stirs the curd with another kind of rake, in which the knives are replaced by round wires. This operation is continued until a handful of curd squeezed together will fall apart when released. The second cutting is done very carefully and as soon as the curd has reached the desired condition, it is slowly dragged to one end of the tub, which is slightly lifted to assist in draining off the whey which must all be removed from the curd.

The curd is then immediately put in a cheese vat of about two or three gallons, although different sizes are used according to the amount of milk. In this vat small holes are punched. The curd is pressed carefully and when most of the whey is expressed, a binder of cheesecloth is placed over the vat, and the vat is turned over so that the cheese falls on the binder. The corners of the cloth are carefully drawn over the top and the cheese is now ready for the press. The first pressing is applied for about ten minutes and the cheese then removed. The cheese cloth is opened up and the government brand is pressed on the cheese. It is then replaced in the press and a pressure of about 200 lbs. is applied, this being gradually decreased to a pressure of 50 lbs. Every two hours the cheese is turned. Small cheeses of about 8 to 10 lbs. are pressed for about six hours, while larger cheeses of 18 to 20 lbs. are pressed for eight hours.

From the press the cheeses are first put into a weak brine solution. After standing in this solution for six hours, they are placed in a brine solution to which a sufficient quantity of salt has been added that an egg or potato will float in it. The small cheese stay in this solution three days and the bigger ones for five days. Every night and morning the cheeses are turned and a little coarse salt is spread over the top.

From the brine solution the cheeses are brought to the curing room, which is some cool place in the farm house, where they are placed on shelves. The cheeses are turned every day and after three weeks they are sent to market. This curing period is much too short, but the demand for these cheeses is so large that the farmers are able to sell them readily as soon as they can stand handling. This kind of cheese making will produce one pound of cheese from about 11 lbs. of milk testing 3.4 per cent fat.

Exactly as the Danish LUR mark and the HOLLAND RYKSMERK serve to guarantee that butter is unadulterated and of fine quality, the HOLLAND CHEESE MARK tells the consumer the kind of cheese he is buying, or rather the quantity of fat and moisture in his cheese. Where one desires to buy a cheese made from milk from which no fat has been taken, he simply looks at the government brand and if he finds the number 45 and the name of the producer, he knows it is of the right quality. The 45 means that in the dry matter of the cheese there is a minimum fat content of 45 per cent. The government also has three other marks of 40, 30, and 20. A rigid control is exercised by the government and in case that cheese does not correspond with the BRAND-MARK, the owner is fined. Up to the present time, no fines of any importance have been applied because the farmer himself is convinced of the usefulness and justice of this system.

Holland. L. DIJKSTRA.

Washing Test Bottles

HOARD'S DAIRYMAN:—In a recent issue of your paper I noticed in Editorial Comment where a tester wanted to know how to clean his test bottles. I am a tester and, of course, ran up against the same question once.

I find that the quickest way to clean them is to put about a teaspoonful of B-B shot into the bottle and whirl them around in it for a few seconds and the brown coating is all gone. I prefer Wyandote washing powder for cleaning my glassware, it seems to dissolve the solids in milk the best of any powder I have ever used. G. M. RHEIN, Tester,
Bandon, Oregon, Cow Testing Ass'n.

Sorghum Hay Not Poisonous

I see in your editorial of Sept. 10 that second growth sorghum is poisonous. I have a piece which was cut about four weeks ago for hay, and is now heading out for second time. Please let me know if this is cut for hay before frost touches it if it would be safe to use it.

Florahome, Fla. W. H.

The danger from second growth sorghum is largely due to the fact that the growth is partially stunted and this is inclined to cause the production of poison in the plant. It is not so much because it is second growth as it is because it is grown during a less favorable season, and also that it may be hit by frost.

When sorghum, either first or second growth, is properly cured as hay or silage, the poison seems to dissipate and there is little if any danger whatever in feeding it. Pasturing of the second growth should be avoided, as it is eating it in the green state that has caused practically every case of poisoning that we have ever heard of. We consider it safe to cut the second growth and feed it as hay.

Overcoming Pasteurization Difficulties

HOARD'S DAIRYMAN:—In your issue of September 17th, I note an inquiry by B. T. D., Connersville, Ind., in regard to having trouble with pasteurized milk. This has been replied to by Professor Farrington, but as I believe we have had some of the same troubles and under similar conditions, I beg to offer a few suggestions in regard to this matter.

We have had some trouble with a cream line, but when the temperature and holding time was all right we found our trouble to be too much, too rapid, or too long agitation of the hot milk. The coil should not run too fast or too long. The milk should be heated to 145 degrees F. in at least 30 minutes and held not over 30 minutes; then, if it is immediately run over the cooler and bottled, a good cream line will be noticed after the milk has been held a few hours. We run the coil while the milk is being pumped over the cooler but try to handle the milk as rapidly as possible and we now always have a good cream line.

In regard to the pasteurized milk souring quickly. We had the same trouble. Oftentimes the milk, when ready for delivery the next morning, would be nearly turned. The trouble was our refrigeration and I believe this is one of your troubles. Our milk was at a temperature around 55 degrees F. when bottled, but it would rise from 5 to 10 degrees over night in our ice box. The temperature of our ice box ran from 50 to 60 degrees but more often it was 58 or 60 degrees than 50 degrees. We cool with water and brine in our cooler which cools the hot pasteurized milk to only 50 to 55 degrees F. We now have a refrigerator that holds at a temperature of 45 to 55 degrees F. and we do not have any trouble with sour milk. Our milk will now keep sweet 5 to 6 days while with the old refrigerator it would hardly keep sweet 24 hours. If you can not lower the temperature of your refrigerator, put cracked ice around the bottles.

If you cool the milk and keep it at a temperature nearer 50 degrees F. than you apparently are doing, then do not agitate the milk too much. You will find that milk pasteurized at 145 degrees F. for 30 minutes will give a good cream line and keep sweet a reasonable length of time.

Pennsylvania. L. B. COOK.

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Get the big ideas

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Pioneering on the Path of Co-operation

(Continued from page 484)

in America. During the year ending August 15, 1920, it handled for its 10,500 members over $57,000,000 worth of oranges, lemons, and grape fruit. It is a big co-operative agency, owned and controlled by the growers themselves, which handles over 70 per cent of the citrus fruit of California from the growers to the wholesale distributors in the cities.

The California Fruit Growers' Exchange is a selling agency only. It does not buy fruit from its members nor from anybody else. It sells the fruit which its members produce, and turns back to them the full price secured, less only the necessary cost of selling. It makes no profit for itself. It will be well to keep these things in mind as its plan of operation is unfolded.

Local Associations Ineffective

When the orange and lemon growers first organized nearly 30 years ago, they formed local associations—one for each community. These local organizations either rented or bought a packing house and prepared the fruit for market. It was thought that these local associations would solve the whole knotty problem of marketing citrus fruit.

It soon developed, however, that the practical effect of these local shipping associations was to largely eliminate the old speculators and make these associations the speculators. Because each local association operated independently, it had no knowledge of what the others were doing; the result was that the New York market might be flooded with oranges, while Chicago had none. Then came a tremendous rush of oranges to Chicago, on an over-loaded market and no oranges at New York. Under these conditions it was not hard for the speculators to break up many of the local associations.

Must Co-operate, Not Compete

The remaining associations, however, finally joined hands in 1895 in forming an overhead clearing house. "We realized that we must not compete against each other and that was what we had been doing," said F. Q. Story, the venerable ex-president of the exchange, who told me the story. "We organized the exchange so that we might work together and not cut each other's throats."

At the present time there are 218 local associations which are organized into 20 district exchanges. These district exchanges in turn have joined together in the central overhead organization, the California Fruit Growers' Exchange. Its headquarters are in Los Angeles, the heart of the citrus district; its general manager is G. Harold Powell, national and international authority on co-operative marketing.

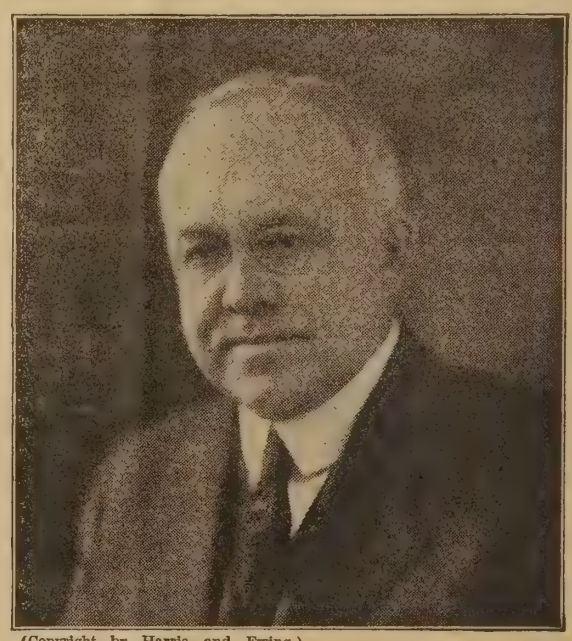
Three Jobs, Three Organizations

Each of the three organizations—central exchange, district exchange, and local associations—have their separate and distinct work to do. The local associations own or rent a packing plant; their job is almost entirely to take care of the mechanical details necessary to get the fruit to market properly. For instance, they employ squads of pickers who take the fruit from the trees; they hire trucks to haul it to the packing houses; they grade and pack the fruit and load it upon the cars. Not all of the fruit is picked and hauled co-operatively, but most of it is because a more uniform product is thus insured.

The district exchanges sell the product. The central exchange keeps the district in various cities and provides the necessary machinery for selling. It maintains a staff of 89 salaried agents in the principal market cities whose business it is to sell the fruit when it arrives on the market. Every district exchange, however, has the final word whether it will accept the price offered, so the agent gets the best bid available and notifies the exchange, which accepts or rejects.

Can't Fix Prices

"We do not fix prices on oranges and lemons, simply because it is impossible to fix prices on a perishable product like ours," said Powell, in reply to a question. "We do attempt to stabilize prices, however, by holding shipments off of glutted markets, and by marketing approximately one-fifty-second of our product each week. Should the whole market be glutted, we would simply ask our members to suspend picking for a short time. Oranges and lemons do not have to be picked at any one time, but may stay on the tree for a considerable time. I want to emphasize that we do not attempt in any way to fix prices, but we do succeed measurably in stabilizing the market by using the means at our command."



(Copyright by Harris and Ewing.)

G. HAROLD POWELL

The chief purposes of the organization, according to Powell, are to eliminate speculation in citrus fruits at the expense of the growers, and to reduce the cost of distribution. Naturally, these two things act to the benefit of the growers. "We have no quarrel with the speculators and middlemen," said Powell. "We have no antagonistic speculators, but they have been eliminated simply because we have found a cheaper and more efficient way of doing business. We did not organize simply to put those fellows out of business, but to do better business ourselves than they were doing. If they have been forced out, it is their fault, not ours."

Eliminating Speculators

The first great step forward by the California Fruit Growers' Exchange was when it worked out the system

of delivered selling. It did away with the practice of selling oranges in California, because that was the very thing that induced speculation. This struck one group of speculators a body blow. Next it eliminated brokers in the big market cities and substituted salaried agents. This eliminated another group of orange and lemon speculators. The exchange now and for many years past has sold in carload lots to wholesale fruit dealers, who in turn distribute to the retail trade. Several officers of the exchange whom I questioned stated that they did not anticipate going farther into the trade than they already have, unless it should prove necessary for them to do so.

"Owing to the perishable nature of our produce, we can not exercise arbitrary control over it, even should we so desire," said Powell. "There is preserved complete and free competition between individuals and between local associations. Our exchange simply finds the market and gets together all the available data on supply and demand; we furnish this to every separate local association. Every man reserves the right to pick his fruit when he wants to and to sell when he wants to, though we may advise what to do. As a matter of fact, our records show that approximately one-fifty-second of the crop is delivered each week, a factor which is absolutely necessary in stabilizing markets."

Pooling the Crop

The pooling system is employed in dividing the proceeds from oranges sold. Each local association handles this to suit its members. The principle of the pool is that every man receives the same price for his oranges as another man does, provided they are of equal quality, regardless of the time sold or the price received. In other words, all the receipts go into a common treasury; when all the oranges are sold, the money is divided among the members in proportion to the amount of produce.

Some associations have a yearly pool; that is, all the oranges of one crop are pooled together. Growers receive a payment each month as fast as money comes in for oranges sold. When all the oranges of the year are sold, a final payment is made. Others have a new pool every month, and final division is made every 30 days of the money received for the oranges handled during that time. There are many kinds of pools in the orange and lemon associations; the method of handling these is rather complicated to an outsider. This principle can be made clearer in discussing nonperishable products like raisins, and will be left until next week's article.

Contracts with Growers

The California Fruit Growers' Exchange has a contract with each of its 10,500 members binding them to deliver their products to it. These contracts cover a 20-year period, and may be revoked if notice is given during a certain season. "It is highly necessary for a co-operative marketing organization to have its members bound to deliver their products to it for sale," said Powell. "Lack of this feature has killed many co-operative agencies in California. Our contract has been upheld in the courts. On the other hand, a co-operative society must have a deeper loyalty than that—a religion of co-operation among its members, if you please,—but the contract is an absolute necessity."

Formerly the California Fruit Growers' Exchange was a capital stock corporation, as also were the district exchanges and the local associations. "It is fundamentally wrong for a co-operative agency of any sort to have capital stock," declares Powell. Several years ago the change began to be made to the non-profit plan of organization without capital stock, and most of the associations and exchanges are now on that plan. A levy on sales is made to furnish the capital needed to operate. This keeps the working capital in proportion to the business done by the individual. A certain amount is retired each year also—usually that which was paid in the fifth year before. This point will be discussed more fully in a special article on financing co-operative associations which will appear later in the series.

Advertising "Sunkist" Fruit

As soon as the California Fruit Growers' Exchange was strong enough to stabilize prices to a reasonable degree, the citrus industry began to be profitable. Then came a period of increased planting of trees and consequent increased production. It is simply another illustration of the fact that the easiest way to secure large production of any product is to insure fair returns. After a time the shadow of over production hung over the growers. It was warded off for many years by efficient distribution of fruit.

In 1907 the exchange embarked on a brand new experiment by starting on an advertising campaign in Iowa, where the virtues of "Sunkist" oranges and lemons were extolled. A 40 per cent increase in consumption resulted. From that modest start grew the present system of advertising "Sunkist" oranges and lemons all over the United States. Nearly $500,000 annually is spent on advertising. "This has justified itself in many ways," commented Powell. "It has kept consumption well ahead of production and has been the very backbone of our success."

Fundamentals of Co-operation

Powell is a man of business, whose kindly philosophy on co-operation is known the world over. "The harsh method of big business cannot be applied to a farmers' movement," he told us. "Co-operative marketing has a creed all its own. There are certain fundamentals which must be observed in any producers' co-operative organization, whether in California or Nebraska.

"First of all, it must be founded upon economic necessity. It must begin in a small way and must not proceed faster than its members. Producers must stick together and have a high degree of loyalty to the organization and to each other.

"Next, a co-operative agency of producers must be owned, managed, controlled, and financed exclusively by producers. There can be no combination of growers and distributors or of growers and consumers. Their interests are fundamentally divergent. The capital contribution should be kept as nearly in proportion to use made of the organization as possible. It should be literally an industrial democracy working in business, therefore all members should have an equal vote, regardless of the amount of stock held.

Producers Only

"The membership in a co-operative marketing organization must be producers exclusively. Producers are the only ones with an interest in the land. Others sooner or later try to dominate it, and capitalize its success. The one-man, one-vote, rule is of equal importance; it is based upon the equal voting power of men. It gives confidence to small producers.

"A co-operative organization must be held together by the benefits to its members, not by compulsion. We are

(Continued on page 508)



Training For Service

What science and engineering have done to develop the mechanical efficiency of the telephone, specialized training has done in the development of workers.

Plant engineers, linemen, directory clerks, toll operators, equipment installers, electrolysis engineers, trouble hunters, line repairmen, test table operators, chief operators, contract agents, building engineers, line installers, exchange repairmen, plant inspectors, trouble operators, fundamental plan engineers, draftsmen, estimate clerks, exchange operators, cable testmen, equipment inspectors, wire chiefs, traffic engineers, galvanometer men, cable splicers, facilities engineers, surveyors, information operators, switchboard installers, accountants, testmen, supervisors, station repairmen, equipment engineers, directory operators, statisticians, appraisal engineers, routing operators and scores of other skilled employees are specially trained for the exacting work of providing telephone service.

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104 Olive St., Peoria, Ill.

WISCONSIN—We were not in hopes of getting our land ready this year for sowing alfalfa, but thanks to your spreader, the work was quickly done. FRED PABST,
Owner Pabst Stock Farm,
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Spreads 16½ Feet

WITTE LEVER CONTROLLED **Log Saw** $125 F.O.B K. C.

Engine, Saw, Etc., all complete. From Pittsburgh add $6.80. Ask for Terms. Folder FREE.

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Standard Dairy
ALFALFA
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TEXACO
MOTOR OIL

There is nothing that takes the joy out of motoring as quickly as an engine that overheats—and then knocks and sputters.

Improper lubrication may result in these symptoms, in which case they indicate that a hard sticky carbon is interfering with correct firing.

With the proper grade of TEXACO MOTOR OIL in the crank case and the proper fuel mixture, most of your motor troubles will vanish. Your motor won't balk because TEXACO MOTOR OIL won't form hard destructive carbon.

It is a carefully manufactured, clean oil with splendid lubricating body that effectively holds compression. TEXACO MOTOR OIL is made in four grades,—a range that will adequately meet the needs of any kind of motor. You may know that you are getting TEXACO MOTOR OIL by the Red Star and Green Ton every can.

THE TEXAS COMPANY, *Petroleum and Its Products*
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"There is a Texaco Lubricant for Every Purpose"

DO YOUR DITCHING NOW

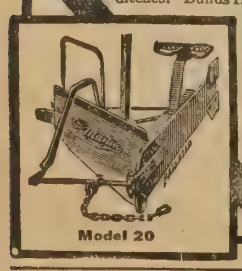


You imperil your next year's crops, your next year's profits, if you let fall and winter rains stand on your land. Give your land a chance to keep breathing. Do the farm ditching and terracing **now.** Do it the quickest way, the cheapest way, the easiest way.

Use the Most Rapid Farm Ditcher, Terracer and Road Grader

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All-steel—Reversible—Lasts a Lifetime. Cuts a V-shaped open-drain, irrigation or tile ditch down to 4 feet. Cleans old ditches. Builds farm terraces, dikes, levees, and grades roads. Works in any soil — wet or dry. Does work of 100 men the old way. Write for free copy of valuable Drainage, Irrigation and Terracing Book and Special Introductory Offer.



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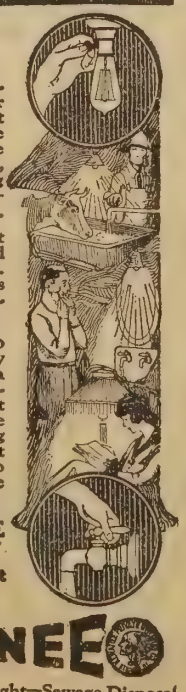
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Install a small, compact Kewanee Lighting Plant in your farm home. Have brilliant light in every room, in the barns, in the yard. Operate churns, cream separators, electric irons and washing machines with electricity—costs only a few cents a day.

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KEWANEE PRIVATE UTILITIES CO.
422 South Franklin Street
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KEWANEE
Running Water—Electric Light—Sewage Disposal

Kansas Shows Cood Herds

(Continued from page 476)

ling shown by Gilliland, was junior champion female. Gilliland also won first in aged and young herds and in produce of dam, the latter being on the produce of Laddie's Golden Viola. Doran showed the first and second prize calf herds, also winning first in get of sire on Celia's Owl of Dornwood.

Holsteins

Eighty-five entries, shown by 13 exhibitors, constituted the excellent Holstein show. The feature of the Holstein exhibition undoubtedly was the herd of 23 head shown by the Holstein-Friesian Association of Kansas. In this group are the pick of the Kansas herds. They were chosen at the beginning of the present fair season by Professor J. B. Fitch of the Kansas State Agricultural College, to represent the Holstein interests of Kansas at several state fairs and national dairy exhibitions. That the herd is a worthy one has been fully evidenced by its winnings. Thus far it has been at four state fairs—Missouri, Iowa, Nebraska, and the Kansas Free Fair—and has won sufficient prize money to defray the expenses involved. It has made nearly a clean sweep of the firsts and championships at all of these fairs. From Topeka it was taken to the Kansas State Fair at Hutchinson. After this fair a few of the animals will be returned to their owners, but the majority of them will be retained in the herd to be shown at the Dairy Cattle Congress and at the National Dairy Show.

L. S. Gillette was the judge of Holsteins at the Kansas Free Fair. The exhibitors were the Kansas Association; Leavenworth County Holstein Association; H. L. Cornell, B. B. Davis, and Union College of Nebraska; F. A. Barney, D. W. Beers, J. Lee Harrison, David Coleman & Sons, L. E. Edmonds, S. Segrist, John H. Stephenson, and Chestnut & Sons of Kansas.

Johanna Bonheur Champion 2d, 26 times a grand champion, had no difficulty in winning this place at the Kansas Free Fair. This bull, which weighs about 2,600 pounds, was exhibited by the Kansas Association. He was bred by Chestnut & Sons, but is now owned by the Colony Farm, U. S. Disciplinary Barracks. The junior champion bull was the senior yearling, U. S. Korndyke Homestead Segis, which was also shown by the Kansas Association; he is owned by C. W. McCoy.

Irene Sarcastic De Kol led an excellent class of eight aged cows, going on to the senior and grand championship. This was another triumph for the Kansas Association, the breeder being George Appleman. Union College won the junior championship on an unnamed junior calf. In the groups the Kansas Association won all the firsts, except in calf herds and produce of dam. These went to Cornell and Coleman, respectively.

Ayrshires

The Ayrshires showed a good increase in the size of the exhibit over last year. In 1919 there were two Kansas herds at the Topeka exhibition. This year two Kansas herds were present and two from other states. The exhibitors were: A. B. Williams & Son, Kansas; Gossard Breeding Estate, Kansas; Stephen Bull, Wisconsin, and C. H. Peverill, Iowa; H. W. Cave, Kansas, was the judge.

Bull won first in aged bulls on Friendlesshead Victor, but yielded the senior and grand championship to Peverill on the two-year-old Cavalier's Choice Goods. The senior and grand champion female was Bull's aged cow, Craighley Ada. The junior female champion was a senior yearling, Rosebud Stonehouse Lucy Yet, shown by Peverill. Peverill won first in all the groups except in senior herds, where Bull led the field.

Guernseys

Two Iowa exhibitors, Mountain Bros. and Dairyland Farm, provided the Guernsey exhibit. Cave also judged these cattle. Mountains won first in aged bulls and the senior and grand championships on Kitchener's Express. All the other championships fell to the same exhibitor, Lydia's Express of I. being junior champion male, Ingleside Pretoria Vrangue, senior and grand champion female, and Kitchener's Pet of I., junior champion female. Mountains also won first in all the groups.

The excellent show of dairy cattle was the feature of the live stock department of the fair. Good quality was exhibited in the horse stalls, though in the horse pavilion was considerable spare room for other animals. While strong, the beef cattle

show was about "average" in point of numbers. Despite the untoward hog market conditions, the pens for swine were well filled, probably indicating that the Kansas hog raisers, or at least the hog breeders, are not entirely discouraged. Doubtless the bumper corn crop that is impending in Kansas also had something to do with the material evidence of swine interest seen at Topeka.

Better conditions for a successful state fair than those attending the recent exhibition at Topeka could not have been ordered. It has been an extraordinary crop year for the state. Rain has been plentiful throughout the growing season, as testified by the good crops of wheat, other small grains and hay, and the fine corn prospects. With the arrival of "fair week", the rain ceased, with the result that the state's agriculture was shown at its best and huge numbers of its people turned out to view the exhibition. The attendance, estimated, ranged from 20,000 to 75,000 daily, it being likely that from 250,000 to 275,000 persons viewed the fair this year.

Ohio's Cornfield Day

(Continued from page 476)

for testing wheat varieties on these plots.

The increase alone in the corn crop from the use of 8 tons of stall manure, reinforced with 40 pounds of acid phosphate to the ton, amounts to almost 35 bushels of corn, or equal to the average production of the state alone. The average unmanured yield in the check plots is just a little more than 35 bushels, so that it has been possible to double the yield of corn by careful handling and reinforcing the manure applied to this crop. While yard manure reinforced with acid phosphate is not so valuable as stall manure, yet the increase per acre amounts to 31 bushels.

The stall manure untreated in any manner brings increase of 23 bushels over the average unmanured yield of 35 bushels and yard manure treated, 19 bushels. The corn has paid a handsome profit for the application of manure and fertilizers, but what about the wheat following the corn? Here we find that the wheat following corn in such treatment has averaged 28 bushels per acre, the increase due to the fertility treatment being about 14 bushels which is entirely clear profit.

Director Thorne, who has recently returned from Europe, states that the average yield per acre of wheat in England is about 30 bushels. This high yield as compared with Ohio has been brought about by the careful use of animal manures and fertilizers. On the Rothamsted Experiment Station an average yield of 36 bushels of wheat has been maintained by the application of chemical fertilizers for 77 years, while the average unfertilized yield for this period has been but 7 bushels. The English experiments show that it is possible to feed the wheat crop entirely with chemical fertilizers, while the Ohio tests go a step farther and show that it is possible to fertilize the corn crop—the great potential food crop of the farm—and still maintain an average production of 28 bushels of wheat to the acre over the expense of fertilizing the corn.

Ohio's Cornfield Day led farmers into a greater sphere than that of simply growing more corn to the acre.

M. D. Lincoln, executive secretary of the farm bureau federation, outlined the program that Ohio farmers expect to carry out within the next year. They are to present before the legislature a bill providing for collective bargaining. They will also be instructed to enact just tax laws to get a "truth in fabric bill" and to regulate the manufacture and sale of ice cream to some extent, as some ice cream now sold in Ohio contains less than 1 per cent of cow cream.

Ohio farmers pay more freight bills than any other industry in the state and there is need that the farmer get his feet under the table when national laws affecting his activities are made. It will be necessary, according to Mr. Lincoln, to conduct a thoroughly good educational campaign in the state in which the city people ascertain how some of the food products are grown and prepared. "Country people read city newspapers," declares Lincoln, "but city people never read farm papers."

Charles E. Gunnels, of the National Farm Bureau Federation, brought out the fact at this meeting that approximately 30 million farmers grow all the food for 100 million people, 70 million being engaged in other industries. After the Civil War, there was a great decline in the price of farm products, due largely to the fact that much more land was brought under cultivation. If a similar decline is not to follow the World War, a certain amount of national legislation and other influences are necessary to hold the price of farm products at a profitable point of production. The farmer needs a social wage so that he can secure the necessities of life.

Dean Vivian of the Ohio College of Agriculture explained the system Ohio adopted following the passage of the Smith-Hughes Vocational Agricultural law, which establishes vocational teachers in many of the centers of Ohio's agricultural sections. Ohio has 70 Smith-Hughes teachers who are now planning and offering four-year high school agricultural courses for country boys and girls.

Praises Account Book

A young Sheboygan County farmer told me the other day that he liked the Wisconsin Farm Record Book because it made it easy for him to keep his farm accounts in order during the year, and greatly simplified the matter of reviewing his year's work at the end of the season, relates S. W. Mendum of the agricultural economics department of the Wisconsin College of Agriculture.

"I have kept records ever since I began farming," he said, "but I did not have any system in them. I set down things as they came along one after another. Everything was there but it was in a regular 'mess' and it was a discouraging job to go through the memoranda, the calendar, the bill file, and bank books at the end of the year and get any ideas out of them. I saw one of the Wisconsin Farm Record Books at the Farmers' Institute nearly two years ago and took to the idea at once. I got one by writing to the college of agriculture and started in. I did not realize the value of the inventories at that time so I did not fill them in that first year, but the arrangement of the receipts and expenses by enterprises was a big help. In the book I got this year I have all the inventories set down and can see at any time just how each account is running. I want another book for next year."

Who rises every time he falls will sometime rise to stay.—WILLIAM C. MORRIS.

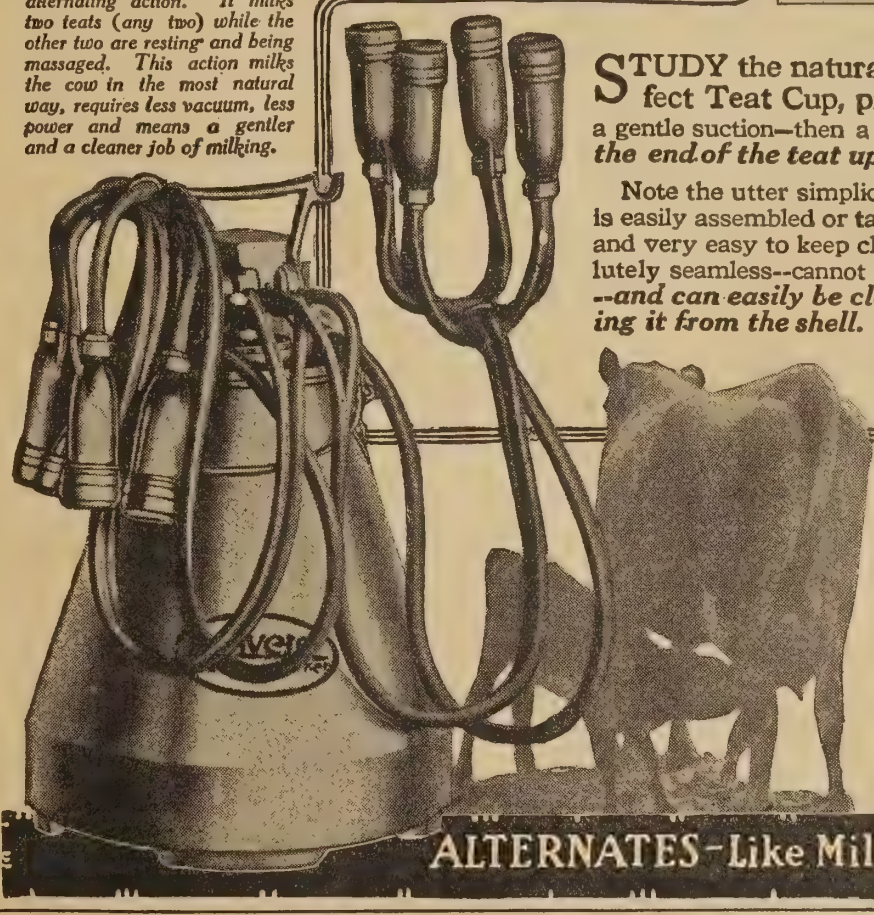
After All—*You Can't Improve on Nature*

---and that's just the reason why, in building the Universal Teat Cup, we first made a most careful study of Nature's ***original*** milker--the sucking calf. And the result was--a teat cup that ***actually duplicates this natural sucking action.***

Universal
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The natural, alternating action of the Universal --the simplicity and absolute reliability of the machine--these are the secrets of the unqualified success of this famous, natural-action milker on the thousands of high class dairy farms where it is being used daily.

The Universal milks with an alternating action. It milks two teats (any two) while the other two are resting and being massaged. This action milks the cow in the most natural way, requires less vacuum, less power and means a gentler and a cleaner job of milking.



UNIVERSAL-the one Real, *Natural* Milker



Milking
A gentle, calf-like suction in the teat cup. This soothing action is what draws the milk.

Massaging
--then a massage, from the end of the teat up---the exact action of the calf's tongue.

STUDY the natural action of this Perfect Teat Cup, pictured above. First a gentle suction—then a soothing massage, ***from the end of the teat up***--the real calf action.

Note the utter simplicity of this Teat Cup. It is easily assembled or taken apart without tools--and very easy to keep clean. The liner is absolutely seamless--cannot collect dirt and bacteria ***--and can easily be cleaned without removing it from the shell.*** At the top is a rubber ring--soft, like the calf's nose--no cold metal to touch the cow.

Your dealer will be glad to demonstrate this famous natural milker. See him. Or write us direct for a catalog and vitally interesting booklet, "The Truth About Mechanical Milking."

The Universal Milking Machine Co.
888 Mound St. Columbus, O.

ALTERNATES-Like Milking With Hands

Producers Favor League Plan

HOARD'S DAIRYMAN:—Rumors are rife these last days of September in the dairy sections of New York. Today an authority on milk who has not always been too friendly to farmers and the League, told me about condensed and evaporated milk in this country. He stated government figures to show that there is not too much of these products in the country. He also brought out figures in relation to butter and cheese showing less holdings than is usual. Then he added, "They are out for your scalp this time, and don't you forget it." We have felt all along since the trouble with the dealers commenced to appear, that trouble might be avoided if the dealers should wish it.

This same person, known by many milk dealers and producers in the state, went on to say that there will be a settlement before the first of October. I wish I could agree, and must admit that it is possible. There is a propaganda going and this may be a specimen to get producers off the track. Personally I do not think that the trouble can be avoided although it is possible that some milk will be bought. If some buy and others close their plants it is a move that will tend to cause the League to collapse. Therefore we must accept the pooling plan and get into the League Co-operative Association. Will it be accomplished? I am writing this on the eve of our own attempt to line up the local League and I confess I am not so sure about our own success as every candidate seems to be of his election.

I have no inside formation on the subject but it seems to me that if the manufacturers of milk fail to buy that the League plants will be likely to manufacture all the condensed and evaporated milk that they can. They own a number of pans in the various plants and can make a lot of condensed and evaporated goods. They can place this on the market at a fair profit and outsell the parties who wish to hold the price to that charged on high sugar prices. A new plant at Syracuse will be ready to help out on this and, together with the other plants, can relieve the fluid situation. The cheese factories in the state can open again since they had closed for the winter. Butter will be made in many places not accustomed to so doing. The League may dry some milk and there will be many outlets for milk. It is not at all dark even tonight. The moon shines through a little.

Since writing the above, I have attended two meetings where the pooling problem has been taken up and have received reports of several others. In no case have the farmers been inclined to turn the project down unless it may be in one place. From there I have conflicting reports. The plan is regarded as the only alternative. If the scheme goes through all right as it now seems the milk dealers will have the satisfaction (?) of knowing that they put it through. It is only under compulsion that we act with energy in these matters. If it goes there is every probability that the dealers will hardly have another opportunity to make a great stir in these matters. In one meeting that I attended a vote was taken by roll call and only nine voted no. In the other, so far as I could determine, every man signed the contract to pool.

It is very freely predicted that entire satisfaction cannot be secured by this method, yet the confidence in the League management is shown decidedly in the attitude of the farmers. It is all very proper that the farmers discuss all acts of the League management. There can be safety in no other way. It is necessary that the management should know what the members desire and are thinking. They are no less concerned about the element of satisfaction than the farmers. Much complaint is likely if the plan is adopted. We all admit this. Yet some such method is certain to be required if we ever get away from these ever recurring contests such as have been so prevalent the present year. It may be due in part to the agitation and disturbance all over the country, and for that matter it presumably may be due to the same or similar causes as other contentions. No one wants to stand a large share of the losses that seem to be coming to business and labor, and must come to farming as well. We think that a large part of it, so far as farming is concerned, is due to the unwillingness of dealers to stand their share of the losses.

One speaker affirms that the milk dealers are not good sports. They have played the game and apparently have made some mistakes. One firm is reported to have had 32 cars of sugar of forty to fifty thousand pounds on the track at one time and that sugar was of the high priced kind. They thought to protect themselves by buying heavily. They bought and have lost and now instead of following Ford and dropping prices they propose to shove the loss over on the farmers and save their bacon. They propose to stop manufacture for they can this time make money in that way.

New York. H. H. LYON.

Firm Feeling is Reflected in Cheese Markets

Further Slight Advances Made During Week—More Condenseries Suspend Operations

[Report by U. S. Bureau of Markets]

Further slight advances under a continued firm feeling were features of the cheese markets during the week ending September 25. Prices at Wisconsin primary markets advanced the first of the week and temporary weakness the middle of the week was followed by immediate recovery due to active selling. Distributing markets also shared in the generally firm condition of the markets. Consumptive demand was reported good, with speculative interest not altogether lacking, but not of particular influence.

The announcement that a number of additional condenseries will suspend operations about October 1 on account of the unsatisfactory condition of the condensed milk market is of more than passing interest just now. Rumors point to an increased production of either butter or cheese in certain parts of New York and Wisconsin, which are important production centers. Whether the milk will be utilized for butter or cheese will, of course, depend upon comparative prices. With butter hovering around the 60-cent mark, however, plants properly equipped to make butter probably will do so.

Poor Quality Cheese Marketed

This possibility is further favored because of difficulties experienced in locating competent cheese makers. Already some cheese of questionable quality has reached certain markets from plants which are temporarily making cheese without the supervision of a competent cheese maker, and the product is not the most desirable property.

The situation from the statistical standpoint seems to warrant a strong outlook. Receipts at the four principal markets are still over 20,000,000 lbs. less than last year. Storage stocks in the same markets are also lighter than last year by approximately 7,000,000 lbs., and the shortage under the 1919 holdings is growing larger each week. On October 1 this shortage will probably be close to 8,000,000 lbs. as compared with a shortage September 1 of but 2,500,000 lbs. Furthermore, stocks last year were increased during September, while this year they are showing a gradual decrease each succeeding week. With this decrease in stocks with southern trade beginning to pick up materially, and with a favorable outlook for export trade, a good many dealers share in the opinion that markets are in a comparatively strong condition.

The average wholesale prices on American cheese, style Twins, for the week ending September 25, were as follows: New York, 27.6 cents; Chicago, 26.5 cents; Boston, 29.5 cents; San Francisco, 32.8 cents; and the Wisconsin primary markets, 26.5 cents. For the corresponding week last year the average prices at these markets were: 30.2c, 28c, 31.4c, 34.4c, and 27.6c respectively. The receipts of cheese at these markets were 3,539,736 lbs., as compared with 4,206,604 lbs. for the corresponding week last year and 2,877,590 lbs. for last week.

New York Butter Market

NEW YORK CITY, SEPTEMBER 28—During the greater part of the past week, trading was decidedly brisk, particularly in butter of high quality. There was some demand for 90—91 score butter, but the greater demand was for butter that would score 92 or above. From Monday until Thursday there was a price advance of 2c on top firsts, extras, and higher scoring butter but undergrades showed no increase. The result is a wider range of values than has obtained at any previous time this season. It is decidedly peculiar that the consumer, in spite of his constant grumbling because of the high cost of living, is satisfied with nothing but the best quality of food products. A high first is a very good quality of butter and very edible and wholesome but it is in only mediocre demand. As a result of the peculiar condition there is a constant accumulation of butter of from medium to low quality with no prospect that it will move in the near future.

Receipts are gradually increasing but the quality of the butter being received is very irregular, only a small percentage of the daily receipts being of the fancy variety. The increase in receipts is in part due to better weather conditions in sections of the northwest where drouths have prevailed for some time and also in part to increase in production of butter in New York State because much of the milk that formerly went to supply condenseries is now being converted into butter at up-state creameries. A large butter production is predicted for the fall and winter months because of improved fall pastures and also because herds have come through the summer in excellent condition.

There continues to be a considerable importation of foreign butter, as small shipments are arriving each week from Denmark and shipments of considerable size from Argentine. During the past week 2,870 casks of Danish butter were unloaded at this port, while 18,181 boxes of Argentine butter were received. The Danish butter varies in quality to a considerable degree and much of it arrived in moldy condition. The Argentine butter is mostly storage butter and is of poor quality generally. Some of it will score 90—91 points and is being held at an asking price of 51@52c. The lower quality is selling at prices of 47@48c. It is expected that Argentine butter will be quite a factor in this market later in the fall as the Argentine winter is just now breaking and quantities of fresh butter will soon become available. There are many who feel that large quantities of Danish butter will soon be reaching this country because of the lowered value of Danish exchange, as Danish exchange took a sudden drop during the past week.

On Monday of last week, the market showed evidences of marked strength and extras were quoted at 60c. On Tuesday, there was great activity in fancy butter and the price advanced 1c. That was followed by advances of ½c on each Wednesday and Thursday. With the decline of activity on Friday a weak undertone developed and has continued since that day. However, there was no change in quotations until today, when, because of lack of buying interest, the price receded 1c. Established quotations today are: Extras (92 score), 61c; higher scoring than extras (93 score or higher), 61½@62c; firsts (90—91 score), 55½@60c; firsts (88—89 score), 51½@54½c; and seconds (83—87 score), 48@51c. W. B. LIVERANCE.

New Jersey Holstein Breeders Organize

New Jersey, a small state in terms of square miles, but large in terms of Holstein enthusiasm, is the eighth state to organize for the employment of a state secretary.

The organization campaign recently completed consisted of a series of ten meetings covering the entire state. President Aitken of the National Association and R. C. Pollock of the Extension Service of the National Association, assisted the New Jersey breeders in their campaign.

Professor Regan, head of the Dairy Department of the New Jersey Agricultural College, and J. W. Bartlett of the Dairy Extension Service Department deserve much credit for the success of the organization work. With the assistance of Regan and Bartlett, Jacob Todd, Jr., secretary of the present organization, A. H. Bullard, secretary of the Salem, Cumberland, and Gloucester Association, and S. B. Roberts, the New Jersey Holstein breeders will be able to perfect a strong state organization.

The New Jersey breeders have organized on a three-year plan, with a membership on the basis of $1.00 per head for pure-breds and 25c per head for grades. This plan met with the unanimous approval of the breeders and as a result of the ten meetings, September 13 to 23, inclusive, the State Association raised a budget of $5,000 per year, or $15,000 for the three years. This amount assures the employment of a secretary. However, the executive board expects to raise an additional amount of $2,000 per year before November 1st.

New Jersey with only twenty-one counties, fifteen of which are interested in Holstein cattle, is evidence of the Holstein spirit which prevails.—R. C. POLLOCK, Extension Service.

Milk Producers to Meet

Milo D. Campbell, President of the National Milk Producers' Federation, has called the annual meeting of the Federation for Oct. 12th, 13th, and 14th to be held at the Morrison Hotel, Chicago.

This will be at the time of the National Dairy Show, affording members and milk producers generally an opportunity to attend both.

Questions of deep interest and concern to the industry will be considered.

There is no substitute for thoroughgoing, ardent, and sincere earnestness.—DICKENS.



First—
Miss Shepherd sang: "In the Gloaming." The New Edison stood on the stage by her side.



Then—
She suddenly stopped singing. The New Edison took up her song, and continued it alone.

185 Times-No difference!

This test was made by Miss Betsy Lane Shepherd in 185 cities and towns of the United States and Canada. The 185 audiences aggregated more than a hundred thousand people. Each audience found itself absolutely unable to tell when Miss Shepherd was singing—and when the New Edison was RE-CREATING her voice—except by watching her lips.

This is a most phenomenal achievement. Merely one such comparison makes an extremely difficult test for a phonograph. Indeed, it is so difficult that no other phonograph or talking machine manufacturer dares to make this comparison.

Mr. Edison subjected the New Edison to more than 4000 such tests, with over 50 different artists, before more than four million people, because he wanted to prove that perfect Realism was an everyday performance with the New Edison.

What does this mean to you?

Test the power of this wonderful Realism on yourself!

WHAT is your musical hobby? What kind of vocal or instrumental music "gets" you most quickly?

Is it a sweet voiced soprano?—a soul stirring violin?—a jazzy orchestra?—or what?

If you'll tell your Edison dealer, he'll give you a wonderfully fascinating test—the "Personal Favorites" Realism Test. It will tell you something you've long wanted to know—whether the New Edison brings you those particular beauties and makes you feel all those fine emotions which you experience in listening to your favorite living artists.

THIS test is really a test of the power of the New Edison's Realism. Do you know what Realism is—what it does?

A most interesting demonstration of what the New Edison's Realism can do, took place at Dallas, Texas, on April 26th, 1920, where Miss Shepherd gave her 185th test.

Miss Shepherd, who is a famous concert soprano, stood beside the New Edison and started to sing:

"In the gloaming, oh! my darling—"

With a soft, rounded loveliness, the beloved melody filled the auditorium. Pulsing through its theme was the soul of a great artist. Its message, warm with understanding, old yet ever new, reached the hearts of the hushed listeners and sped their imaginations back to cherished memories.

It was the magic of music!

Suddenly Miss Shepherd's lips went absolutely still. But her lovely voice went smoothly on—

"—it was best to leave you thus—"

The audience was puzzled. Then it awoke. Miss Shepherd's voice was now coming from the New Edison—and no one had been able to tell the difference between the living voice and the RE-CREATED voice.

The power that enabled the New Edison completely to baffle this audience was its Realism.

Edison's Realism had put into the RE-CREATED music all the magic of the living voice with which Miss Shepherd charmed her listeners.

YOU love fine music. You want your home to enjoy it! You want your children to get its cultural benefits. But where you live may not be convenient to the opera and concert centres.

Mr. Edison has long appreciated your desire—your situation. Other music lovers were in the same position. So Mr. Edison concentrated his life's greatest effort upon perfecting the phonograph. He spent seven years and three million dollars in research work.

What he strove for, was recently told by Mr. Edison himself:

"The ordinary phonograph, as we have known it, falls somewhat short of conferring upon its owner all of the pleasure and benefits that can be derived from good music. The greatest shortcoming of the phonograph was its lack of Realism, and it is this shortcoming which I have sought to overcome. The result is a degree of Realism in our present phonograph which is baffling to even the most expert ears.

"I have been quoted as desiring to see a phonograph in every home. What I actually want to see in every American home is music, so realistic and so perfect in its rendition as to be an unending source of benefit and pleasure."

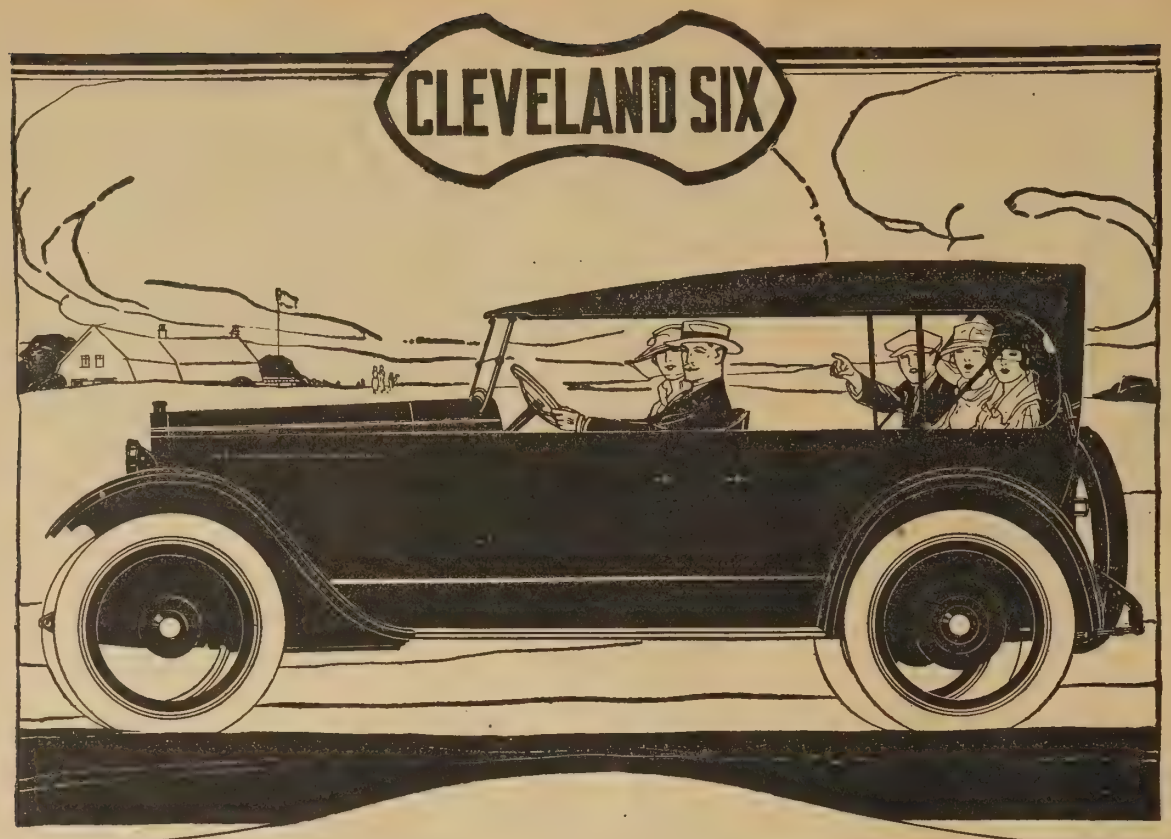
NOW you see what the New Edison's Realism is, and what it does. You're pretty certain that this Realism can bring the magic of music into your home. But Mr. Edison wants you to assure yourself on this point. He wants you to test the power of that Realism on yourself.

Watch for the advertisements of your local Edison dealer in your newspaper. See when he is ready to give the "Personal Favorites" Realism Test. Take the whole family along when you go to hear it.

If you prefer, write us direct and we'll send you a special ticket, addressed to your nearest Edison dealer. This will entitle you to have a private test.

The NEW EDISON
"The Phonograph with a Soul"

THOMAS A. EDISON, Inc.
Orange, N. J.



The Cleveland Has Made Good Because It Is So Good

Offered to the public with no weird claims, sold only for what it is, a better car of really unusual qualities, the Cleveland Six has won a place of marked distinction among light cars.

In a year's time this better car has gone into daily use in the hands of over fifteen thousand owners, and today the satisfaction of those owners, expressed to their friends and neighbors, is multiplying Cleveland ownership.

Featuring the Cleveland is the exclusive Cleveland motor, the most advanced design of the over-head valve type, quiet, flexible and alive with power. Long underslung springs, positive brakes and ease of control are features of the sturdy chassis upon which are mounted four handsome, dignified and splendidly upholstered and finished styles of body.

Touring Car (Five Passengers)	$1435	Roadster (Three Passengers)	$1435
Sedan (Five Passengers)	$2445	Coupe (Four Passengers)	$2345

(Prices F. O. B. Cleveland)

There are Cleveland Six dealers in more than 2000 cities and towns. There is one where you live or nearby. Arrange to see the Cleveland. Catalogue mailed on request.

CLEVELAND AUTOMOBILE COMPANY, CLEVELAND, OHIO

$1435


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DOG DISEASES
And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
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America's Pioneer Dog Medicines


Dickey Glazed Tile Silos
Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.
The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
KansasCity,Mo. Chattanooga,Tenn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Dairying Thirty Years Ago

Taken From the Issue of Hoard's Dairyman of Oct. 10, 1890

An enraged bull at Valpariso, Ind., notwithstanding he had been dehorned, mortally bruised John Swanson, his breast being smashed to a jelly. His wife had her leg broken and came near sharing the same fate in trying to rescue her husband. Taking the horns off doesn't always endow the bull with a meek and quiet spirit.

⚜

It is about time we quit trying to fool ourselves with the idea that we can take very bad taints and almost rottenness out of filthy milks by the use of aerating machines, separators, curd mills, extractors, or submerged creamers. Easily moved, volatile oils and flavors can be held in check, removed by aeration and manipulation, and neutralized by development of acid in cream, milk, or cheese curds, but that which is really far on the way to the bad, or unmistakably "filthy, will be filthy still," as saith the Scriptures.

⚜

It is hardly conceivable to "live Yankees" that there should be still in good old Scotia persons who think they can write down and talk down the business of selling live stock by weight instead of by guess; but it is a fact, nevertheless, that the butchers are throwing cold water on the use of what they call over there the "weigh-bridge", but which we call platform scales. The Farming World says the butchers inspire the opposition to the end that they may go out among the farmers and "guess" off the weight of their cattle for less than they would weigh.

In this country, the man who would inveigh against the use of the "weigh-bridge" would make himself as ridiculous as to deny the use of locks on safes and bank vaults; or as ridiculous as the man will make himself who opposes the testing of pooled milk "in the good time coming".

⚜

The Southern Live Stock Journal has a correspondent who says he has a neighbor, an Alabama cow doctor, who decided an ailing cow had the "hollow tail" and he split it and put in some soot, salt, and black pepper and tied the whole up in a rag! This is the nineteenth, almost the twentieth century. Still we have the same kind of mind that groped in the darkness of the 11th century. Well does the veterinary editor of that paper hit off such benighted superstition. We can just barely remember seeing an old "hoss doctor" do that "way back" when our home was in New York State.

⚜

We are glad to learn that the live dairymen of Missouri have met and organized a state dairymen's association and propose in the hereafter to keep step with their brethren in dairy states in advancing the great interest.

They have a soil and climate well adapted to the purpose. Eternal corn does or can reign there as flourishingly as it does in Iowa or Kansas, especially if it has the cow to help it along—and where corn is almost indigenous to the soil, the cow or any kind of stock can be cheaply fed.

⚜

The Elgin butter market was quoted firm at 24c and in New York the fanciest lot commanded 23 cents. Cheese in New York brought 9⅝—9¾c for a few special lots of Oswegoes.

⚜

Never put dry layers of hay or straw into the silo along with green fodder. Every layer of the hay and straw makes a strata of air that cannot be forced out, and hay will absorb moisture enough from the silage to cause it to mold because of this air, and the germs of mold that it contains quickly begin to multiply. Mold once started travels a good ways and more or less silage will be spoiled in whole or part, above and below each layer. Such is the tendency of those who have experimented along this line of investigation.

⚜

"The farmer must be educated to be the intellectual peer of any man," says Wm. G. Smith of Minnesota, "and so be able to fight successfully those systems that absorb too much of his profits." A bright young boy once said he had a farm which was exempt from taxation, not subject to execution, and equal in value to any other of three times the area. "Where is your farm?" he was asked. "Under my hat," he replied. And he was right; every industrious, ambitious, and deserving young man has that kind of a farm by divine inheritance. Shall it be allowed to run to weeds or shall it be cultivated, fertilized, and developed? There can be but one answer for the farm under the hat—let us educate.

There is value in neatness. Most folks realize that a good-looking farm is a good farm.

This fall is a good time to put into effect that contemplated plan of improving the home grounds.

"SNAG-PROOF" Rubber Footwear



Have You Ever Compared Leather Shoes With Snag-Proofs?

LEATHER is high. Snow, sleet and slush ruin leather shoes. They can't keep your feet warm in mean weather.

Snag-Proof rubber footwear has not advanced in cost anywhere nearly as much as leather. Yet it is more comfortable, warmer and gives better service during winter. No matter how bad the weather is, if you are wearing Snag-Proof rubber boots, shoes or arctics, your feet are kept warm, dry and snug.

And you can't get better rubber footwear than Snag-Proof. Nearly fifty years of progressive study have enabled us to make truly exceptional rubber footwear. The green Snag-Proof label is on every boot, shoe and arctic. Look for it.

Have you met the Snag-Proof dealer in your town? His proud boast is that once he sells a man a Snag-Proof boot, shoe or arctic, he has made a permanent, satisfied customer. Let him show you the footwear that will please you in every respect. He has the right style and grade to fit your need at the price you want to pay. Look him up.

LAMBERTVILLE RUBBER COMPANY
Lambertville, New Jersey



Faster, Deeper Plowing!

THREE miles per hour, with the pull of a dozen-odd horses ***concentrated*** at the draw-bar---all under easy, quick control of one operator. ("5 Ton"—40—25 H.P., 4 plow), ("10 Ton"—60—40 H.P., 6 plow). Power to leave deep, even furrows in stiffest sod or stubble; to pull a big load of harrows or seeders on the ***mellowest*** seed bed. ***No*** slipping and ***no*** fuel waste. ***No*** packing so cannot injure any soil.

Holt patented steel tracks—heat treated for long service by our own process—have carried business farmers and road makers through season after season of hard work.

The "Caterpillar" will fit every power job on your farm—belt, field and road and turn you a real profit by ***year 'round service and satisfaction.***

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Ask any Holt dealer—or write us for booklet
"'Caterpillar' Tractor Performance"

NP-1

League Milk Sold for $3.65

Does Not Include Milk Now Manufactured

At a meeting of the directors and county presidents of the Dairymen's League held in New York City September 27th, it was voted to sell League milk for October for $3.65 per hundred pounds. This is for three per cent milk at the 200-210 mile zone, with the usual butterfat differentials and with freight differentials as changed by the new freight rates. At a meeting of the directors held two weeks earlier, they voted for a price of $3.85. But the League was unable to sell the milk at this price and for many reasons it was thought best to change the price to $3.65. Final agreement has not yet been reached with the distributors but they have intimated that they would buy at this price.

Manufacturers of milk products still refuse to buy milk at any price after the beginning of October so that the above price will not include the milk of those members of the organization who are now selling to the manufacturers but it will move all of the milk for the fluid market and that which is going to ice cream manufacturers.

The chief reason why the directors decided to change the price was that no milk had been sold at the $3.85 price; there was no prospect of selling twenty-five to thirty per cent of it now going to the manufacturers at any price, and, therefore, if the fluid milk was not sold, it would be a case of a double-headed fight with all of the dealers, and nothing would please many of them better than to have the farmers keep their milk at home.

In case of trouble, the dealers would be so situated that the distributors would obtain a considerable supply of milk now going to manufacturers at very low prices and use this cheap milk as a weapon against the producers of fluid milk who were keeping it at home. In case the farmers won the controversy, the distributors would immediately put up the price again to the consumers with the farmers' higher price as an excuse (it would not be a justification) and this would immediately reduce consumption and react to the detriment of the farmer especially when the tendency of all markets is downward.

With the sale of all the fluid milk and the milk to the ice cream manufacturers at $3.65, not only will the milk of the great majority of the members be sold but it will be possible to sell at this price to the distributors at least some of the milk which is now going to the manufacturers.

Three dollars and sixty-five cents per hundred pounds is below the cost of production, and is not a satisfactory price to farmers. On the other hand, it is fifty-four cents higher than the price for October milk last year, and milk will be sold by the League at this low price in consideration of the very critical situation which is faced at this time by all kinds of business.

The Pooling Plan

It is hoped that by November the situation will improve. In the meantime, the signing of the co-operative contracts and of the orders for pooling of the proceeds from the members' milk is going on. Meetings are being held in every community in Dairymen's League territory, and with almost no opposition the farmers vote to put their business on a better basis by signing the co-operative contracts and the orders on the dealers for the pooling of the proceeds.

It is not certain yet that the pooling can be put into effect to take care of October milk, as it is a tremendous job of organization to get the contracts to farmers, have them signed and then to make the necessary business arrangements afterwards to make pooling of proceeds imperative. Whether or not it can be done, depends almost entirely upon the farmers themselves and the interest they have in saving their own business. It was the opinion of the majority of the Board of Directors that it would be possible to get ready to pool the October proceeds. If this can be done, and with the selling of a large part of the October milk for $3.65, all of the members of the Dairymen's League can be taken care of without tremendous loss to anyone.

This will make the best of a bad situation and will lead to the establishment of the co-operative plan, the ownership of the country plants and equipment by farmers whereby their markets cannot be interrupted by the arbitrary action of the milk dealers and whereby their business can be put upon a more successful and permanent basis.—E. R. Eastman, Editor Dairymen's League News.

Butter Markets Make Further Substantial Gains

Active Demand and Comparative Shortage of Finer Grades Responsible for Firm Tone

[Report by U. S. Bureau of Markets]

Greater firmness than has been noted for some time developed in the butter markets during the week ending September 25, and prices made substantial gains of 2 to 3 cents. As has generally been the case this year, demand and a comparative shortage of finer grades were directly responsible for the firmness. Undergrades were accumulated and showed but little price change until late in the week, when the advance on top grades directed the attention of buyers to the relatively lower prices ruling on underscores.

It was thought that the rapid price advances which took place might slow up consumption, but the trading showed no evidence of this, and western dealers, who have been more or less skeptical regarding earlier price advances at New York, were more confident when the movement of undergrades began to improve. Heretofore, even when the markets have appeared weakest, there has usually been a surplus of undergrades to act as a drag on the market.

The average wholesale prices on 92-score butter at five of the principal markets, for the week ending September 25, were as follows: New York, 61.4 cents; Chicago, 57.7 cents; Philadelphia, 61.5 cents; Boston, 60.7 cents; and San Francisco, 63.6 cents. For the corresponding week last year the average prices were: 60.5c, 59.5c, 60.8c, 59.8c, and 60.9c, respectively. The receipts of butter at these five markets were 9,720,798 lbs. as compared with 8,770,458 lbs. for the corresponding week last year and 10,378,735 lbs. for last week.

Clean nests for clean eggs; eggs should not need washing.

MOLASSES

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Feed **Kane Syro**—it will increase your milk production from 10% to 25%. **Kane Syro** is rich in milk-producing fats, having a sugar content of at least 52%. No sugar has been extracted.

KANE SYRO

will make your other feeds palatable and digestible.

Shipped direct from Cuba and Porto Rico— the home of real cane molasses. We pump directly from the ship into staunch barrels, which are shipped direct to you. Prompt deliveries guaranteed.

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HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

. . . **STATEMENT OF** . . .

The Ownership, Management, Circulation, etc., required by the Act of Congress of Aug. 24, 1912

—OF—

Hoard's Dairyman

Published weekly at Fort Atkinson, Wis., for October 1, 1920.

State of Wisconsin, County of Jefferson, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Frank W. Hoard, who, having been duly sworn according to law, deposes and says that he is the business manager of the Hoard's Dairyman and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher W. D. Hoard & Sons Co. Fort Atkinson, Wis.

Editors A. J. Glover, P. C. Burchard, C. L. Burlingham Fort Atkinson, Wis.

Managing Editor A. J. Glover Fort Atkinson, Wis.

Business Manager F. W. Hoard Fort Atkinson, Wis.

2. That the owners are: W. D. Hoard & Sons Co., Fort Atkinson, Wis.; A. R. Hoard, Fort Atkinson, Wis.; H. L. Hoard, Fort Atkinson, Wis.; F. W. Hoard, Fort Atkinson, Wis.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

Signed, Frank W. Hoard, General Manager.

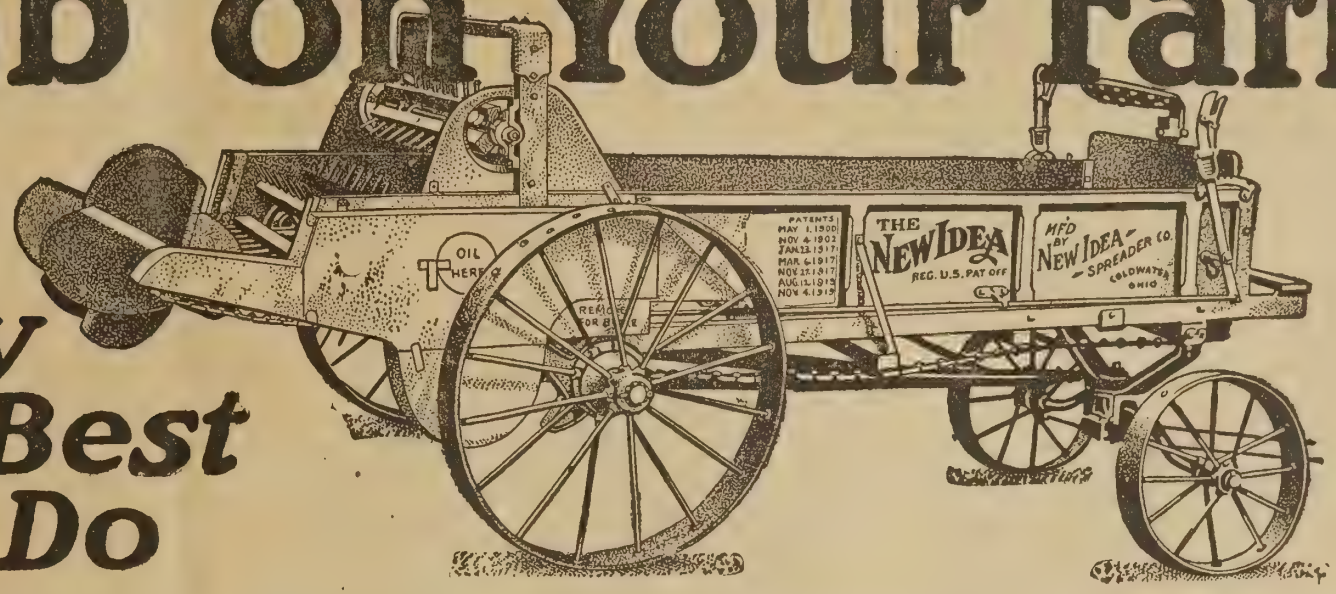
Sworn to and subscribed before me this 1st day of October, 1920.

Signed S. R. Jones, Notary Public.

[SEAL](My commission expires Aug. 10, '24.)

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Successful farmers everywhere realize this. They know that yields increase yearly and land rises steadily in value, when the greatest of fertilizers--stable manure--is used as it ***should*** be used.

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It is the one spreader that gives you the greatest worth out of your manure with lowest upkeep and least amount of work for man or team.

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Free copy of your new book, "Feeding the Farm."
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The farm that is properly equipped with power farming machinery has no labor problem. Farm labor naturally seeks it because, there, the work is lighter, the day shorter and much more can be accomplished.

A Federal is a natural part of every farm's power equipment. It, too, saves valuable time, lightens labor and accomplishes a greater day's work.

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You Get What You Advertise

(Continued from first page.)

ties I mean items such as fetching wood from the wood pile, (of course I allow for cutting and hauling and making that woodpile), cutting a lawn, or stoking the furnace and sifting ashes. There are many similar petty tasks that one man or the other performs as a matter of course and that the city man ordinarily does not make as a mental charge against his "work" and the farmer ordinarily does. In both cases such tasks are done in person by the householder who must be economical of money and in both cases it pays few householders to hire such tasks done. Farm or city, they ought not to be fairly rated in the day's work even though they are in both cases daily "chores". But the so called "chores" that are properly part of the constructive work, such as the barn chores on the farm or the sweeping out and early heating up of the baker's ovens before the dough goes into them, are both part of the day's constructive work, though they are both in the nature of "chores".

We sometimes have "time studies" made in our factories to determine how much of the time the employees spend is constructive and how much is wasted motion or lost motion. If the same experts should make time studies on a series of farms——! But I am getting away from my theme.

I do sincerely believe that a large part of the farmer's labor trouble is due to a persistent habit of talking of the imagined joys of city life and "knocking" because of this, that, and the other difficulty connected with the work on the farm. If one-half as persistent, one-sided, and true propaganda concerning the unpleasant side of city life as compared to that on the farm was offered the city dweller, many would leave the city for the farm and the farm labor problem would be solved.

Come on, brother farmers, throw out your chests altogether and start the propaganda by saying: "Long hours! Yes, but in God's free country where the sun is not reflected from hot, hard pavements; where cool water comes from a spring, not tepid from pipes; where at night the wind from the grasslands or the tree tops blows clear through your bedroom and out the other side.

Good! Take a new, long breath, chests out again, brothers, and say: "Hard work!" You bet! Bully hard work which strengthens the muscles and hardens the hands and brings a man into contact with the good, honest, sweet smelling soil of the country; work where a man is not nagged by a sub-foreman, or liable to be thrown out of his job on pay day because the firm has failed; work where a man can think for himself as he works.

Once more! Another good lung full of country air! "Limited household comforts?" Yes, but if somebody else goes on strike in the winter time no farmers' house ever goes cold so long as the woodlot holds out. You are not dependent on the whim of a janitor as to whether your dwelling place will be warm or cold today. So long as there is illness in the house on any farm there are always neighbors ready to offer services and who will help in your kitchen or the sick room. There is more free help than you will ever find without paying good hard money for in the city, and such help so given in the country won't be half hearted either. If you are sick in the country, you'll be in your own bed at home among friends instead of being carted off in an ambulance to loneliness in a hospital.

We're gaining! Try it again! "Plain meals?" Yes! But there's no gassy city smoke and filthy human dust blown into the meals as they cook and when we get garden vegetables, we get vegetables! The sweet corn isn't wilted and corky. The beets are plump and juicy. The string beans aren't all string, other vegetables are really fresh and their full flavor is not lost by lying in a city market in the sun for a day or two. The Lord knows you can't hold enough apples to make any impression on the mass of them that are lying around under the trees free for the eating from August to November or December and after that the cellar will be full and just as free. They won't cost five to ten cents apiece as they do in the city.

Think up, brother farmer, all the other things you have heard your neighbors growling about and I'll bet you I can offset them three to one with things to growl about in city life. But unless you challenge me I won't, because I was born almost in the city, live there some of the year, and though I own a farm I can see the good—and find the places to growl over if I hunt for them—in both. I refuse to knock either. You may be fitted better for one life and I for the other or we may both be misfits, but if either of us want labor to come out of its shell and join us where we are ——! No, I won't say it again.

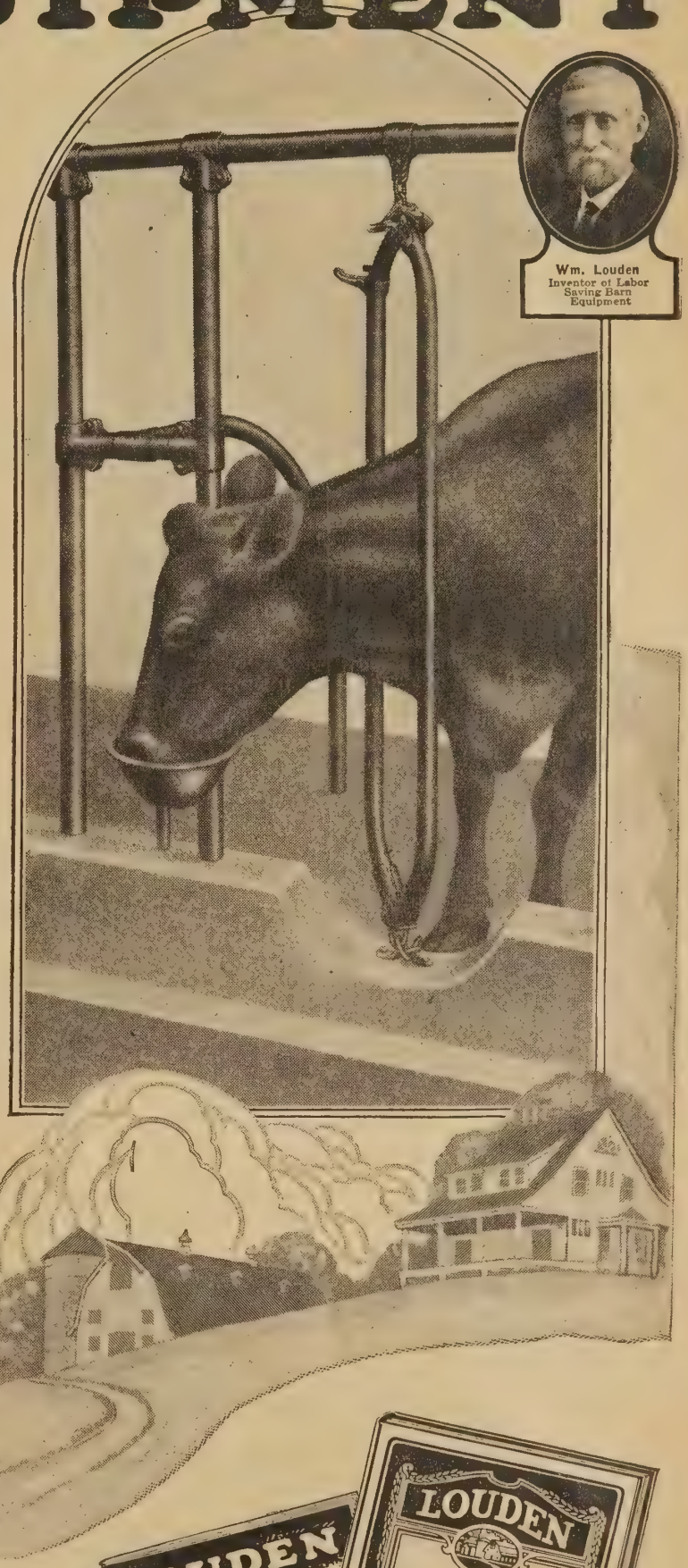
A good house has three complete parts: One for work, one for play, and one for rest

LOUDEN
BARN EQUIPMENT

Keeps the Boys Interested in the Farm

When the farm boy gets the fever to go to the city or the hired man "jumps his job," visit the barn—it may suggest a reason. Slopping around a filthy barnyard in rubber boots, cleaning out the barn with a pitchfork and wheelbarrow is the meanest, dirtiest, most unpopular job on the farm.

You can transform the drudgery of barn work into a pleasant, profitable job through the use of Louden Labor-Saving Equipment, because it takes all the hard, disagreeable work out of the daily chores—cleaning the barn, handling the cows, feeding and watering.



Saves Half the Labor and Time

Have more time for other work by using a Louden Litter Carrier—clean, quick and water tight—the carrier that actually takes out as much as five wheelbarrow loads at a single trip—dumps it into a spreader or manure pit. Saves more than half the labor every day in the year and turns a man's job into a boy's pleasure.

Louden Quick Detachable Water Bowls eliminate the time-wasting job of turning the cows out for water once or twice daily. More important still—the cows give anywhere from 20% to 40% more milk because they can get all the water they want, when they want it, and at the right temperature.

Louden Steel Tubular Stalls and Stanchions make it easy to keep the cows clean and the barn sanitary—saving more labor and insuring a better grade of milk. In addition, they give the cows genuine "Pasture Comfort"—the kind of comfort they pay you for in a fuller milk pail. The Louden High Built-up Manger Curb alone will keep you from wasting enough feed to repay for the stalls within a few years time.

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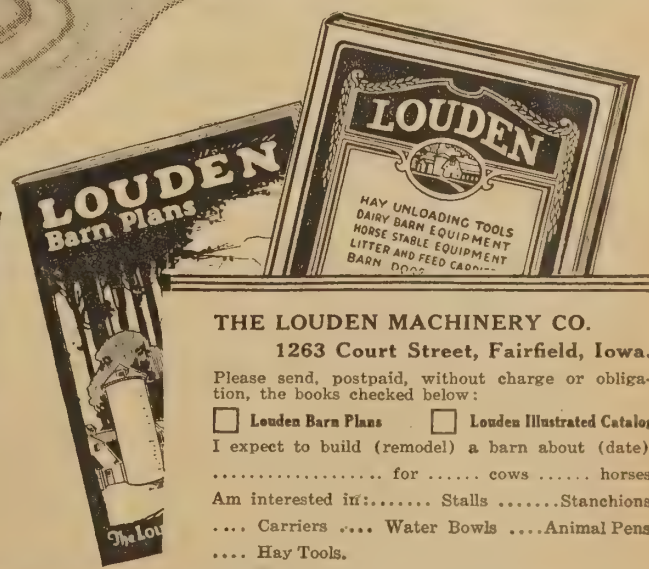
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Please send, postpaid, without charge or obligation, the books checked below:

☐ **Louden Barn Plans** ☐ **Louden Illustrated Catalog**

I expect to build (remodel) a barn about (date) ..... for ..... cows ..... horses

Am interested in:..... Stalls .....Stanchions .... Carriers .... Water Bowls ....Animal Pens .... Hay Tools.

Name .....

Post Office ..... State .....

MARKETS

CHICAGO, Sept. 30—Butter—Creamery, extras, 58c; standards, 54½c; dairy, firsts, 54@56c; seconds, 44@47c.
Eggs—Ordinary, 49@52c; firsts, 55½c.
Cheese—Twins, 25⅜c; Young Americas, 26½c.

MILWAUKEE, Sept. 30—Butter—Creamery, tubs, 59c; prints, 60c; extra firsts, 57c; firsts, 55@56c; No. 1 packing stock, 34@35c; No. 2 do. 20@30c.
Eggs—Fresh firsts, recandled for city trade, 51@52c; current receipts, country candled, 49@52c; checks, 31@34c; dirties, 35@38c.
Cheese—Twins, 25⅝c; Daisies, 26⅞c; Longhorns, 26½c; fancy Brick, 25c; Limburger, new, 1 lb., 25½c; Limburger, new, 2 lbs., 24½c.

NEW YORK, Sept. 30—Cheese—Quiet; state milk, common to specials, 20@29⅝c; skims, common to specials, 5@19c.
Butter—Weaker; receipts, 7,726 pkgs., creamery, extras, 60c; state dairy, tubs, 45@59c.

Dispersion Sale

October 15, 1920
Rockport, Indiana

55 Registered Holsteins
24 High-Grade Holsteins

This is a complete dispersion of my herd. It includes some well bred heavy producers that will please you.
Every animal over 6 months tuberculin tested.
Write for catalog.

Louis P. Eigenmann, Rockport, Ind.

$150
30 Holstein Heifers

coming two years old. Sired by "Sir Riverdale May Echo Lyons", brother to "May Echo Sylvia". Bred to "Sir Echo Verbelle Twice". All of them straight, guaranteed in every way and tuberculin tested. Only $150 each. Their calves will carry 82½% May Echo blood.

J. C. Eyre, Chantry, Ontario, Can.

Mara Alva

75 Head

Registered Guernsey Cattle to be sold at public auction

Mara Alva Farms Smithville, Ohio

Thursday, Oct. 21, 1920

This offering will consist of 25 choice cows in milk or close springers. A fine lot of bred heifers, a few choice bulls and a beautiful collection of yearling heifers most suitable for calf club work.

Many of the cows and heifers are in calf to Wardem Ultra King (27922) senior herd sire at Mara Alva.

It will perhaps be sufficient to say that Wardem Ultra King is by a son of the famous **Ne Plus Ultra** and out of Queen of May Rose (28326), one of the choicest daughters of May Rose King (8336), making him a bull of superb breeding.

Cows and heifers in calf to this bull should find ready sale, with those wanting the choicest of foundation stock.

This is Mara Alva's fifth semi-annual sale of registered Guernsey cattle and you are cordially invited to attend.

A. C. RAMSEYER, Proprietor
Col. F. W. Andrews & Son, Auctioneers

Catalogue on request



Forty Production Guernseys

From Two of Waukesha's Most Noted Herds

80% of the herd are A. R. animals or are from A. R. dams.

Watch next week's advertisement for the prizes and records represented in this herd.

Jones & McKerrow
Waukesha - Wisconsin

Two Ohio Holstein Sales

October 23

The entire Ruffner herd of 70 first class registered Holsteins will be sold at Lebanon, Ohio.

It will include daughters of Reinickel Sarcastic Segis Fayne and cows bred to him. He is sired by a grandson of Sarcastic Lad and from a granddaughter of King Fayne Segis that has a 7-day record of 33.45 lbs. butter, 628.5 lbs. milk.

Some splendid 2-year-old heifers bred to a half brother of Reinickel Sarcastic Segis Fayne out of a 25-lb. granddaughter of Sir Fayne Concordia and to a 26-lb. son of King of the Pontiacs. Also some good granddaughters of Colantha Johanna Lad.

October 25—26
The Wellington District Guaranty Sale at Wellington, Ohio

45 excellent grade cows and 2-year-old heifers due early in November, including the entire grade herd of M. L. Fuller, several of which have C. T. A. records of from 10,000 to 14,000 lbs. milk in a year.

85 registered Holsteins including the J. G. Beal herd and that owned by Frint, Mays, and Garver, as well as one or two animals from other herds in the district.

Every animal in the sale has been selected and only really good ones have been included.

Every animal over 6 months in both sales will be tuberculin tested and sold subject to a retest guarantee.

Write for catalogs to

Ohio Holstein Association, Sale Mgr.
H. C. Barker, Field Secretary, Tiffin, Ohio

Third Annual Sale

Porter County, Indiana, Holstein-Friesian Breeders' Association

50 Registered Holstein-Friesian Cattle

Consignment includes heifers and cows bred to or from sires of National note, such as:

Winterthur Ormsby

Seven nearest dams average:

Butter	7 days	35.84
Milk	7 days	630.23
Butter	365 days	1064.37
Milk	365 days	22491.54

Unaland Korndyke Hengerveld

Three nearest dams average:

Butter	7 days	29.03
Butter	1 year	1146.34
Milk	1 year	24151.80

Creamelle Perfection

Took second prize at Ind. State Fair 1918-19. Grand Champion Indiana State Fair 1919. Breeding of the best blood lines.

King Korndyke Isabelle Veeman

His six nearest dams average: Butter 7 days, 32.77. Grand Champion Indiana State Fair 1918 and other fairs. A sire whose daughters are proving to be high producers.

Winterthur Sadie Vale Dosegis

His dam as a 2-year-old had a record of:

Butter	7 days	25.20
Butter	1 year	826.19
Milk	1 year	19116.00

Is a grandson of King Segis Pontiac Alcartra and King Korndyke Sadie Vale

Come to Porter County to get foundation cattle, where the Ind. State Champion cow is, where we have had 8 out of 10 best cows in the Cow Test Association in the State. Had the highest cow 8 months out of 12 in 1919.

Valparaiso, Indiana, October 30, 1920

Sale will begin at 12:30 o'clock sharp

On Pennsylvania, Nickel Plate and Grand Trunk R. R. Auto Bus from Kouts and Wheatfield. For Catalog write

A. C. MOHNSSEN, VALPARAISO, INDIANA

Barron County
Holstein Sale
Barron, Wisconsin
October 11th
A Sale of 50 Head of High Grade Holsteins

Be on hand if you want some good grades for winter

October 12th
50 Head — Registered Holsteins — 50 Head

A nice lot of desirable Holsteins.

Cows in good condition, some from very fine record dams, some with good records of their own, and several on semi-official test.

Very choice heifers, from good record dams, and some of them show heifers, now on the Fair Circuit, and taking blue ribbons at the northern fairs.

A show bull, now on fair circuit, from a 15-lb. 2-year-old dam now on yearly test.

Yearling son of Pabst Pontiac Hartog, from a 22.20-lb. dam now on yearly test and finishing with 800 lbs. Some of the consignors will accept bankable notes on one year's time.

All over 6 months old tuberculin tested.

Auctioneer, Col. J. E. Mack. F. H. Everson, Pedigrees

Catalogs ready at Sale Time.



Iowana Farms
consign to the
National Dairymen's Sale
at
Chicago, Oct. 13-14

3 Bred Yearling Daughters of
Oak DeKol Ollie Homestead (85529)
Grand Champion at National Dairy Show 1916 and 1917

These are all show heifers and from yearly tested dams. They are bred to Iowana Star Fayne, a son of Sir Johanna Fayne from Star Watson, whose daughters have already won $234.00 Association prize money.

Also one show bull, born November 29, 1919. Mostly white, whose 3 nearest dams average 29 pounds butter in seven days. His dam is on yearly test, going at a 900-pound gait and her dam has over 24,000 pounds milk and over 1,100 pounds butter.

Herd Under Federal Supervision

IOWANA FARMS - Davenport, Iowa

Holstein Breeders' Sale Co.
October 15th, 1920
Fond du Lac, Wisconsin
95 Head Pure-bred Holsteins

40 head will be fresh or heavy springers, 20 of them with A. R. O. records from 14 to 31 pounds butter.

Includes the dispersion of the herd of Wm. Knapstein, New London, Wis. 10 cows with records up to 20 lbs. butter and bred to a 32-lb. sire. He is also sire to 10 yearling heifers and heifer calves.

We will sell Fairview Milla Korndyke 2d, a 31.46-lb. daughter of Rag Apple Korndyke 8th, bred to Erricson's Marathon Bess Burke Bull. We will sell her son by Pabst Pontiac Hengerveld De Kol, also a yearling son of King Segis Pontiac and Queen Julianna Dirkje. His 2 nearest dams average 1,146.66 lbs. butter in 365 days, and 33 lbs. butter in 7 days.

Also twin bulls ready for service out of a 28-lb. dam and a 37-lb. sire's dam.

The sale will be held in our new sale pavilion, where you will be comfortable, no matter what the weather. We will protect the buyer by handling all the papers, and if we cannot secure the papers, will return the purchase price.

Catalogue ready. Sale will start at 10:30 a. m. sharp. Dinner served in dining room.

Remember the Date

S. H. Bird, Sales Mgr., So. Byron, Wis.

Green County Holstein Breeders' Association
Semi-Annual Consignment Sale
Fair Grounds, Monroe, Wis., Oct. 28 - 29
150 Picked Registered Holsteins

from the best herds in Green County. 120 females of excellent breeding. Good individuality, some with records up to 25 lbs. of butter. 30 bulls all of breeding age, good individuals, sired by 30-lb. bulls and many of them from high record A. R. O. dams.

All the animals in this Sale have been picked by the Sale Manager and if you are in the market for Holsteins of quality and individuality don't forget our dates.

We will sell all cattle on a 60-day retest.

The Green County Calf Club will sell 22 calves, among which are the 1st and 4th prize heifers and the 3rd prize bull at the Wisconsin State Fair.

Monroe is on the lines of the Illinois Central R. R. and the C. M. and St. Paul R. R. which gives us good shipping facilities.

Come out to the Fair Grounds Oct. 28 and 29 and we will meet you on the level and sell to you on the square.

Auctioneers:
Col. Robt. Haeger, Col. Edgar Eells, Col. R. E. Hellen
S. T. Wood in the Box

For information and catalogs write

H. D. Schindel, Field Sec'y, Box 132, Monroe, Wis.

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Broadening Out

"Why, how perfectly splendid, dad," exclaimed Bob on the morning of his nineteenth birthday as his father presented him with a brand new Henry of the coupe style. "You tell 'em, dad, you've got the idea when it comes to knowing what a boy likes. Why I never dreamed of such a thing, dad."

"Of course you didn't, son; that's the reason why I bought it for you. I thought you would be pleased to have a car of your own, even though you have never been denied the use of the Cadillac. Ownership is what the boys like," he concluded with the satisfaction that he had done the right thing.

As a matter of fact there had been considerable family discussion as to whether or not it would be a good thing for Bob to have a car of his own. Aunt Ella decided as usual in matters of this kind that concerned Bob. "No, John," she had said with sarcastic firmness, "don't get it for him, at least until he is through college. I am sure it will ruin his scholastic record. College boys do not need extras of this kind to make their college course pleasant. I shall consider it a wasteful expenditure of hard earned cash," she added with final determination.

But to all of her arguments Bob's father had the one ready answer which he had always used to put an end to unpleasant family entanglements that arose whenever Bob's welfare seemed to be at stake. "Everything I have done for Bob, having his best interests at heart for his future, have worked out just about as I thought they would," he replied, "and no one can say that Bob is a spoiled boy. He is developing into just the kind of a young man that I want him to be and I think he is old enough now for you to give him credit, Ella, for knowing more about life with its many problems than you do. We have plenty of money and are making more all of the time, and if one of Uncle Henry's Lizzies will make my boy happier, as I think it will, he is going to have it. So you can consider that final."

Of course Aunt Ella considered herself the most abused creature in seven counties, but that made little difference to either Bob or his father for the former had the car and the latter had had his way.

One morning after Bob had had the car for about two weeks found him engaged in the following conversation with his father. It was one of those drizzly, rainy mornings that sometimes make it difficult for the farm folks to keep busy. The two men stood in the doorway of the horse barn, apparently deliberating what they should do next now that the chores were all completed.

Now this would be a good time to approach dad upon the thing Jimmy and I have been discussing, thought Bob. It's a lot easier to reason with dad when he hasn't much else on his mind, he thought. He seems to be pretty good natured, too, this morning, so I am going to tackle him with all the diplomacy I've got. And so he sailed into his subject.

"Dad, I know that both you and mother agree that good reading has a very broadening influence upon the reader. I agree with you both and I think I have profited a great deal from the habit which you and mother helped me to form in doing a certain amount of good, wholesome reading each day. It made my college English a great deal easier than it was for many of the other boys."

Mr. Ramsay wrinkled his high, shiny brow and began to tug at his short, wiry mustache. It was a rather unusual subject interjected at a rather unusual time he thought and he wondered what kind of an attack son was going to put up this time. "Well, what has this got to do with the weather, boy?" he grinned. "Good reading doesn't seem to stop the rain. Wish it would," he added. "We're getting behind in our field work." Then thinking to spoil Bob's little attack, he asked, "Son, did you fix that hole in the lane fence where the old sow broke through the other day?"

"Yes, dad, I did," he quickly replied, and before his father could get in another word he said, "Dad, what do you think about traveling compared to reading as a broadening influence? Which do you think is better?"

" 'Twould be hard to say, son. Both are good." Then quickly—what are you getting at, son? You sound a little mysterious this morning. Isn't going to be a wedding soon, is there?" he joked. "Better not pull anything like that just yet, son, for I shall have to agree with Aunt Ella and you know now where she will stand upon that subject."

"Well, I kind of wish it was my wedding announcement, dad," he laughed back, "but don't worry about that. I expect to be a free man for at least three more years. No, dad, it's some thing lot's worse than a wedding announcement. Jimmy and I have planned to take off the month of August and the two of us together with Lizzie—don't get alarmed, dad, Lizzie Ford I mean, intend taking a trip through the South. And now I want to know if you will give your consent. Mr. Greene says Jimmy can go and he even has promised to pay one-half of the expenses.

"Humph," grunted Mr. Ramsay, "Pat Greene's getting mighty liberal lately. Building modern houses and sending his son to college and to cap it all now wants him to go gallivanting around among the niggers of the South. Wonder if he thinks that will give young Jim a polish, society polish, I mean."

"Come on, dad, say yes," urged Bob impatiently.

"Who put this fool idea into your head, son?" he demanded.

"Doesn't look as though it is going to be so easy after all," thought Bob. "He thinks it's a fool idea." And so he proceeded to answer the question. "You see, dad, it's this way. Last year at college we met a fellow from the South, from Georgia, and he was always telling the rest of us kids about the wonderful opportunities in his state, about the cheap land that can be bought, about the good soil and the good weather and the long cropping season. And he thinks that a young man can make a great name for himself in a short time down there if he just goes into the stock industry and develops that. Guess most of us believed him, too, but Jimmy seemed just a little skeptical and so the other day he suggested that we take a trip down there and look over the country ourselves."



OVER TO JIMMY'S TO TELL HIM THE NEWS

"But I thought you fellows already had planned on coming home to the old homesteads when through college," interrupted his father.

"We have, dad, and we will, too. Of course Jimmy thinks that if there are such good opportunities down there, we ought to get in on them. It's different in his case, dad. There are so many Greenes and that doesn't give him the chance that I will have here on the home farm. I'm looking at the trip merely as being a vacation which will do us both good, as well as being very instructive. We'll be back in the north for good when we once get back. Now can we go, dad?" he teased in boyish earnestness.

"What do you figure it will cost?" inquired his father.

"According to our calculations it ought not to run higher than $300 apiece," Bob promptly replied. "And that includes everything that we could think of," he added.

"Well, I don't think much of it, Bob, and besides you won't have much of a car left by the time you get back. Roads are not like these all through the country."

"Yes, dad, we figured on bad roads and if other cars can run on them, I'll take a chance that Henry Ford can do what they can and some things in addition."

Then followed a silence of a few minutes which to Bob seemed like an hour. His father was thinking it over.

"Does mother know about this?" he inquired.

"Sure she does, dad. I consulted her first and she says whatever you say will be all right with her."

"How about your Aunt Ella?" he smiled. "You know she has to be consulted, boy."

"I don't see why," and Bob began to pout. "She's been mixed up altogether too much in my life, dad, and I'm tired of listening to her arguments. It always ends the way you and mother say any way. Just keep mum about it to her until after we have started and then if you think it will do her any good tell her and you and mother can enjoy the fireworks all by yourselves. Let's make this our business for once," he confided.

"Well, son, after listening to your arguments, I have decided to leave the matter entirely to you. Go if you want to, but remember I shall expect you to give a good account of yourself. It won't be all fun, I assure you, and both of you are going to get pretty tired before it is over," and with that he arose and started for the house, leaving Bob to think further upon the subject.

It didn't take Bob long to decide what to do. "We are going," he said half aloud, "and I had better drive over to Jimmy's right now and let him know the outcome." He was met at the door by the entire Greene family as he dashed up the driveway, squawking the tin horn of his coop, as Jimmy called it.

"A week from today, Jimmy, is the time we start," he announced. "Dad has given his consent, although he thinks we're out on a wild goose chase, but like a good fellow he gave in and said that I could suit myself. He isn't going to say anything to Aunt Ella about it, at least not until after we are well out of sight. This is one time when she isn't going to get a chance to butt in on our game" he added.

The following Saturday evening found the two boys driving into the city of Kenosha. They were headed for Chicago. "What will we do?" asked Bob. "Stay here tonight or run on to Chicago? It is now seven-thirty and 'twould be pretty late when we get there. I'm for staying here, Jim. What do you say?"

"Guess that's what we had better do," he answered. "Chicago's a pretty big place and since we are not acquainted there it might be pleasanter to stop in a smaller town where it isn't so much trouble to find our way. Guess it's no easy job to drive a car in that city anyway. Too much traffic." So it was decided that they would stay in Kenosha that night and start out early the next morning for the big city.

"Listen to that noise," said Bob as Jimmy returned to the car from the hotel where he had been to register for the night.

"What noise?" he inquired, watching the disturbed expression on Bob's face.

"Can't you hear that grinding roar in the motor?" returned Bob. "Just

as though something isn't getting oil enough."

"Acts like a case of colic," laughed Jimmy who did not deem it anything very serious.

"It's no laughing matter," frowned Bob. "We can't go on tomorrow with it acting this way. Something's wrong, that's a cinch, but I don't suppose we can have anything done for it tonight, seeing it's Saturday. We'll just run it into the garage, and see what we can do tomorrow morning."

"It'll probably be all right," answered Jimmy. "Just a little tired, maybe that's all," he added in his optimistic way of looking at things.

"Hope you're right," said Bob as the two left the garage, starting for their room.

"Here, this way," Bob called as Jimmy started for the stairway. "We don't climb no stairs when we can just as well take the elevator," he whispered to his companion. Jimmy, who was not accustomed to the ways of the city, followed timidly after Bob, wondering just what he meant and what it was all about. Bob stepped briskly into the open door of the waiting elevator. Jimmy did the same, but much more cautiously. Bob removed his cap—ladies were present, and Jimmy watching his every movement did likewise.

"Going up," called the elevator boy, as he waited a moment before closing the door. As they shot upward, Jimmy grabbed Bob by the arm. It seemed to him that everything was falling from beneath, as he afterwards told Bob.

"Gosh, if that's the way you feel when you go up in an airplane, I don't ever want to ride in one," he laughed.

"You'd soon get used to it, Jim," said Bob carelessly. "Never climb hotel stairs when you can take the elevator, Jim," he cautioned.

"Say, Bob, what'd you give that kid a dime for?" inquired Jimmy rather sheepishly.

"Oh, that's just the custom in hotels," he replied. "You see, Jim, he carried our baggage to the elevator and from the elevator into the room. That's worth a dime, isn't it? And, besides, if you want any service while at the hotels you've got to pay for it."

"Well, he carried mine, too," said Jimmy, "so I suppose I owe him ten cents too," as he started for the door, thinking that he was in bad.

"No, you don't owe him anything, silly. That dime was for the both of us. You can pay the next tip and that will square us," laughed Bob.

"Well, I'm afraid I won't know just when a tip, as you call it, is necessary, Bob. I don't want to be giving away dimes for nothing, and still I want to be like other people, too."

"Don't worry over such small matters, Jim. Whenever you feel that you have had a little extra attention in the hotel, just slip the fellow a dime and you'll be playing safe. Say, kid," he added as he saw Jimmy preparing to shave. "I wish you'd take off that foot ball squad from your upper lip. You'd look a lot better. You won't be able to get away with that thing at college next fall, anyway, so what's the use in nursing the thing along."

"What do you mean by foot ball squad?" Jimmy retorted.

"Count the hairs in that eye brow and you'll see why," laughed Bob. "Oh, I might throw in a few of the substitute players," he added. "Now do you see what I mean?"

By this time Jimmy was peering intently into the mirror. "Does look pretty sad, I'll admit," he answered, as he rubbed his fingers across the few lonesome hairs. "Guess that's only another mistake the Lord made when I was created. He put all of the hair on my dome," as he shoved his fingers through his shock of red hair until it stood out in all directions.

"What's this room costing us?" asked Bob as he watched Jimmy chopping away at his beard.

"Three bucks," he replied. "Why, doesn't that suit you?"

"Do you mean three apiece or three together?"

"Don't know, didn't ask him," replied Jimmy doggedly with tears coming to his eyes as he drew his dad's old straight edge across his upper lip.

"Well, if it's three apiece, that's too much," answered Bob. "You want to make sure what the price is before registering, or else let me secure the lodging after this. We have got to keep expenses down, Jimmy, or we'll be pawning the car before we get back."

"Wait 'til you see what they charge us before borrowing any more trouble," Jimmy snarled back. "Don't think you know any more about getting rooms in hotels than any one else," he added. "You're all right, Bob, on most things and I'll admit you've had many advantages over me, but don't put up that kind of a front on this kind of a proposition. We've signed up for this room, and I'm very comfortable and think I'll sleep here tonight. You can do what you want to, and if the clerk says ten bucks tomorrow morning, he'll get it. That's the kind of a guy I am," as he slapped his razor back into its case.

Nothing more was said upon the subject and the two tired boys were soon sound asleep. They were up with the sun on Sunday morning. After eating a hurried lunch at a cheap Greek restaurant, they hastened to the garage to see what they could do for the trouble in the motor which they both felt sure was bound to delay them on their journey.

"As bad as ever," scowled Bob as he backed it into the street. "Hops along like a rabbit," commented Jimmy. "She certainly isn't hitting on all four." They stopped it on the side of the street and proceeded to turn out the spark plugs. They were all more or less dirty, but cleaning them didn't seem to help matters any. So on to the Ford service station they hobbled, only to be informed that no work was done on cars on Sunday.

"Well, when can you get at it?" inquired Bob impatiently. And after being informed by the manager himself that he would put his best mechanic at it early in the morning, the boys left for the hotel to dress for the day.

"We'll have to make the best of it, old kid," said Jimmy, "and the city of Kenosha can feel honored to entertain us for the day."

"Say, Jim, did you ever read that book called Quincy Adams Sawyer?" Bob remarked.

"Naw," answered Jimmy. "Why?"

"Well, Obediah Strout is one of the leading characters and he was pretty generally given to boasting and tooting his own horn. Somewhere in that book some one characterizes his conceit in this way. 'If conceit was consumption there would be another little green grave in the cemetery and Obediah Strout would be on the head stone.'"

"What's that to do with me?" retorted Jimmy.

"Not much, I guess," dryly remarked Bob, "but sometimes you show a little of the Strout in you," at which he burst into a laugh, at the same time slapping Jimmy on the back. "You're all right, though, Jimmy, so just swallow that mouthful of nasty words you're going to fire at me."

The day wore slowly away. They had walked, visited the movies, and attended a base ball game. They were on hand at the garage the next morning when the doors opened. The head mechanic was assigned to the car and before going to work on it he asked Bob to give him a short drive about the city so he would know more about the trouble which he was expected to correct.

"Clogged oil tube," he said as the two got out of the car. And the grinding noise is due to the fact that one of the pistons isn't getting oil enough." Within half an hour he had the motor sufficiently apart to blow out the oil tube.

"Do all of the pistons fit as tightly as they should?" inquired Jimmy. "Seems to me that one of them must be pumping too much oil and maybe that is the reason for the grinding noise because some of the others are running too dry."

"Yes, I was going to ask you about that," broke in Bob. "I think there must be something like that wrong because the first spark plug is always getting gummed up with oil and carbon and it has been causing all kinds of trouble for the past month."

The mechanic bent over the motor and carefully examined the fit of each piston. "The front one has just a little play in it," he explained. "It doesn't take much to make it allow too much oil to get by, and evidently that is why you have been having this trouble. I would advise a new piston before you go any further. It will cost you ten dollars, including the labor, but it will be worth all of that and more too. What do you say?" he inquired of Bob, as the latter hesitated.

"Well, if you think that will correct the trouble, we might as well have it attended to at once. What do you think, Jim?"

"Sure thing," replied Jimmy. "Have it done and let's get on our way. I'll stand half of the expense anyway, Bob," as he carelessly flicked the ashes from his cigar. "We'll just cut down somewhere else to make up for this," he added. And so the job was ordered done and the boys left the city bound for Chicago, confident that they would have no more motor troubles of that nature.

[To be continued]

Junior Letters

Hoard's Dairyman Juniors:—I haven't written to the juniors for some time.

I am eleven years old and in the sixth grade in school. I have a pig. His name is "Nig". Papa gave him to me. I have 13 chickens. Papa gave me 22 little chicks this spring; two died and the hawks got all but 13. I have 8 pullets and 5 roosters. I have a calf. Her name is Peaches. We have 5 calves. We are milking 14 cows. Papa has a registered bull and a registered heifer. I have 2 cows. Their names are Blossom and May. I belong to the chicken club. We have a pup. His name is "Chum". I have 2 cats, one is a grown one and one is just a kitten. Their names are Betsy and Tom. We have 4 ducks that we raised this year.

Oregon. Janet McHurgue.

Hoard's Dairyman Juniors:—I received the fob, creed, and button and like them very much.

I had a pair of rabbits but they died. We are milking 7 cows and have 6 calves. We have sold all our pigs. We have a pure-bred bull. I do not remember his name. I am 10 years old and in the 5th grade. I have a yearling heifer that father and I bought on halves. I wish some of the juniors would write to me. My address is R. F. D. c, Box 12, Tulare, Calif. Eugene Skidmore.

Hoard's Dairyman Juniors:—I am a new member of the Hoard's Dairyman Juniors.

The 24th of May I bought a Holstein heifer calf. She is three months old today and is mostly white. I paid $25 for her. Although she is a grade I have been offered $75 for her.

My father and I milk 10 cows now. We have one registered Holstein cow. She gave 322 lbs. in seven days.

We are going to build 20 ft. onto our barn this winter. Papa wants a silo, but hasn't got one yet.

I go to school and am in the 7th grade. The name of the school I go to is Fairview. Last year we had a pie supper and raised enough money to buy a slate blackboard.

The 27th of September I will be 13 years old. My address is R. R. No. 3, Pleasanton, Kans.

James F. Bell.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

20 High Grade Holstein, early fall freshening cows; some two-year-old and yearling heifers; also 6 nicely marked, heifer calves 3 to 5 weeks old, $30 each, express prepaid. CRAWFORD STOCK FARM, Mukwonago, Wis. 26*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated. C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Having rented my farm will sell entire herd of 26 registered and high grade Holstein cows and heifers, result of years of careful selection and breeding. Most of them to freshen by February. All bred to grandson of K. K. S. V. 27.43-lb. herd bull. Bull also included if desired. Sold reasonable if taken at once. E. M. BICKFORD, Plain View Farm, Neponset, Illinois. 10*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

Holstein Bulls—Ready for service, 37-lb. sire. IDEAL STOCK FARM, Dexter, Iowa. 10-4

For Sale—Registered Holstein bulls from tested dams. High class herd. Tuberculin tested. Full particulars on request. ARTHUR C. DAILY, Springfield, Mo. 10-3

2,000 pure-bred and grade Holsteins including entire herds, Federally tested. What do you want? Inquire at our offices. WISCONSIN LIVE STOCK ADVERTISING CO., Pioneer Bldg., Madison, Wis. 11-2

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

For Sale—My entire herd of 15 cattle; 8 registered Holstein cows and herd bull and 6 grade cows, also one registered bull calf 2 weeks old. Prices right. FRANK STONE, 1020 Kent St., Kewanee, Ill.

Registered Holstein heifers. Twenty head. Two are granddaughters of Rag Apple Korndyke 8th, one from a 1,000-lb. sire. Others equally well bred. Priced for quick sale. HENSE-TEETER CO., Aitkin, Minn.

For Sale—Registered Holstein bull calf for $50.00. B. J. SCHUMACHER, Sigel, Illinois.

For Sale—Registered Holstein bull, four years old. R. T. BAUTON, Route 3, Bristol, Tenn.

For Sale—Ten pure-bred Holstein heifers one and two years old. Sired by Sir Rag Apple Clothilde Korndyke. CHAS. G. BURCH, Newark, Ohio.

For Sale—Six yearling registered Holstein heifers. Sire—King Admiral Segis, his sire a 34-lb. son of King Segis and Betta Lyons Netherland. His dam the highest record 2-year-old daughter of King Walker. Heifers are a great milk bred bunch. Five from A. R. O. dams. Ready to ship anywhere. First check for $1,200.00 gets them. F. E. GORHAM, South Newbury, Vermont.

For Sale—Registered Holsteins. Bred cows and heifers, fresh or soon due to 32-lb. bull. OSCAR WESTERHEIDE, New Douglas, Illinois.

High grade Holsteins. 40 head springers, $140.00. JNO. H. WALL, Elkhorn, Wisconsin. 12-3

Registered Holstein cows for sale. Due to freshen soon. M. RIENKS, Route 2, Sparta, Wis. 12-2

For Sale—Real bull at a bargain. Calved March 23, 1920. A fine, straight individual more white than black. Sire—King Nudine Colantha, his four nearest dams average 32.66 in 7 days. Dam of calf, Regina Lyons 132166, butter 25.13, milk 531.8 in seven days, 680.72 butter, 19,671 milk in one year. This calf is in first class condition and a dandy. First, $300.00 check takes him. R. N. RICHARDSON, Ideal Stock Farms, Pierceville, Ind.

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

STOCK FOR SALE

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

For Sale—A carload of high grade Guernsey cows made up from the pick of Polk County Guernsey herds. What you want in grades. Polk County Guernsey Breeders' Association, J. H. STEWART, Sec., Clear Lake, Wis. 8*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

For Sale—To avoid inbreeding I offer for sale a handsome Imp. show bull, sired by the prize winning Island bull, Emperor of Inesard. I have used him 3 years and have only one bull calf. His heifers are show animals with fine udders. Also a fine yearling granddaughter of Imp. Sailor Boy and a granddaughter of Gov. of the Chene. Young bulls of all ages. E. M. FITZMAURICE, Berlin, Wis. 11-2

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

For Sale—Registered Guernsey bull, three years old. Good breeding. Also bull calf, five months old. NELSON PECK, Doylestown, Wis. 11-2

For Sale—Cows, bulls. Registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wisconsin. 10-5

Guernsey bulls for sale two months to eighteen months old. From A. R. cows. May Rose and Sequel breeding. Send for sale list. Also several big type Poland China boars, sired by The Comet and he by Liberator. Real boars at reasonable prices. DALE E. RUNDELL, Ore Hill Farm, Livingston, Wis. 10-4

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

For Sale—Registered Guernsey bull calves. Prices, $50.00 to $75.00. ADOLPH THOMPSON, Route 6, Wausau, Wisconsin. 12-2

For Sale—High grade Guernseys and a few pure-breds. Fresh milkers, springers, and heifers from a clean herd. No abortion or tuberculosis. This ad will appear but once. Also aged bull from A. R. dam, 585 lbs. fat. GRIFF R. JONES, Wales, Wis.

We will sell 30 head of grade Guernsey cows and heifers at Public Sale on October 12. TRACY'S DAIRY, Brighton, Iowa.

For Sale—Fine registered Guernsey heifer calf. 2 months old. CHARLES L. MOORE, Oxford, Chenango County, N. Y.

Four young registered Guernsey bulls; May Rose Chene blood. HARRY HOUCK, Hannibal, Missouri.

We have a few young registered Jersey cows and heifers for sale. Write for particulars. SHARON HILL FARM, Coraopolis, Pa. 10-5

Federally tested Brown Swiss bulls. A. W. WILLMANN, Hawkeye, Iowa. 9-4

For Sale—Registered Ayrshires, cows, heifers and calves; bull calves and a few bulls ready for service. Write or come. GEO. A. NELSON, Milltown, Wis. 12-2

For Sale—Ayrshire bull calves, sired by grandson of Barcenoch Gay Calalier, Imp. HARRY R. RICHARDSON, Route 3, Spring Green, Wis.

STOCK WANTED

Wanted—Ten registered or high grade Holstein springers, each capable of producing 9,000 lbs. milk in ten months. Tuberculin tested, with privilege of 90-day retest. For shipment to South Carolina, November delivery. The same to calve within 40 days after arrival. Address BOX 390, care Hoard's Dairyman.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

SWINE

For Sale—Eight-week-old pigs. Reasonable price. ASBURY & KOHLMEYER, Whitewater, Wis. 8-8

Pure-bred, big type, Chester White boars. Excellent breeding. LLOYD NESBIT, Barron, Wis. 10-3

5 big boned March Poland China boars, and 4 gilts. Also 2 Shetland ponies. P. A. BLACKFORD, Hillsboro, Iowa. 12-2

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Illinois. 12-4

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

MACHINERY

Sharples Milker—Two single units, pump, tanks, gauges, and piping. Complete for twenty cows. Good condition. Price, $200. ALFRED FISHER, North Loup, Neb. 11-2

For Sale—Sharples milking machine, four single units, pipe lines, vacuum tank and pump, complete for 60 cows. Have used only a short time. Also new set of tubes and rubbers for same. Price, $400.00. THE FLOREX GARDENS, INC., North Wales, Pennsylvania. 11-3

Edwards Kerosene Motor convertible 1½ to 6 horse pewer. Selling for $170.00 f. o. b. Lima, Ohio. First check $120.00 gets it. JOSEPH GREHL, Sharonville, Ohio.

For Sale—Universal Milker, 2 double units and pump complete, $350.00. Never used. Address BOX 392, care Hoard's Dairyman. 12-2

For Sale—Empire Milker and 28 steel stalls and staanchions. PIERCY SINCLAIR, Cloverdale, Ind.

For Sale—20-h. p. Baker steam traction engine. Some repairs needed; but a bargain at the price. Write for details. A. D. ELLISON, Marengo, Ill. 12-2

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

TOBACCO

Tobacco—Kentucky's Best Leaf, chewing or smoking, all tobacco, no dope. Direct from farmers. Trial offer, 2 lbs. $1.00 postpaid; 10 lbs. $4.50. KY. TOBACCO ASSN., Dept. L, Hawesville, Ky. 11-4

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

MILK ROUTES

Wanted—Milk route in good town. J. ROBERT CALLAHAN, Fayetteville, N. Y.

BUTTERMAKERS

Buttermaker wanted—In answering this advertisement, state age, experience and salary wanted. FARMERS' WAUKON CREAMERY CO., Waukon, Iowa. 12-4

MOLASSES

Molasses—Kentucky Country Sorghum, made the good "old fashioned way". Pure cane molasses, no adulterants. Sample and price list mailed for 10c. S. ROSENBLATT, Hawesville, Ky. 12-4

DAIRY FOR RENT

Dairy for rent on shares to party with cows; fifty-fifty basis; fine climate, good market. ANDERSON CREAMERY CO., Anderson, S. C. 11-2

PARTNER WANTED

Wanted—Partnership with owner of large, modern farm. Am 34, active, responsible; understand farm machinery, tractors, gas-engines, trucks. Agricultural graduate, 10 years experience, grain and stock farming. Have tripled profits in four years in present proposition. Want bigger proposition. I have the ability, you have the capital. Will locate anywhere, let's get together. Address BOX 396, care Hoard's Dairyman.

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 11-4

For Rent—On a half and half basis, fine dairy farm in Northern Wisconsin on beautiful lake. Accredited registered Holstein herd. Duroc hogs, two miles from cheese factory and town or will sell stock and implements and rent farm if preferred. Address R. L. RUDDICK, 219 North 5th St., Minneapolis, Minnesota.

For Rent—268-acre dairy farm, running water, brick barn. Stanchions for forty head of milk cows, large feed storage facilities. Rent less than $10.00 per acre. Near Joliet, Illinois. Milk station on premises. OLIVER REALTY COMPANY, Joliet, Illinois.

FARMS WANTED

Want large farms, highly improved, fully equipped. Receiving many inquiries for such—also for 80- to 160-acre farm. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

FARMS FOR SALE

Waukesha County's finest dairy farm. 280 acres, nearly all tillable, 3 large barns, 3 silos, 2 new houses, electric lights, water, 1 mile from city and school. Write HARDY RYAN ABSTRACT CO., Waukesha, Wisconsin.

Executor's Sale—Fine farm of 312 acres for sale to close estate. An unusual farm joining the City of Effingham, Illinois and located on the Old National Trail (which runs from coast to coast). It extends from the city limits to the Little Wabash River and is skirted by the Pennsylvania Railroad. The railroad company fences nearly half of the farm. Lake Kanagga, a beautiful lake is located on the railroad property and borders this farm furnishing plenty of water to the stock. There is a large, modern dwelling, costing $25,000 to build, also a barn, silo, corn crib, granary, tool shed, poultry house, garage, etc. About 30 acres fine corn and alfalfa land in river bottom. About 50 acres pasture and timber near the lake and balance good level farming land. Bargain if taken at once. C. P. AUSTIN, Executor, Effingham, Illinois.

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

High Class Virginia Bluegrass stock, grain and dairy farms. Near Washington and best markets. Mild climate. Write for free booklet. CAVINESS REALTY CO., Lecsburg, Virginia. 8-5

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

Must sell 70-acre farm adjoining city limits with all personal property, $16,000. Further particulars, write WM. ALBRECHT, JR., Wausau, Wisconsin. 9-4

Maryland: Beautiful country home and modern dairy farm, 120 acres, every known convenience, mansion house, 12 rooms, tenant house, five rooms, on main line two railroads. Everything new and recently painted white. Address OWNER, 1721 Tribune Building, New York City. 10*

Dairy Farm—167 acres adjoining splendid town, rich, black land well improved, for sale at bargain price. Write for description and list. THE MANSFIELD LAND & LOAN CO., Ottawa, Kans. 11-2

For sale for $14,000, productive farm, 141 acres, good buildings, in Pennsylvania on line between Philadelphia and New York. Write for particulars. HENRY WYNKOOP, Yardley, Bucks Co., Pa. 11-2

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

200-acre farm near Ypsilanti, Mich., for rent or on shares to responsible party. Good stream running through farm and the best of land. Address ROOM 204, 90 Griswold St., Detroit, Mich. 11-2

Farm Bargains—60 miles Twin Cities. Free list, man. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

New York Farm Agency, Westfield, New York, specializes dairy stock farms. Westerners buying fast. Best bargains on earth. 8-spl

Buy Farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and service. Offices throughout the state. Write the CENTRAL OFFICE at Oneida, N. Y., for a brief list and state your requirements. 8-spl

Farm on the Susquehanna River. 48 acres, level fertile, good water, good buildings, fine situation. S. STORIE, Owner, Bainbridge, N. Y.

Fifty-eight acre farm complete with house, barn, silo, windmill, etc., near Lake La Belle, within ten minutes ride from Oconomowoc. Apply C. E. DINGWALL CO., 536 First Wisconsin National Bank Bldg., Milwaukee, Wisconsin. 12-4

Illinois farms for sale—Several choice grain, stock and dairy farms, located convenient to St. Louis, at bargain prices. Free descriptive matter. IRVING M. CLARK, Brighton, Illinois. 12-4

217 acres, $9,000 with 4 horses, 27 cows and 3 heifers, 4 yearlings, calf, hogs, poultry, wagons, machinery, complete equipment, feed for stock, other produce; great dairy farm, leading dairy section; last year's income, $4,635.91; loam fields. Cut 30 tons hay; 60-cow spring-watered pasture; 200 cords hardwood per year, 50,000 feet timber; orchard; 1,000 sugar maples; 11-room house, running spring; 2-story, 60-foot barn, big horse barn, garage, other buildings; owner retiring makes price only $9,000, part cash, easy terms. Details page 23 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Call or write for free copy. STROUT FARM AGENCY, DL 150 Nassau St., New York City.

For Sale—161-acre, choice dairy farm near Flint; barn 40x70 with basement, silo 12x32; stone hen house; hog house; milk house; 8 acres timber; all kinds small fruit; small apple orchard; 10-room excellent house, occupies a rise of ground overlooking all of the farm which is level and very productive. Excellent crops in 1920; 1½ mile from shipping; 1 mile to school, on gravel road to all points. Price, $25,000; part down, balance on long time. HETCHLER-RAAB COMPANY, Flint, Michigan

320-acre, well improved, irrigated farm with undivided water right in famous Yellowstone Valley, only 7 miles from Billings, the third city of Montana. Good and ample buildings for all purposes including dairy barn for 70 cows. Well equipped for dairy or general farming, grain, alfalfa, beets, corn, etc. Large sugar factory at Billings is paying $12.00 to $15.00 per ton for beets. Excellent home market for everything raised. 25% cash, balance can be arranged in annual payments or otherwise with idea of meeting purchaser's convenience. Owner is anxious to sell at once and is ready to make exceptional terms for quick action. T. C. ARMITAGE, Billings, Montana. 12-4

Land that is real land in St. Louis County. "The County of real farms". Now is your chance to get one of our reasonably priced farms at little cost. We need good farmers to supply our markets. We are offering our lands on a small down payment and give you a long time to pay balance. Remember a great railroad stands back of this offer. Send for free information today. L. B. ARNOLD, Land Commissioner, 154 Wolvin Bldg., Duluth, Minn. 12-4

80-acre farm for $3,500. Good clay soil, 30 acres cleared, balance wood-land. Almost level, log house and barn, well, near village, school and creamery. Write for further particulars and bargain list. DEPT. 23, Ev. Luth. Colonization Co., Merrill, Wis. 12-2

South Dakota—Your opportunity is waiting for you in South Dakota. For each farm family in 1919 this state produced $5,000.00 in new wealth. South Dakota offers you a special opportunity now to secure a farm. Write for further information today.—IMMIGRATION DEPARTMENT, Capitol F-15, Pierre, So. Dakota.

Duroc farm for sale with most modern equipment, wire fence paddocks for hogs to forage green crops; self-feeders; automatic watering cans and oilers. New farrowing house with Lowden equipment. Tractor, motor truck, new farming machinery. Is essentially a breeding stock farm with Royal Pathfinedr, Joe Orrin, Taxpayer strain of blood. One thousand bushels of corn. Well stocked and well advertised. Located on Long Island, New York, where there are many wealthy gentlemen's estates and fine farmers' colony to sell to. Excellent opportunity for practical or scientific breeder to continue profitable business. Terms: fifty thousand dollars, half cash, balance mortgage. Might consider exchange for farm mortgages. Address: H. CHURCH, Fairacres Farm, Sayville, N. Y.



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted at once—Herdsman to care for Guernsey cattle on A. R. test. SUGAR RIVER STOCK FARM, Allie S. Knudson, Prop., Route 5, Brodhead, Wisconsin. 10-3

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Guernseys. Work to begin at once. Write inclosing salary desired and credentials to NORTHLAND COLLEGE, Ashland, Wis. 10*

Wanted—Energetic married couple for 160-acre, modern equipped stock and dairy farm near Detroit. State experience, references, number in family, ages, and salary expected. Wife may have to board two or three men. Address G. W. SLAUGHTER, Birmingham, Michigan. 11-2

Wanted at once—Married man for herdsman. Good wages and living conditions. Pure-bred Holsteins. Write stating wages and reference. A. J. DAUGHERTY, Streator, Ill. 11-2

Wanted—Single man as feeder and milker in dairy. G. M. STADELMAN FARMS, Hartville, Ohio. 11-2

Herdsman to raise Guernsey calves. Southern Pennsylvania. Address BOX 388, care Hoard's Dairyman. 11-2

Wanted at once—Single herdsman to take charge of herd of 20 cows and 15 young cattle, Jerseys and Holsteins. State wages and experience. RAY McCAULEY, Hicksville, Ohio. 11-2

Wanted—Boy 16 to 18 years old on small dairy farm. State age and wages expected in first letter. FARNERHOLM DAIRY FARM, Colfax, Wis. 10-3

Dairyman—Single, good buttermaker. Empire milking machine, electric equipment. Must understand handling help. Foreman—Single, competent to handle help and work on general farm. Blacksmith—Experienced in gas engine and machinery repair. Give reference, age, wages wanted in first letter. Positions steady for dependable men. FRED S. PLAATES, Mgr., Agricultural Dept., St. Mary's Training School, Des Plaines, Illinois. 12-2

Wanted—Good dry hand milker to milk and care for 12 cows and do few chores around the house. Wages $75.00 and board. PETER C. KROON, Mgr., L. G. Kaufman Farm, Birch, Mich.

Wanted—A single man for bottling room on dairy farm three miles from Denver, Colorado. Must understand milk and bottling machinery, testing and care of bottler. Man who has had certified experience preferred. Permanent position, modern equipment, good place for a steady man. State wages, experience, etc., in first letter. Address BROOK RIDGE FARM, Littleton, Colorado.

Wanted—Single man to milk and take care of small private dairy herd, pure-breds. Live with superintendent on farm. W. F. STANTON, Lake Geneva, Wisconsin. 12*

Wanted—Two four-time milkers for Official Test work. Swiss or Danish preferred. P. FROST SPAULDING FARM CO., Warren, Minn. 12-3

Herdsman of experience with abortion. Good proposition. Address BOX 394, care Hoard's Dairyman. 12-2

Experienced man for general dairy farm work. $60.00 to start. LEE P. GRANT, Bloomville, N. Y.

HELP WANTED

Wanted—Reliable dairyman of experience with labor of his own to operate dairy and Advanced Registry Breeding on shares or salary, shares preferred, next year. High-class, pure-bred, Holstein-Friesian herd. Also pure-bred poultry business for eggs. Forty-thousand dollars yearly business. Very near railroad, post office, good school and churches. Reference required. EDWARD HOLLAND, Eastville, Va. 12-2

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

Wanted—Experienced married farmer with some knowledge in feeding dairy cattle to act as herdsman under my orders in Guernsey herd. State wages and references in first letter. Address ART. A. KRELL, Deerfield, Ill.

Wanted—A competent cow tester for the Pope County, Minn. Cow Testing Association. Apply with references and salary required to A. P. HENDERSON, County Agent, Glenwood, Minn. 12-2

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Two young men, Hollanders, single, want positions on dairy farm to work in cow barn or field. Good milkers. State wages in first letter. Address BOX 360, care Hoard's Dairyman. 8-5

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work. Salary, $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spl

Farm and garden manager, with energy, push and proven ability, desires position on large modern farm, institution or private estate, where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and vegetable garden. Married, two children. Excellent references. Address FARMER AND GARDENER, 4463 North Uber Street, Philadelphia, Pennsylvania. 10-spl.

Position Wanted—Married man with 20 years of practical experience as herdsman and farm foreman desires position where A. R. O. work is done. No children, wife willing to board extra men. Address BOX 395, care Hoard's Dairyman.

Wanted—Position as managing herdsman by first class married man, 28 years old. Broad experience in breeding Holsteins, and Advanced Registry feeding. College training. Highly recommended. BOX 374, care Hoard's Dairyman. 12-2

Wanted—Position as buttermaker in co-operative creamery. CARL SIMONSON, Wautoma, Wis.

Herdsman—Practical, energetic and efficient, wishes position at once in A-1 commercial dairy. Married man with small family. 30 years of age. My recommendations covering 7 years capable work will be forwarded to interested parties. Have always made good. Address BOX 391, care Hoard's Dairyman.

Married man, thirty-two, wants position as assistant herdsman in modern dairy some place in the West. Dry hand milker or can operate milking machine. State wages and living conditions. Can come at once. Address BOX 393, care Hoard's Dairyman.

Current Feed and Hay Prices

[Report by U. S. Bureau of Markets]

Extremely dull conditions and a lack of confidence in the market value of feeds during the week ending September 25 resulted in a general decline in feed prices of $1.50 to $6 per ton. The heaviest declines were reported in gluten and wheat mill feeds. One of the large gluten feed manufacturers announced another reduction during the week of $5 per ton in the price of this feed, making a total reduction of $10 per ton within 15 days.

Chicago jobbers are offering bran and middlings at from 50c to $1.50 under prices quoted by mills. At Minneapolis the market is weak and declining, with bran offered at $37 and middlings at $44. Bran was offered at $40 in Chicago and Cincinnati, at $46 in Boston, New York, and Philadelphia, and at $48 in Richmond and Atlanta.

Cottonseed meal of low protein content was not in great demand at prices offered. The 43 per cent Texas meal was offered at Kansas City on Saturday at $56.75 and 41 per cent meal was sold at $2 discount. This grade is quoted at $59 in St. Louis and at $62 in Boston and Philadelphia. The 36 per cent meal is offered at $56 in Chicago, $51 in Atlanta, $56 in Philadelphia, and $60 in Boston and New York.

Linseed meal declined slightly, with quotations as follows: $63 at Minneapolis, Cincinnati, and Philadelphia; $61 at New York and Boston; and $65 at St. Louis and Chicago.

Gluten feed has declined $10 in two weeks, but manufacturers report they are not selling their output. Quotations are: $53.75 at Chicago, $59 at Cincinnati, $61 at Philadelphia, and $62 at Boston.

Alfalfa meal is not in good demand, No. 2 selling for $29 in Kansas City and higher grades at $34. Hominy continues to decline, with brokers stating that lower prices could be secured. Stocks are heavy and demand light. Prices range from $43 in Omaha and $45 in Chicago to $55 in Boston and Kansas City. Beet pulp ranges from $53 in Los Angeles to $58 in Boston.

The hay market also continues dull, with declines up to $6 for timothy in the New York market. Quotations on No. 1 timothy are: $27 in Kansas City and Minneapolis, $32 in Chicago, $41 in Boston, and $42.50 in New York. Mixed clover and timothy ranges from $1 to $8 less per ton, the general average being about $4 lower. Clover hay is quoted at $21 in Minneapolis, $22 in Kansas City, $27 in Chicago, and $34.50 in Richmond.

There was a slight decline in alfalfa prices, quotations on No. 1 being: $25 in Omaha, $27 in Kansas City, $28 in Los Angeles and Minneapolis, $33 in Chicago, $32 in Memphis, and $39 in Atlanta.

POSITIONS WANTED

Married man, age 30, wants position on dairy farm as herdsman or working foreman. Life experience, capable, reliable, energetic, good milker, calf raiser. Can feed for records. Would consider share proposition. Good results assured. No children. D. L. LAMBERT, General Delivery, Minneapolis, Minn.

Farm manager—7 year's practical work in Virginia. Single, age 30, available in December. Prefer Virginia. Address BOX 397, care Hoard's Dairyman.

Wanted—Position as calf and young stock man. Holsteins preferred. 14 years experience. ALBERT C. ROUSSEAU, Grand Isle, Vt. 12-2

Reliable man wants position on farm by November first. Life experience, no bad habits. SAMUEL CALLOW, Route 8, Waukesha, Wisconsin.

Jersey Cattle Notes

For week ending Sept. 24:

Number of animals registered: Bulls, 268; cows, 717; total, 985. Number of transfers recorded: Bulls, 231; cows, 668; total, 899.

No man in this world ever rightfully gets more than he gives.—ADAMS.

THIS FARM FOR RENT



This farm consists of 360 acres and is considered one of the best farms in Southern Michigan. The gross income per year, from sales of milk and cattle, will average between twenty-two and twenty-four thousand dollars. Milk is retailed in Coldwater at 14 cents per quart. There are 100 head of milch cows on this farm. The farm produces sufficient feed each year, including grain, for all stock on the farm. There are 50 acres of alfalfa on this farm that produced nearly 200 tons of hay this season.

The house in the center has seven bedrooms, living room, dining room, kitchen, office, bath, toilet, furnace, gas, electric lights and city water. The house on the right has the same improvements except furnace. The house on the left has electric lights, gas and city water.

The cow barn is 150 by 38 feet. There are four silos and all equipment is in first class condition. The buildings are located within ¾ mile from the court house in the city of Coldwater, which has between six and seven thousand population and is the county seat of Branch County. Coldwater is one of the finest cities in the central west and is located on the main line of the New York Central Railroad.

I want a tenant who has plenty of help of his own. Tenant must own one-half of the cattle and all tools and horses necessary to run the farm. If the tenant has plenty of help to run this farm and has not sufficient money, I will help him to secure the additional necessary money, if he is the right sort. I will make a lease for 5 years on a 50-50 basis. Possession given March 1st, 1921.

If this proposition appeals to you, let me know how much help you have and their ages, your nationality and bank reference.

This is an exceedingly good proposition for the right party.

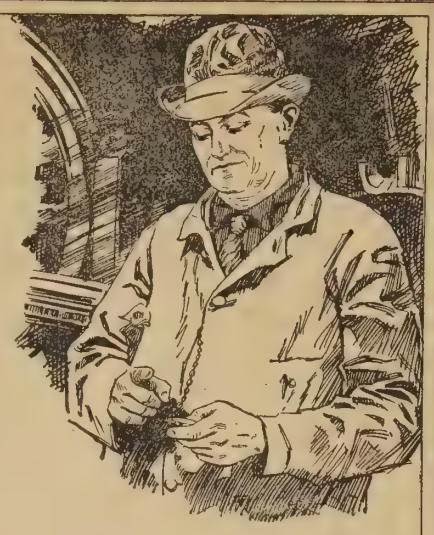
L. J. Byers - - Coldwater, Michigan

An engineer dare not say

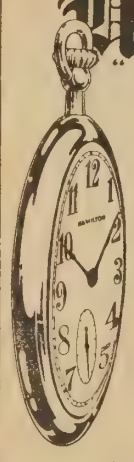
"My watch was wrong"

Having the correct time is vital with the engineer. Catastrophes thrive on trains that are late. Railroad men *must* be able to rely on the watches they carry.

The Hamilton Watch is wonderfully accurate and truly dependable. That is why it has become by far the most popular watch in use on American railroads.



Engineer F. J. Mink of the New York Central Lines, is known as "The Chief' on the New York-Albany run, because he's handled a throttle for thirty-one years. For ten years he drove the Twentieth Century Limited on his division, with the *Hamilton he carries*, and *established an enviable record for running on schedule.*



Hamilton Watch

"The Watch of Railroad Accuracy"

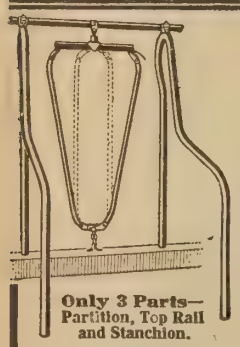
Like other progressive men, you've often wanted an accurate watch. Why not get one—a Hamilton? It would help save you time, be a constant convenience and source of pride, and would last you a lifetime.

There are 22 different Hamilton models to choose from with prices ranging from $40 to $200. Movements alone, $22 (in Canada $27) and up. Let your jeweler show you some of the many Hamiltons today.

Send for "The Timekeeper"—an interesting little book about the manufacture of fine watches. The various Hamiltons are illustrated and prices given.

HAMILTON WATCH COMPANY
Lancaster, Pennsylvania

Lasts Longer Than *the* Barn



Only 3 Parts—Partition, Top Rail and Stanchion.

—and Increases Dairy Profits

CLAY Equipment installed in your dairy barn is there **to stay.** Strong, simple steel construction cuts upkeep cost. Bolting only 3 parts together completes a sanitary, **permanent** stall with swinging stanchion. Smooth tubing—no dangerous corners.

CLAY Steel Dairy Barn Equipment

provides safety, quiet and pasture comfort in the barn. Saves feed, time and labor. Helps increase quantity and improve quality of milk. CLAY 2-WAY Stanchion instantly closed or opened **both ways** with **one hand.** Hangs straight in center of stall—no sure-stops needed. Cow can't get in wrong. Instantly adjusted to any size animal. Cow-proof lock. Easily kept clean. CLAY Equipment costs less than others. Fully guaranteed.

Free Barn Plan Service. CLAY architects will plan your alterations or new buildings **free**

Send name today—a card will do—for big catalog and Free Barn Plan Blank. Address

IOWA GATE COMPANY, 701 Clay Street, Cedar Falls, Iowa

Cow Waters Herself



with this wonderful new **Libbey Automatic Water Bowl.** Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

Coleman Quick-Lite Lamp



More Light Than 20 Old Style Oil Lamps

This is the light for you—the Coleman Quick-Lite, most up-to-date of all home lamps. Gives a brilliant, mellow light of 300 candle power, without glare or flicker. Easy on the eyes. No wicks to trim; no chimneys to wash; no dripping oil; no smoke; no smell.

Lights With Matches
No Torch Needed

Makes and Burns Its Own Gas From Common Motor Gasoline

Can't spill, can't explode, even if tipped over. Cost to use only 10 to 12 cents a week. Brass, heavily nickeled and polished. Inspected, tested and guaranteed. Will last a lifetime. **Take this advertisement to your dealer.** He will gladly get a Quick-Lite for you on approval. Free Book on request. Write to Dept. HD5

THE COLEMAN LAMP COMPANY;
Wichita St. Paul Toledo Dallas
Los Angeles Atlanta Chicago

National Milk Producers' Federation

Abstract of Speech Delivered by G. P. Warber at the Semi-annual Conference of the National Board of Farm Organizations, Columbus, Ohio

The National Milk Producers' Federation was born of the adversity of the pioneer producers' milk marketing associations of the United States.

The Chicago Milk Producers' Association, the New York Dairymen's League, the New England Milk Producers' Association, the Twin City Milk Producers' Association, and the Associated Milk Producers' Association of San Francisco were among the first to demand a voice in the determination of milk producers in those regional markets. At the very outset all of those producers' co-operative or collective bargaining associations were attacked in force by the organized city distributors of fluid milk and operators of milk condenseries. Bitter and denunciatory articles were launched against them by temporarily misinformed metropolitan newspapers. Officers of these pioneer associations were vilified with such epithets as "unscrupulous promoters of milk trusts" and "baby-killers". In many cases legal proceedings were instituted against them.

It was out of the necessity for defense against such attacks that there was born the consciousness of the need for a federation of the various local or regional milk producers' associations; and in the year 1917 the National Milk Producers' Federation was organized and incorporated under the laws of the state of Illinois. This Federation immediately set itself to the task of safe-guarding what had been won for the cause of co-operative marketing by producers and of giving assistance to promote the right type of co-operative dairy marketing associations in unorganized territory.

The task that the Federation then had and still has before it is largely a matter of education. It calls for a nation-wide dissemination of the facts with regard to (1) the status of the dairy industry in this country, (2) the various and changing costs of producing market milk, and (3) the necessity for the organization of producers and co-operative marketing in order to insure the permanency of a wholesome fluid milk supply in the territory immediately surrounding most of the larger cities of the United States. Much has already been accomplished in this direction with the result that the greater portion of the natural milk supply of most of the metropolitan centers of the United States is furnished by producers who are members of local or regional producers' marketing associations and that these associations, for the most part, now have the support of not only the agricultural papers of the country—but also many of the most influential metropolitan newspapers. The educational and publicity activities of the National Milk Producers' Federation have been important factors in bringing about this revision of the public attitude towards the activities of organized milk producers.

Since May of the present year, the Federation has maintained a service bureau with offices in Washington, D. C., at the headquarters of the National Board of Farm Organizations with which the Federation is affiliated. The Federation is now in a position to give more active assistance than ever before in the promotion of the interests of producers' co-operative dairy marketing organizations in all parts of the United States.

Sale Announcements

Oct. 8—Holsteins. Alfakorn Farms Fifth Semi-annual Sale at Evansville, Wis. F. B. Green & Sons, Owners.
Oct. 9—Holsteins. Pabst Stock Farms First Semi-annual Sale at Oconomowoc, Wis.
Oct. 11-12—Holsteins. Barron Co. Semi-annual Sale at Barron, Wis. F. H. Everson, Mgr.
Oct. 12-13—Holsteins. The Pure-bred Live Stock Sales Co. Sale at Brattleboro, Vt.
Oct. 13—Guernseys. Wisconsin State Guernsey Sale at the Live Stock Pavilion, University Grounds, Madison, Wis.
Oct. 13-14—Holsteins. National Dairymen's Sale in connection with the National Dairy Show, Chicago, Ill. E. M. Hastings Co., Mgrs.
Oct. 14—Guernseys. The Southern Wisconsin Guernsey Breeders' Ass'n., Janesville, Wis. James H. Murphy, Mgr., Delavan, Wis.
Oct. 14—Holsteins. Warren County Holstein-Friesian Association's third consignment sale at Belvidere, New Jersey. Arthur S. Parr, Sec'y.
Oct. 15—Holsteins. Registered and grade herd of Louis P. Eigenmann, Rockport, Indiana.
Oct. 15-16—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Sec.
Oct. 15—Holsteins. Breeders of St. Joseph Valley, South Bend, Ind.
Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 16—Holstein Dispersal. John B. Martin, Grand Rapids, Mich.
Oct. 18—Holsteins. Lake County Holstein Breeders' Sale at Libertyville, Ill. R. N. Thompson, People's Life Bldg., Chicago, Mgr.
Oct. 18—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 19—Holsteins. Jackson, Mich. Second Michigan State Holstein Sale.
Oct. 19—Holsteins. West Concord Security Sale at West Concord, Minn.
Oct. 20—Holsteins. East Lansing, Mich. Central Michigan Holstein Breeders.
Oct. 21—Holsteins. Carver County Breeders' Sale at Waconia, Minn.
Oct. 21—Holsteins. Owosso, Mich. Shiawassee County Holstein Breeders.
Oct. 23—Holsteins. Dispersion and Consignment Sale at Lake Park Farm, Sheboygan, Wis.
October 22—Holsteins. Central Pennsylvania Holstein-Friesian breeders' second annual sale at Hughesville, Pa.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 26—Holsteins. Consignment Sale at Mauston, Wis. F. H. Everson, Lake Mills, Wis., Mgr.
Oct. 26—Guernseys. Jones & McKerrow Quality Sale at Waukesha, Wis.
Oct. 27—Guernseys. E. J. Himmelberger's complete dispersal sale of registered Guernseys at Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Mgr.
Oct. 27—Holsteins. Lake Mills Breeders' Consignment Sale at Lake Mills, Wis. F. H. Everson, Manager.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28—Holsteins. Dispersal of herd owned by Thompson Estate at Barneveld, Wis. F. H. Everson, Manager.
October 28—Guernseys. F. G. Eberhardt complete dispersal sale of registered and grade Guernseys at Mishawaka, Ind. F. E. Fox, Sales Mgr., Waukesha, Wis.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 30—Holsteins. Daniel S. Johnson's Holstein Sale at Rockdale, N. Y.
Nov. 3—Holsteins. Waukesha County Holstein Sale at West Bend, Wis.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
May 9. 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Clean Out Abortion

From Your Herd With

Hood Farm Abortion Remedy

and

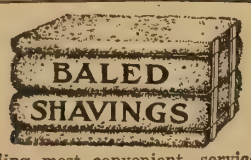
Hood Farm Breeding Powder

Hundreds of breeders have saved valuable cows and their calves by giving the Abortion Remedy promptly and freely on the first sign of abortion. Its success has been remarkable.

Injection with Hood Farm Breeding Powder every day for 21 days before service, then every day for 21 days after service, destroys abortion germs, disinfects the organs and keeps cows in a normal, healthy breeding condition.

PRICES: Abortion Remedy, prepaid, $1.25, $2.75, and $9. Breeding Powder, $1.15, $2.75, and $5. Injection Tube, by mail, 90 cents. One medium Breeding Powder, one medium Abortion Remedy, one Tube, prepaid, $5.75.

C. I. HOOD CO., Lowell, Mass.



For bedding most convenient, serviceable and sanitary. Write for prices.

Defnet & Jagerson Supply Co., Neenah, Wis.

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

Foundation Berkshire Trios

From the herd that sold the $6,500.00 world's record price Berkshire boar and the $3,900.00 world's record price Berkshire sow. From the herd that won 46 out of a possible 62 firsts, 17 out of a possible 24 championships, and 6 out of a possible 8 grand championships at the great Illinois, Iowa, Indiana, and New York State Fairs this year.

Bred sows $250.00 each and up.
Trios $300.00 to $2,500.00

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Our Berkshires are the smoothest and deepest big-type hogs.

Martinsville, Ind. Preston, Kans.
Axial, Colo.

GOSSARD BREEDING ESTATES

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Abortion

1. About two months ago, while trying to dry the cow up, a quarter of her udder began getting hard and has now spread to two of her quarters. She walks stiff-legged, humped in the hock, and falls off in flesh. Eats all she can get. She dropped dead calf about two weeks ago and now milks about three gallons daily. The milk is as clear as if her udder were in good condition. We have never been able to get any lumpy or stringy milk from her. A few days ago a soft place appeared on one of the hard quarters and from it comes watery, blood colored puss and the quarter seems to be getting a bit soft. Can you tell me how to treat it and what caused it to get in such shape?

2. We have a lot of trouble in cows retaining their afterbirths. They all have been in the best of condition before calving time, and were fed on a mixture of corn cob meal and wheat bran of equal parts. Have had four out of nine to retain afterbirth.

Manning, S. C. C. L. D.

1. The cow in question no doubt is affected with the contagious abortion disease, as she dropped a dead calf. That disease also is the common cause of retained afterbirth. The condition of the udder, however, strongly indicates tuberculosis and it is quite likely that the cow is affected with that incurable, contagious disease. The fact that she is running down in flesh may well be another indication of tuberculosis. Under the circumstances you should have her tested with tuberculin and if she reacts all of your cows should be tested.

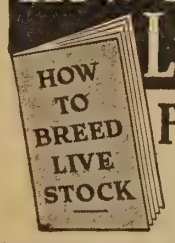
2. A trained veterinarian should be employed to treat all of the affected cattle as the infection remains in the womb and also involves the ovaries. Meanwhile flush out the vagina of each cow and heifer every other day with lukewarm, boiled water containing a heaping teaspoonful of table salt to the quart. The stable should also be cleansed, disinfected, and whitewashed. Isolate the cow that lost her calf.

Jersey Cattle Notes

For week ending Sept. 10:

Number of animals registered: Bulls, 189; cows, 506; total, 693. Number of transfers recorded: Bulls, 159; cows, 555; total, 714.

How to Breed Live Stock



Free Book Write today. A post card will do. Get our wonderful free booklet, "How to Breed Live Stock". Reveals valuable information on the breeding and feeding of horses, cattle, swine and sheep. Shows pictures of breeding organs. Also describes our wonderful home-study course in Animal Breeding, Sterility, Disease-Prevention, Contagious Abortion, Artificial Breeding, Systems of Breeding, etc.—all taught in detail. Write today for free booklet and learn how to master scientific breeding at home. We have brought the school to the breeder. Get our free booklet. Write today. Just mail a postcard.

NATIONAL SCHOOL OF ANIMAL BREEDING
Dept. 410 Pleasant Hill, Ohio

Lump Jaw Fleming's Actinoform, for 30 years the standard Lump Jaw remedy. $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Lump Jaw and 200 other Cattle and Horse diseases.

FLEMING BROTHERS, 255 Union Stock Yards, Chicago

Lowe's



Fall Painting costs less than spring

There is at least one big reason why Fall painting will cost you less. Putting it off until next Spring, after your buildings have gone through another Winter's wear means they will take more paint to paint them. That's just the plainest kind of plain horse sense.

Then another thing: next Spring you will be so rushed with Spring work that you will put painting off until Fall—and so it goes on from bad to worse.

Any way you figure it, you can save money by painting this Fall. And speaking of saving — send for circular called—"Figure Your Paint Costs with a Brush—Not a Pencil." Remember that Lowe Brothers' Paint is sold by the one best dealer in each town.

The Lowe Brothers Company
491 EAST THIRD STREET, DAYTON, OHIO
Boston New York Jersey City Chicago Atlanta Kansas City Minneapolis Toronto

Paints

ABORTION IN CATTLE



CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

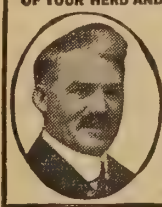
TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

Stop Losing Calves

Treat Your Herd the Roberts Way
Easy to Apply — Sure Results
Successful for 30 Years
YOU CAN
Stamp Abortion Out OF YOUR HERD AND Keep It Out
ASK FOR
"The Cattle Specialist"



Sent free on request. Answers every question pertaining to **Abortion in Cows.** Tells how to treat your own herd at small expense. Write

DR. DAVID ROBERTS VETERINARY CO., Inc.
638 Grand Ave., Waukesha, Wis.

DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.



Write for free booklet with guarantee and letters from farmers and dairymen

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

Early to Market—Full Weight



51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.

Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.

Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age, and are uniformly red in color.
Write for our Free booklet *"Duroc-Jersey Hogs Are Prolific and Profitable."*

The National Duroc-Jersey Record Association. Dept. 300 Peoria, Ill.
The largest swine record association in the world—12,000 members

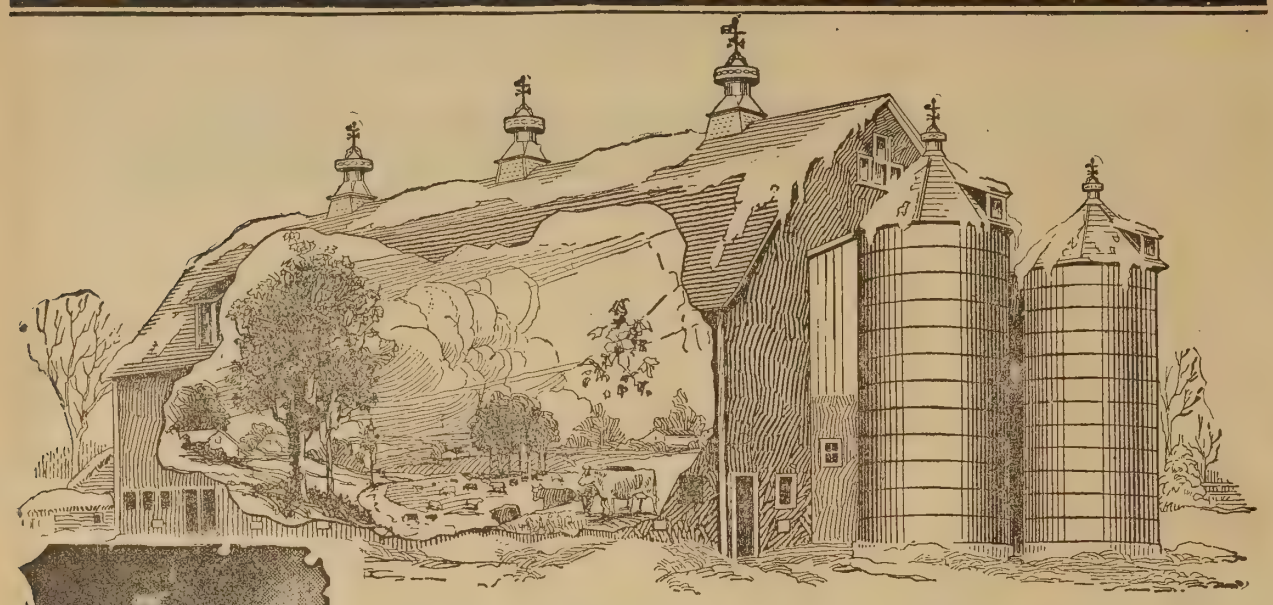
GUERNSEY BREEDER'S JOURNAL

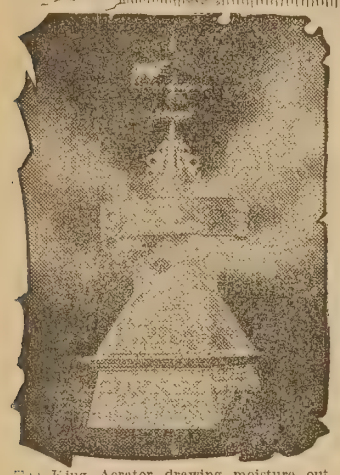
Indespensable toall interested in Guernseys or improving their herds of dairy stock. Well gotten up. Full of pertinent facts. Giving latest records of production. With Hoard's Dairyman 1 year, $2.75.

Send for sample copy.

GUERNSEY BREEDER'S JOURNAL
Peterboro, New Hampshire.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.





The King Aerator drawing moisture out of a building—the steam can be easily seen in cold weather.
King Systems consist of the **Aerators** for the roof, the **Foul-Air Flues** leading from the stock room to the Aerators, and the **Fresh-Air Intakes.** These units are designed and placed according to the requirements of the building.

KING VENTILATING CO. SOLE MANUFACTURERS — KING AERATOR — KING SANITARY VENTILATING SYSTEM — OWATONNA, MINNESOTA

For your protection be sure this diamond King trade mark is on the ventilating system you buy.

Keep Summer Conditions in Your Barn all Winter

YOUR herd goes into winter quarters in the best of condition after the summer in pasture. But what condition is it in when it goes back to pasture in the spring? The answer depends very largely upon your barn. A poorly ventilated, damp, insanitary barn will lower the vitality of the healthiest herd. Lack of fresh air is indirectly responsible for much tuberculosis. Often disease sets in and spreads before the owner is aware of it. The best preventive is plenty of fresh air. Dampness in a farm building is a thief that is constantly robbing the owner of a valuable property and profits on his investment. It rots the timbers of the building and hastens the depreciation of everything in it.

With a King System of ventilation installed fresh air is kept circulating through every part of the stock room without drafts. Your stock gets plenty of oxygen, and as the temperature of the barn is better regulated your stock is kept more comfortable, and excessive moisture is carried out of the building.

There is no guesswork about a King System. When we accept your order for a King System we realize more than you do what responsibility we have undertaken to ventilate your building. Your ventilating troubles are over; our problem just begins. Our first move is to study the conditions in the building, then we plan a system to fit the building.

Send for Our Free Book on Barn Ventilation

Do not let this winter pass without giving your stock the benefits of proper ventilation. We can put in a King System at any time—whether the building is old or new, and whether or not the mow is full of hay. If you are going to build a new barn, hog house or poultry house send us the plans of the building or tell us about what you will need, and let us plan a King System to be installed while the building is being constructed. That is the best time to install it.

KING VENTILATING COMPANY, 1162 Cedar St., OWATONNA, MINN.

Ventilating Engineers for Farm Buildings and Creameries

KING SYSTEM OF VENTILATION

"Make Good Barns Better"

Pioneering on the Path of Co-operation

(Continued from page 489)

all human therefore it is absolutely necessary to have a membership agreement providing that the individual producers must market their products through the organization.

"It must also be founded upon a special crop. Bean growers and cotton growers cannot co-operate. Each farm industry must be organized by itself. The group within the organization must be actuated by a common interest, a common purpose, and a common ideal."—Copyright, 1920, Standard Farm Papers, Inc.

Another 20,000-pound Ayrshire Record

Voca 5th of Avon 40267 is the latest addition to the 20,000-lb. list of Ayrshire matrons. She has recently completed a mature record of 21,123 lbs. milk, 741.91 lbs. fat.

Voca 5th of Avon was born February 12, 1913. She was bred by W. P. Schanck, N. Y., and sold by him as a yearling. She was repurchased by Mr. Schanck a year ago, and without any preliminary fitting put on A. R. test, beginning same July 28, 1919, and completing her record July 26, 1920. Voca 5th of Avon is capable of still greater results, and will unquestionably be a strong contender for world record honors of the breed. Voca's sire is the great A. R. sire, Howie's Dairy King 9855, who has 32 entries in the Advanced Registry, averaging 11,674 lbs. milk, 455.83 lbs. fat, 3.90%, with 50% of the records made by immature cows. The daughters of Howie's Dairy King have a larger average of butterfat than the daughters of any other sire of the breed. The dam of Voca 5th of Avon has no record, having never been tested.

The Schanck herd has made quite an enviable record during the present year, winning Roll of Honor championship and Gold Medal in the junior two-year-old class with Jean Armour's Big Kate, and at the present time Addington Queen, of the same herd, is due to finish soon with another 20,000-lb. record.—J. G. WATSON, Secretary Ayrshire Breeders' Ass'n.

Corn Equals Hominy Feed as Swine Ration

Experiments conducted in the growing of swine at the Ohio Experiment Station show that there is very little difference in the amount of feed required per pound of gain for pigs fed on hominy feed as compared with corn.

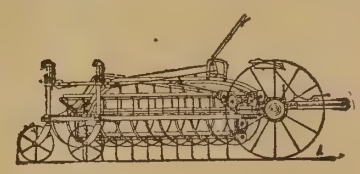
Pigs, however, do not eat hominy feed as readily as corn and consequently gain less rapidly. As formerly manufactured hominy feed had a value of 10 to 15 per cent greater than that of an equal weight of corn, but recent tests at a number of state experiment stations, including Ohio, now show that hominy feed is worth no more, if as much as a pound of corn.

Manufacturers of hominy feed now extract oil from the corn germ; the oil was formerly included in the feed so that there is a reduction in the energy or fuel value of hominy feed due to its lower fat content, it is stated.—Weekly Press Bulletin Ohio Experiment Station.

Inventions and Appliances of Interest to Agriculture

Side Delivery Rake

This rake has two caster wheels to support the rear end of the rotating rake. They are at different distances from the front end, but are so connected to the single lever that each

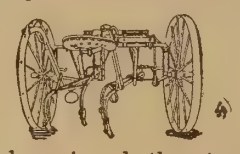


carries its proper share of the weight, whether the rake is raised or lowered.

(Dain Mfg. Co., Ottumwa, Iowa. U. S. Patent, 1,313,880.)

Cultivator

This riding cultivator is of the pivot axle, pivot gang type, in which the rider's weight normally supports the blades clear of the ground. It is so arranged that when the rider swings the gangs to one side, the ground wheels carry the frame to this side;

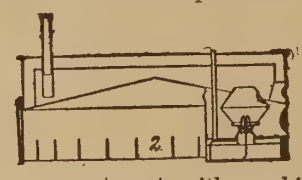


but when he swings both out, or both in, the wheels remain neutral.

(Roderick Lean Manufacturing Co., Mansfield, Ohio, U. S. Patent, 1,327,413).

Hover

One trouble with the ordinary hover is that as the oil lamp burns, it generates more gas inside the bowl than can be burned in the burner; this gas accumulates in the hover, and if it reaches a sufficient temperature ignites the hover. To prevent this, the bowl here is placed in a

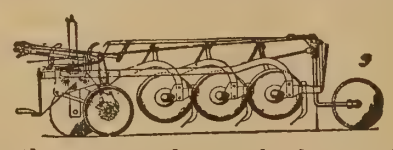


separate compartment with a chimney and has small gas outlets in its upper surface.

(Buckeye Incubator Co., Springfield, Ohio. U. S. Patent, 1,334,368).

Disk Plow and Subsoiler

The invention here relates to the mechanism for raising or lowering the disks at both ends at once. This mechanism is driven by power from the ground wheel and when tripped

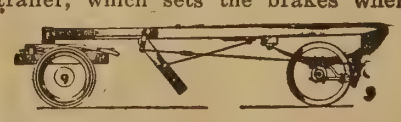


by the operator, lowers the front and rear wheels to raise the disks, or vice versa.

(McKay Disk Plow Co., Rome, Georgia. U. S. Patent 1,323,887.)

Trailer

This invention relates to a two wheeled trailer with a supporting leg. The new feature is the connection between the leg and the brakes of the trailer, which sets the brakes when



the leg is down and releases them when it is up. This makes it practically impossible to leave the trailer without the leg in proper position.

(Lapeer Tractor-Truck Co., Lapeer, Mich. U. S. Patent 1,316,660.)

Canada. C. J. LYNDE.



White Truck owned by Garfield Carlisle, of Dunlap, Ill., delivering milk at Peoria

Most Dependable *for* Hauling Milk

GARFIELD CARLISLE hauls milk every day from dairy farms near Dunlap, Ill., to a large ice cream plant in Peoria, a round trip of 32 miles. Before investing in White transportation, he used trucks of different makes, but none was dependable enough for his purpose. For the milk *must* be delivered in the city at an early hour every morning, and his contract hinges on his ability to deliver with absolute certainty.

"My White has made it possible for me to run on schedule, something that I could not do when I used other trucks," says Mr. Carlisle. "There is no equipment for country hauling as dependable and economical as a White Truck."

The experience of Mr. Carlisle is a typical example of the performance of White Trucks in hauling milk, stock and other farm products. Wherever they are used, Whites are known for their ability to stand up and keep going day after day, year after year. Write for booklet which tells of the work White Trucks are doing in agricultural service.

THE WHITE COMPANY
CLEVELAND

White Trucks



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd



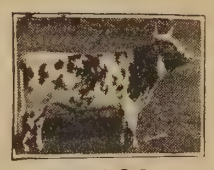
A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals.

Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.
JOHN R. VALENTINE, Prop. PHILIP C. PALMER, V. S. Mgr.



Milking Cows
Fresh and Bred Heifers
and Sons of
Ringmaster's B. B. Diplomat
For Sale
DUNCRAGGAN, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,320 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed
L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis.

Middlesex Meadows Ayrshires

No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.

We offer Nona's Chancellor of Middlesex, the six month's grandson of a champion out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.

A. Henry Higginson
SOUTH LINCOLN, MASS.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.
Aged cows, bred to Glenury, an A. R. son of Finlayston.
Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.
Heifers, bred to these two great sires.
Young heifers.
Bull calves.
All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Aldebaran Farms

Racine, Wis.

AYRSHIRES



BARCLAY FARMS,

FOR SALE

Barclay's "Herd Laddie" 23548
Born May 7th, 1919

Sire, Barclay's "Doch-en-Doris" 20698. Dam, Dalmusternock "Jessie" 31692 Imp. A. R. as a three-year-old 9,624 lbs. milk, 334 lbs. fat.
Bull calf. Born September, 1919. Sire, "Doch-en-Doris". Dam, Willoxton "Lively 2nd" 27530 Imp., A. R. record 12,844 lbs. milk, 508 lbs. fat.
ROSEMONT, PENNSYLVANIA

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston
Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.
SEWICKLEY, PA.

Strathglass Farm Ayrshires

Possess in the highest degree those desirable qualities for which the breed is justly famed—namely:

MOST HIGHLY ADMIRED DAIRY CHARACTER,
MOST UNIFORM REPRODUCING PROCLIVITIES AND
MOST ECONOMICAL PRODUCING ABILITY OF
HIGHEST GRADE COMMERCIAL MILK.

128 A. R. records made by Strathglass Farm cows, 65 of which number were in junior classes, average 10,859 lbs. milk, 419.85 lbs. fat.

HERD NUMBERS OVER 200 HEAD

A carload of yearling heifers, a dozen cows, a few heifer calves and several richly bred, top notch young bulls are comprised in our present offering of foundation stock at reasonable prices.

STRATHGLASS FARM, - - - PORT CHESTER, N. Y.



ALTA CREST AYRSHIRES
Special Offering of
Ayrshire Bull Calves
Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

When writing advertisers please mention Hoard's Dairyman.

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Abortion

What can be done to develop the udder and increase the milk output from a three-year-old pure Jersey cow that dropped her calf too soon? Her udder never has developed, has always been small, and the quantity of milk too meagre to consider her profitable. July 3rd, she dropped a heifer calf one month too soon and shortly after an accident and fall while picketed out on a rope. The afterbirth was retained for a few days but at the end of a week she was all right again. She has not yet come into her usual flow and shows no indication of an increase. I have not bred her since her abortion although we keep a registered Jersey bull. Would breeding her now have any effect upon the present condition? She has come in heat twice since calving. Could the next lactation period reasonably be expected to show good results? Will she ever become a heavy milker?

Sarasota, Fla. (MRS.) R. H. E.

It is questionable whether this heifer will ever make a profitable dairy cow. In the first place the abortive act in all probability was due to the contagious abortion disease and there is no certain remedy for that. To determine the presence of infection your veterinarian may perhaps be able to arrange to have a sample of her blood tested for abortion by a trained pathologist or bacteriologist. Meanwhile, if you think her worth retaining, we should advise drying off the scant milk secretion and having her bred after womb has been disinfected by the veterinarian (unless that was done when she aborted and retained her afterbirth) and after flushing out her vagina every other day for two or three weeks with a mild antiseptic solution.

Leaking Teats

Not long ago I read an article in Hoard's Dairyman which described the use of teat thimbles to prevent the loss of milk from leakage. If you could give me information as to where I could get these teat thimbles, I should appreciate the favor very much.

Oneida, N. Y. E. O. T

We suggested that if rubber thimbles could be used they would be likely to prove a success, but we cannot tell you where they may be bought. If any readers know, we shall be glad to have the information. Meanwhile, as often advised here, first try the effects of immersing the teats night and morning in a strong solution of alum and if that does not suffice apply melted wax or paraffin after each milking and as a last resort apply flexible collodion. When the latter medicine makes the teats sore its use should be stopped for some time.

Retained Afterbirth

Please tell me the cause of retained afterbirth in cattle. I have never had but two cases of abortion and those were caused by accident, so contagious abortion is not the cause. The cows are always in good condition. What do you consider the best method of removing it? Is there anything I could feed my cattle before freshening to prevent its being retained?

Oregon, Wis. J. E. F.

The contagious abortion disease almost invariably is the cause of retained afterbirth. The germs of the disease infect the crypts or depressions of the cotyledons which grasp the villi or finger-like projections of the afterbirth (placental membrane), and cause swelling which prevents loosening and separation after calving. Endometritis is the condition present in such cases and it can only be remedied by treatment of the womb, for which a specially trained veterinarian has to be employed. We do not know of any internal remedy that will cure endometritis or cause expulsion of a retained afterbirth. Daily for a week before a cow calves flush out her vagina with lukewarm water containing a mild antiseptic. A quarter per cent mixture of Lugol's solution will suffice. If the afterbirth does not come away inside of 2 or 3 hours after calving inject into the vagina then and every 6 hours up to 48 hours the mild antiseptic solution mentioned. Increase its strength if a foul smell is noticed. If the afterbirth does not then come away you should have it removed by an expert who will give correct after treatment.

Illino. Brown Swiss Breeders Meet

The annual meeting of the Illinois Brown Swiss Breeders' Association was held September 9th on the farm of Peter Gerber & Sons at Tremont, Illinois. Despite a day of more or less rain, a large proportion of the membership with their families were present. One feature of the picnic was the estimating of the relative standing as milk producers and also the daily record of three Brown Swiss cows of the Gerber herd. Both men and women competed.

The annual election of officers resulted in selecting Rowland Wilson president, David Plattner vice-president, Chester G. Starr of Pekin, secretary-treasurer. The membership is now over sixty.

The week following the annual meeting 65 head of Brown Swiss were exhibited at the Morton Live Stock Show. All of the cattle were owned in Tazewell and Peoria Counties. The quality of this show was superior to that of 1919 when 78 were exhibited. Ralph Ayres won champion bull and Gerber & Sons of Tremont won champion cow. Immediately following this show, the Peoria Fair came. The better animals at the Morton Show moved over to Peoria to try conclusions with the Jubilee Farms and W. C. Randall. In the opinion of many breeders, this show at Peoria was the best Brown Swiss show that has been seen so far this year. In numbers the Brown Swiss ranked first at the fair and were housed in one barn with appropriate banners and descriptive cards. In the opinion of Judge C. R. Rhodes, the Jubilee Farms' grand champion bull and Gerber & Sons' grand champion cow were specimens of the breed that equalled any Brown Swiss cattle being shown this year.

CHESTER G. STARR, Farm Advisor.

Uncle Ezra Invests in a Cow

Bought a cow t'other day;
Man was getting short of hay,
Rather sell his wife, he said,
Or part with anything he had,
But his hay was getting low,
And the cow had got to go.
"Such a cow," says he to me,
"Is something that you seldom see;
Gives two pails twice a day,
Only eating medder hay.
Give her shorts and cottonseed,
Another pail you'll surely need.
Butter that 'ere cow will make
Can't be beat in all the state.
Her mother took first money at
The Monroe fair for butterfat."
I shaved him ten and took the cow
Wish I hadn't done it now.
Felt like I'd been stealing sheep,
'Cause I got that cow so cheap.
Of course it wa'nt exactly right
To take advantage of his plight,
But turn it round and I could see
That he would do the same to me.
I took her home and gave her feed
Of ensilage and cottonseed.
Could hardly wait for milking time,
So as to try that cow of mine.
I won't attempt to express my thoughts
But all I got was just three quarts.
Yet he told the truth when, says he,
A cow like this you seldom see.
For her bag was bigger when I got done
Than it was before I had begun;
But strip and strip it was no use.
There wasn't another drop of juice.
Next cow I buy I will not fail
To inquire the size of the milking pail.
—Exchange.

BROWN SWISS

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows — profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JERSEYS

$250.00
Buys Jersey Bull Calf
Dropped May 30, 1920

$300.00
Buys Jersey Bull Calf
Dropped Jan. 24, 1920

These bulls are rich in the high producing Sophie Tormentor blood, Register of Merit ancestry on both sides. For extended pedigree and description, write

HOOD FARM, INC.
Lowell, Mass.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Cedar Crest Farms
Offer Jersey Bull

Noble's Fontaine Chief 185637, dropped August 12th, 1919. Sired by Fairy Boy's Gamboge Lad 141747. Grandsire Imported Hauteville Fairy Boy 90952 (20 daughters in Register of Merit). Out of Nobles Matchless Pride 271104, entered Register of Merit at five years four months. Producing 8,160 lbs of milk, 561.05 lbs. 85% butter.

First $250.00 takes him.

J. K. Dering, Lake Villa, Ill.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. **R. C. Green & Son, Albion, Wis.**

$500 — $500
Delivered at Your Station

We offer two very choice registered Jersey heifers, two and one-half years old, lately fresh. We will pay express to any station.

H. E. ANDERSON, Whitewater, Wis.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.

J. Q. EMERY & SON, - Edgerton, Wisconsin

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY. BLACK EARTH, WIS.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT. TOMAH, WIS.

GUERNSEYS

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

FOR SALE

A registered Guernsey bull 18 months old, a sure breeder. Also an 18-month-old heifer bred June 5, 1920. Their grandams were imported. Price for the two $350.00.

John Walls, Mystic, Iowa.

Registered Bulls — $100 and Up

West View Farm offers registered Jersey bull calf, born April 15th, 1920, solid color and a good one. Dam now on test and making a good record. Double grandam made 609 lbs. butter in one year. Price $100.00 f. o. b. here. Also other bulls one to nineteen months old. Good ones priced right.

Registered Berkshire pigs eight to ten weeks old, $15.00 either sex. Also yearling sows. For size, type, and prolificacy you can't do better.

W. C. BROOKOVER, Route No. 1, Chandlersville, Ohio.



Yearling Bull for Sale

Dropped June 21, 1919, solid fawn color, well grown, well bred toppy bull. Sired by a grandson of Mabel's Raleigh and Noble of Oakland. Dam is of Eminent breeding, R. of M. class AA—485 lbs. 15 oz. butter, adv. test 5.97%. This bull's pedigree is full of records and blue ribbons. For further particulars write,

W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton. Wis.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price —May Rose and Glenwood strains —write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd. **August Ziesing, Deerfield, Ill.**

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

FOR SALE
Registered Guernsey Calves
At Bargain Prices
10 Bred Heifers
6 Bull Calves (2 Ready for Service)

STOCKDALE FARMS
Hynicka Bros, Lebanon, Pa.

Guernseys for Sale

Twenty females, cows and heifers, a number of May Roses. Mostly bred to Laverna's Ultra May King 24660 and Gerar Pearl's Royal 58411, who is full brother to three class leaders. Also several sons of Langwater Royal, Langwater Raritan and Laverna's Ultra May King from A. R. cows or cows on test, several ready for service. All are priced to sell.

M. T. Phillips, - Pomeroy, Pa.

For Sale
Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

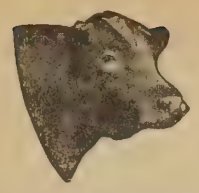
May Rose on both sides. Dams in A.R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.



Economy in Production ← **GUERNSEYS** → Quality of Products



A Michigan farmer bought a Guernsey heifer for $200. Ten years later the descendants of this cow were equal in value to a good sized farm of the highest quality. Let us tell you how a Guernsey cow can make you prosperous.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 85, PETERBORO, N. H.

SECOND

Wisconsin State Sale

— OF —

Guernseys

October 13th, 1920

MADISON, WIS.

Plan now to attend this event as you go to the National. They will not conflict.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 923 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

SOON READY FOR SERVICE



KING BOY OF PROSPECT
Dropped January 10, 1920

Sire—Anton's King Confidence (43517). Dam—Companion of Prospect(43218). A. R. 4069

King Boy is one of the best young bulls we have ever raised. His conformation is faultless. He carries good depth and width, and a top line that is as level as the floor.

His sire has six May Rose crosses and his dam has a record 764.65 lbs. of butterfat as a junior 4-year-old.

The dam of King Boy is an excellent individual and a daughter of a double grandson of Imp. Masher's Sequel.

This calf is priced to sell.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

F. G. Eberhardt — Bercado Farms

will offer his entire herd of

Registered and Grade Guernseys at a

Public Sale

to be held at

Mishawaka, Ind., October 28, 1920

Mr. Eberhardt offers an excellent selection of fine Guernseys at his sale, which will be held at the Farms, located a short distance from Mishawaka, on the Lincoln Highway. The herd is on the Accredited List and animals are great producers.

Twenty daughters and sons of St. Austell Souvenir's Dany Laddie No. 39720, comprise part of the fine offering. The bull is also offered, and he is a son of Jethro's May King of Linda Vista, A. R., double grandson of the famous Imp. King of the May 9001. (A. R.). His dam is Imp. Christine of St. Sampsons A. R., milk 11,645.1 lbs., butterfat, 608.0 lbs.

Another splendid feature will be **seven daughters of Imp. Dairyman of Sarnia No. 38931,** who is a son of Governor of the Chene (A. R.) and out of Violet of Corbinez, the dam of Violet IV of Corbinez A. R., milk 16,336.40 lbs., butterfat 756.72 lbs.

Auctioneers: Love and Benjamin.

Write for catalog to

F. E. Fox, Sales Manager, Waukesha, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Tristram Farm Guernseys

Herd Bull: Dairymaid's Glenwood of Pinehurst 3d whose two nearest dams average over 715 lbs. B. F. and whose daughters are proven producers.

Several young bull calves from one to six months of age for sale.

Federal Accredited Herd.

Tristram Farm Co., Eau Claire, Wis.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.8 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.
R. R. Station—Owasco Lake

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

HILLSCROFT FARM

Offers for Sale Guernsey Bulls

HILLSCROFT'S PROUD WARRIOR

Dam, Felice of Falcon's Flight 71209. Sire, Falcon's Proud Warrior 47559. Born March 31st, 1920. The dam f this bull is now producing 40 lbs. of milk.

BULL CALF

Dam, Florham Bell 2nd of Oakhurst 54984, A. R. record. Sire, Rosie's Golden King of Oakhurst 31630. Born August 9th.

E. W. Simons, Bantam, Conn.

Don't fail to attend

SOUTHERN WISCONSIN GUERNSEY BREEDERS ASSOCIATION

First Annual Sale of

-GUERNSEYS-

October 14, 1920, at Janesville, Wis.

For Catalog write James H. Murphy, Delavan, Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

A Great Sire IS FALCON'S PROUD WARRIOR

considered by many to be

The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.

Grape Lawn Guernseys

For Sale—Three bull calves, seven months old, of the May Rose, Golden Secret Cross, sired by Grape Lawn May King and he by Langwater Cavalier that is considered to be the outstanding May Rose bull of the day. One of his daughters sold at the last combination sale for $8,000.

The dams have the following credits in A. R.:

No. I, Class C, 198 days, 7,694.4 lbs. milk, 372.72 lbs. fat.

No. II, Class C, 144 days, 6,206.1 lbs. milk, 290.56 lbs. fat.

No. III, Class A, 138 days, 7,778.1 lbs. milk, 289.05 lbs. fat and are sired by Mota's Golden Secret and Gold Noble II.

ACCREDITED HERD

WM. H. GOULD - - Burkeville, Va.

Young Bulls 6-10 Months Old

From tested dams or dams now on test making from 450 to 750 lbs. fat. They are sired by excellent bulls of May Rose, Clara Sequel, and other breeding as good. Price $100 to $500. Write for more complete information.

CORIUM FARM, F. J. Rueping, Owner, Fond du Lac, Wisconsin

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Absolute Dispersal Sale

of the entire herd of

Registered Guernseys

Property of

E. J. Himmelberger, Capitol View Farm

Lansing, Mich.

October 27, 1920

A fine lot of registered males and females are listed for the sale, practically all tracing to May Rose breeding. Herd under Federal Supervision and animals to be sold subject to 60 day retest.

A feature of the sale will be the offering of 15 daughters and several sons of **GOLDEN NASSAU OF PENCOYD**, who is by Langwater Pencoyd A. R. and out of Golden Preel of Pencoyd A. R., milk 11392 lbs., butterfat, 622 lbs.

Auctioneers: Love and Benjamin.

For Catalog

Address F. E. Fox, Sales Mgr., Waukesha, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary. Fond du Lac Wis.

Homestead Farm

Offers some

Choice Bulls For Sale

To avoid inbreeding, will dispose of a son of "Pencoyd's Golden May Secret" (39626) also five grandsons of Pencoyd.

Eight sons of Pine Blossom's Cherub (44600).

A grandson of Imp. King of the May, out of a daughter of Pencoyd's Golden May Secret.

Also seven cows that are all safe in calf to good bulls.

Five of these cows have A. R. records. Prices on all this stock reasonable considering quality.

Herd under Federal supervision for tuberculosis.

Write for sale list.

W. G. Jamison & Sons

R. 2, Appleton, Wisconsin

Appletree Point Farms



PENCOYD'S SECRET MAROSE 48332

The "Get" of this bull is being exhibited along with the rest of our show herd at the New England Fair in Worcester, Mass.; Connecticut State Fair at Hartford; New York State Fair at Syracuse; Eastern States Exposition at Springfield, Mass.; Waterloo Dairy Cattle Congress at Waterloo, Iowa; and National Dairy Show at Chicago. Write for information about bull calves and a few females, some being daughters of Langwater Peerless.

.U A. WOODBURY, II, Burlington, Vermont

Minnesota Dairy Short Course

Teachers of dairy husbandry at northwest universities agree that at no time in the history of dairying in this country has there been a greater demand for men who understand the theory and practice of manufacturing dairy products than now. Here in Minnesota the university's dairy short courses have assisted in the training of nearly 2,500 young men. One hundred fifty attended the various short courses of the dairy school in 1919—1920. J. R. Keithley, who is in charge of the courses, says it is impossible to supply the demand for skilled dairy workers, such as butter, cheese, and ice cream makers, as reflected by inquiries received almost daily at University Farm. This unusual demand, it is felt, means an increased attendance at the courses to be given at University Farm, St. Paul, this fall and winter.

Five short courses are offered, as follows:

Creamery operators, beginners, January 3 to February 12; advanced creamery operators, November 15—27; ice cream plant operators, November 29 to December 4; cheese plant operators, November 15 to December 11; milk plant operators, December 6—11; in addition, a state conference of creamery managers will be held at University Farm on January 3. For further information write J. R. Keithley, University Farm, St. Paul.

No farmer will be downcast if he appreciates the compensations that nature mixes in with the hardships of his job.

HOLSTEINS

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Carver County Holstein Breeders'

First Annual Sale

October 21 at Waconia, Minn.



56 Registered Holsteins
30 High Grade Holsteins

An Opportunity to Buy Good Ones from a Section that Never has Been Exploited

In the selection of these entries, the sale committee has made every effort to make them representative of the herds of Carver County. They have selected the registered cattle to meet the demands of the breeder who wants clean, well bred females that will sell for average rather than extremely high prices. If you want that kind, don't fail to attend.

The 30 grades are top notch cows and heifers, most of them bred for fall and winter freshening. A great many of them have excellent C. T. A. records. All of them are the result of the use of very good pure-bred sires for several generations.

Get your catalog at once from

The Minnesota Holstein-Friesian Breeders' Ass'n
406 Market Bank Building - Minneapolis, Minnesota

Two-Year-Old Sire

His two nearest dams average for 7-day production nearly 34 lbs. butter. For yearly production they average better than 1,000 lbs. butter.

He is well grown, a show animal, and free from disease. Worthy to head a top notch herd. Priced for quick sale.

He has been used in a small registered herd the past year. We want him placed in a herd where his daughters will be tested. If you need a herd sire, with 7-day and yearly production, combined with good individuality, here is your chance.

Don't delay, write us.

Hargrove & Arnold, Norwalk, Iowa

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.

MAXWELL FARMS - - - - WATERLOO, IOWA

HOME FARM HOLSTEIN FRIESIANS

A Son of Woodcrest Sir Clyde

born March 1920. three-fourths white and straight as a line. His sire is a son of the great 33-lb. and 970-lb. cow, Alma Clyde. His dam has 26.43 lbs. in 7 days, 105.6 lbs. in 30 days, 98.8 lbs. milk in a day. She has 3 records averaging 25 lbs. and 3 daughters with 2-year-old records of 20.2 lbs. 18.38 and 18.2 lbs. in 7 days.

Write for photo, price and pedigree.

W. B. BARNEY & SONS - - - - - Chapin, Iowa

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35 lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.

BLUEBELL FARM, RICEVILLE, IOWA.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*
At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*
2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont**, the **First Tuesday and Wednesday of every other month,** Feb.4-5; Apr.1-2; June3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

When writing advertisers please mention Hoard's Dairyman.

Selling Everything

at

Mountain View Farm

Mountain, Wis.

Thursday, October 14th

I am retiring from active farming, and am selling my entire herd of 45 head of pure-bred and high grade Holsteins.

These cows are a fine, large lot of cows, and include Maggie of Hawthorne (198307), Advanced Registry (45290). At age 2 years, 7 months, she gave milk 326.8 lbs., butterfat 126.-31 lbs. in 7 consecutive days—30-day record, 1,363.6 lbs. milk, 515.16 lbs. butterfat.

Also sons and daughters of Prince Hengerveld Pietje—19 A. R. O. daughters, whose highest record is 36 lbs.

Horses, implements, and everything, including Hinman milking machine, will be sold in the morning.

Sale starts at 9 o'clock sharp, rain or shine, in my big stock pavilion at Mountain, Wis., on Chicago and Northwestern Railroad, 50 miles northwest of Green Bay.

Guy J. Gibson, Mountain, Wis.

Two Ormsby Bulls

Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

Both tuberculin tested and guaranteed right.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Grandsons of Sir Pietertje Ormsby Mercedes

Sired by Sir Pietertje Ormsby Korndyke, a Sir Piet. Bess Burke bull.

Dams are line bred Johanna cows with A. R. O. and cow testing records.

The calves are straight, growthy individuals and are six months old.

For pedigrees and prices write to

H. A. Brace and Sons, Lone Rock, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year. He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

This Holstein Cow
"MAY ECHO SYLVIA"
Holds all milk records over all ages and breeds for from 7 days to 120 days

Her Son
"AVON PONTIAC ECHO"
At 6 years of age has 22 A. R. O. daughters

His Daughter
30.83 lbs. of butter in 7 days at 4 years of age.

His Daughter
108.8 lbs. of butter in 30 days at 3 years of age.

His Son out of
"ORMSBY DUCHESS CORNUCOPIA"
24.5 lbs. butter in 7 days.

For Sale at $750.00

Infuse the milk flow behind AVON PONTIAC ECHO into your herd.

WE GUARANTEE THIS ANIMAL FREE FROM DISEASE

For Further Information Write

FARMS
Washington Farm, Near Seattle, Wash.
Eastern Farm, Oconomowoc, Wis.

Carnation Stock Farms

Eastern Office: 1011 Consumers Bldg., Chicago, Ill.
Western Office: 1011 Stuart Bldg., Seattle, Wash.

Home of Contented Cows

Dispersion and Consignment Sale

Oct. 23—Sheboygan, Wis.

60 Registered Holsteins

The Model Stock and Dairy Herd

of 25 animals will be sold. This herd was established 14 years ago with 2 foundation cows and every animal in the present herd except the herd sire is a descendant of one of these cows.

Every animal of milking age has a C. T. A. record, many of them being leaders in the local association.

The Silvernagel Herd

of 22 head will also be sold. These are, with one exception, all descendants of a single foundation cow that is still in the herd. Here too, every animal has a C. T. A. record, several having produced from 10,000 to 12,000 lbs. milk in 6 mo.

Whippermann Bros. will Consign

15 head—5 of them A. R. O. cows. 5 heifers from A. R. O. dams, and 5 splendid young bulls from A. R. O. dams. All but one of the 10 females will be bred to King Abbekerk Segis 3d, he from the highest record daughter of Piebe Laura Ollie Homestead King and by the highest record son of "Count".

The Sale will be held at Lake Park Farm. Watch next issue for more complete information. For catalogs address

E. C. Whippermann, R. 1, Sheboygan, Wis.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale 3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.
OTTO F. BRANDT, - HORICON, WIS.

HORICON BELLE HOLSTEINS

Herd headed by Pabst Korndyke Baldwin, a son of Korndyke Segis Johanna and from a 32-lb. granddaughter of King Pontiac Champion. Five females in my herd average 24.12 lbs. butter as 2-yr.-olds.
E. F. KUEHN, - - HORICON, WIS.

Bull, 40-lb. breeding, $550. Year and a half old. Evenly marked. Good individual. Sire is a son of a 40-lb. cow with 1,000 lbs. butter in a year. Dam has a 7-day record of nearly 26 lbs. 2 nearest dams average over 33 lbs. Herd tuberculin tested annually.
CHIC DAIRY FARM, Juneau, Wis.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.
S. T. JONES, - R. 8, Watertown, Wis.

JOHANNA BOY TWISK

heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. Nothing for sale at present.
T. W. LUCK, R. 1, HORICON, Wis.

LEVEL-LAY FARM HERD

headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.
E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. Chris. Indermuehle, R. 1, Juneau, Wis.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.
S. L. De Smidt, Manager. - - - - - - - Burnett, Wisconsin.

Two More Good Sons of King Pontiac Artis Sadie Vale



KING PONTIAC ARTIS SADIE VALE

No. 1—Summit Ruby Segis Vale, born Dec. 13, '19. An excellent son of Summit Ruby May Segis 18.54-lb. 3-year-old now on year test and with over 11,000 lbs. milk to her credit June 1.

No. 2—Summit Mechthilde King, born Dec. 17. A very well grown, nicely marked son of Mechthilde Rose Pontiac, 25.54-lb. cow, that has in 190 days produced 13,826 lbs. milk and practically 600 lbs. butter.

Their sire, King Pontiac Artis Sadie Vale is a 34-lb. son of the great King Korndyke Sadie Vale.

They are priced right.

Hollyhock Farms, Dousman, Wis.

GUSTAVE PABST, Owner F. J. SOUTHCOTT, Manager

Waukesha County Holsteins

For Sale

10 carloads of pure-bred bulls of serviceable age and younger at prices ranging from $100 up. Will ship satisfaction.

18 carloads of grade Holstein cows fresh and springing at prices ranging from $140 to $250.

Several herds of choice pure-breds at farmers' prices. If you want foundation stock of any kind, write for information or come and see Waukesha County. (32,000 head of tuberculin tested cattle.)

WAUKESHA COUNTY HOLSTEINS

Waukesha County Holstein-Friesian Breeders' Association

Office 254 Broadway - Waukesha, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**

HOLSTEIN BULLS AND HEIFERS ! !

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN



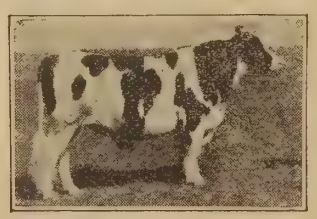
Here's Another Good Son

of Sir Bess Ormsby Fobes, the $30,000 son of "37th". He is Ureeka Dio Dandy Sir Bess, born Feb. 6, well grown and a splendid individual like his sire.

His dam is a 21-lb. 3-year-old daughter of a 24-lb. heifer.

This bull is not a cheap one but he's priced reasonable. Write us today about him.

UREEKA STOCK FARM,
Otto W. Schinke, R. 1, - Jefferson, Wisconsin



A Son of "Sir Bess" For Sale

This fellow is a year old, an excellent individual and very well grown.

His dam is Queen Schillaard 2d, a 22-lb. daughter of a 27-lb. cow. "Queen" also has a very creditable 359-day record.

"Bess", the sire, is as you know a son of "37th" and Wisconsin Fobes (1152-lb. cow).

Write today if you want him.

Linden Lawn Stock Farm, B. W. Rabenhorst, Prop., Jefferson, Wis.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

Waupaca County Holstein Breeders' Association

1. Where the largest breeders can secure their choicest herd sires.
2. Where the average breeder can buy those animals of high class breeding that will build up his herd.
3. Where the beginner can obtain that good foundation stock with most excellent type and good records at moderate prices.

Buy that carload in Waupaca Co., the county noted for its large number of Federal Accredited Herds.

Stock for sale at all times.
Write to

A. B. Rowe, Sec'y, Waupaca, Wisconsin

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9th, 1920

Sale will start at 10:30 A. M.

Oconomowoc, Waukesha County, Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.63 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Arden Farms

Offer You the Chance to Buy at Your Own Figure — Its

Choicest Breeding

At the

National Dairymen's Sale

Chicago, Ill., October 13th and 14th



KING SEGIS PONTIAC COUNT

Two magnificent daughters of *King Segis Pontiac Count,* The World's Greatest Dairy Bull, whose daughters have broken 140 World's Records. They are sisters to our *World's Champions.*

A splendid twice 30-lb. son of *King Segis Pontiac Count,* a magnificent individual with great yearly backing.

A 29-lb. three-year-old daughter of *Piebe Laura Ollie Homestead King,* the only bull in the world with five 20,000-lb. two-year-old daughters, whose offspring made such a remarkable showing at the Minnesota State Fair this year. This heifer has an 800-lb. two-year-old record and is now on yearly test again as a three-year-old. *Safely in calf to King Segis Pontiac Count. Her calf will be worth what you pay for her.*

Two daughters of our *Ormsby* bull (son of *Pietertje Maid Ormsby*), one, a beautiful 22-lb. three-year-old, bred to *King Segis Pontiac Count.* The other, out of one of the best yearly record daughters of *King Segis Pontiac Count.*

A splendid 26-lb. daughter of *Finderne Pietertje Fayne,* bred to *King Segis Pontiac Count.*

I Have Never Offered a Finer Consignment

J. M. Hackney, 602 Merchants Bank Bldg., St. Paul, Minn.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

Sir Pietertje Ormsby Mercedes 41st

One of Our Herd Sires



The only son of Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. His sire has more 1,000-lb. daughters than any other sire in the world and his dam is the only 1,000-lb. cow having three 1,000-lb. daughters.

Twenty daughters of "41st" have been sold at public sale during the past year at an average of over $2,000. They were all out of either low record or untested dams.

We have for sale several young sons of "41st" from yearly record daughters and granddaughters of Sir Pietertje Ormsby Mercedes at prices that you can afford to pay. Write us for pedigrees.

E. C. SCHROEDER FARMS

Moorhead - - - Minnesota

(Federal Accredited Herd)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

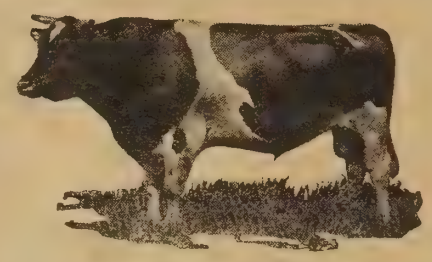
M. L. ENRIGHT, - - - - - - - - E. GRAND FORKS, MINN.

Use A Son of "Piebe"

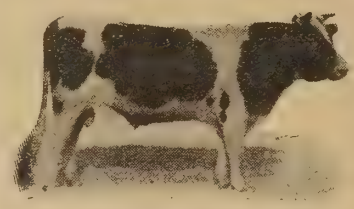
from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.

We have one or two left that are almost of serviceable age. Write or wire today if you are interested.



MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.



$200 — Buys this ten months old Bull

If you like deep middles, straight rumps, square udders with well placed, easy milking teats, in your herd—**Breed for those points.**

Be sure it is in the dams back of your herd sire. It's all there in this bull, we've bred three generations of his dams, and his dam is a 19-lb. cow. This calf is good all over and nicely marked. Send for his pedigree and photo and see.

Just the bull for a good grade herd.

A. J. LASHBROOK, NORTHFIELD, MINN.
(Federal Accredited Herd)



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

Mankato Holstein Farms

OUR HERD BULLS

King Colantha Ormsby Bess, a Sir Pietertje Bess Burke Combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Nine daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

(A Federal Accredited Herd)

MARLOW & RANDALL, MANKATO, MINN.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

Wright Co. Holstein Breeders' Sale

65 head, bulls, cows and heifers with excellent type, guaranteed absolutely right in every way. Don't forget the date, October 5th, 1920. Howard Lake, Minn. Sale in New Sale Pavilion, at Fair grounds. Send for Catalogue.

Chas. Oby, Maple Lake, Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.

Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm

William Schmidt, Prop. St. Peter, Minn.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Where

is the best son of King Segis Pontiac Count? King Segis Pontiac Fayne Star is "The best individual King Segis Pontiac Count ever sired." His dam is Johanna Fayne Star, 32 lbs. in 7 days, 941 in 365 days. She the highest record daughter of Sir Johanna Fayne. We like this cross. Send for the bull circular.

FLECKS FARMS, Faribault, Minn.

LAKE SHORE HOLSTEINS

Fine service bull for sale. Sire one of the best—Dam now on yearly test and twice Grand Champion Cow at Ramsey Co. Fair. Send for pedigree if you want a good one.

E. J. OPPLIGER, Box 20, Forest Lake, Minn.

ATTEND—

The West Concord Security Sale

October 19th, at West Concord, Minn.

All trains will stop there on Sale Day.



If You Want—

One or a dozen young cows or bred heifers that are due to freshen this fall and early winter. Females that are well bred and individually good; that are in calf to well known sires; and that you can feel absolutely sure will be exactly as represented.

70 head, most of them just that class of registered females, and including a very few good young bulls make up the list of sale entries. It is, moreover, a sale where prices are sure to average within the reach of any progressive dairyman who is ambitious to own better Holsteins.

Your catalog is ready

The Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Building - - - Minneapolis, Minnesota

The Most Important Holstein Sale of The Fall and Winter Season 1920

—

Details Next Week



2nd Foundation Breeders' Sale

State Fair Grounds

St. Paul, Minn., Oct. 28-29

140 Head of Foundation Females

and a few young bulls of outstanding quality

The Consignors:

Arden Farms, St. Paul
J. M. Hackney, Owner.

North Star Herd, Lake Elmo
W. S. Moscrip, Owner.

Kiekenapp Farms, Faribault
E. B. Kiekenapp, Owner.

Woodlake & Clover Farm, Minneapolis
J. B. Irwin, Owner.

E. C. Schroeder Farms, Moorhead
E. C. Schroeder, Owner.

Mudcura Farms, Shakopee
Dr. H. P. Fischer, Owner.

Long Lake Live Stock Co., St. Paul

Mineral Spring Stock Farms, Savage
Stewart — McIntyre — Hansen, Owners.

For catalogs address

Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Bldg. Minneapolis, Minn.

Come to Michigan—Home of Healthy Holsteins
Three Great Days—October 19-20-21

Second Michigan State Holstein Sale

Jackson, Michigan, Tuesday, October 19th

75 of Michigan's Best Holsteins, selected from clean herds
All high-class individuals. All high-record animals

Traverse City State Hospital consigns a 33-lb. daughter of a 33-lb. cow, and 6 other good ones all in calf to Echo Sylvia King Model, a grandson of May Echo Sylvia and out of a 36-lb. daughter of a 37-lb. cow.
Musolff Brothers consign 6 heifers from dams ranging from 29.11 to 33.3 and five bred to a 33-lb. son of King Ona.

Other Entries Include:

A 33-lb. son of a 36-lb. bull and a 31-lb. son of a 43-lb. bull.
A 28-lb. cow bred to a 32-lb. bull.
A 26-lb. three-year-old and a 25-lb. four-year-old, bred to a son of King Segis Pontiac Konigen.
A 28-lb. cow bred to a 35-lb. sire.
A 26-lb. cow bred to a 33-lb. sire.
A 25-lb. cow bred to Korndyke Geiske Raymondale.

A REMARKABLE OPPORTUNITY TO SELECT CLEAN CATTLE

Every animal in this sale comes from a herd that has passed at least one clean test under State and Federal supervision—Sold with 60-90 day retest privilege

Central Michigan Holstein Breeders'

Third Annual Sale

Agricultural Building, East Lansing, Michigan

Wednesday, October 20, 1920

75 head of choice registered Holsteins, including two complete dispersals.

14 daughters of Sunshine Clothilde Pontiac Lad, an excellent individual, rich in the blood of Pontiac Korndyke and De Kol 2nd's Butter Boy 3rd, and 8 cows in calf to him.

7 cows in calf to Model Glista King Segis, a grandson of King Segis and out of a 35-lb. daughter of a 31-lb. cow.

2 daughters of King Dora Segis Pontiac, a 32-lb. son of a 35-lb. bull.

Shiawassee County Holstein Breeders'

First Annual Sale

Owosso, Michigan

Thursday, October 21, 1920

80 head, selected cows and heifers, including the complete dispersal of the Hillis herd, headed by Johan Hengerveld Lad, one of the best sons of Hengerveld De Kol. Fourteen cows in calf to this great sire and ten of his daughters will be offered. This is an exceptionally good herd and offers a rare opportunity to select real foundation animals.

6 daughters of Maplecrest Banostine Application, a 35-lb. son of Friend Hengerveld De Kol Butter Boy.

3 cows in calf to a son of King of the Sadie Vales.

Daughters of King Pontiac Artis, Traverse Cadillac Lad, Peldora De Kol King of the Pontiacs, and Ypsiland Sir Pontiac De Kol.

Records to 31 pounds.

225 head of carefully selected individuals to be sold with 60-90 day retest privilege. Every consignment inspected before accepted. Attend these three sales. We will hold the cattle for you until the close of the series

SEND FOR CATALOG

Sales Managed by THE MICHIGAN HOLSTEIN-FRIESIAN ASSOCIATION

H. W. Norton, Jr., Field Secretary, Old State Block, Lansing, Michigan

Facts in BLACK & WHITE

Purebred Holstein Cows For Milk Producers

As long as farmers were content to sell whole milk for the price of the fat it contained there was room for discussion as to comparative value of the breeds. But the separator overcomes the necessity of selling milk in this unprofitable way.

For the wholesale milk trade, for delivering milk to condenseries or cheese factories, for the production of butterfat, the skimmilk being retained to feed pigs and calves, thus preventing the depletion of the soil which never fails to occur where whole milk is shipped, the Holstein-Friesian cow is most profitable.

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

Dispersion Auction Sale

Saturday, October 16, 11 A.M.

44 Registered Holsteins



PAULINE ALTADALE
30 lbs. butter, 470 lbs. milk in 7 days. One of the good ones to be sold.

Having rented my farm, I must close out a herd of registered Holstein cattle I have been building for 14 years. I started using a 27-lb. bull; am now using a 32-lb. bull.

There are in the herd:

2—30-lb. cows	**1—32-lb. bull**
5—daughters of 30-lb. cows	**1—30-lb. bull**
6—sisters of 30-lb. cows	**1—30-lb. bull calf**

and others headed for 30-lb. honors

I say this because I have bred, raised and developed them all and have tested only nine head so far with the above results.

Have just passed clean, the final test for the Accredited Herd list and will have certificate before the sale.

For catalogue, write me

JOHN B. MARTIN, GRAND RAPIDS, MICHIGAN

Altadale Farm, Ada Mich., Close to Grand Rapids.
For transportation to farm, 'phone me on arrival.

Auctioneer, Col. L. D. Perry, Pedigree Expert, R. A. Backus.

The West Michigan Holstein-Friesian Association sells 115 high class cattle the following Monday at Grand Rapids.

The St. Joseph Valley Holstein Breeders' Association

will hold their

First Annual Sale

at Notre Dame Sale Barn, on

Friday, Oct. 15, 1920, 11 a.m.

60 Head of Pure-bred Holstein-Friesian Cattle

Cows, heifers and bulls of first class blood lines of King Segis, Pontiac Aaggie Korndyke, Hengerveld De Kol, King Walker and other popular blood lines. Cows bred to, and daughters of Peldora De Kol Pontiac Pietertje a 32.7-lb. grandson of the well known bull, King of the Pontiacs. A 17.84-lb. 2-year-old granddaughter of Pontiac Aaggie Korndyke bred to "Peldora".

A daughter of the 29.42-lb. Ind. Senior 4-year-old champion.

A 19-lb. cow bred to a Hengerveld De Kol bull whose dam has a 22-lb. 3-year-old record. He will also be in the sale. Several cows are on test and records will be announced on day of sale.

Consignors:

University of Notre Dame....Notre Dame, Ind.
C. I. Reamer .....North Liberty, Ind.
Leo Van Hess .....South Bend, Ind.
W. Leo Casaday, ...New Carlisle, Ind.
L. L. Vaughn .....New Carlisle, Ind.
Harry A. Kring .....South Bend, Ind.
M. I. Ogilvie .....Three Oaks, Mich.

Cattle have all been tuberculin tested and will be sold on a 60-day retest.

Write for catalog.

Harry A. Kring, Sec., South Bend, Ind.

R. E. Haeger and Cal Stuckman, Auctioneers. W. N. Osborn, Pedigree Man

Get In On

The Lake County Sale

65 Real Choice Illinois Holsteins

19 Consignors

H. K. Vose, Gurnee
W. I. Osborne, Area
Earl H. Kane, Area
R. B. Griffin, Zion City
Guy W. Farman, Gurnee
A. S. Benson, Grays Lake
Clark & Rhode, Belvidere
J. G. Bonner, Lake Villa
George R. White, Antioch
Walter I. Martin, Barrington
Hawthorne Farms, Barrington
L. H. Pepper, Lake Villa
Mrs. Kate H. Miller, Barrington
Lloyd Ritzenthaler, Prairie View
George E. Van Hagen, Barrington
Anton DeGraff, Grays Lake
Earl Paddock, Round Lake
Leslie G. Hutchins, Prairie View

Among these consignors are some of the leading breeders in the State. They are all progressive fellows—constructive breeders who take a pride in being able to make an offering of such class that one is quite justified in coming a long way to attend this sale.

INDIVIDUALITY The cattle have been selected carefully by a competent, disinterested judge.

HEALTH All tested. Most of them from Accredited and Federally supervised herds. Guaranteed subject to a 60-90 day retest.

BREEDING The blood of Sarcastic Lad, King Segis Pontiac, Admiral Walker, Colantha Johanna Lad, Prince Hengerveld Pietje, King Segis Pontiac Chicago, Rag Apple Korndyke—the Ormsbys, Sadie Vales, McKinley Segis' and Changeling Abbekerks—blood that has always made good—and will make good for you.

These cattle are not only of high record ancestry and fashionable breeding, but among them are a great many very promising prospects. They have breeding enough and individuality enough and a number of them look like they would make records enough to make them eligible for any State or National Sale. **They actually look the part.**

If good, dependable cattle interest you, do not pass up this sale!

Libertyville, Illinois - October 18, 1920

Management

Illinois Holstein-Friesian Association

R. N. Thompson, Field Secretary - - 130 North Wells Street, Chicago, Illinois

Libertyville is less than an hour from Chicago. Take C. M. & St. P. at 7:10 a. m.; or North Shore (electric) at 7 or 8 a. m. and tranfser at Lake Bluff to Libertyville electric. Sale right in town.

Grandsons and Granddaughters of Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

---

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam,—Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

---

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke.

Wm. N. Osborn, Wanatah, Ind.

---

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peidora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **C. I. Reamer, North Liberty, Ind.**

"SPOT"



Eli Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.



See Them At The "National"

Sir Johanna Fayne Segis Pontiac, our herd sire, and Pabst Pontiac Madrigal, a 25-lb. 2-year-old daughter of King Pontiac Champion, have been selected from Rock River Farms Herd for the Illinois Show Herd at the National.

They will be in the open classes as well.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

Yearly Record

ZEHRINGHURST HOLSTEIN FRIESIANS



Accredited Herd

Zehringhurst Farm

Offers

A few splendid young bulls that have show ring type that are backed by short and long time records and by the best productive breeding Ohio has produced.

They are guaranteed right and are priced to sell.

Oscar O. Zehring, Prop., Germantown, Ohio

Now Is the Time

To select your bull for next winter's use.

Select a son from Wooderest Pietje Clyde, our herd sire.

7 days	365 days
33.07 butter	970.48 butter
523 milk	22,558.40 milk

He has 4 20-lb. Junior 2-year-olds including one 26.58-lb. Illinois State Champion. They are from *A. R. O. Dams* up to 27 lbs. butter and 636 lbs. milk. Prices reasonable.

JOHN SEXAUER & SONS
BELVIDERE, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅗ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

REPUBLIC TRUCKS

REPUBLIC
Yellow Chassis
TRUCKS

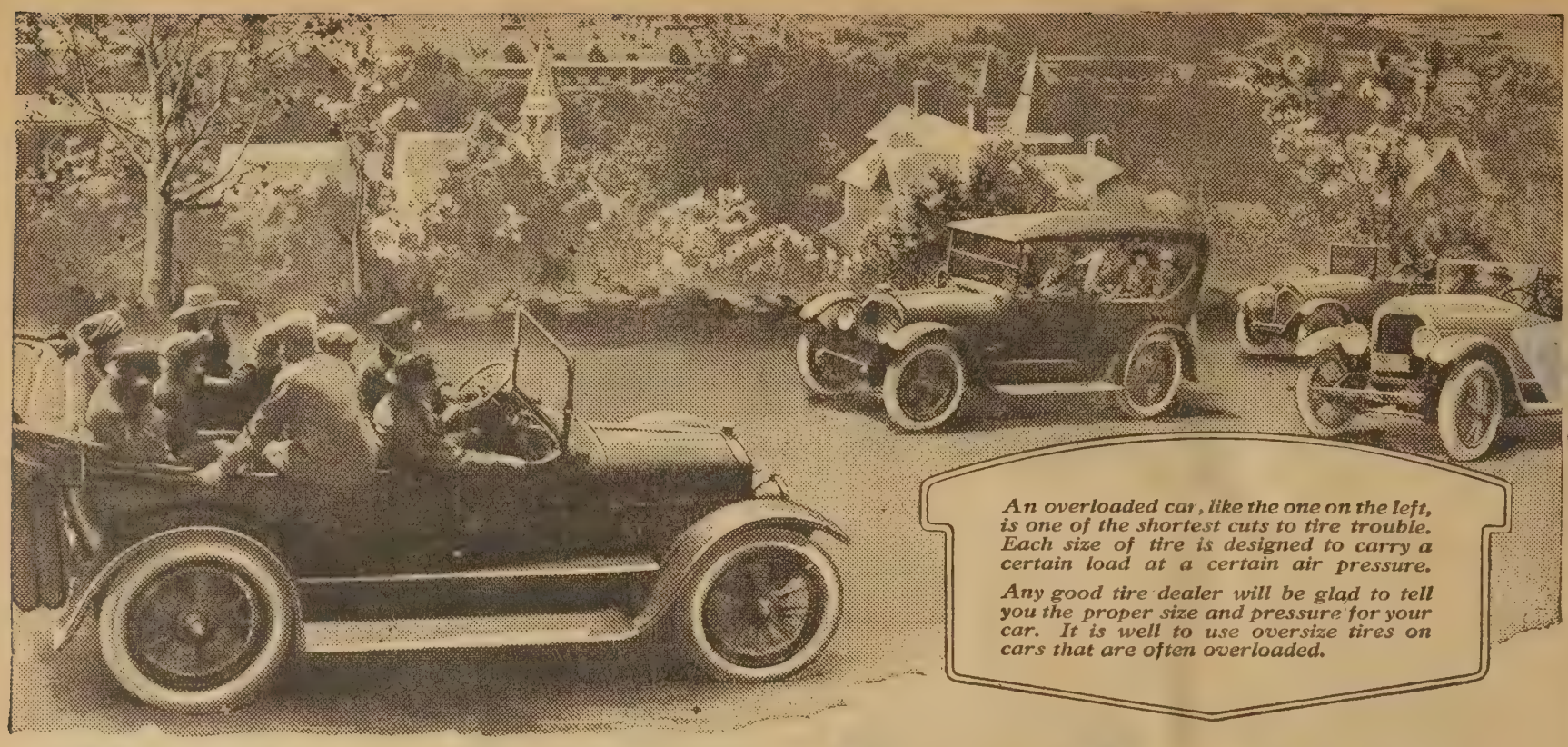
Ship by Truck



BUY REPUBLIC TRUCKS

Republic construction, assuring ruggedness and performance, contributes its important part to the world's need for dependable transportation. Maintenance of two thousand fully equipped service stations and seven National Parts Depots gives positive and uninterrupted service to owners of Yellow Chassis trucks everywhere.

Republic Truck Sales Corporation, 933 Michigan Avenue, Alma, Michigan



An overloaded car, like the one on the left, is one of the shortest cuts to tire trouble. Each size of tire is designed to carry a certain load at a certain air pressure.

Any good tire dealer will be glad to tell you the proper size and pressure for your car. It is well to use oversize tires on cars that are often overloaded.

Tire Knowledge is Spreading Faster than Some People seem to Think

NOTHING is surer than this—that the man who bets against the informed opinion of the tire users of this country is going to *lose*.

The average American motorist is essentially practical. He may get off the track now and then.

But always you will find him going right in the end.

* * *

The trouble with the irresponsible type of tire dealer is that he allows his ideas of his customers to be bred in an atmosphere of distrust and fostered by a small coterie, not at all representative of the motoring public.

Not every motorist of whom he takes advantage always finds it out immediately.

But the time it takes for motorists generally to complete their tire education *is growing less and less every season*.

* * *

The United States Rubber Company has always stood for a *wider spread of tire knowledge* among motorists.

Doing everything it could to encourage them to greater *care* in *tire selection*. Firm in the belief that the more they know about tires, the *quicker* they will come to *quality*.

* * *

Back of the *legitimate dealer* who sells *legitimate tires* stand all the weight and influence and responsibility of the United States Rubber Company—the *largest* and *most experienced* organization of its kind in the world.

Go to him when you want a tire. For that way—and that way only—lies *economy*.

United States Tires

United States Rubber Company

Fifty-three Factories

The oldest and largest Rubber Organization in the World

Two hundred and thirty-five Branches

4 C
College Of Agric.
Urbana Ill.
20 Jul.21

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Fort Atkinson, Wisconsin Volume LX. No. 13 October 15, 1920

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
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Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Getting the Last Drop

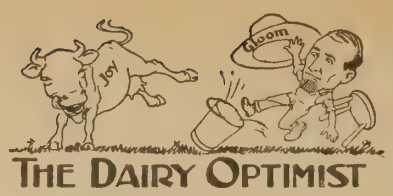
HOARD'S DAIRYMAN:—The last time the man came to try out our herd under the cow testing plan, it occurred to us to have the strippings tested to determine their real value. We use a milking machine and strip the cows after the machine has done its work. So it was easy to save the strippings in a pail by themselves. Our herd numbers twenty grade and pure-bred Guernseys.

"How much do you think the strippings tested?" This is what everybody was asking and some guessed as high as eight per cent of butterfat. Imagine our surprise and delight, then, to have the official tester say, "You are all too low. They test 11.8."

There are some who use a milking machine, but do not do any hand stripping. They depend upon rubbing the udder and manipulating the teat cups of the machine to get all of the milk. We are as careful about that as anybody can well be; and yet at a recent milking I got fully eight quarts of strippings from our herd of twenty. It proved to me conclusively that we cannot afford to stop milking when we have used the machine to the limit.

I have noticed that some cows, when I begin to strip, will not appear to have anything in the udder; but if I keep going through the motions, milk will after a while begin to flow and often I get from a pint to a quart of this valuable milk. I do not think it any fault of the one who handles the machine, and I do not know as we can blame the cow. Just how the difficulty may best be avoided I do not know, but it seems to me now that there is no better way than to do very thorough work by hand after the machine has been taken off. Surely, we cannot afford not to get the rich strippings. If there is any way to educate cows to give down better I want to know what it is.

New York. E. L. VINCENT.



THE DAIRY OPTIMIST

W. LIVINGSTON LAR

School Again

Down the lane and road they go,
Spic and span and dressed to kill;
Boys and girls, with swinging books,
Studying in parlor nooks,
Climbing up the schoolhouse hill.
Wish that I was young once more,
They've got all of life in store.

Ribbons shining in their hair,
Dresses new and shoes to match.
Whisperings of "ten times eight",
Or, "Now hurry up, we're late".
Bless the clinkin' o' the latch.
Gate swings wide and out they go,
To the place where problems grow.

See those pancakes disappear,
'Lasses gobbled up and "grits".
Readin', writin, rithmetic;
Larn 'em sure an' larn 'em quick.
Tear th' grammar rule to bits.
Wish that I was young once more,
With the whole wide world in store.

The First Pumpkin Pie

The walk out into the field.
The picking out of the big, plump yellow one.
The carrying of it back and dropping it.
The slicing of it up into small bits.
The cooking in the big pot.
The mashing.
The way mother makes the pie dough.
The flattening of it out in the pan.
The crinkling of the edges.
The pouring in of the golden treasure.
The putting on of the top.
The making of the air holes.
The red hot oven.
The peep to see if it's ready.
The delicious perfume when the door is open.
The slicing of it.
The first wonderful taste.
The pleading for just one more portion.

Close Reckoning

A city chap has been making some mathematical calculations and he finds that, for reasons not easily defined, the following facts may be set down as pure gospel:

One man in 18,975 gets an ear of really sweet corn on the cob.

One person in 97,345 manages to pick a sweet-as-sugar cantaloupe.

One in every 62,178 people know how to make a genuine pumpkin pie.

One in 90,000 housewives in the city can prepare good old fashioned pot cheese that tastes like the dairy farm kind.

Human nature never changes much throughout the ages. For example, rhubarb will always remain an acquired taste.

Revamped History

Christopher Columbus stood on the deck of his proud ship as the first land was sighted. Suddenly he clapped his spy glass to his eyes and gave a low cry of pleasure.

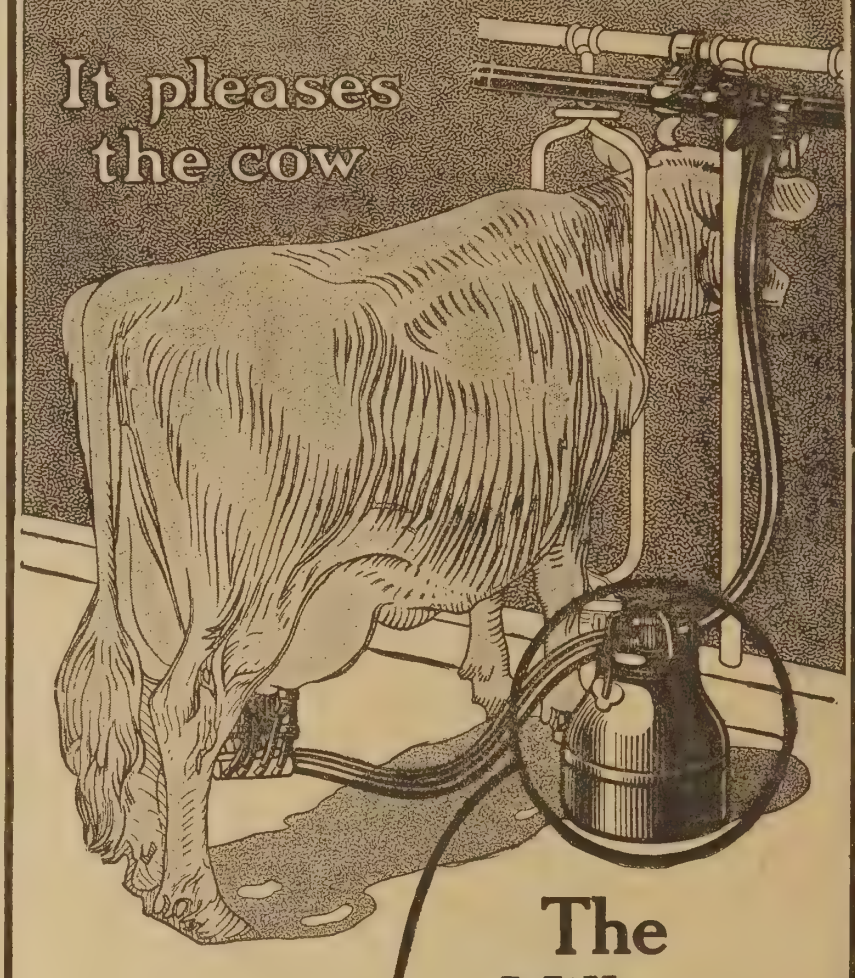
"What is it you see?" the first mate demanded.

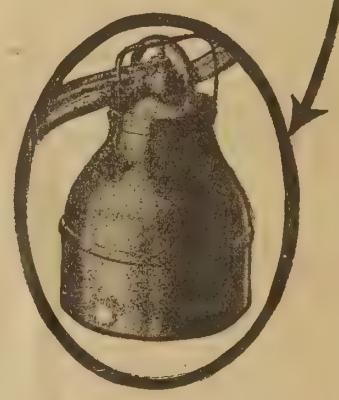
"Land, land at last!" Columbus answered, "and there are seven silos and six red barns. Make shore at once and we will alight. I want it to go down in history that I was the first to discover a dairy farm. This must be the Land of Promise. You'll always find it where there are cows and silos!"

Saying which, Columbus sent one of the cabin boys ashore for a pitcher of fresh buttermilk.

The De Laval Milker

It pleases the cow





The Milker Pail

The De Laval Milker pail embodies several important and distinctive features, making it unusually substantial and serviceable, as well as easy to keep clean. The pail is made of sanitary white metal, with nickel-plated brass fittings. It is of sanitary design with no crevices or sharp corners where bacteria might congregate, and is heavily reinforced and protected where the wear comes — made to give long and satisfactory service as other De Laval products.

The De Laval Milker unit is designed to milk one cow at a time and the pail is therefore of a size to be conveniently handled and cleaned, and permits the keeping of each cow's individual records.

The De Laval Milker is positive and uniform in action from day to day, and it is faster, more reliable and more sanitary than any other method of milking.

Wherever cows are milked the world over, the name "De Laval" stands for quality and highest value to the user.

Write to nearest De Laval office for Milker Catalog, stating number of cows being milked

The De Laval Separator Co.

165 Broadway New York
29 East Madison Street Chicago
61 Beale Street San Francisco

DO PRODUCERS REPRODUCE?

E. A. ONSRUD, NEW HAMPSHIRE

THE Guernseys whose pictures are shown on this page are producers which have reproduced. They present visual proof that the Guernsey does "carry on" through several generations. This characteristic is not confined to one blood line, but is typical of the May Rose, Governor of the Chene, Glenwood, Masher, France, Yeksa, and all other families of the breed.

All credit for large production does not belong to the sire or dam alone. For example, Langwater Rosie undoubtedly inherited many of her splendid qualities from her famous sire, Imp. King of the May. Rose of Langwater, in turn, inherited her qualities from her sire, Jethro Bass and his ancestors, as well as from Langwater Rosie and Imp. Hayes Rosie. In other words, the proper mating of high producers has resulted in the reproduction of high producers. A Guernsey bull descended from a line of high producing ancestry will, with reasonable certainty, produce daughters of high producing qualities. Bulls of average breeding merely maintain the average of the breed, but will greatly improve the production and sale value of ordinary stock.

In reviewing the following pictures it should be recalled that the average dairy cow in the United States produces less than 175 pounds of butterfat in one year.

The letter following each record indicates the age at which it was begun: A—5 years old or over; B—4½ years; C—4 years; D—3½ years; E—3 years; F—2½ years; G—2 years.

The photographs are in series from left to right, in each case the animal at the left being the dam or sire of the one to its right.



Imp. Hayes Rosie has a record of 714 lbs. fat in Class A. She is the dam of 7 Guernseys, including Imp. Yeoman, Langwater Hayes Rosie, and Langwater Rosie.



Langwater Rosie, whose record is 724 lbs. fat in Class A. She is the dam of the bull, Jethro's May King of Linda Vista and Rose of Langwater.



Rose of Langwater. This cow has records of 670 lbs. fat in Class F and 752 lbs. fat in Class D. She is the dam of 5 bulls and 3 cows, including Langwater Charity.



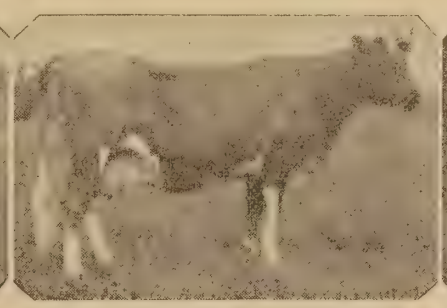
Langwater Charity. She has records of 635 lbs. fat in Class D and 721 lbs. fat in Class A.



Dolly Dimple has records of 703, 907, and 876 lbs. fat. She dropped six calves including Langwater Stars and Stripes and his full brother, Dolly Dimple's May King of Langwater.



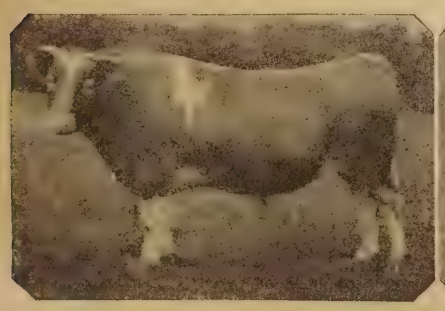
Dolly Dimple's May King of Langwater. He is the sire of nine famous sons and Langwater Nancy.



Langwater Nancy, one of the five 1,000-lb. Guernsey cows. She has four records, 631, 735, 862, and 1,012 lbs. of fat. She is the dam of Follyland Nancy.



Follyland Nancy, whose record in Class G is 713 lbs. of fat.



Governor of the Chene is the sire of 100 Advanced Register daughters including Imp. Antoinette's Queen's Prize VII.



Imp. Antoinette's Queen's Prize VII. This cow produced 416 lbs. of fat in Class E, and is dam of seven famous Guernseys, among them being King of Chilmark.



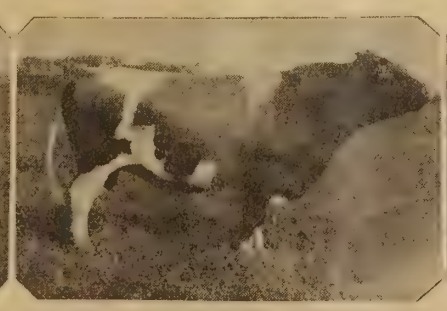
King of Chilmark, a sire whose first seven daughters have records averaging 679 lbs. fat made in junior classes. One of these is Ina's Grace.



Ina's Grace. She produced 775 lbs. fat in Class B, and is the dam of four promising Guernseys.



Glenwood Girl 6th, the first cow to enter the Advanced Register, has a record of 572 lbs. fat in Class A. The third of her seven calves was Glenwood's Main Stay.



Glenwood's Main Stay, twenty-six of whose daughters are in the Advanced Register. One of them is Lady Chesterbrook of Haddon.



Lady Chesterbrook of Haddon, has completed records of 404, 466, 530, and 479 lbs. of fat. The second of her seven calves was Benton's Lady Chesterbrook of Ingleside.



Benton's Lady Chesterbrook of Ingleside, with records of 342, 691, and 731 lbs. fat in classes DD, AA, and A. She is the dam of six calves and is still in breeding condition.



Imp. Island Champion is the sire of eight Advanced Register daughters and five Advanced Register sons. Among the sons is Imp. France's Masher 2d.



Imp. France's Masher 2d. He has twelve A. R. daughters and four A. R. sons. Among the sons are Imp. Masher's Sequel and Imp. Masher's Galore.



Imp. Masher's Galore, the sire of nineteen A. R. daughters including Linden Girl of Harbor Hill 3d with 786 lbs. of fat in Class CC. Among his five A. R. sons is King Masher.



King Masher. This bull's thirteen A. R. daughters include Masher's Elsie with 746 and 865 lbs. fat in classes E and A.



PURE-BRED DANISH RED COW, ELLA. AVERAGE YIELD BASED ON RECORDS FOR THREE YEARS: 11,572 LBS. MILK, 3.97% FAT



PURE-BRED RED DANISH COW, LISS, CALVED MAY 12, 1912. AVERAGE YIELD BASED ON 3 YEARS' RECORDS: 8,421.6 LBS. MILK, 4.16% FAT

COWS THAT MADE DENMARK FAMOUS

JOHN J. DUNNE, DENMARK

THE area of the Kingdom of Denmark is 14,829 square miles, that of Wisconsin is 56,040. Compared with Wisconsin the area of Denmark is as 26 is to 100 or slightly over a quarter the size of the American Denmark. The peninsula of Jutland constitutes nearly 66 per cent or two-thirds of the total Danish area. The remaining third is made up by a large number of islands. It is the conviction of the writer that the present preponderance of in-breeding owes its origin to the experiences of Danish stock breeders on small islands who were forced by the geographical circumstances of their case to practice systematic in-breeding. These stock breeders learned its advantages and its drawbacks in the hard school of practical experience. Its results were invariably extreme; that is, extremely good or extremely bad.

The mean Danisn temperature is 45 degrees Fahr.; it varies from a July average of 61 degres F. to a winter average (December, January, February) about zero. On the warmest days the temperature is 86 degrees F.; on the coldest 28 degrees F. below freezing point. The average rainfall is 23.6 inches.

About half of Denmark's three million inhabitants live by agriculture. Denmark is as flat as the fens of Holland and hence the Danes love mountains as fervently as the Swiss love ships. Three-fourths of the entire Danish area is used for agricultural purposes; of this nearly two-thirds is under the plow. Of the area under the plow nearly nine-tenths is used for the raising of corn, roots, grass, and green feeds. One-eighth of the plowed area is sown with roots; these constitute the staple winter feeds for Danish dairy stock.

In the matter of high-class dairy cattle Denmark is the richest land in Europe. In 1918 there were about one million dairy cows in Denmark. The Red Danish milkers and the Jutland cattle (black and white) are the two native breeds. Both are developed with a view to the production of the maximum amount of milk and butter from a given amount of fodder. In addition to this, Danish stock breeders endeavor to produce cattle of such physique and thriftiness as will furnish salable animals when they or their offspring are put into the stalls to fatten.

Every Dane is subconsciously aware that the best milkers are to be found on the islands; good milkers are also to be found in the south of Jutland. Nearly 50 per cent of the dairy cattle are of the black and white Jutland breed.

Origin of Red Danish Milkers

In the middle of the nineteenth century the cattle on the Danish islands consisted of native breeds which were distinguished for the meagre character of their nutritive wants and their capacity for giving much milk in return for poor fare. In general the cows received poor feeds. The summer pasturage constituted the high-water mark of their nutrition in any given year; in winter their nutriment consisted chiefly of straw and a little hay. In general the heifers calved at the age of two years and the best milkers were selected for breeding purposes. The breed was small in size; an adult cow weighed 770 lbs. or less (a two-year-old heifer now weighs from 1,050 to 1,140 lbs.) and as a rule she lacked symmetry of form. Most of the cows were of a light red color, others were black or black and white. The light red breed has been known from the earliest times. It will be understood from the foregoing that stock breeding was given but scant attention in those days as the Danish islanders specialized in the culture and sale of corn.

About 1850 a change of system began to appear in Danish agricultural management. The sale of butter began to take the place of the sale of corn; the islanders began to devote their attention to improved methods of stock keeping and stock breeding. This change was quite gradual and increased in volume according as the farmers detected its pecuniary and economic advantages. The change of system began amongst the large farmers; in the course of the sixties and seventies the owners of medium sized farms followed suit. It was the advent of the milk separator and the co-operative system in the middle of the eighties that enabled the small holders to start progressive stock keeping and to buy their supplies as economically and sell their products as profitably as their well-to-do brothers. Between 1882 and 1914 no fewer than 1,168 co-operative dairies were started in Denmark. This change of system was also characterized by a more extensive and liberal use of concentrated feeds and better care both of the dairy cows and the young stock.

Improved methods of stock breeding also characterized the change of system as it was found that the native breeds inured to meagre fare did not readily give an adequate return for concentrated feeds.

Improvement was mainly derived from the importation of the better developed dairy breed of south Slesvig, i. e., the Angler dairy cattle and the north Slesvig cattle. Many large farmers imported dairy stock from Slesvig and found that the investment proved remunerative. The Slesvig cattle were easily acclimatized and being good milkers promptly gave a better return for the concentrated feeds than the native stock. Possessing in a preponderating degree the same characteristics as the native Danish breed, the Angler cattle assimilated and improved the latter. The better milking qualities of the Angler cows soon became widely known and many calves were sold by the large farmers to their less well-to-do brethren. In the course of about ten years the nucleus of pure-bred herds of dairy cattle were to be found on a multiplicity of Danish farms large and small. In some instances the pure-bred herds were Angler cattle; in others, pure-bred herds of North Slesvig cattle; in still other cases grades bred from either of the foregoing and the old native Danish breed.

In the course of the last 35 years the Red Danish Dairy Stock has been exclusively improved by means of careful selection aided by milk and herd book records from amongst the best known herds. During that period the uniformity and hereditary transmission of the breed, its symmetry of form and harmonious build have made considerable progress, whilst the yields of milk and butter fats have been considerably augmented.

The exports of butter were fairly normal until 1917, '18, '19. In 1917 the import of feeds (cottonseed cake, linseed cake, soya cake, earth nut cake, etc.) was only 25 per cent of the normal quantity and the butter only 60 per cent of the normal quantity; in 1918 the concentrated feed imports moved down to vanishing point and the butter exports were 86 per cent below the normal quantity; in 1919 the feed imports were only 21 per cent of the normal quantity and

(Continued on page 542)



PURE-BRED RED DANISH BULL, KRISTOFFER VESTERSKOV. AVERAGE YIELD OF DAM BASED ON 6 YEARS' RECORDS: 8,159.8 LBS. MILK, 4.54% FAT



PURE-BRED RED DANISH COW, FRIGGA VIII. AVERAGE YIELD BASED ON THREE YEARS' RECORDS: 11,792 LBS. MILK, 3.73% FAT

THE FUTURE OF YOUR BOY ON THE FARM

LUMAN W. COLTON, ILLINOIS







MOST of us farmers have something that we grow or raise on our farms, in which we take particular pride. It may be any one or several kinds of pure-bred seed grains or live stock, but there is pretty apt to be at least one thing in which we excel as farmers, and for which we have some sort of good reputation among our neighbors. This thing alone often makes all the rest of our work worth while, through the advertisement that it gives our business, and the zest it puts into us. Now aside from all this, good and commendable as it may be, many of us have running about our farm something three of four feet tall, (not a hedge fence,) that is a much greater, in fact, our greatest possible, asset. I refer to the small boy on the farm, the boy in torn overalls and his first straw hat, whose greatest ambition is to grow to be a big man and do as his daddy does. In this one little figure more possibilities lie, more interest centers, and more unlooked-for actions develop, than anything else on the farm. Since these actions are even more easily turned the wrong way than the right, your greatest asset may likewise become your greatest liability.

While this youngster is still under school age you find him beginning to do all sorts of little things to help (or hinder) you in your work. He wants to hold horses and drive them, begins to find eggs in unheard-of places, has a mania for driving hogs and cattle about, perhaps—in short, anything upon which he can exercise his newly acquired authority and power. He is always watching you, imitating your actions, trying to go places that you go, and do things that you do, even though they are far beyond his strength. He delights in hauling big loads of wood, cobs, and other kinds of truck on his little express wagon, has a great fondness for a pet of some kind, sometimes several, and wants at an early age to have something to call his very own.

Just what are you doing for that particular boy of yours? Do you find time to play with him and be his companion a little while each day? When he comes to you with his troubles, which are many and loom, oh, so large in his little world, do you have time to make him forget them in something else? Or do your many cares and the numerous drains upon your time and energy keep you so engrossed that you turn away from him in impatience at such times, or send him away with a sharp word to find solace elsewhere? Right there is the place to keep close to your boy in sympathy and counsel if you are to have the proper hold upon him later. If you are very much interested in all that he does, and try to help him, he will be more interested in you and your work, and more apt to follow your vocation in later life, for where his interest is, there he is pretty apt to spend his time. If you win this interest at any early age, you have at least an even break with the other vocations that will try to entice him away from farming, the best vocation, later on. And we on the farm are learning to be more jealous of our farm boys being called away from us unless they show an especial adaptation or fondness for other lines of work. The old days are gone forever when farmers were thought to be men who did not know enough to do anything else. Instead, we cannot overeducate anyone who is to make a business of farming today, provided we preserve the proper balance in their training. By proper balance I mean to give them a broad liberal education, and let the agricultural part of it predominate as the years come when one naturally chooses what he likes best to do. Your hardest task will be to manage so that your boy will like farming better than anything else. If he really is enthusiastic about it when a boy, he is pretty apt to choose it for his life work later on.

And why do I lay such stress upon your son becoming a farmer? Simply because if he gets the right training he can make the best kind of farmer there is. Many things are born in him that will do more for him as an up-to-date farmer than anything else. Certainly there are many of our sons that show a decided talent and taste for other work. It would be wrong to try to induce these boys to stay on the farm, as wrong as to insist upon two young people getting married when neither one loves the other. It would not only go against the very natures of these boys to stay on the farm, but it would also deprive other professions of much of the best blood they receive, the bone and sinew of country strength and character, without which they would soon deteriorate. We must not be too selfish, for we have the greatest place God ever gave man for developing character—the open spaces and freedom of the country. But we ought to have our just share of the benefit of this, and it is a pitiable thing to see some good old rural couple finishing their lives alone in the country, while the large family of children they have raised is scattered through our cities far and wide, not one left to keep up the old homestead.



Here another danger appears. You may be able to keep your son on the farm by making life easy for him, lavishing money upon him, and letting him think that everything you have will come his way some day, if he will only mark time and wait. But although he stays on the farm under such treatment, he will not do himself or you justice, nor will he know the real value of money, nor the joy of achievement that follows hard, conscientious effort. How well we who worked hard for our start realize that the things that come hardest are oftentimes worth the most to us. If your son is to be a real farmer he must early learn the art of working hard while he is at it, and of doing things for himself. Just calling something his, that he has put forth no effort to help earn, will not make him self-reliant and resourceful. But teaching him to help himself will make him manly and independent.

But no boy likes to work all the time, or should, by any means. Your boy must have his hours of recreation each day to keep up his interest in his work. He wants to be with other boys some, and have plenty of fun. No matter how much exercise his work gives him as he grows older, athletics and play will develop muscles that are otherwise little used, make him more buoyant and self-reliant, and cause him to be a better all-around man. Farm boys do not get together enough. City boys are always in gangs, and can have many games where country boys cannot. They learn to play in groups and mix well while very young, while the country boy must often amuse himself.



Why cannot one-half a day a week be observed as a half-holiday on the farm, a time for games, visiting, and recreation? Community life will be one hundred per cent richer because of it; besides, the added incentive to work, and the better spirits it will put us in will make it positively a sound investment. Anyone returning from a univer-

(Continued on page (542)

Eastern States Exposition

THE Eastern States Exposition held its fourth annual show at Springfield, Mass., September 19 to 25. It attained a high mark of success not reached in previous years and gave further proof of the wisdom of the public-spirited founders of this great eastern agricultural movement.

The Eastern States Exposition is even more than a week's program of educational entertainment. Progressive, unselfish men of vision gave it its beginning for a well defined mission of usefulness. They saw the need of a new agriculture and a better rural life on eastern farms and have given freely that improved live stock and progressive methods of soil tillage may hasten the rehabilitation of country life in the Atlantic Coast States. The work carried on through the Exposition is the expression of their efforts to this end. The results attained in the work continued throughout the year as well as the quick growth of the annual show attests the progress already made.

⚜

Only high grade concessions are granted space at Springfield. No noisy pike detracts from good impressions gained by the thousands who come to see worth while things and no cheap "attractions" offend those who seek the inspiration which record daily attendance approaching 50,000 sought. It is gratifying to know that under such management all available exhibit space was sold this year and fifty per cent more could have been filled. Three times as much outside space was taken as in any previous year.

State Exhibits

Of high educational merit were the displays of the products of New England States. New Hampshire, Vermont, Maine, Rhode Island, and Connecticut in effective manner presented their chief industries to the crowds in machinery hall. The state-pride engendered makes this effort directly worth while and its schooling value is great. Massachusetts has a separate building and plans are under way that other commonwealths may be provided with buildings for more comprehensive and individual showings. The agricultural situation and necessity for its rejuvenation in the Bay State were set forth in the statement that Massachusetts is losing in both manufacturies and agriculture because of high debt burdens, taxes, and living costs. It is proposed to correct this condition by putting idle acres to work so that more of the $400,000,000 spent for food annually will stay in the state, reducing production costs, improving marketing facilities, standardizing products, financing farmers, and improving rural transportation and educational advantages. Only 7 per cent of Massachusetts' people live on her farms.

Knock-out Facts on "Oleo"

The Massachusetts Department of Agriculture handed "oleo" a sharp one in a large chart reporting results of a comparison at Rochester, New York, of the effects in child feeding with butter and the substitute. Seven children whose average age was 11 years were fed a uniform ration except that the butter fed in the first six months' period was replaced by "oleo" the second six months. During the third period of six months butter was again furnished. The average gain made by each child for the first period with butter was 4.93 lbs.; with "oleo" for the second, 2.89 lbs.; and with butter for the third period, 7.69 lbs. The facts were sufficiently clear that no mother who could read need be mislead by the oleo display in a packer exhibit into buying the "just-as-good-as" product for her children.

Boys Given Large Place

The Eastern States Exposition is a success through its work with boys and girls alone. Four hundred participated in the week's program—bright eyed, healthy, well informed, eager youngsters who hold the future of eastern progress in their extraordinary grasp and application of practical facts. Forty boy scouts lived in the Mohawk village erected for them, the boys' and girls' club members in Camp Vail, and the Achievement Club members in their special quarters. All week they demonstrated, lectured, and took part in competitive judging. In judging dairy cattle, Geo. Ott of New Jersey was the winner in Ayrshires; Frank Hopkins of Connecticut in Jerseys; Preston Davenport, Massachusetts, in Guernseys; and Robert Watson of Delaware in Holsteins. As a team New Jersey's representatives won first place and Massachusetts second. The achievement clubs, instigated by the exposition to cover industrial projects as boys' and girls' clubs cover those in agriculture, were in charge of O. H. Benson. No more encouraging assurance of the worth-whileness of the exposition can be found than in its work with boys and girls, nor is there better proof that it is a movement rather than simply a show.



KING PONTIAC ASIATIC ORMSBY, SENIOR AND GRAND CHAMPION HOLSTEIN BULL AT EASTERN STATES EXPOSITION
OWNED BY F. P. KNOWLES, MASSACHUSETTS



FISHERMAN'S ELLERSLIE, SENIOR AND GRAND CHAMPION GUERNSEY COW AT EASTERN STATES EXPOSITION
OWNED BY U. A. WOODBURY, VERMONT



GYPSY GAMBOGE LAD, SENIOR AND GRAND CHAMPION JERSEY BULL AT THE EASTERN STATES EXPOSITION
OWNED BY C. F. STURHAHN, CONNECTICUT

College Students Judge

Student teams from six eastern agricultural colleges contested in the judging of dairy cattle, beef cattle, horses, swine, and sheep. In dairy judging the Connecticut team won first honors; Massachusetts, second; New Jersey, third; New York, fourth; Pennsylvania, fifth; and New Hampshire, sixth. The high men in the four breeds were: R. E. Johnson, Connecticut, Guernseys; R. D. Baker, Massachusetts, Jerseys; B. M. Davis, New Hampshire, Holsteins; and R. W. Smith, Jr., Massachusetts, Ayrshires.

Live Stock

A well balanced collection of live stock represented the herds and flocks of the East. Included in the swine show were the choicest Berkshires of the county. Sheep, heavy horses, light horses, and beef cattle drew their respective adherents. One of the best milking Shorthorn exhibits ever made was seen. The dairy cattle, greatly excelling those on the grounds in 1919 both in number and quality, were as good in Jerseys and Ayrshires as will be seen this year. Holsteins and Brown Swiss are out in greater numbers at western shows while Guernseys are a standoff. The exposition presents a great show unexcelled in its uniform worth throughout.

Holsteins

Sixteen herds sent in a total of 108 black and whites. If the breed failed to lead the show in quality, it still registered a very notable improvement over its 1919 showing of 47 head. Two states qualified for the state herd class which required 10 head and which offered three prizes totalling $600. This was the first State Holstein-Friesian herd contest held; Connecticut won first and Massachusetts was awarded second. Seven herds won blue ribbons but the bulk of winnings went to two; Gardner Hall, Jr., of Connecticut taking nine and Frank P. Knowles of Massachusetts four. Five championships went to the latter herd, the only other purple winner being F. P. Cabot whose senior bull calf, Mt. Hermon Sir Colantha Robert, was made junior champion.

King Pontiac Asiatic Ormsby, Knowles' aged bull, led his class easily and was given grand championship. King Korndyke Ida Veeman, owned by the Vermont State Hospital, won second money in the aged class. He has the scale and strength to win but lacks the finish and the clean cut type of the blue ribbon animal.

Knowles' aged cow, Belle Clay Princess, was grand champion. She found her strongest competitor in the Massachusetts Agricultural College entry, Beth of Amherst 3rd, a cow exhibited as part of the College's educational display and the winner among the senior Advanced Registry entries. The champion is of the medium size, quality type, and showed more finish than the College entry. For junior champion the senior yearling, Pearl Asiatic, from the Knowles herd, was chosen over two blue ribbon winners from the Hall herd and the first senior calf, Nutmeg Lady Lass, owned by F. M. Peasley of Connecticut. Hall won four of the five usual group classes, losing only to Knowles on graded herd.

The awards were made by J. C. McNutt and are as follows:

Bull 3 years or over—1, Knowles on King Pontiac Asiatic Ormsby; 2, Vermont State Hospital on King Korndyke Ida Veeman; 3, Northampton State Hospital on Dutchland Pietertje Sir Colantha; 4, Hall on King Kornkdye Fannie Veeman; 5, Walker on King Valdessa Finderne. Bull 2 years, under 3—1, Dept. of Public Charities on Sir Artis Colantha Pontiac; 2, Northampton Hospital on King Tehee Fayne Paula Walker; 3, Shaw on Star Boy Shephard. Bull 1 year, under 2—1, Hall on K. K. F. V. Ormsby; 2, Hough on Count Paul Ladoga Posch; 3, Waterman on Elm Farm Valdessa King Fayne. Senior bull calf—1, Cabot on Mt. Herman Sir Colantha Robert; 2 and 5, Hall on Storrs King Korndyke Fayne and Fannie Veeman King; 3, Vermont Hospi-

tal on V. S. H. King Korndyke Joe; 4, Knowles on King of the Hill Ormsby; 6, Broadlie Farm on Broadlie Echo Alcartra De Kol. Junior bull calf—1, Hall on Braeside Amarilla King; 2, Vermont Hos. on V. S. H. King Korndyke Veeman; 3, Northampton Hos. on Northampton Paul Colantha; 4, Peasley on Nutmeg Colantha Johanna Lad; 5, Dodge on Zady Farsedo Butter Boy.

Cow 4 years or over—1 and 4, Knowles on Belle Clay Princess and Carrie Pontiac Clothilde; 2, Mass. Agr'l College on Beth of Amherst 3rd; 3, Hall on Lillie De Kol Pietertje 2d; 5, Dodge on Dodge Farm Bernice; 6, Pickering on Martia McKinley. Cow 3 years, under 4—1, Vermont Hos. on Waterbury Elnora De Kol; 2, Stoddard on Gretna Wallsu Hinke; 3, Pickering on Spring Valley Queen Pontiac; 4, Walker on Balsam Zelea Segis. Heifer 2 years, under 3—1, Vermont Hos. on V. S. H. Rag Apple Nettie; 2, Pickering on U. S. Mutual Homestead Oak De Kol; 3, Knowles on Blanche Margo Pontiac; 4, Dodge on Dodge Farm Korndyke Arcturia; 5, Northampton; 6, Walker on Balsam Colantha Mercedes De Kol. Senior yearling heifer not in milk—1, Knowles on Pearl Asiatic; 2 and 4, Hall on K. S. P. W. Manor Beets and K. K. F. V. Agnes; 3, Harper on Korndyke Alcartra Albino; 5, Dodge on Zady Fayne Alcartra 2d; 6, Harper on Alcartra Pauline Twisk. Junior yearling heifer, not in milk—1, Hall on K. K. F. V. Helen; 2, Northampton on Pauline Eva Pietertje; 3, Knowles on Ormsby Countess; 4, Dodge Farm on Albina Farsedo Ormsby De Kol; 5. Waterman on Elm Farm Missie Cornucopia; 6, Vermont Hos. on V. S. H. Sadie Vale Pride. Senior heifer calf—1, Peasley on Nutmeg Colantha Buttercup; 2, Vermont Hos on V. S. H. Sadie Vale Nettie; 3, Knowles on Highlawn Rosewood; 4, Waterman on Highlawn Sylvia; 5, Hall on K. K. F. V. Pietje; 6, Dodge on Gracie Farsedo Ormsby. Junior heifer calf—1, Hall on K. K. F. V. Inka; 2, Waterman; 3, Peasley on Nutmeg Eveline; 4, Dept. of Public Charities; 5, Broadlie on Broadlie Beauty Pietertje; 6, Northampton Hos. on Countess Pietertje



AGED COW CLASS IN THE AYRSHIRE SHOW AT THE EASTERN STATES EXPOSITION—ONE OF THE BEST EVER SEEN IN AMERICA. THE WINNERS ARE IN THEIR ORDER OF WINNING FROM LEFT TO RIGHT

Thurston. Cows having official yearly record begun at 5 years or over—1, Mass. Agr'l College on Beth of Amherst 3rd; 2, Dodge Farm. Cows having official yearly record begun under age of 5 years—1, Hall on Lillie De Kol Pietertje 2d; 2, Dodge Farm.

Graded Herd—1, Knowles; 2, Vermont Hos.; 3, Walker. Young Herd—1, Hale; 2, Knowles; 3, Vermont Hos.; 4, Northampton Hos.; 5, Dodge. Calf Herd—1 and 2, Hall; 3, Vermont Hos.; 4, Walker. Get of Sire—1 and 3, Hall; 2, Knowles; 4, Vermont Hos.; 5, Northampton Hos. Produce of Cow—1 and 5, Hall; 2, Dodge; 3, Vermont Hos.; 4, Walker.

Senior and Grand Champion Bull—King Pontiac Asiatic Ormsby. Junior Champion Bull—Mt. Hermon Sir Colantha Robert. Senior and Grand Champion Cow—Belle Clay Princess. Junior Champion Cow—Pearl Asiatic.

Guernseys

Guernseys made the lightest showing of the breeds. The average quality of the exhibit was above that of earlier ones this season, but the number was low, seven herds contributing 62 head. The judging was done by Mr. F. L. Ames on the day following the record auction at Langwater.

The strongest ring of the day was the aged bull line-up. Mr. J. L. Hope made the awards because two Langwater bulls were entered. Langwater Renown, exhibited by George A. Cluett of Massachusetts but recently purchased by E. F. Price of New York, led the group. Langwater Croesus, exhibited by A. Schlehuber of Massachusetts, was runner-up. These two bulls have the size and Guernsey character which distinguish the breed from the type of the males of its companion island breed, to which some show rings have seemed to incline. Renown was popular winner. The two Syracuse aged leaders, owned by U. A. Woodbury of Vermont and Emmadine Farm, New York, followed in third and fourth places in the order of their winnings at the New York Fair. Mr. Ames chose Woodbury's junior calf, Deanie's Marose of Appletree Point, to lead the juniors and made the aged sire grand champion.

The milking classes were not strong. Fisherman's Ellerslie, from the Vermont herd, a three-year-old, showed the most breed type with production and was chosen for highest honors. The younger entries included a number of good ones, particularly among the calves. Emmadine Adah, Syracuse junior champion, lost in her class to Appletree Point's Dolly Dimple but the Empire State herd came back in the championships and won the purple with the senior calf, Emmadine Buttercup.

Winnings were well divided with U. A. Woodbury, the heaviest winner with nine firsts and three championships. George A. Cluett won two blues and two championships; Emmadine Farms, two and a championship; Hillswold Farm, four firsts; and A. Schlehuber, one first and three seconds. The detailed winnings follow:

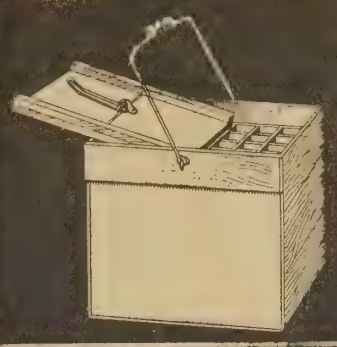
Bull 3 years or over—1, Cluett on Langwater Renown; 2, Schlehuber on Langwater Croesus; 3, Woodbury on Pencoyd's Secret Marose; 4, Emmadine on Inspector of Indian Bridge; 5, Eden Hill Park Farm on Ma Charmanter Governor; 6, Hillswold on Warrior of Hillswold. Bull 2 years, under 3—1, Woodbury on Rose's Golden Cherub; 2, Bar None Ranch on Wyebrook Attain. Bull 1 year, under 2—1, Schlehuber on Cavalier's King of Almanor; 2, Woodbury on Cherub's Bopeep Prince; 3 and 4, Emmadine on Emmadine's May King and Gay Lad of Emmadine; 5, Hillswold on Recorder of Hillswold; 6, Cluett on Green Meadow Warrior. Senior bull calf—1, Cluett on Green Meadow Viceroy. Junior bull calf—1, Woodbury on Deanie's Marose of Appletree Point; 2, Cluett on Green Meadow Viking; 3, Hillswold on Rollo of Hillswold.

Cow 4 years or over—1, Hillswold on Hillswold Dorfsie; 2 and 4, Woodbury on Follyland Rose Queen and Morning Glory of Appletree Point; 3, Hillswold on Hillswold Ramona. Cow 3 years and under 4—1 and 3, Woodbury on Fisherman's Ellerslie and Imp. Duchess of Prospect A. R.; 2, Schlehuber on Uplands May Rose; 4, Cluett on Green Meadow Doris. Heifer 2 years, under 3—1, Woodbury on Katherine Ridgeway; 2, 3, and 4, Cluett on Lady Alden, Green Meadow Golden Viola, and Foremost Branford Strawberry. Senior yearling heifer, not in milk—1 and 5, Hillswold on Hillswold Belclaye and Hillswold Rosemary; 2, Woodbury on Flora of Buena Vista; 3 and 6, Cluett on Green Meadow Hope and Green Meadow Blossom; 4, Schlehuber on Ruby's Pearl of Almanor. Junior yearling heifer, not in milk—1 and 2, Woodbury on Nancy's Betsy of Belleview and Peerless Bonnie of Rockstone; 3 and 4, Emmadine on Masher's Gladys of Emmadine and Emmadine Laura Belle; Bar None Ranch on Daisy's Dally. Senior heifer calf—1, Emmadine on Emmadine Buttercup; 2, Woodbury on Golden Secret's Duchess of Appletree Point; 3 and 4, Hillswold on Hillswold Diana and Hillswold Janet; 5, Emmadine on Emmadine Gladys. Junior heifer calf—1 and 3, Woodbury on Appletree Point's Dolly Dimple and Appletree Point's Aimable; 2, 4, and 5, Emmadine on Emmadine Adah, Emmadine Mary Ann, and Emmadine Daisy; 6, Schlehuber on Zither of Indian Ridge. Cows Produced 400 lbs. fat in tests begun between two and under 5 years—1, Hillswold on Hillswold Dorfsie; 2, Schlehuber on Upland's May Rose.

Graded Herd—1, Woodbury. Young Herd—1, Hillswold; 2, Emmadine. Calf Herd—1, Woodbury; 2, Emmadine. Get of Sire—1 and 4, Woodbury; 2, Hillswold; 3, Emmadine.

(Continued on page 556)

You can safely put all your Eggs in one Basket if you use



FARMER'S FRIEND EGG CARRIER

Made of wood, nicely painted and finished, very strong and durable and will last for years. Has adjustable lid and automatic lock. Regardless of quantity of eggs in carrier, they are held firmly—will not jostle and break. Each carrier holds 12 doz.

When eggs are delivered fillers can be folded, placed in bottom of carrier, which can then be used to take home groceries or other purchases.

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½ doz.	4.50	8 doz.	8.70 per doz.
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Dandelion Brand Butter Color is purely vegetable and fully meets requirements of all Food laws—State and National. Ask your jobber for prices.

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Story of the California Raisin "Trust"

Farmers Have Absolute Control of Crop. Co-operation Rescued Declining Industry.

HERMAN STEEN, ILLINOIS

THIS is the story of the only farmers' trust in the world. The California Associated Raisin Company—an organization of 10,000 farmers—markets 90 per cent of all the raisins produced, thus having a virtual monopoly over the industry. Through agreements with its members, it has absolute control over their crops and it fixes prices. The affairs of the company are directed by 25 men who operate under a voting trust agreement. Finally, it has been investigated by the Federal Trade Commission and hauled into court by the Department of Justice. No other farmers' company can claim so many distinctions along this line. All of which is cited as proof of the statement that the raisin growers' company fulfills the requirements of a trust and is the only farm-raised and farm-managed trust in existence.

Different Kinds of Trusts

But Wylie M. Giffin, president of the raisin growers, objects vigorously to his organization being classed with other trusts. "We've never pulled the rough stuff with which the lumber trust, the steel trust, and others are commonly credited," he said to me. "For instance, we have never done anything to restrict production. Since the California Associated Raisin Company was organized in 1912, the production of raisins in California has increased 500 per cent. This increased production can justly be credited to our organization, because the fair prices secured for raisins have resulted in a tremendously increased acreage devoted to raisins.

"We have not attempted to stifle competition; we pay no attention to growers outside our organization, except as we occasionally ask them to join. We market our own raisins and nobody else's and let the independent growers handle theirs as they see fit. If they want to join, they are welcome on the same terms as all the rest of us; if not, we are sorry that they cannot see things the way we do.

A Benevolent Trust

"We have not charged exorbitant prices for raisins. Our prices are fixed high enough to make the growers a reasonable profit and low enough to move the crop. Raisins are not a necessity, you know, and people would refuse to buy if we charged too much. In fact, during the past two years, independent buyers and speculators have paid from two to seven cents per pound more than the association price, and our members have accused us of laying down on the job.

"Call us a trust if you want to, but we're a benevolent one. Give us credit for stimulating production, providing efficient distribution and eliminating speculation, and at the same time treating the consumer square."

History of Raisin Industry

All the raisins produced in the United States come from California, and 80 per cent of them from a district in the San Joaquin Valley within 35 miles of Fresno. Nearly 90 per cent of the California raisins are marketed under contract through the growers' own company.

The history of raisin growing in the San Joaquin Valley is a sorry tale. It dates back to 1884, when the first vineyards were set. The first planting brought large crops, followed by a large boom in raisins, and equally wild boom in land, and a smashup. In 1891 raisins sold for one cent a pound. Growers' organizations of one sort or another were formed, and followed one another into the graveyard. By 1905, conditions became so bad that 20,000 acres of vines were uprooted, each grower pulling up a certain percentage of his holdings. Even then the packers could not market the crop satisfactorily.

Under-consumption

"It was not over-production and never was," declares Giffin. "It was under-consumption caused by a vicious, inefficient, and out-of-date distributive system. They used to talk over-production when 35,000 tons was the size of the crop, and a cent and a half per pound was the price. Now we sell 200,000 tons above ten cents and the supply is licked up clean before the season is over. In 1907, when one of our defunct associations was functioning fairly well, a 110,000-ton crop was cleaned at 5½ cents per pound; the year a considerably smaller crop could not be moved for 2½ cents. It was a case of bad merchandizing."

In 1912 the morale of the raisin growers was the lowest in the history of the industry. The growers were too discouraged to even think of organizing. Another organization was launched, but had the bankers and business men of Fresno not backed the proposition vigorously, it would not have been started even.

An Ambitious Program

The resulting product was the California Associated Raisin Company. It was the most ambitious plan ever tried by any of the numerous raisin organizations. It was proposed to require the members to turn all their raisins over to the company which would sell them; in other words, the growers would produce the raisins and the company would sell them. It was proposed to pay every grower the same price for the same quality of raisins, no matter when they were sold. It was proposed to fix the price of raisins at the cost of production plus a fair profit—more to be sold for less. It was agreed that the organization should not turn a wheel until at least 75 per cent of the raisin growers had signed contracts binding them to deliver all of their raisins for five years to the association.

A good story might be written about the campaign to secure growers' signatures to contracts. There was little enthusiasm, because every grower in the district had seen previous organizations rise and fall. If enthusiasm was lacking, courage was not. The wisest growers knew that if this organization failed there would be more foreclosures than ever in the San Joaquin Valley. By the time the raisin crop was ready to be moved, 77 per cent of the raisins were pledged to the association for five years.

Financing the Company

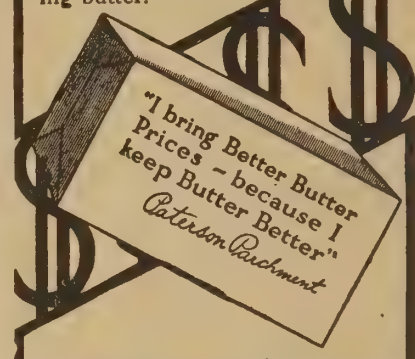
The biggest part of the job was to finance the new company. It had $1,000,000 of capital stock authorized, the plan being for every grower to subscribe $10 per acre of vineyard. Some growers subscribed more, some less, others nothing at all. Finally bankers and business men had to take a good-sized slice of the stock. It has since been generally recognized in California that right there the raisin growers committed their only serious blunders—(1) they allowed outsiders to join with growers in their organization; (2) they formed a capital stock corporation instead of a non-profit co-operative association without capital stock. The reason why the first was a blunder is quite obvious; the second question is one of the fundamental features of California



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makes butter *taste* better, *keep* longer and *look* more appetizing. And don't forget that *looks* go a long way toward selling butter profitably. The best protection for butter and for good butter prices is Paterson Pioneer Parchment Paper. *Prove* it today.

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are instantly closed or opened **both ways** by **one hand.** Opening in center of stall—cow can't miss it—no sure-stops needed. Lock warranted cow-proof. Fit any size animal and give perfect ease, standing or lying. Users say CLAY Equipment quickly pays for itself. Fully guaranteed. Costs no more than ordinary equipment.

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co-operation and will be discussed in a separate article.

The raisin crop, previous to 1912, had always been handled by the packers who processed and packed the crop, later selling it to the wholesale distributors. These packers were not only packers, but speculators, also. In fact, the words packer and speculator can be used interchangeably, so far as the California fruit business is concerned. Their practice was to buy the crops at the lowest possible prices, and, if the crop looked too large, to refuse to buy more than they could handle easily. The rest was allowed to spoil. There were ten principal raisin packers previous to 1912, in addition to a number of smaller speculators. The ten were known to the growers as the High Five and the Low Five.

The High Five and the Low Five

It was to the High Five and the Low Five that Wylie Giffin, president of the California Associated Raisin Company, went to in 1912 to sell the 77 per cent of the raisin crop controlled by the new raisin association. He offered to sell the 77 per cent for a period of five years for three and one-fourth cents per pound, this figure being based on the cost of production. The offer was scornfully refused.

"That was most fortunate," says Giffin. "It was fortunate that our dreams of somebody else doing our job did not come true. It was most fortunate that we were compelled to do the job ourselves. Had we not been compelled to do the job ourselves, had the packers accepted our offer and taken our initiative away from us, our association would not today be in existence. The High Five and the Low Five would still be dominating the raisin industry."

The association took the raisin crop that fall as it was harvested, and sold it direct to wholesale grocers or to brokers who supplied the wholesale trade. When the growers delivered raisins they were given a first payment. As it takes some time to get money from shipments, the scanty supply of cash in the raisin association till was soon licked up. Growers were induced to take notes—even one-day notes. A few with more courage took seven-day notes, and a few hardy souls accepted 90-day notes. "The banks believed in us and encouraged us until we wanted to borrow money," Giffin said.

Over the Hilltop

Before that first season was over, raisin growers held over $1,000,000 of the association notes. These notes were all paid when due, and the association managed to keep its head above water. The price of three and one-fourth cents was obtained for every pound of raisins produced. The raisin growers were crossing the valley of uncertainty and mounting the hilltop of success.

The next year a few more growers had courage, and some had a little faith. But no matter how they felt toward the association they were compelled to market their raisins through it because of the ironclad five-year contract they signed. The packers and speculators, now alarmed at the strength of the organization that snatched 77 per cent of the raisin crop away from their grasp by one stroke, stirred up all kinds of dissensions. Members of the association were induced to sell their raisins to speculators, in spite of their contracts. The contracts were then taken to court and sustained in every case—the most sweeping legal victory ever obtained up to that time for the cause of co-operation in California.

Eight Years of Success

The raisin growers' organization continued to grow stronger until now it controls close to 90 per cent of the raisins produced in the San Joaquin Valley. It always paid more than the three and a quarter cents that was fixed the first year. In 1919 the average price realized was 10¼ cents per pound. This year it is fixed at 15c.

At first, prices were fixed on the basis of the cost of production plus a fair profit. This was soon abandoned because it was not practical. One year the cost might be two cents per pound, the next year five cents per pound. The consumer who eats raisins cares nothing for the cost of production; he adjusts his purchases to his wants and the price he must pay. The raisin growers soon were back on the law of supply and demand which they discovered was not so bad when the manipulation was removed from it.

Increased Production

The prosperity which attended the raisin industry when speculators were eliminated and prices stabilized led to a tremendous rush into raisin growing. The crop increased from 35,000 tons in 1912 to 190,000 tons in 1919 and 210,000 tons in 1920. It will probably be 300,000 tons within five years. Yet these crops have all been marketed successfully, none being carried over from one year to the next. Before the co-operative association was formed, the speculators were never able to market all of the crop, though it was only one-fifth of the present production.

The past year or so has seen an unusual boom in raisins, due to prohibition. As one man remarked, "raisins are now our national drink", and this demand has sent raisin prices skyward. The association officials believe that a 20-cent price could have been secured for the whole crop, but felt that it was too high to be just.

In order to sell the increased volume of raisins caused by the larger acreage, the raisin association found it necessary to advertise to create a larger demand. The first year $100,000 was used for advertising, $150,000 the second, $440,000 last year, and $600,000 this year. "It has meant success to us, for it has solved the problem of over-production," says Giffin.

Plan of Organization

There are about 10,000 stockholders in the California Associated Raisin Company. Most of them are growers, but a good amount of stock is owned by bankers and business men. About $4,000,000 of stock is outstanding. The new contract with the growers provides that each grower shall own $4 worth of stock for each ton of raisins



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ARMOUR'S DAIRY FEED

Feed That's More Easily Made Into Milk

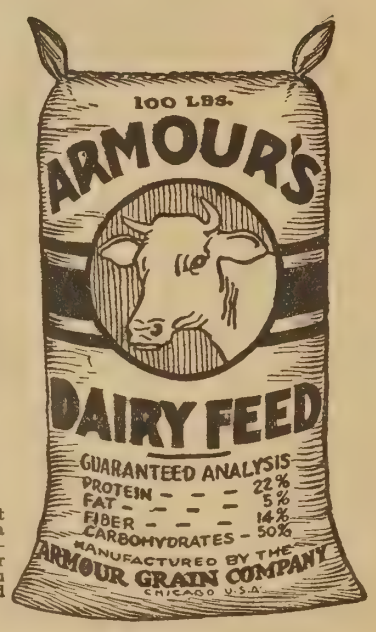
IF you could take milk apart, you would see many strange salts and chemicals rarely observed by the human eye.

To make this milk the cow has to eat food containing these elements.

On a casual glance at a ration, no one can tell whether they are present or not. Milk production may be curtailed because the cow is starved for one single element.

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produced. Dividends of six to ten per cent are paid annually. Every member must own stock, and no raisins are handled for non-members.

The grower signs up for stock, he also signs away his voting power to a board of trustees, 25 in number. These trustees are elected by the stockholders by districts. They in turn elect a board of seven directors who manage the affairs of the company. This is the voting trust, an idea borrowed directly from Big Business. "It is not democratic, but it works," says Giffin. It has been essential. Formerly, in order to transact business, we had to call a stockholders' meeting. In a large gathering the fellow who could yell the loudest got the most attention. Now the trustees are elected by districts by the growers themselves—the trustees are practically all growers, too, and they can give their undivided attention to the affairs of the company. They are a deliberative body. This plan of organization is a sort of benevolent autocracy, but it has worked out best."

The reason the raisin association has proved successful, according to Giffin, is that it has eliminated speculation from the raisin industry and put it upon a stable, substantial basis. "The old system under which the growers sold their product direct to the packer or speculator was inefficient and would have destroyed the industry had it continued," he said. "The consignment system which was used for several years was vicious and rotten; it was the mother of speculation, and the growers were nearly always robbed. The only system which has worked out is the present one, under which the farmers grow the raisins, the association prepares them for market and sells them to the wholesale trade. The speculators are entirely eliminated from the cycle."

"But how about the high retail prices for raisins?" I asked.

"It is due to profiteering by the wholesale and retail grocers," was the reply. "Consumers pay from two to three times what we get for raisins. We have gone as far as we can legitimately; it's up to the consumer to meet us part way. The retail price of raisins is no concern to us except as it affects the use of them. Some day we may join the other co-operative associations out here and form a wholesale organization for all of our products, but we're a long ways from that yet."

Raisin Growers in Court

During the past two years the raisin growers have been in almost continuous hot water from government sources because of the high degree of control it has over the industry. They have been investigated by the Federal Trade Commission and are now prosecuted by the Department of Justice under the Sherman anti-trust law. It is a fact, not disputed in California, that these prosecutions were instigated by a firm of speculators in San Francisco who were one of the High Five, when speculation ran riot in the raisin business.

The speculators attacked the raisin growers at four points: (1) percentage of crop controlled; (2) on refusal to sell raisins to packers and speculators; (3) on guaranteeing to the grocery trade a stable price to prevail through the year; (4) on fixing prices on raisins through the plan of a "firm-at-opening" price.

The raisin growers defended their position stoutly. Several of the other co-operative organizations came to their aid, as also did the State Department of Markets; this latter action was approved by Governor Stephens. In fact, Col. Harris Weinstack, head of the State Department of Markets, went to Washington to assist in the defense. The raisin growers were sustained on the right to control 90 per cent of the acreage and on the right to refuse to sell to packers or speculators. They lost the claim to establish a guaranteed price to wholesalers to be effective through the year, and lost the "firm-at-opening" price. According to Giffin, they were ready to abandon the "firm-at-opening" price plan, and can operate without the guarantee to wholesalers.

The Department of Justice has now hauled the raisin growers into court to answer charges of violating the anti-trust law. The raisin growers might have avoided the whole trouble had they incorporated under the non-profit co-operative plan.

The raisin growers are going to fight the matter through. "Our fight to organize and fix prices is attacked, just as the milk producers' right to organize has brought farmers into court all over the United States," they say. "Co-operative marketing associations have their existence at stake in this fight, which is engineered by the speculative interests to destroy us."—Copyright, 1920, by Standard Farm Papers, Inc.

Washington Holstein Breeders

A meeting was held in Ellensburg, Washington, recently which pure-bred Holstein breeders attended for the purpose of organizing a Kittitas County Holstein Club. The objects of this club were explained and the meeting was enthusiastically organized. It is now only awaiting the organization of the state club to begin active operations.

Much to the gratification of all present, there was no dissenting voice on the probable cost of this state organization. It is a new thing out here and we can only estimate our cost per head because we do not know in the first place how many head there are or how much this work is going to cost, but the organizers feel sure they are conservative in the cost so it will stay within the prescribed limits.

At the State Fair at Yakima the state organization is expected to be organized in the rough so that before November 19th, at the Pacific International at Portland, Oregon, the state organization will be in perfect running order to receive the address of President Aitken who is expected at that time. It is hoped that the rest of the counties of the state will come in as enthusiastically as did Kittitas. Yakima County was very active in its organization, but so far the palm must be handed to Kittitas.

Washington. F. S. STIMSON.

"The farm kitchen and the furnace room are probably the best places to cure small amounts of seed corn," says R. A. Moore of the Wisconsin College of Agriculture. "By using some of the simple hanging devices enough seed corn for an ordinary farm can easily be cured. An attic which can be ventilated, which has a chimney passing through it, or which is located directly over a heated room so that it can be kept at a fairly uniform temperature, is a very good place to cure corn. During the warm fall weather the attic is usually heated from the rays of the sun upon the roof and the effect upon the corn is equal to that of fire drying, provided the quantity to be cured is small. If a large quantity of corn is to be cured in the attic it will be necessary to warm the room with a small stove. There must be a good circulation of air through the room to cure the seed in the best manner. For larger amounts of corn a seed drying house is desirable."

September Milk Prices

The following table from the U. S. Bureau of Markets' report presents a comparison of the net prices received during September by producers for fresh milk (test 3.5%) f. o. b. local shipping points or milk plants operated by fluid milk dealers:

Sections	Range of Sept. prices per cwt.	Comparison of average prices 1920 Aug.	1920 Sept.	1919 Sept.
United States	$2.10–$6.05	$3.64	$3.79	$3.53
New England	2.50– 5.12	4.12	4.30	3.81
Middle Atlantic	2.84– 4.35	3.62	3.87	3.45
E. North Central	2.30– 4.07	3.47	3.49	3.51
W. North Central	2.10– 4.42	3.42	3.45	3.33
South Atlantic	3.25– 6.05	4.43	4.45	3.81
E. South Central	2.91– 4.80	3.30	3.43	3.23
W. South Central	2.87– 5.24	3.96	4.39	4.13
Mountain	2.91– 3.49	3.23	3.34	3.24
Pacific	3.10– 4.43	3.62	3.68	3.34

Producers' and Consumers' Prices

Prices paid producers during September averaged 15c higher than for August and 26c higher than a year ago. The next table shows for certain representative city markets the prices of standard grade milk (Grade B, test 3.5%) received by producers and paid by consumers during the month of September:

	Producer receives per cwt.	Consumer pays per qt.	Butterfat allowance per lb.*
Birmingham, Ala.	$4.56	$.22	$1.28
San Francisco, Cal.	4.51	.17	.29
San Diego, Calif.	4.45		
Denver, Colo.		.13	
New Haven, Conn.	4.85	.16	.40
Washington, D. C.	4.35	.16	.40
Jacksonville, Fla.	5.18	.25	.58
Atlanta, Ga.	5.82	.25	flat
Chicago, Ill.	4.20	.16	.40
Indianapolis, Ind.	2.92	.14	.65
Des Moines, Ia.	3.50	.15	.50
Kansas City, Kans.			
Louisville, Ky.	3.33	.16	.50
New Orleans, La.	5.24	.19	.45
Portland, Me.			
Baltimore, Md.	4.36	.16	.58
Boston, Mass.	4.88	.18	
Detroit, Mich.	4.10	.16	.40
St. Paul, Minn.	3.57	.14	.50
Kansas City, Mo.	3.68	.15	.58
Butte, Mont.			
Lincoln, Nebr.	2.98	.15	.85
Carson City, Nev.	2.91	.12	flat
Trenton, N. J.	4.40	.15	.40
New York, N. Y.	4.73	.18	.40
Asheville, N. C.	4.70	.18	flat
Fargo, N. D.		.16	
Cleveland, Ohio	4.19	.16	.58
Cincinnati, Ohio	3.90	.15	.45
Okla. City, Okla.	3.50	.16	1.00
Portland, Ore.	3.40	.14	.50
Pittsburgh, Pa.	4.30	.16	.58
Philadelphia, Pa.	4.40	.15	.40
Providence, R. I.	4.88	.18	
Sioux Falls, S. D.	3.75	.14	flat
Memphis, Tenn.	4.42	.19	flat
Dallas, Texas			
Salt Lake C'y, Utah	3.55	.12	flat
Burlington, Vt.	2.75	.14	flat
Richmond, Va.	5.15	.16	flat
Seattle, Wash.	3.58	.14	.70
Wheeling, W. Va.	4.00	.16	.50
Milwaukee, Wis.	3.75	.13	flat
Cheyenne, Wyo.	2.80	.15	.80

*In actual practice this allowance is made on the basis of a certain price per hundred of milk of a certain test, one-tenth of the price per pound fat being paid or deducted for each one-tenth per cent above or below the stipulated basic test. Where the word "flat" appears in this column, it means that no allowances are made for butterfat content but the milk must not be lower in test than legal requirement and must not be adulterated or skimmed.

The prices quoted for producers are for milk testing 3.5 per cent and delivered f. o. b. city, from which must be deducted the various transportation costs in order to get the actual price. In certain cities the prices given apply only to that portion which is considered as the producers' average production, the surplus being either handled by the producers' association or the dealers at somewhat lower prices.

The prices given are here reduced to the comparable basis of 3.5% fat, as different cities vary from 3% to 4% as the basic fat test. To reduce the prices per hundredweight to either a gallon or a quart basis divide by 11.63 or 46.33, respectively.

The prices paid by consumers are for average testing milk delivered in quart bottles. It is the grade of milk most generally sold in these cities and in most cases is for pasteurized milk.

Country Shipping Stations

Prices per cwt. paid at the dealers' country receiving stations or at producers' railway shipping plants are given as follows for September:

New Haven	$4.04	Kans. City	$2.80–3.43
Washington	4.18	Lincoln	2.62
Jacksonville	3.67	New York	3.85
Chicago	3.70	Albany	3.94
Indianapolis	2.33	Cleveland	3.60
Baltimore	3.71	Cincinnati	3.30
Boston	4.09	Pittsburgh	3.50
Detroit	3.70	Philadelphia	3.81

Retail Prices

The following table gives for a few cities the retail prices of milk, cream, and buttermilk for September, 1920:

Cities	Common milk per quart	Special milk per quart	Certified milk per quart	Light cream* per half pint	Buttermilk per quart
	Cents	Cents	Cents	Cents	Cents
Boston	18	21	28	16	
New York	18	21	28	22	12
Philadelphia	15	17	30	18	13
Pittsburgh	16		25	19	
Cleveland	16	20	32	20	15
Chicago	16	22	25	17	12
Minneapolis	14		22	16	15
St. Louis	16	20	25	18	20
Washington	16	18	30	19	17
Jacksonville	25	27			12
New Orleans	19	22	25	18	17
Memphis	19		28	20	
Portland	14		21	15	14
San Francisco	17		25	17	17
Average	17	21	27	18	15

*Cream testing 18—20 per cent butterfat.

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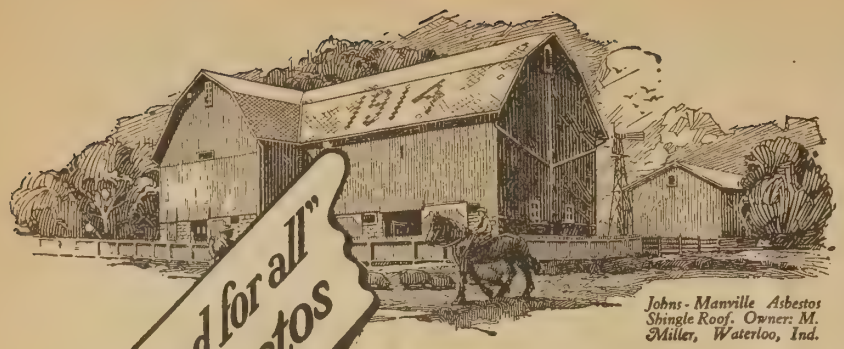
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Washington State Fair

G. N. ANGELL, WASHINGTON

MORE than 60,000 people paid admission to the twenty-fourth annual Washington State Fair at Yakima, September 20 to 25, which Secretary Guy. C. Finley, though in office less than a year, made the greatest in the history of the state. The new secretary, whose executive ability was developed in a long term of service with the United States Reclamation service on government service on government projects, is thoroughly convinced of the value of agriculture, and particularly of live stock breeding, to the state, and these industries were given the important place at the fair they deserve. Entertainment was given second place for the first time in years, and although the entertainment features offered pleased the public, it was of the splendid exhibits of cattle, horses, sheep, swine, and poultry that visitors spoke most enthusiastically. Never before has there been such a collection of blooded live stock on the state fair grounds, and the show eclipsed anything that has been seen in the state outside of the Western Royal Stock Show at Spokane.

The attendance was slightly larger than last year, and the fair is now on a paying basis. Dependent heretofore on biennial appropriations from the state legislature, its paid admissions will now take care of current expenses, and the attention of legislators was this year directed to needed permanent improvements to the fair grounds, for which an appropriation of $100,000 will be asked next January. If this money is obtained, a new horse barn, dairy products building and poultry building will be constructed; the grounds enlarged; and the seating capacity of the grandstand, which this season proved entirely too small for the crowds, doubled.

The greatest improvements made this year were in the appearance of the grounds and in arrangements for comfort and convenience of exhibitors and visitors. A new railroad siding and unloading platform for live stock was in use; a new swine pavilion 300 feet long was crowded to capacity; a sanitary dining pavilion catered to thousands; and landscaping gave the grounds a finished appearance they had never had before.

Perhaps the greatest single educational feature, outside of the live stock, was the exhibit of fruit, vegetables, grains, and grasses assembled from widely scattered sections of the state in the county contests. In this eleven counties participated with the active co-operation of the horticultural division of the state department of agriculture, and the state's resources were shown in great variety. Boys' and girls' club contests in ten different branches of club activity attracted 35 district champions, some from each of the five districts into which the state is divided for that purpose. The work of the youngsters in the state contests was of a high order, and their exhibits won recognition even in the regular classes. A high school students' live stock judging contest brought out individuals or teams of three from 11 different high schools, and the score of the winning team from Walla Walla lacked only 143 points of being perfect. Each member of this team showed prize-winning Shorthorns in the regular classes, and several other contestants had animals entered. The participation of club boys and girls in the live stock show was a real feature of the fair, one club product defeating a seasoned exhibitor for first and second place on senior sow pig in the Duroc-Jersey state futurity contest.

All of the live stock barns were filled to overflowing, including the new swine pavilion. No such beef cattle display had ever been seen at Yakima before; the number of horses shown was double that of last year; and the dairy cattle show, while no larger than in some previous years, was of an exceptionally high character, due to the participation of a number of herds with national reputations for both show and production animals.

Four dairy breeds, Holstein, Jersey, Guernsey, and Ayrshire, were shown, totaling 175 head, and for the first time in several years, at least, the number of Jerseys in the barn surpassed that of Holsteins by about 10 head, 67 to 57. The showing of Ayrshires and Guernseys was about the same, 25 head each. Practically all of the animals were in excellent form, a condition which has not always been true at Yakima. The gathering of breeders from all sections of the state furnished the occasion for the informal organization of Holstein enthusiasts into a state association which will be perfected at the Pacific International Live Stock Show at Portland, and for a banquet and annual meeting of the Washington Guernsey Breeders' Association.

Holsteins

Exhibitors: Washington State College, William Bishop, Hollywood Farm, John Hobson, Butchart Bros., F. E. Fairbanks, M. W. Poyner, F. Rosenkranz, Firlock Stock Farm, and Paul Johnson, all of Washington.

Judge: Chesley F. Jenness, Iowa.

Nineteen head from the herd of William Bishop constituted the only full string of black and whites in the show, the Hollywood Farm entries consisting of its herd sire, Judge Segis; a son and a grandson of the famous bull; and 11 of his daughters, none of them yet in milk. Washington State College and Butchart Bros. also showed principally young stuff, hence the aged classes were not particularly well filled and the real competition developed in the younger classes for females. Judge Segis went to the top in the aged bull class and took the championship over the Bishop herd sire of Chimacum Wayne Boone and Lutschke Vale Cornucopia breeding, and over Segis Pontiac Acme, the state college bull. A Hollywood bred son of the champion also defeated three others in the senior yearling class and took the junior championship. He is owned by Firlock Stock Farm. Maldeta Canary Mercedes, an old cow owned by Butchart Brothers, which several years ago was grand champion female at both the Washington and the Oregon state fairs and which won the seven-day butter contest at the same shows the same year, ran second in the aged cow class to Hazelwood Ormsby Posch 2d, a Bishop cow which was first as a calf and junior champion at the National Dairy Show in 1912. Hollywood Farm took most of the prizes, including four firsts, on individual females under three years old, and also on young and calf herds, get of sire and produce of dam. There were six entries in the senior yearling, seven in the junior yearling, nine in the senior calf, and eight in the junior calf classes for females.

The awards in each class were as follows:

Bull 3 years or over—1, Hollywood Farm on Judge Segis; 2, William Bishop on Chimacum

Wayne Lutschke; 3, Washington State College on Segis Pontiac Acme; 4, Paul Johnson on Sir Leda Ormsby. Bull 2 years and under 3—1, Bishop on Riverview Sir Fellenga; 2, Fairbanks on Sir Bessie Rags; 3, Rosenkranz on Ormsby Wanabee Johanna. Senior yearling bull—1, Firlock Stock Farm on Hollywood Veeman Segis; 2, Bishop on Canary Paul Ormsby Posch. Senior bull calf—1, Hobson & Sons on Sir Ormsby Bessie Segis; 2 and 4, Washington State College on Chinook Segis Pontiac David and Chinook Segis Pontiac; 3, Hollywood Farm on Hollywood Illustrites Segis. Junior bull calf—1, Butchart Bros. on Sir Maldeta Bessie Fobes; 2, Bishop on King of Chimacum 2nd.

Cow 4 years and over—1, Bishop on Hazelwood Ormsby Posch 2nd; 2, Butchart Bros. on Maldeta Canary Mercedes; 3, Washington State College on Pietertje Natsey Belle 2nd. Cow 3 years and under 4—1, Bishop on Daisy Perfection De Kol; 2, Washington State College on Chinook Maplecrest Barbara; 3, Poyner on Pearl Tritomia Fobes. Heifer 2 years and under 3—1 and 3, Hollywood Farm on Hollywood Segis Lady Fayne and Hollywood Segis Mercedes De Kol; 2 and 4, Bishop on Chimacum Lutschke Lorena; and Newaukum Palmyra Beauty. Senior yearling heifer—1, Hollywood Farm on Hollywood Segis Phoebe Veeman; 2 and 4, Bishop on Chimacum Lutschke Mercedes May and Chimacum Bracelet's Chloe; 3, Butchart Bros. on Gerben Bracelet's Fobes. Junior yearling heifer—1 and 2, Butchart Bros. on Bessie Jewel Fobes Edna and Bessie Canary Mercedes; 3, Hollywood Farm on Hollywood Hengerveld Segis; 4, Bishop on Chimacum Molly 2nd. Senior heifer calf—1, 2, and 4, Hollywood Farm on Hollywood Lilith Segis 2nd, Hollywood Mercena 2nd and Hollywood Mercedes Veeman; 3, Bishop on Hazelwood Ormsby Posch. Junior heifer calf—1, 2, and 4, Hollywood Farm on Hollywood Lilith Bella 2nd, Hollywood Segis Beryl and Hollywood Segis Fayne Jewel; 3, Bishop on Chimacum Molly 3rd.

Graded Herd—1 and 3, Bishop; 2, Washington State College. Young herd—1, Hollywood; 2 and 4, Bishop; 3, W. S. C. Calf herd—1, Hollywood; 2, W. S. C.; 3, Bishop. Get of sire—1, Hollywood on get of Judge Segis; 2, Butchart on get of Sir Bessie Fobes Tritomia; 3, Bishop on get of Chimacum Wayne Lutschke; 4, W. S. C. on get of Segis Pontiac Acme. Produce of Cow—1, Hollywood on produce of Lady Illustrites Fayne; 2, W. S. C. on produce of Pietertje Natsey Belle; 3 and 4, Bishop on produce of Hazelwood Ormsby Posch and Riverview Bracelet Chloe.

Senior and grand champion bull—Judge Segis. Junior champion bull—Hollywood Veeman Segis—Senior and grand champion female—Hazelwood Ormsby Posch 2nd. Junior champion female—Hollywood Lilith Segis 2nd.

Jerseys

Exhibitors: Washington State College, Waikiki Farm, N. C. Sears, P. Meenderinck, and E. O. Erickson, all of Washington.

Judge: F. H. Scribner, California.

The predominance of Jerseys was perhaps the real feature of the dairy cattle show. Yakima is not a Jersey breeding center, Holsteins and Guernseys being bred there almost exclusively, and heretofore the showing of Jerseys has been comparatively small. The four herds came from as many different sections of the state, and Waikiki farm, which has always had things pretty much its own way at the state fair, found some real competition in the entries of the young breeders. Judge Scribner found the Jersey exhibit much larger than he expected, and said that while the older classes were good, the younger ones were exceptionally so, a condition which spoke well for the work which breeders of Washington are doing. He particularly admired Mr. Erickson's Sultan's Figgis of J. H., the three-year-old grand champion. The older classes were not large, but that for junior heifer calves brought out 11 youngsters, among which Mr. Sears' Diploma's Little Sweetheart was placed first, and was later made junior champion. The Meenderinck entries arrived too late to be judged, having been delayed in shipment from the Victoria, B. C., fair, where they won several prizes.

The awards were as follows:

Bull 3 years or over—1, W. S. C. on Maxwell's Landseer Lad; 2 and 4, Erickson on Sultan's Olga's Boy and Flying Fancy's Sultan; 3, Sears on St. Mawes of Grassmere. Bull 2 years and under 3—1, Waikiki Farm on Mauna Loa of Waikiki. Senior yearling bull—1, 3, and 4, Waikiki Farm on Bonny's Pet of Waikiki, Esther's Pilot of Waikiki and Count's Foxy Owl; 2, W. S. C. on Chinook Golden Gogol. Senior bull calf—1 and 2, W. S. C. on Chinook Landseer Clem and Chinook Landseer Ban; 3, Waikiki Farms on Waikiki's Owlet; 4th, Sears on Champion of Midfields. Junior bull calf—1, Waikiki Farm on Belle's Pilot of Waikiki; 2 and 3, Erickson on Olga's Flower Boy and Raleigh's Fancy Boy.

Cow 4 years or over—1 and 3, Erickson on Raleigh's Beauty of J. H. and Sultan's Star's Fancy; 2, Waikiki Farm on Indiana Lady's Diana; 4, Sears on Miss Zillah's Pansy. Cow 3 years and under 4—1, Erickson on Sultan's Figgis of J. H.; 3, Waikiki Farm on Emeline's Easter Lily. Heifer 2 years and under 3—1 and 3, Waikiki Farm on Owlet's Druscilla and Pilot's Cognette of Waikiki; 2, Erickson on Sultan's Flower Girl; 4, Sears on St. Mawes Goldie of Midfields. Senior yearling heifer—1, Waikiki Farm on Pilot's Duchess of Waikiki; 2 and 3, Sears on St. Mawes Zillah Pansy and Brighter Dawn. Junior yearling heifer—1, Sears on Peggie Anne of Midfields; 2, Waikiki Farm on Pilot's Edena of Waikiki; 3, Erickson on Raleigh's Olga Girl. Senior heifer calf—1 and 2, Erickson on Fancy Star Lassie and Olga's Pet; 3, W. S. C. on Chinook Landseer Alma; 4, Sears on Dawn's Sunshine. Junior heifer calf—1 and 4, Sears on Diploma's Little Sweetheart and Peggie Annabelle; 2 and 3, W. S. C. on Chinook Landseer Clemmie and Chinook Landseer Betsy.

Graded Herd—1, Erickson; 2, Waikiki; 3, Sears. Young Herd—1, Sears; 2, Erickson; 3, Waikiki. Calf Herd—1, W. S. C.; 2, Erickson; 3, Sears; 4, Waikiki. Get of Sire—1 and 4, Erickson on get of Sultan Star and Sultan's Olga Boy; 2, W. S. C. on get of Maxwell's Landseer Lad; 3, Sears on get of St. Mawes of Grasmere. Produce of Cow—1, 2, and 3, Erickson on produce of Raleigh's Sunbeam, Miss Muriel Olga of M. L. P., and Oxford Lad's Flower; 4, Sears on produce of Peggie Anna.

Senior and Grand Champion Bull—Maxwell's Landseer Lad. Junior Champion Bull—Chinook Landseer Clem. Senior and Grand Champion Female—Sultan's Figgis of J. H. Junior Champion Female—Diploma's Little Sweetheart.

Guernseys

Exhibitors: Dr. A. McRae Smith, Vander Griend Brothers, Wallace & Fordyce, and Yakima Valley Guernsey Breeders' Association, Ray N. West, R. T. Peterson, Joseph Rochel, Robert McKendrick, and F. A. Majewski, all of Washington.

Judge: F. H. Scribner.

The progress shown by Guernsey breeders of the state since their organization last winter was well illustrated in this division, for although one of the best herds in the state, that of H. E. Angel was missing, more breeders than ever participated and the quality of the animals shown was excellent. Most of those exhibited by Yakima breeders were dispersed in that section last June after importation of the Canterbury Shaker herd by the local Guernsey Breeders' Association. The effect of this excellent stroke of business was thus felt immediately at the fair. The young bull made first in the yearling class came with this importation from the Harbor Hill Farm, and is now being used by several breeders in the Yakima Guernsey Bull Association. Woodvale Radium, the junior and grand champion, is a wonderful specimen of the breed, and Judge Scribner characterized him as fit to win in any competition. He was sold at the fair grounds to Dr. Smith, whose splendid small herd, with that of Vander Griend Brothers, arrived late from the Victoria, B. C., fair.

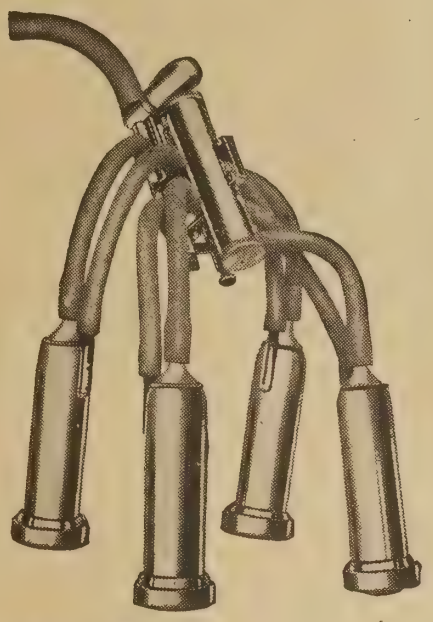
The detailed awards follow:

Bull 1 year and under 2—1, R. N. West on Pioneer of Harbor Hill. Senior bull calf—1, McKendrick on Woodvale Radium; 2, Dr. A. McRae Smith on Fircrest King of the the May; 3, Joseph Rochel on Yakima King. Junior bull calf—1, Yakima Valley Guernsey Breeders' Association on Canterbury Adventurer; 2, Wallace & Fordyce on unnamed.

Cow 4 years or over—1, Vander Griend Bros. on Imp. Satinette of Edgemoor; 2 and 4,

(Continued on page 552)

National MILKER



The National Milker Pulsator just above the branch connection gives distinct, positive action.

See our exhibit in Space 85, Section B, at the National Dairy Show, Chicago, October 7th to 16th.

This Pulsator Marks a New Era

YOU have heard your neighbors say: "I never saw anything like the National Milker Pulsator." What do they mean? They mean that of all the wonderful features of this milker, the National Pulsator is the most surprising. It is placed just above the branch connection, giving distinct, positive action and enabling the National to milk cleaner and faster than any other milker on the market. It makes it possible for the National to milk alternately and still use only one tube between the pail and branch connection.

It makes possible automatic squeeze and suction adjustment from moment to moment according to the exact milk flow of the cow.

It means that you can milk stripping cows with better results than with any other milker.

It means that you can change from a single to a double unit more easily than any other milker.

It means new simplicity greater economy, higher efficiency—in fact a new era in milking machines!

Will You Investigate?

A new standard has come in milking machines. You can no longer judge the machine for your farm by what you have known of other milkers. You must investigate the National before you can know what to expect of your milking machine.

Wonderful as it is, the National Pulsator is only one of many features of this milker. At every point the National Milker has new improvements—new simplicity.

Find out about the National Milker. You owe it to yourself to investigate. Write us a letter.

National Milker Company

639 Washington Ave. So. **Minneapolis, Minnesota**



Do you know that $70 worth of good Buffalo Gorn Gluten Feed mixture, well fed with good roughage, can produce, at current prices, $245 to $280 worth of milk?

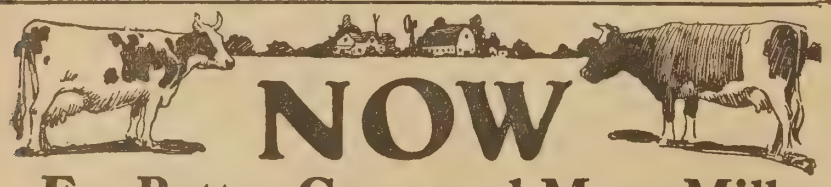
WITH milk bringing around $3.50 a hundred pounds, and more than that in many sections, and the price of BUFFALO CORN GLUTEN FEED lower, present and prospective dairy profits are better than they ever have been.

The feeding of high-protein, highly digestible, milk-producing BUFFALO CORN GLUTEN FEED *liberally* to good cows assures you of the largest and most economical milk production—*the widest possible margin of profit* over cost of grain feed.

FEED UP! *FEED BUFFALO CORN GLUTEN FEED*

Your dealer should have BUFFALO CORN GLUTEN FEED for you. If he does not, write us, saying who and where he is. We will be glad to send you sample and literature.

Corn Products Refining Co.
New York Chicago



NOW

For Better Cows and More Milk

To put your cows into the barn in best condition and assure the biggest milk flows throughout the winter feed them International Special Dairy Feed *NOW*—and from now *on*. International Special Dairy Feed keeps cows in best condition and makes them give more milk throughout the milking period. The cost of this feed is more than covered by your profits from more milk. Better herd condition means extra profit. These are facts to which thousands of dairymen testify.

FEED

International Special Dairy Feed

This feed is guaranteed to produce more milk than any other feed of similar analysis. A million dollar corporation backs this guarantee with their capital and reputation.

International executives and salesmen are experienced practical feeders. There is no guesswork about any International Feed. When one man can take 40 grade cows and get an average of 6000 lbs. of milk per cow from them in a year, as did one International Special feeder, *you can do it.*

Order your trial ton today from your dealer or from us—and put it to the test.



INTERNATIONAL SUGAR FEED CO.
Minneapolis - Minnesota
Mills at Minneapolis and Memphis
Live Agents Wanted

Uncle Sam's Hired Men Who Serve You

Charles F. Marvin, Weather Man, a Scientist and Inventor —That's Why He's Right 90 Per Cent of the Time

JOHN ANSON FORD

This is the sixth of a series of articles this publication is running, in co-operation with the U. S. Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the Department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITORS.

CHARLES F. Marvin, Chief of the Weather Bureau, was "discovered" by a famous Arctic explorer—not while the latter was in the Northland, to be sure, but in Washington, D. C. The story goes back to the '80's, not long after young Marvin had passed a Civil Service examination and secured an appointment as "junior professor"—an odd title designating a position in the Signal Corps, which in those days carried on weather forecasting and related work known to science as meteorology. It was the famous discoverer of new land north of Greenland, Major General A. W. Greeley, who discerned, while head of the Signal Corps after his return from the North, that Marvin possessed exceptional ability in mechanical engineering. He foresaw the great service which the young man might render to his country in the weather forecasting organization, and opened the door of opportunity for him.

"I told you so," the venerable general says in effect, when folks talk about the record Marvin has made in the 30 odd years he has been working for the government. "I am proud to take a good deal of credit for having started him on a path which has led to wonderful achievements."

If it seems a far cry from mechanical engineering to weather forecasting, let the reader remember that 85 to 90 per cent of the day-to-day forecasts of the Weather Bureau are accurate and that this remarkable record has been possible because of the increasing skill of the forecasters, supplemented by one of the most extraordinary collections of scientific apparatus and instruments to be found anywhere in the world. Among the inventors of these meteorological instruments Mr. Marvin stands first.

Had Mr. Marvin spent his life in private employment and made as many fundamental inventions for some chosen industry as he has while in government service, he would have been rewarded many times over what Uncle Sam has paid him. When he became chief of the Weather Bureau in 1913, after 29 years of service in subordinate positions, his salary was placed at $5,000. There it has remained, regardless of the H. C. of L. and his invaluable contributions to a government service which annually saves the farmers, through its timely warnings, hundreds of thousands of dollars loss in live stock and crops; a service which also acts as the trusted lookout for numberless shippers on land and water, warning them of approaching storm, cold, or heat; a service performing a score of other important tasks touching the nation's daily life. One of the most remarkable facts about the Weather Bureau is that in recent years not a single great storm has occurred in this country which has not been adequately heralded by the government's forecasters.

Mr. Marvin's contributions to his chosen science have received gratifying recognition in the scientific world. When the office of chief of Weather Bureau became vacant in 1913, President Wilson asked the National Academy of Sciences to submit a list of men it would recommend for appointment. Mr. Marvin's name was one of four submitted. His appointment as chief came as a well merited reward.

Everybody has heard of box kites, but few know that an improved type of box kite which will go up a mile or



CHARLES F. MARVIN

more was devised by Marvin and built to carry what is called a kite meteorograph which also is a Marvin invenvention. This little instrument weighing about 1½ lbs. records the atmospheric pressure, temperature, the humidity, and the velocity of the wind. Large numbers of these kite meteorographs are in use by the Weather Bureau. Incidentally, the reeling apparatus by which each kite's 40,000 or 50,000 feet of steel wire is wound up automatically, is also Marvin's invention.

Ever hear of Marvin's pyrheliometer? It's a mighty important instrument for measuring one of the forces fundamental to all life—the amount of heat received from the sun on which plant and animal processes depend. Another of his achievements is a particularly efficient seismograph which records earthquake shocks, and is so sensitive that it will respond to heavy disturbances taking place in any part of the earth.

Of prime importance in studying soil moisture, etc., is knowledge of the rate at which evaporation takes place on the surface of bodies of water. One of the instruments used in this work is also the product of his brain. Still another Marvin invention is a barograph of exceptional precision, which makes a continuous record of atmospheric pressures so that one can tell at a glance how much the barometer has risen and fallen during a given period. No weather forecasting can be done without knowledge of changes in barometric pressures.

A study of the clouds, their character and movements, is another important phase of the work at the Weather Bureau. To carry it on better, Mr. Marvin devised a nephoscope by which an observer views clouded conditions of the sky, and by means of scales and sighting arrangements,

determines the motion of clouds and their apparent velocity.

Of all the varied services under Marvin's supervision, first in importance is the work of the Forecasting Division, which receives and charts twice daily telegraphic reports of prevailing weather conditions, and issues statements of impending weather changes. In the case of severe disturbances, warnings are issued along the lakes and sea coasts. The frost and cold wave warnings are invaluable to many interests, including the trucker and fruit grower, especially in the spring when tender vegetation needs protection.

The aim of the Weather Bureau, as guided in its enlarging program by Mr. Marvin, has been to serve wherever its facilities and a special need made service practicable. The variety of special uses of the storm warnings illustrate another phase of the practical value of the forecasters' service. In advance of a predicted storm, rice planters flood their crops to prevent the straw from being broken by the winds. Agents of marine insurance companies stop insuring cargoes after a storm has been predicted. Fishermen take steps to protect their boats and nets. Lumbermen make their standing booms secure and regulate their log towing. At lake ports vessels load hurriedly if they can get off two to five hours in advance of off-shore winds. If snow is expected shippers must start 17 to 18 hours in advance.

Not only on the farms and on the water is the service of the Weather Bureau invaluable, but cities also are constantly dependent upon it. With notice of an approaching cold wave greenhouses are closed and their boilers fired. Preparations are made at once by heating and lighting plants in all cities, whether gas, electric, steam, or hot water. Fire plugs, exposed mains, and general plumbing are protected. Large stockyards drain their machines. Gasoline engines are drained. Work in concrete is stopped. Street railway companies arrange for more heat in their cars. Natural gas companies turn a larger amount of gas into their lines to provide for increased consumption. Dredging of sand and gravel ceases, and iron ore in piles for shipment is placed in the holds of vessels to prevent the wet masses from freezing.

The Division of Agricultural Meteorology, another branch of the bureau, supervises the work of about 400 special observers maintained in connection with the corn, wheat, cotton, sugar, rice, tobacco, fruit, and other industries. It has charge of the distribution of the special warnings issued for the benefit of certain crops and publishes data showing weather conditions throughout the country and the effect of these conditions on certain important crops.

When a new industry is proposed for a certain section of the country or the introduction of a plant new to a region is contemplated, a history of the climate of that region is most important. Information of this character regarding every section of the country is compiled by the Climatological Division of the bureau. It has supervision of about 4,200 co-operators and about 42 special stations. From these are collected records of daily observations of temperature, rainfall, etc., forming the basis of a climate history of the utmost importance to agricultural and industrial development.

The bureau maintains throughout the United States, in the West Indies, Alaska, and Hawaii about 200 meteorological stations employing from 1 to 15 persons especially trained in gathering data on which the forecasters, located at five points in the United States, base their daily predictions which combined cover the entire country. Mr. Marvin, while not specializing in forecasting himself, feels that these men at the observation stations and the forecasters deserve a larger measure of credit than is popularly accorded them.

"The public does not always realize the tremendous responsibility resting on these men," said Mr. Marvin in discussing weather forecasting. "It's no 'fair weather' job that they have. Eternal vigilance is their motto. Who can measure the responsibility that is theirs when a great storm sweeps across the country? Did you ever stop to think what would happen to ships, trains, live stock, unsheltered stores of goods, and a thousand other interests, if the Weather Bureau was not on the job when one of those West Indian hurricanes comes roaring up out of the Carribean? I know of no other man whose task equals the forecaster's at such a time. He must be in touch every two hours with all our stations down in the southwestern section of the United States and points beyond our coast. At the earliest possible moment he must warn the section of the Gulf Coast which he believes will be struck by the monster of destruction. It may be Pensacola; it may be Galveston; or it may be in between. He must decide, and send forth the warnings. I take off my hat to these men, and if I can devise an instrument or a piece of apparatus that will make their task easier, by giving them more complete and accurate data, I am proud to make such a contribution as part of my service to this great national servant, the Weather Bureau."

And this is only one bureau of the seventeen that goes to make up the United States Department of Agriculture, all working together, each using information furnished by the others in planning and suggesting better methods in agriculture for the direct benefit of the farmers and also for the benefit of every other citizen of the United States.





The Fall Help You Need

CORN harvesting is a tough Fall job which the tank-type Cletrac handles easily. Compact and low-set, it gives you a short, straight hitch on your corn binder that eliminates side draft.

This tractor does twice the work horses can do and more quickly, too; keeps going up grades or on bad level stretches at uniform cutting speed—faster if the crop is light, slower in a heavier stand.

The easily-operated Cletrac turns short, cuts clean to the corners and swings quickly back to the row. Its broad, sure-gripping, metal tracks keep it from digging in or slipping on soft or sticky ground—there is no power-loss.

The Cletrac follows through in shredding, shelling and grinding as well as other Fall belt jobs. Lines up quickly and easily—won't creep out of line.

Talk it over with the Cletrac dealer near you or write today for the interesting booklet, "Selecting Your Tractor."

The Cleveland Tractor Co.

"Largest Producers of Tank-Type Tractors in the World"

19005 Euclid Ave., Cleveland, Ohio

Iowa Swine Feeders' Day

Would you like to know how to produce pork at the least feed cost and with less labor? This will be dwelt upon at the Iowa Experiment Station, November 11, 1920.

Everyone will have an opportunity to see experiment pigs fed in some 57 different ways, practical and impractical, demonstrating different methods of converting feeds into pork.

These pigs are all live pigs and they tell a live, clear, and authorized story. They illustrate different methods in actual practice which in actual life is the real actual test.

We are feeding some score and a half lots of different commercial feeds this year and the commercial feed manufacturers will be here along with everyone else to see the results of the test.

Iowa Swine Feeders' Day has always been well attended. Our Cattle Feeders' Day has been a well attended event. This year the Swine Feeders' Day, held on Armistice Day, will be a day filled brimful of profitable activities.

Mixed feeds, corn substitutes, alfalfa, bluegrass, sudan grass, different tankages, corn oil cake meal, type test, and lots of other things will be covered. We are going to release a lot of good, practical stuff.

Come and be with us and see the pigs for yourself. See how they have done on the different methods of feeding.—Iowa College of Agriculture.

There's Nothing So Dark as the Inside of a Cow *Unless*—

it's the inside of a bag of feed.

Look at feeds—they all appear alike and you can't tell anything about them.

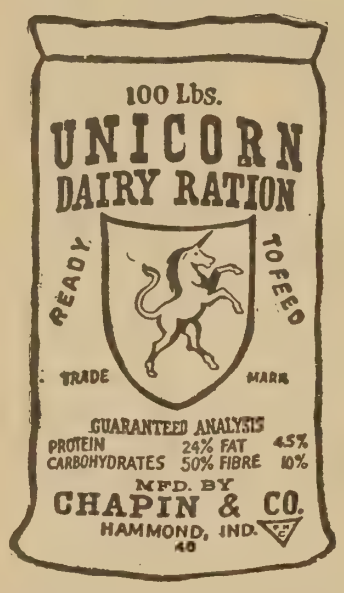
Analyses and names don't deliver the goods.

The only proof of a cow or a feed is in the milk pail.

Unicorn has been proved by scores of Testing Association winners to be the greatest milk and largest profit producer.

If it is profits you want, then feed Unicorn.

Forget the price and look at the profits.



Porter County, Indiana, Cow Testing Association reports Morgan Brothers led all herds for August, 1920. Their 19 cows averaged 40.3 lbs. fat and are fed Unicorn Dairy Ration the year round.

CHAPIN & COMPANY
Chicago



FRESH WATER FOR EVERY DRINK

The more clean, fresh water a cow consumes the more milk she gives. Make it easy for her to get fresh water.

The ACORN Drinking Bowl

permits her to obtain fresh water by simply poking her nose into the bowl—valve opens automatically giving fresh flow of water. Write for circular.

John W. Ladd Co.
(Branch) Cleveland, Ohio
574 Lafayette Blvd. DETROIT, MICH.



PAT. 7-2-07
ANTI-COW-KICKER

Save your temper, your cows, your milk Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule Price $1.15 Postage extra. Weight 2 lbs. Send for it today, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.

Is Shortage of Farm Labor Serious

HOARD'S DAIRYMAN:—I have read Hoard's Dairyman for a number of years, and you may be sure that I appreciate its high quality as an agricultural and dairy magazine. I know that its policy has always been one of progressiveness, and a desire to stimulate the dairyman to make the most possible out of his business, and to keep him informed as to the latest developments in the dairy industry. I also appreciate the fact that you have not indulged to any considerable extent in "calamity howling", and in this I believe you have pursued a wise policy because the farmer, as a rule, I believe, is prone to do this too much, and no doubt this is the reason why you have refrained from admitting what sometimes appears to us to be a serious problem.

However, I believe we should look these problems that confront us square in the face and admit their seriousness when they are really a menacing problem. I refer particularly to the labor proposition. I note that in a number of your recent issues on your editorial page, you make mention of the labor situation as not being at all serious. In fact, you make the statement that the complaints along this line are largely imaginary. In your issue of July 6th, you have a large headline over one of your editorials, as follows: "South Oversupplied with Farm Labor." The article then goes on to say, "Much has been said by the agricultural press regarding the shortage of farm labor. We do not look upon our present farm labor situation as being at all serious, although we appreciate that perhaps we may have a shortage of certain kinds of foodstuffs."

Our farm, consisting of about 3,500 acres, is located in Southern Illinois, which might be termed the gateway of the South. We operate one of the largest dairies in the Mississippi Valley, milking as many as 300 cows a day, with a dairy herd that numbers more than 500 head. We produce certified milk for the St. Louis market, and in addition we run a pure-bred breeding establishment in connection with our certified milk business. We operate a hog farm on which we handle about 3,000 hogs per year, all of which are bred by us. We carry more than 100 head of mules, and we cultivate about 2,000 acres of our farm. I give you this short description showing that we are in the farming business on a large scale, and should be in a position to know what the farm labor situation is in our particular section.

You can readily appreciate the fact, when I say that our proposition requires a large amount of labor, and I might say that we try to provide our labor with very attractive conditions. All of our equipment is thoroughly modern in every respect, with labor saving devices wherever it is possible to install them, so as to make the work for the men as pleasant as possible. We run our plant on a nine-hour day, and men working in the dairy do not have to go out and work upon the farm. We pay our men good wages, in fact more than our business really justifies, and when I say good wages, I mean from $75 to $150 per month. But even with these conditions, we have not been aware of the fact that the South has been oversupplied with labor, at least during the past two or three years. In fact, the labor situation with us is the most critical now that we have ever known it to be. Of course we are in a coal mining field, and it is hard for the farmer to compete with the wages paid by the coal mines. When it is possible for a man with his helper, who in many cases is only a sixteen- to eighteen-year-old boy, to go down in the mines and earn $8 to $10 a day each, we cannot reasonably expect them to work on a farm for $100 a month and work one hour longer each day and seven days a week. However, as a matter of fact, the man working on the farm every day the year round, will in all probability have as much money at the end of the year as the coal miner, but the laboring man does not appreciate this fact.

Our conditions here may be somewhat different than conditions in other communities, due to our location, but I have been in touch with a great many farmers all over our state and neighboring states who view the situation in the same light as I do. The conditions seem to be pretty general, that the farmers cannot get sufficient labor, and what they are able to get is very inefficient. The laboring class of people is moving away from the farms to the cities and industrial centers, and getting jobs that pay big wages. It is not necessary for me to review some of the industries and the wages being paid by them, because it has become well known that a man who is able bodied and of ordinary intelligence can get a job in the cities at a wage that is absolutely impossible for the farmer to compete with. As a result, what is there left in the way of labor, that the farmer can hire? It is a very low and irresponsible class that is not worth any wage you might pay them however small. They will not take care of our property, they will not take an interest in their work, and all they seem to care for is pay day and quitting time. I remember a few years back, when there was a lot of talk about the shortage of labor on farms, the agricultural press began to discuss the proposition, and they seemed to reach the general conclusion that the trouble was largely with the farmer, in that he did not provide suitable quarters for his men or pay a decent wage for an honest day's work. Perhaps that was largely true, but even then I think the situation was somewhat overdrawn by the agricultural press. But, be that as it may, the situation of today is the one in which we are interested, and the conditions existing in my particular locality are serious; they are not imaginary, and they are the cause of a great deal of concern.

A proof that these conditions are serious is, that in the Randolph Coun-

ty paper, published at Chester, Illinois, there were in one issue advertised 37 farm sales. The sales advertised in this particular issue were in a strictly agricultural section, little influenced by the mines. In Perry and Jackson Counties, there have been more than 50 farm sales with better than 50% of the men leaving the farms entirely. This would seem that something must be wrong, and I have talked to a number of these men personally, and the large majority of them give as the reason, that they cannot get help.

In your issue of August 6th, in your editorial headed, "Now and Then" you published a few statements taken from an issue of Hoard's Dairyman, published 30 years ago. In one of these you make mention of the fact that in 1842 a man lived in Eastern Iowa, who hauled shelled corn 28 miles and sold it for 6¾ cents per bushel, his corn being shelled in a wash tub; that he also dressed his own pork and hauled it to the same town for 1½ cents per pound, made his own clothing, lived on pork, corn bread, and rye coffee, went without shoes, and was very happy. That was 80 years ago but I cannot see that there is any consolation in that fact. Of course now we get many times over the price received for corn and pork 80 years ago, but the cost of production has also increased many times over. It isn't what a product sells for that denotes whether or not the producer is making money, it is the cost of production. If the cost of production is more than the selling price, it is then time for the producer to look into his system of management or to have a kick coming on the selling price. But we are getting off the subject slightly, as I started out to discuss the labor conditions in our locality.

I would be glad to see a general discussion of the labor situation carried on in your columns and while the conditions in our locality may not be fairly indicative of the general conditions existing over the entire country, still they are serious from our standpoint.

Illinois. W. R. Hale.

[Comment upon this communication will be found on the editorial page.—Ed.]

The Farm of the Future

HOARD'S DAIRYMAN:—Cost of production is troubling the farmer the world over and many and various are the remedies proposed to help the farmer. We all know what the trouble is but we have got to find the real cause before we can apply the proper remedy.

I believe the main trouble is due to the fact that while we have invested in tractors, milking machines, and other labor saving machinery we have not adjusted our methods of farming to meet the altered conditions. For instance, the average small farmer still dodges about 14 to 16 hours per day and he thinks you are a fit subject for a lunatic asylum if you say that a dairy farm could be run on an eight- or ten-hour system but I have seen it proved over and over again that a man working eight or ten hours per day will do far more work in twelve months than the man who tries to work 16 hours per day. I believe that the small farmer's days are numbered and only the big farmer will survive under modern conditions

I have worked on large farms and small farms and although the big farmer paid much better wages and only worked about half the hours still he made much more profit. For one thing every man had his own job and he got right into it from eight in the morning until five at night, keeping right on with the one job until it was finished instead of starting a dozen jobs a day and never finishing one of them like many small farmers do.

The big man installs all sorts of labor saving machinery so that each man does several times the amount of work that he would do with inferior tools. He can also finance his business far better as he usually keeps proper books. Being able to buy on the low market and sell on the high, he makes a big profit on this alone. He is also able to attract a much higher class of labor and does not have to send to town for high priced experts every time something goes wrong with his machinery. Then, again, the big farmer does not take his coat off but attends to the buying and selling and keeps his eyes on every department and thus saves many a leak.

I believe that the farm of the future will consist of thousands of acres employing hundreds or perhaps thousands of men, not only farm hands but carpenters, painters, engineers, and all manner of tradesmen. They will be housed in model villages with all modern conveniences and social advantages. Mixed farming will be practiced and the farm will produce most of their own requirements and in food, clothing, etc. They will build and repair their own houses and buildings and repair their own machinery.

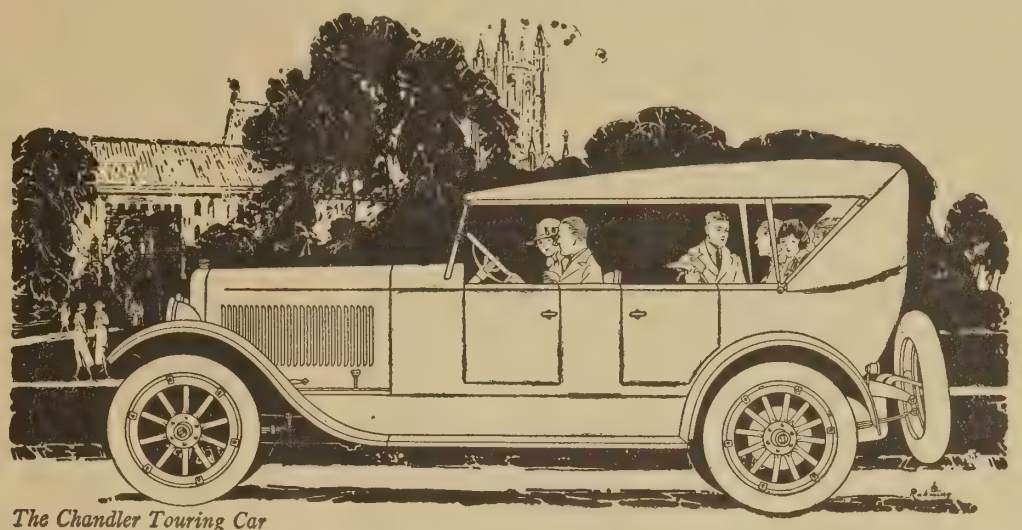
I think it is clearly understood nowadays that the city worker is really working for the farmer—shoeing his horses, making and repairing his machinery, making his clothes, etc. What is not so clearly understood is the fact that money is only a token and what we really pay the city worker is food, clothing, and shelter; not only that but half of it goes in wages to someone else for their time and trouble in distributing it. It costs several times as much to house our laborers in the city where lands cost more per foot than it does per acre in the country.

The most pressing thing to decide is whether these large farms are to be owned by trusts or whether the present farmers will amalgamate and run them on the co-operative system.

New Zealand. F. W. MARCHANT.

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Famous For Its Marvelous Motor



The Chandler Touring Car

Right Car at Right Price; Chandler Is First Choice

The Chandler Company has devoted itself for seven years to the determined policy of producing, and continuing to produce, the best Six at the fairest price. And it has succeeded with distinction in this devotion.

Featured by its exclusive Chandler motor, constantly developed and refined but never radically changed, and by its sturdy chassis construction throughout, the Chandler has steadfastly held its place among fine cars and gone forward into a position of unquestioned leadership among Sixes.

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Seven-Passenger Touring, $1895 *Four-Passenger Roadster*, $1895

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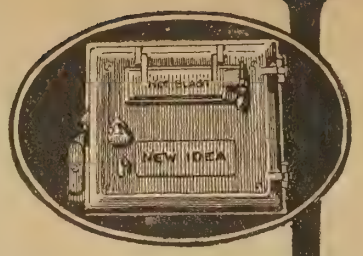
Seven-Passenger Sedan, $2995 *Four-Passenger Coupe*, $2895 *Limousine*, $3395

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THE CHANDLER MOTOR CAR COMPANY

CLEVELAND, OHIO

New-Idea Frameless Feed Door



The exclusive frameless feed door construction puts the New-Idea in a class by itself; on no other furnace will you find this wonderful improvement. It absolutely prevents any dust or gas escaping into the cellar. The frame of the door is cast in one piece; there are no bolts, screws or cement to loosen as in other heaters.

This is only one of the many superior features that make the New-Idea the furnace you will select when you know all about it and make comparisons.

A Few New-Idea Features

Our catalog tells all about the cup-joined construction that prevents leaks; the hot-blast feed door; the gas and dust-tight register that assures clean heat; the patented non-clinker grate that burns any fuel; and all the other New-Idea advantages.

A binding written guarantee insures absolute satisfaction. Your money back if the New-Idea does not do what we claim.

Send for catalog and name of dealer in your neighborhood. Expert advice on your heating problems, free.

UTICA HEATER COMPANY, Box 25, Utica, N. Y.

Also manufacturers of "Superior" Warm Air Furnaces and "Imperial" Steam and Hot Water Boilers

NEW-IDEA Pipeless Furnace



"The one you've heard so much about"

Excellent proposition for the right kind of hardware dealers, implement men, etc. New-Idea dealers are "making good" everywhere.

Dont Send a Penny

Extra special bargain offer to men. A heavy weather-proof sheep lined moleskin coat sent to you simply on request. Don't risk a penny now—just mail coupon and see this sensational value for yourself. Try it on—make any comparison you like. If not absolutely sure it is the biggest coat bargain you ever saw, send it back and not a penny lost. Don't delay on this; send today.

Just the Coupon Act Quick!

Sheepskin Lined Moleskin COAT



The most practical coat for men who work out doors. Made of stout moleskin cloth outside in dark drab color that does not show dirt. The body of coat is lined with selected quality sheepskin to edge and the large shawl collar is also of beaverized clipped sheepskin with storm tab. Sleeves are lined with heavy, warm frieze and finished with knitted snug fitting wristlets; armholes reinforced with moleskin shields. Coat fitted with two warm lined slash pockets, double stitched and reinforced to prevent tearing. Modeled with double breasted front for greater protection. Coat closes with extra strong cord loops and sewed-on buttons and finished with all-round loose belt and buckle.

Drab color only. Sizes 36 to 48-inch breast measure. Length 36 inches. **Order No. CX1466 Give size wanted.**

Send Now Just mail coupon—no money now. When the coat arrives, pay only the low bargain price, $19.95, and postage. Then you be the judge of its fine quality and really sensational value. If not satisfied, for any reason at all, send it back and we return your money without question. Don't hesitate—ACT NOW! Mail the coupon. Give size.

LEONARD-MORTON & CO., Dept. 7865 Chicago

Send me the extra warm sheep lined Moleskin Coat No. CX1466. I will pay the bargain price, $19.95, and postage, on arrival. If not satisfied after examination and try-on, I will return coat and you will refund my money.

Size.....

Name.....

Address.....



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SLIDEWELL HKK COLLARS

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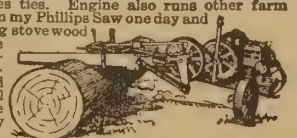
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Wood will be in demand this winter. You can make big money with the Phillips One-Man Drag Saw—

Saws 15 to 35 Cords Daily

Fells tree—makes ties. Engine also runs other farm machinery. "I ran my Phillips Saw one day and made $36.80 sawing stove wood lengths. All done with one man—easily—J. A. Coverdale." Just send name—a card will do—for free folder and money saving prices.



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MY PLAN SUCCEEDS

Farms of 80 to 160 acres with fair improvements and stocked, wanted. Have over 100 on my list who want such.

Walter Miller, 320 Brumder Bldg., Milwaukee, Wis.

When Writing to Advertisers, Mention Hoard's Dairyman

The Future of Your Boy on the Farm

(Continued from page 529)

sity to the farm, as I have, feels so forcibly the scantiness of the get-together spirit in many places, the barrenness of one's social life, and the meagreness of so much that the soul craves. Contrasts and change are what make routine bearable, in fact, under the properly balanced kind of work-and-play life, drudgery and routine cease to exist. Spirit means so much in the work of anyone. Who had not rather do a hard piece of work, if they are in good spirits, than do some comparatively easy thing when they are feeling depressed? If your boy can be shown that, no matter how badly things go on the farm with his own boyish affairs, aspirations, and possessions, there is always some way out, some means of rising above the obstacle, he will develop the unconquerable spirit which is so necessary to tide over periods of poor crops, disease in stock, and partial failure of other things that come to all of us.

He needs for you to give him a clear vision of our new and greater agriculture. You should be the first one to teach him that upon the intelligent handling of our soil depends the life and well-being of all future generations. Beyond the daily grind of chores and field work, show him the pure-bred stock and well selected seed grains, the clean fields and well kept fences, and the neat, roomy buildings of a progressive farmer. Impress it upon him that all these can be his if he will stay on the farm after getting a good education, apply what he has learned, and use, through it all, good common sense.

To do all of this you will spend money, yes, a great deal of it, and valuable time, but what are a few more years of preparation if they double and treble your boy's earning power and his capacity for enjoyment throughout the rest of his life? The golden time to acquire knowledge rapidly is in youth. How many of us but what realize that, now that we have passed the age? Your boy must be loaned for a time to city life and university surroundings if he is to have his happiest future on the farm. Many things may turn him aside there, but if he really loves the farm and the soil when he goes there, and takes up an agricultural course, he will be back as soon as he can get his well-won diploma, and not feel that he is lowering himself when he substitutes work clothes for cap and gown. Too many of our university graduates, I fear, plan only for some managing job where they can tell someone else what to do, and have no hard or dirty work to do in person. The best farming, as a class, will always be done by the farmer who lives on his own farm and works it with the help of his own boys, and what outside help he has to have. The immense farms with a man or two for every job seldom pay, in proportion to the capital invested, like the privately owned and operated farms. And do not be impatient with your boy for receiving instruction in many subjects that you were taught little or nothing of. Our age is becoming more and more one of machinery, and he needs additional training along mechanical lines. Then, too, several subjects, such as bacteriology, are of great value now in his higher education, which were unknown in your time. You will have to bear in mind that he needs such things, although you did not have them and "got along very well without them".

And what kind of man is all this to make of your boy? Is he to be a selfish, domineering, aristocratic, too-good-to-be-touched sort of person? Heaven forbid! You want to see him as one of the people around him, better educated, let us hope, but one of them in sympathy and purpose, a good mixer and neighbor, a leader among them for the advancement of a better agriculture. He should have the best of health, for his training has shown him how to take care of it; the best of spirits (for is not his the most glorious heritage?); and the best morals and religious life.

All the deep and grand things that one learns from close communion with Nature are to be his, the thousand and one things in his every-day life that we become so accustomed to that we hardly heed them will take on a new and more sacred meaning after he has studied the sciences and cultural subjects of a higher education. He can truly have life, and have it more abundantly, and his farm can be as sacred to him as his Bible, for do they not both teach the will of God? And if some other farmer has raised up a daughter in the way that you have your son, and they take a liking to each other—why—there is nothing on earth too good for them, and you may rest assured that their future, as well as your own, will be a happy one.

Cows That Made Denmark Famous

(Continued from page 528)

the butter exports showed a 65% deficit.

The best basis of judgment with regard to the milking powers of the Red Danish dairy cattle is to be found in the records of the cow testing associations on the island of Funen. In the course of the twelve months, October 1, 1914, to September 30, 1915, 38,528 regularly tested cows had an average milk yield of 7,682.4 lbs. containing an average fat percentage of 3.57%.

The foregoing records would be incomplete without those of the first-class herds of Red Danish cattle on the Island of Funen. In the course of the last twenty-five years the agricultural societies on the island have carried out a series of seven dairy cattle competitions, each covering a period of two years. During this period the milk of the competing herds was regularly tested and the competing animals periodically inspected by competent judges of dairy cattle. The following table shows the main results of the competition in question:

No. of competition	Years	No. of herds competing	No. of cows	Ave. for all the competing cows Milk Lbs.	Butter Lbs.
1st	1894—96	7	529.6	6976.2	266.2
2nd	1896—98	9	661.6	7275.5	275.0
3rd	1899—01	8	359.5	8657.0	327.8
4th	1903—05	18	776.6	8527.2	334.4
5th	1906—08	12	525.1	8569.0	347.6
6th	1909—11	11	384.1	9046.4	367.4
7th	1913—15	10	303.8	9341.2	398.2

In the course of the seven competitions covering a period of 21 years the indicated average increase in the milk yield was 2,365 lbs. or nearly 34%; the average increase in the butter yield 132 lbs. or nearly 50%.

One of the ten herds that took part in the seventh competition had an average annual yield of 10,551.2 lbs. of milk and an annual average butter yield of 488.4 lbs. Another herd had an annual average milk yield of 9,182.8 lbs. and an average of 409.2 lbs. of butter. These two herds obtained the highest awards all round. If we consider the individual units of the herds it will be found as a matter of course that the annual milk yield

will be larger. It is not at all unusual for an adult cow to give 11,000 lbs. of milk. Indeed, there are examples of an annual yield of 16,500 lbs. of milk. The average fat percentage for the entire Red Danish breed ranges between 3.5% and 3.65%. The fat percentage of the breed is increasing. There are numerous examples of good milkers of the Red Danish breed having a 4% fat percentage and more. Such cows are usually selected as dams for future sires, especially when they possess the symmetry of the dairy form and belong to a good strain. The number of herd books for Red Danish bulls amounts already to 20 volumes; the first of these appeared in 1896. The Red Danish cows have their own herd books; there are many herd books containing detailed records of cows of this breed. All these books contain valuable data furnished by the cow testing associations.

In 1919 there were about 700 cow testing associations in Denmark, which included 16,000 herds and more than 200,000 cows.

In 1915—16 no fewer than 3,277 herds of Red Danish cattle were subjected to regular testing on the island of Funen alone. The total number of cows tested was 40,116 or 32.5% of the total number (123,278) of dairy cows on the island; the average milk yield per head for the 40,116 cows was 7,938 lbs. and the average butter yield 323.4 lbs.

In July, 1920, the value of the American dollar in Denmark was six Danish crowns. This would enable an American farmer to buy a first-class, select, pure-bred, Red Danish yearling bull calf for about $1,000 or six thousand Danish crowns. First class pure-bred heifers from one to two years old could be bought for about $250 to $300 per head. Second and third quality pure-bred heifers for about $180 to $200 per head.

Sophie 19th of Hood Farm Completes Ninth Record

Sophie 19th of Hood Farm has further strengthened her claim to the title of champion long-distance producer by completing her ninth official year's record with a production of 10,360.9 pounds milk, 566.5 pounds fat. In the nine years she has been tested Sophie 19th has produced 110,938 pounds milk, 6,354.6 pounds fat, which gives her a clear lead of 693 pounds fat over her nearest competitor, Tilly Alcartra, for long-distance production honors. Sophie's nine records are:

Lbs. milk	Lbs. fat	Age Yrs.	Age Mos.
7,050.2	395.9	2	2
9,924.8	570.8	3	8
14,373.2	854.9	4	11
15,099.4	931.9	6	7
17,577.8	999.1	7	11
11,915.4	680.5	9	7
15,948.2	847.8	11	9
8,688.2	507.2	13	0
10,360.9	566.5	14	6

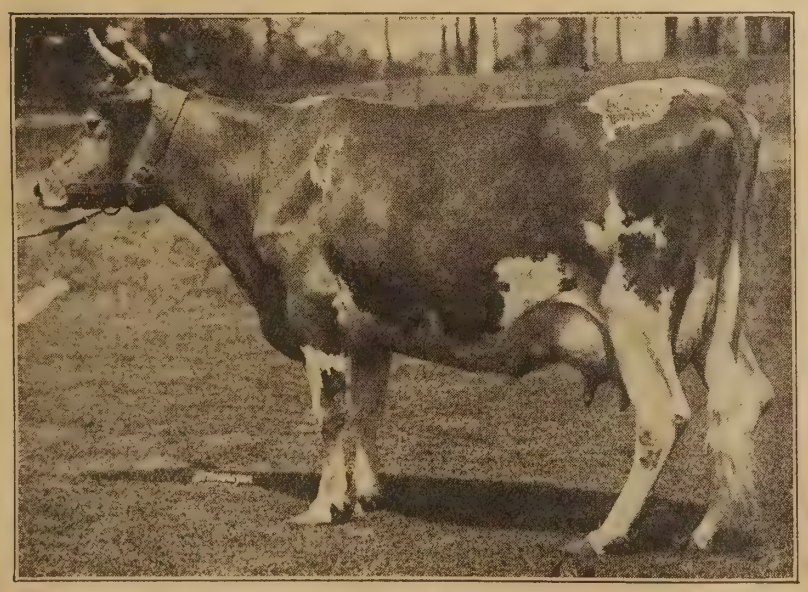
The average yearly production of all her records is 12,326 pounds milk, 706 pounds fat. Although Sophie completed her latest record after passing her fifteenth birthday she is in fine condition, ready to start on her tenth record as soon as she freshens.

At the time she made her fifth record, 999 pounds fat in one year, it was the highest ever made by a Jersey, and it remained so for several years, until her granddaughter, Sophie's Agnes, passed it with a record of 1,000 pounds fat.

Sophie 19th was bred, owned, and tested by Hood Farm, Massachusetts. —AMERICAN JERSEY CATTLE CLUB.

Go on and make errors and fail and get up again. Only go on.—ANNA C. BRACKETT.

New Jersey Guernsey Makes 800 Lbs. Fat



IMP. QUEEN ROSE OF PINE GROVE

IMP. QUEEN Rose of Pine Grove, an eight-year-old Guernsey owned by Paul Moore, New Jersey, has recently completed a record of 15,688.6 pounds milk, 803.01 pounds fat. This production exceeds her requirements for the Advanced Register by 123 per cent. She has a previous record of 12,160.7 pounds of milk, 635.45 pounds of butterfat completed in Class C.

Imp. Queen Rose of Pine Grove was bred on the Island of Guernsey, and was dropped on April 2, 1912. She was sired by Imp. Raymond's Pearl King, an Advanced Register sire, and is out of Rose of Sunnyside. Frank E. Oliver, Mr. Moore's herdsman, reports that he was disappointed with her production because he feels that she is capable of making a very much larger record. He intends to start her on retest in July, 1921. Imp. Queen Rose of Pine Grove is a large cow of extreme dairy capacity and outstanding type. She is quiet, gentle, a good feeder, and takes well to all kinds of feed. All her calves have been vigorous and her last one, a bull, took the blue ribbon at the Morris County and Far Hills fairs.—AMERICAN GUERNSEY CATTLE CLUB.

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ELASTIC KNIT
UNDERWEAR

"HANES" underwear for men has been standard for years! Beyond any question it is the best value in actual quality, comfort and service ever sold at the price! The "Hanes" guarantee is your assurance of absolute satisfaction. Read it!

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This year we present the new yellow label medium weight, silk trimmed Union Suit, made of full combed yarn particularly for men who prefer a medium weight union suit.

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"We guarantee Hanes Underwear absolutely—every thread, stitch and button. We guarantee to return your money or give you a new garment if any seam breaks."

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"They must make good or we will"

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UNION MADE
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One Man Saws 40 Cords a Day

At a Cost of 1½c a Cord!
Send today for Big Special Offer and Low Direct Price on the OTTAWA, the One-Man Saw, the first made and sold direct from factory to user. Greatest labor saver and money-maker ever invented. Saws any size log at the rate of a foot a minute. Does the work of ten men. As easily moved from log to log or cut to cut as any wheelbarrow. 4-Cycle Frost Proof Engine has balanced crank shaft—pulls over 4 H-P. Magneto equipped; no batteries needed. **Special Clutch** lever controlled enables you to start and stop saw with engine running. Automatic Speed Governor. Easy to move, costs less to operate. When not sawing, engine runs pumps, feed mills and other machinery. Pulley furnished.

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Cuts Down Trees—Saws Logs By Power
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See the OTTAWA at work on your farm once and you will never give it up. Thousands in use, every owner a booster. Out-saws any other on the market. Send today for FREE BOOK and Special Offer.

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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Mo.	St. Louis Co.	J. L. Lloyd	July	358	6	65.7	St. Stanislaus Seminary
Ky.	McCracken Co.	B. G. Marsh	"	336	8	46.5	H. Lawrence
"	McCracken Co.	B. G. Marsh	Aug.	332	7	65.9	H. Lawrence
Ill.	DeKalb Co.	E. R. Jackson	Sept.	230	25	77.6	Stevens Stk. Farm
Wis.	Richland Co.	Henry Engsberg	"	480	14	46.2	Tom Bee
"	Edgar—Marathon	S. G. Maxted	"	500	4	47.0	Frank Faulkes
"	North Crandon	Charles Stivers	Aug.	290	12	74.5	H. Peterson
"	West Bend	Martin Lange	"	382	6	71.4	J. Opgenocth
Kans.	Shawnee Co.	Louise Krigbaum	"	191	8	50.9	H. B. Cowles
Wis.	Ft. Atkinson	Wm. Seales	Sept.	316	10	51.0	W. A. Stark

Association Notes

St. Louis County, Missouri—The average production for pure-breds during July was 801 lbs. milk containing 27.3 lbs. butterfat. For grades and scrubs it was 372 lbs. milk and 13.6 lbs. butterfat. Feed prices were: Bran, $52 per ton; cottonseed meal, $60; alfalfa, $30; clover hay, $25.

McCracken County, Kentucky—This association has been in operation since the first of June. There are 28 members and a total of about 340 cows on test. Three cows are on official test. Feed prices are as follows: Bran, $53—$62 per ton; mixed feed, $75—$80; gluten feed, $80; cottonseed meal, $60 and $80.

De Kalb County, Illinois:—September market milk testing 3.5% sold for $3.70 per cwt. and 4c per point above. Local feed prices are: Unicorn, $4 per cwt.; corn, $2.30; barley, $2; oats, $1.90; cottonseed meal, $3.25, oil meal, $3.35; molasses feed, $3; bran, $2.50.

Richland County, Wisconsin—Ten unprofitable cows were sold for beef in September and five pure-breds purchased. Two pure-bred bulls were also bought. Market milk testing 4% sold for $2.16 per cwt. and 7c per point above. The condensery paid 80c per pound for fat, the creamery paid 58c, and the cheese factory 53c per pound. Milk retails for 11c per quart, butter for 57c per pound, and cheese for 25c per pound. Oil meal is rated at $70 per ton; bran, $47; alfalfa hay, $30; oats, 75c per bushel; barley, $1.20; corn, $1.90.

Edgar—Marathon County, Wisconsin—Twenty low producing cows were sold for beef during September. One more herd has been tested for tuberculosis and no reactors found. Three herds were retested and one reactor found. Many new barns have been put up and new equipment installed. Excessive dry weather is the reason for a big drop in milk flow. September market milk sold for $2 to $2.50 per cwt. The creamery paid 58c per pound for fat and the cheese factory paid 54c to 61c.

North Crandon, Wisconsin—Some members are feeding balanced rations as pasture has not been good. A carload of feed has been bought and another will soon be ordered at a saving of between $350 to $425 per carload lot. Two unprofitable cows were sold to the butcher. One pure-bred Guernsey bull was bought. The creamery paid 55c per pound for fat. Milk retails for 15c per quart, butter for 60c per pound, and cheese for 28c per pound. Feeds are rated as follows: Oats, 60c per bushel; peas, $3 per cwt.; bran, $45 per ton; oil meal, $70; Dairy Ration, $60; clover hay, $30.

West Bend, Wisconsin:—During August two barns were equipped with iron stanchions. Members are starting to feed grain with good results. The condensery paid 72½c per pound for fat. Milk retails for 13c per quart and butter for 61c per pound. Local feed prices are: Bran, $44 per ton; oats, 60c per bushel; silage, $7 per ton; pasture, $3.50 per month. This association finished its year June 30, 1920. Twenty-three herds finished the year with 255 cows. The average milk production for the association is 7,453 lbs. containing 274 lbs. fat. Twenty-three cows qualified for entry in the Register of Production. The high cow for the year is a registered Holstein owned by Chas. Backhaus, which produced 506.8 lbs. fat in 13,498 lbs. milk. The high herd, nine registered Holsteins, also owned by Chas. Backhaus, averaged 377 lbs. fat in 10,072 lbs. milk.

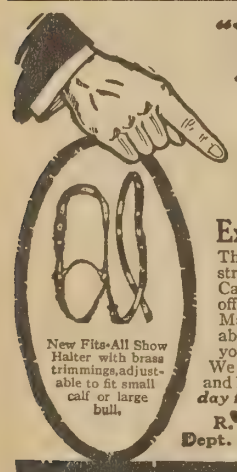
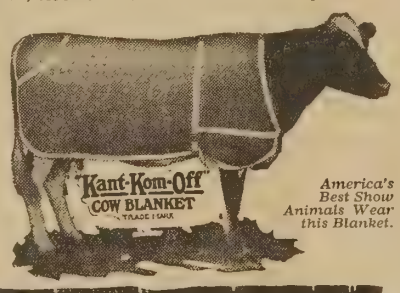
Progressive, New Richland, Minnesota—This association finished its year April 30, 1920. The 156 cows finishing the year averaged 6,143 lbs. milk containing 223.5 lbs. butterfat. Twenty-four cows were tested for 10 months, averaging 3,028 lbs. milk containing 124.1 lbs. fat. Eighteen cows were tested for nine months and averaged 3,389 lbs. milk, 141.6 lbs. fat. The high herd produced an average of 275.5 lbs. fat. This herd is owned by Ed. Echternach. The high cow, also owned by Ed. Echternach, produced 391.1 lbs. fat.

Shawnee County, Kansas—This county has two dairy herds that have passed the accredited herd test and have their certificates and three more herds are being tested. The Romig herd is also being tested and went through the first test without a suspect. This herd is on semi-official test and is in excellent condition to make a splendid record. For the third consecutive month the H. B. Cowles herd has led the association. This month they also have the high cow—a daughter of Crumpy Cow who presented her owner with triplet calves in her eighteenth year.

Ft. Atkinson, Wisconsin—Milk sold to the condensery brought $3.20—$3.35 per cwt. The creamery paid 54 to 64 cents per pound for fat. Silage cost $7 per ton; alfalfa hay, $30; bran, $50; oil meal, $66 to $70; oats, 62c per bushel; barley, 95c; pasture $1.50 per head.

Farm Bureau Progress in Vermont

Mr. E. B. Cornwall, president of the Addison County, Vermont, Farm Bureau, writes us that the second week's campaign for membership in that county has produced gratifying results. The town of Weybridge has 80% of its farmers signed up and in three other towns there has been better than 80% of the farmers enrolled on the basis of a ten-dollar-a-year membership. Canvass in three other towns is being made at present and additional towns will be taken up shortly.


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The only blanket with hip strap support of leg stay. Cannot lose off or be kicked off. Stays on day and night. Made of best and most durable material and will give you excellent satisfaction. We also manufacture stack and hay cock covers. Write today for circular and prices.


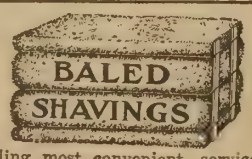
America's Best Show Animals Wear this Blanket.
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The Milking Machine and the Cheese Industry

WALTER W. FISK, New York College of Agriculture

BECAUSE so much of the poor cheese has been attributed to the poor quality of mechanically drawn milk, the writer thought it desirable to relate his experiences last summer at a cheese factory; and, because the conditions at this particular factory were so typical of conditions over this state and other cheese producing states.

An ordinary Cheddar cheese factory in Northern New York was selected as a typical factory at which some experimental work might be done on the manufacture and quality of the cheese. On arrival at this factory, about the first of July, the weather began to become hot and the quality of the milk rapidly deteriorated. This was evidenced by the bad flavor and odor of the milk and the bad flavor and gassy condition of the cheese curd. This condition of the milk and the resulting condition of the curd was believed by the cheesemaker to be due to the milking machine.

As conditions grew worse, a threat was expressed by the cheesemaker not to receive any more mechanically drawn milk. At this point, the writer became interested to learn the difference between the hand and mechanically drawn milk and the exact conditions on the farms producing the milk. To this end, a fermentation test was made of each patron's milk. There were thirty-eight patrons, seventeen of whom had various mechanical milkers, the rest were milking by hand. This fermentation test showed that all but one of those patrons having mechanical milkers was delivering gassy milk and about half of that drawn by hand was gassy.

A campaign was started to improve the milk and an inspection was made of the farms. This showed that, with one exception, the mechanical milkers were not kept in a sanitary condition. This one was washed daily and the milk was of good quality. The others were neglected because of ignorance on the part of both the operator and the salesman. In order to make sales, the dairyman was told that it was only necessary to wash the machine weekly or, perhaps, monthly. The machines were in very bad condition, some of them not having been apart in so long that they could not be easily taken apart. All of them, with the one exception, were more or less coated with a yellow slime which is characteristic of dirty milk utensils.

At the end of two weeks, patrons delivering the hand and the mechanically drawn milk had both cleaned up conditions so that there was no gas in the cheese curd. At this point, it would have been very easy for the patrons delivering the machine drawn milk to slip back into the old rut for they did not yet know how to take proper care of their milking machine. Because some of the gassy cheese had been rejected, the patrons realized that they must have good milk or they would not obtain the best quality of cheese or the highest price. They were willing to do anything within reason to produce milk of good quality.

Various schemes of caring for the machines were tried on the different farms; some were kept in a salt solution, some in chloride of lime solution, some in the prepared Javelle waters such as B. K., and some in cold spring water. The machines were first rinsed in warm water, then washed in a solution of cleaning powder, and, lastly, sterilized with boiling water before being put into the solution. Some of the machines were taken apart and washed daily. As a bacteriological laboratory was a part of the experimental equipment of the factory, it was easy to determine the condition of each patron's milk.

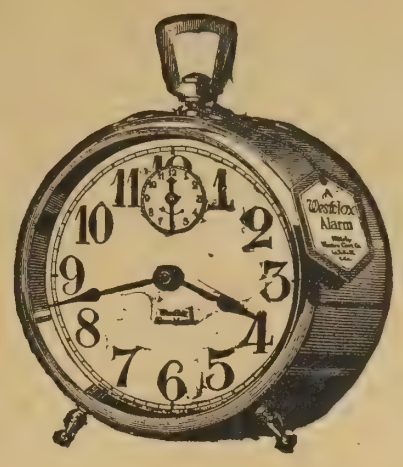
By keeping the machines in the different solutions and at the same time noting the condition of the milk, some interesting observations were made. If the machine was not properly rinsed after being in some one of these solutions, the characteristic flavor of the solution was imparted to the milk. Those solutions which contained chlorine as the active agent quickly deteriorated in hot weather so that they were not effective, and chlorine quickly corrodes the aluminum parts of the machine. Some machines are not so constructed that they can be cleaned and scalded; some rubbers will not stand scalding water; some operators are not careful to thoroughly rinse the machine before placing it in the solution and then the solution quickly became milky and bad flavored; some manufacturers do not supply suitable brushes for cleaning the machines; and some operators are not careful to have the tubes full when placing them in the solution.

Gradually the method of caring for the machines was changed by the individual operators until finally each one was taken apart and the machine washed each day; after being washed, the rubber parts were put into clean, cold or salt water, or scalded and left in the air. The writer had occasion to visit this factory again this summer and no complaint was found regarding the quality of the machine drawn milk. By talking with the patrons, it was found that the machines were being washed daily.

From this experience several conclusions may be drawn. The milking machine must be kept clean the same as any other dairy utensil if milk of good quality is produced. Cheese of as good quality or even better can be made from machine drawn milk if the machine is kept clean. Undoubtedly, the easiest and most satisfactory way to keep the machine clean and sanitary is to wash it every day.

The mechanical milker must be recognized as a necessary part of the equipment on the dairy farm and if it is kept clean the same as the other dairy utensils, no objections can be found to the milk drawn by it. Because of the quality of available help, the scarcity of help, and the objections to the sanitary quality of mechanically drawn milk, many dairy farmers have gradually drifted out of dairying. This is a sad mistake and the sooner the dairy interests can be made to realize that the mechanical milker will produce milk of good quality, the sooner the dairymen will rebuild their herds.

There is no excuse for a dairyman to produce dirty milk with the mechanical milker except carelessness on his own part. A cheesemaker is not justified in blaming the poor quality of his cheese to the innocent mechanical milker. It is his duty to see that the machine is kept clean and then and only then will we have the cheese of the highest quality.



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Section showing foundation

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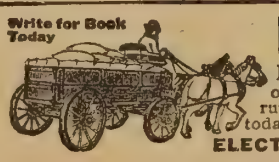
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GRAND CHAMPION COWS AT THE DAIRY CATTLE CONGRESS

Left to right: De Kol Albin Princess 2d, four-year-old Holstein, owned by N. P. Hanson, Minnesota; Imp. Mildred 2d of Les Godaines, winner of Guernsey grand championship at five consecutive showings, owned by Jones and McKerrow of Wisconsin; and Betty of Lakeview, A. E. Bower's 1919 National grand champion Brown Swiss.

Eleventh Annual Dairy Cattle Congress

THE 1920 Dairy Cattle Congress, held September 27th to October 3rd at Waterloo, Iowa, stands forth in its attainments as the most notable of the eleven annual shows which have been held. In a clean-cut manner it presented to thousands of farmers, in what is potentially the greatest dairy district of the country, a high class dairy exposition. Breeders and dairy manufacturers of the middle west whose future lies in the spread of dairying and its improvement may well say of this "good and faithful servant" of the dairy industry, "Well done".

The growing success of this great annual dairy show is the more gratifying when its history is known. Born in 1910 in Iowa when hogs, steers, and corn, not dairy cattle, had a large place in the Hawkeye farmer's mind and where the schedule of endeavor seemed to be "to raise more corn to feed more hogs to buy more land to raise more corn, etc.", it had a difficult beginning. Even the weather man seemed indisposed to give this apostle of the dairy cow a chance to grow on Iowa soil, for most of the weeks of the eleven shows have been unfavorable to large attendance. One year's downpour flooded the stalls of the cattle and left the grounds a swamp.

But a few men believed in the potential greatness of Iowa as a dairy state. Their faith guaranteed a continuance of the show when gate receipts did not. Year after year improvements have been accomplished which have added to the comforts of exhibitors and have increased attendance; year after year the management has fought on to make the Dairy Cattle Congress a real show. This year's exposition led all the ten preceeding it. This "greatest dairy show west of the Mississippi River" is without a peer in the effectiveness of its appeal for improved dairy farming.

National Associations Represented

Four of the national associations maintained headquarters at the Congress. Besides serving the associations in securing new memberships, etc., such booths furnish a place for breeders to meet and also keep local showmen in touch with the national organizations. The Iowa Holstein Breeders' Association established itself with the National. Wisconsin Holstein men put up a separate, effective booth and displayed proof of the greatness of the state's Holstein population and of the justice of the assertion that Wisconsin is the "cradle of the breed".



MINNESOTA AGRICULTURAL COLLEGE DAIRY STOCK JUDGING TEAM, WINNER OF DAIRY JUDGING CONTEST AT DAIRY CATTLE CONGRESS

From left to right: M. A. Loomis, V. M. Williams, A. B. Rayburn (coach), H. A. Hass, E. J. Haslerud (alternate).

Educational Exhibits

The Iowa State College maintained a "milk bar" where dairy drinks were sold and cottage cheese equipment where A. W. Rudnick-manufactured and sold a palatable pimento cheese.

The Dominion of Canada and the commonwealths of Minnesota and South Dakota made the most of the opportunity to reach the real farmers of Iowa through attractive booths advertising the advantages of their respective lands as economical farming propositions. Minnesota made her claims on the basis of apples, potatoes, grasses, and small grains and answered the question every Iowa farmer asks in a placard statement, "Yes, we grow corn". Canada showed that vegetables, small grains, and dairy products can be sold in goodly quantity from the 128,000,000 acres now offered for sale. South Dakota emphasized the prosperity of her agriculture, showing that in 1919 the state exported $625 worth of farm products for each person in the state. It also declared that the total assessed value of the state is such that it averages $3,473 for each citizen.

Dairy Products

Only a small exhibit of dairy products was made. W. S. Walsh of Wisconsin won first prize with cheese scoring 94. In the gathered cream classification, W. S. Clemmensen of Iowa received the first award with butter scoring 95½, second place going to D. W. Mohler of Iowa whose butter scored 94½. In the whole milk division butter made by E. M. Quiney of Iowa and scoring 96 won the blue. L. C. Ladage of the same state took second with butter scoring 95¾. A notable feature of the products show was the butter sculpturing of J. E. Wallace of Nebraska who makes butter do quite as wonderful things in statuary as Dr. McCollum has it doing in the human diet.

Six States in Student Contest

Six middlewestern states entered teams in the third annual collegiate judging contest. Minnesota won first honors: Iowa, second; Missouri, third; Nebraska, fourth; Kansas, fifth; and South Dakota, sixth. The Minnesota team made the highest score on Holsteins and Jerseys; Kansas on Ayrshires; and Missouri on Guernseys. The five high men of the contest were M. C. Loomis of Minnesota; W. D. Jefferson, Iowa; H. H. Slayton, Iowa; K. M. Williams, Minnesota; and J. E. Crosby, Jr., Missouri, in the order given. A class of bulls and of females from each of the four breeds was placed and oral reasons on four classes were given. Professor J. A. McLean served as judge of placings and reasons.

The Cattle

In the management of a dairy show, the "proof of the pudding" lies not so much in the concession space sold or the number of curious spectators which can be drawn through the gates as in the character and size of the dairy cattle exhibit. Judged on this basis, the Congress is unexcelled.



GRAND CHAMPION BULLS AT THE DAIRY CATTLE CONGRESS

Left to right: The Jersey two-year-old, Fashionable Fern Lad, owned by Longview Farm, Missouri; the three-year-old Holstein, Johanna Glenda Lad, owned by Mayowood Farms, Minnesota; and Cavalier's Sherry Redman, senior Ayrshire calf owned by Adam Seitz of Wisconsin.

No exhibition of the season offers greater opportunity for intelligent study of types and for comparisons of the five breeds. The stalls were full to overflowing with strictly high class individuals, a total of 545 head being stalled and shown. The absence of unworthies was strikingly noticeable.

Of special interest was the friendly state rivalry in the Holstein judging, engendered by four competing state herds. This commendable plan of giving a state advertising before show crowds and of enabling a number of small breeders to exhibit their cattle in such shows as the Congress, bids fair to continue to increase in popularity.

Jerseys

Eight exhibitors from five states brought ninety-one head of Jerseys. The showing was not as large as in some years, but the quality was highly creditable. A. M. McClenahan of Colorado showed twenty-four head. The only other large herd was that of Longview Farms, Missouri, which has campaigned from Sedalia to Louisville and back for the two last northern shows. At Waterloo it maintained its battle record taking sixteen firsts and five of the six purples. Professor J. A. McLean made the appraisals.

In a weak aged bull class Financial Beauty's King, owned by Meredith Jersey Farm, was an easy winner. He has great length, good lines, and dairy conformation but lacks the finish, masculinity, and breed character to be a strong contender in heavy competition. He met two better show types in the contest for senior championship: the three-year-old, Chief Raleigh; and Fashionable Fern Lad, a year younger, both owned by Longview. The latter, grand champion at Sedalia and Louisville, defeated Noma's Perfect Raleigh in class, a bull twice junior champion at the National, but lacking the strength of top and the length of the winner; the two-year-old was a popular grand champion. W. A. Brewerton of Illinois exhibited three head and landed all in the money. His yearling bull, Raleigh's King Thornbury, grand champion at the Wisconsin state fair, led his class. Longview won in the calf line-ups and showed the senior, Wolff's Chieftain 2d, to junior championship.

The writer selected Sly Puss P, a twelve-year-old cow, from the Longview herd, as an outstanding leader of the aged milkers. She was shown dry but he considered her breed character, clean cut form, quality of udder, and size entitled her to the blue ribbon. After the judge's decision he remarked his catalogue to give first honors to Westfield Girl, grand champion at Milwaukee and owned by A. M. McClenahan. Mr. McLean credited the winner with greater spring of rib, a better shaped udder, and larger milk veins. Longview's Golden Matron was shown blemished and drew third money. M. E. McMurray's Des Moines Champion fell to fourth rating. Raleigh's Star of Peace, Sedalia Champion, and Rochette's Noble Nina, Illinois, Louisville, Columbus, and Indianapolis champion led the four- and three-year-olds respectively. Both come from the Missouri herd. The aged cow defeated them for senior championship but lost, in turn, to Raleigh's Miriam, a Longview senior calf, for the highest honor.

The following lists the complete awards:

Bull 4 years or over—1, Meredith Jersey Farm on Financial Beauty's King; 2, Reinheimer on Ibsen's Golden Prince; 3, Campbell on Maximilian You'll Do. Bull 3 years or over—1, Longview Farm on Chief Raleigh. Bull 2 years, under 3—1, Longview on Fashionable Fern Lad; 2, Reynolds on Noma's Perfect Raleigh; 3, McClenahan on Majesty's Feather Lad; 4, Reinheimer on King's Golden Pride. Bull 1 year, under 2—1, Brewerton on Raleigh's King Thornbury; 2, Longview on Manora's Fairy Lad; 3 and 4, McClenahan on Financial Dainty Prince and Maj. Defiant Count; 5, Reynolds on Raleigh's Fairy Sultan. Bull calf 6 months, under 12—1 and 2, Longview on Wolff's Chieftain 2d and Blue Feather's Raleigh; 3, Reynolds on Flower's Fairy Raleigh; 4, Reinheimer on Fair Martha's Prince; 5, Campbell on You'll Do Bobbie. Bull calf under 6 months—1 and 3, Longview on Star's Fairy Lad and Buttercup's Butter Lad; 2, Reynolds on Bella's Perfect Raleigh; 4 and 5, McClenahan on Bosnian's Shy Duke and Canoness' Shy Raleigh.

Cow 5 years or over—1, McClenahan on Westfield Girl; 2 and 3, Longview on Sly Puss P. and Golden Matron; 4, McMurray on Fox's Lucy of Ingleside; 5, Campbell on Minnetta's Golden Fern; 6, Reynolds on Lula Burrier. Cow 4 years, under 5—1, 2, 3, Longview on Raleigh's Star of Peace, Queen's Raleigh's Nimay, and Fountaines Nema; 4, Reinheimer on Mrs. Fox's Marigold. Cow 3 years, under 4—1, 2, 4, Longview on Rochette's Noble Nina, Raleigh's Lily White, and Fairy Flag; 3 and 5, McClenahan on Western King's Flora Dora and Ruby's Financial Girl. Heifer 2 years, under 3—1 and 6, McClenahan on Jubilee Oxie and Majesty's Peachy; 2, Campbell on Sweet Marie's Rhea; 3, 4, 5, Longview on Viola's May Fern, Raleigh's Queen Manora, and Raleigh's Fairy Finance. Heifer 18 months, under 2 years —1 and 2, Longview on Raleigh's Blue Feather and Raleigh's Queen o' The Night; 3 and 4, McClenahan on Major Finance Oxford and Princely's Sweet Star; 5, Reinheimer on Fair Martha's Princess. Heifer, not in milk, 12 months, under 18—1 and 4, Longview on Raleigh's Royal Fairy and Raleigh's Golden Brightness; 2, McMurray on Financial Gambogess; 3, McClenahan on Princely's Sweet Rose; 5, Brewerton on Raleigh's Bessie Thornbury. Heifer calf 6 months, under 12—1 and 2, Longview on Raleigh's Miriam and Raleigh's Pretty Maiden; 3, Reynolds on Raleigh Carnation Flower; 4, McClenahan on Maj. Cowslip's Feather; 5, Brewerton on Miss Pennithorpe-Thornbury. Heifer calf under 6 months—1 and 4, Longview on Raleigh's Starling and Raleigh's Royal Maid; 2 and 3, Reynolds on Raleigh Calora Flower and Perfect Raleigh's Countess; 5, McClenahan on Maj. Feather Lad's Tiz.

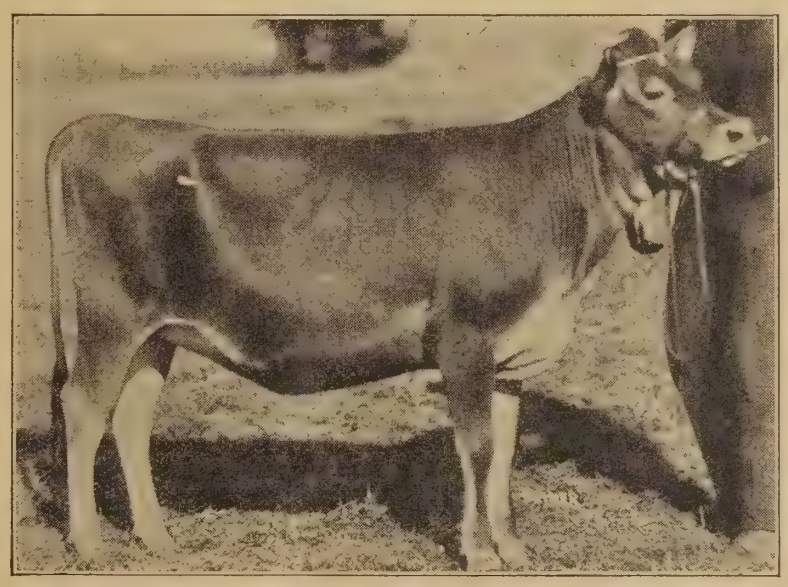
Exhibitor's Herd—1 and 2, Longview; 3, McClenahan; 4, Campbell. Breeder's Young Herd—1 and 2, Longview; 3, McClenahan. Calf Herd—1, Longview; 2, McClenahan. Get of Sire—1 and 2, Longview; 3, McClenahan. Produce of Cow—1, 2, 3, Longview; 4, McClenahan; 5, Campbell. Dairy Herd—1, Longview; 2, McClenahan.

Senior and Grand Champion Bull—Fashionable Fern Lad. Junior Champion Bull—Wolff's Chieftain 2d. Senior Champion Cow—Westfield Girl. Junior and Grand Champion Cow—Raleigh's Miriam.



FIRST PRIZE GUERNSEY GET OF SIRE AT DAIRY CATTLE CONGRESS

Including four first prize winners and two junior champions, Honey Bloom of the Prairie, at the left, and Prince Charming of the Prairie at the right of the group. This get is by Cherub's Prince, grand champion of the show, and is owned by W. W. Marsh of Iowa.



RALEIGH'S MIRIAM, JUNIOR AND GRAND CHAMPION JERSEY FEMALE AT DAIRY CATTLE CONGRESS

Owned by Longview Farm, Missouri

Guernseys

One hundred forty-six Guernseys from twenty different herds made by far the largest showing the breed has ever made at the Cattle Congress. Iowa led with 64 animals owned by 8 exhibitors, followed by Wisconsin with 36 head from two herds, Vermont and Montana each brought out 17 entries, in each case representing a single herd, and Minnesota showed 12 head owned by 8 exhibitors, this last a state show herd and the only one for the breed at the show. The quality of the exhibit as a whole was equally pleasing, with class after class showing a gratifying lack of tail enders.

Cherub's Prince at the head of the Marsh string and owned jointly by W. W. Marsh, Chas. L. Hill, and F. J. Reuping, was the outstanding individual among the 8 in the aged class. He was, in fact, the outstanding bull of the show and a most popular senior and grand champion. Judge Fitch did not, however, have as easy winners in most of the younger classes, and among the two-year-olds and yearlings the leaders could have been put farther down without much criticism. Prince Charming of the Prairie, the Marsh senior calf, was junior champion, winning over Mountain Bros.' first prize yearling, Simplicity's Winner of Iowanola, and U. A. Woodbury's (Vermont) Deanie's Marose of Appletree Point, the winning junior calf.

Competition among the ten aged cows was keen, particularly between Imp. Mildred 2d of Les Godaines owned by Jones & McKerrow and the Marsh entry, Imp. Hayes Express 5th. The former with her scale, wonderfully good type, and exceptional veining was an outstanding first except for her udder that showed very pendulous and not entirely normal, due to recent freshening and the fact that she was too heavily bagged. The Marsh entry, on the other hand, carried an exceptionally good udder both as to shape and quality, but lacked the scale and veining of the other and was just a little plainer in the head and at the tail setting.

Among the six three-year-olds were at least four keen competitors with Kate of Aurelian Farms and Adel of Burnham Beach apparently the strongest contestants. The judge ruled otherwise, however, and when the ribbons were placed they stood second and fifth respectively with Mountain Bros.' Engleside Pretoria Queen in first place. Jones & McKerrow's two-year-old, Century Girl of Edgemoor, a daughter of Imp. Mildred 2d of Les Godaines, was an easy first, but neither she nor any of the others was good enough to defeat the aged cow for senior championship.

The senior yearling class brought out the sensation of the junior female classes, Honey Bloom of the Prairie, owned by W. W. Marsh. Her type and quality are of the best and if she but develops as she promises, she will go far in any ring. She was a most popular junior champion.

The real battle royal was for the grand championship. On one hand was a wonderful promise, on the other a wonderfully good cow that had arrived, and while her udder was against her the fact that she had otherwise so nearly approached the Guernsey ideal type won for her her fifth consecutive grand championship this year.

J. B. Fitch made the placings, a complete report of which follows:

Bull 3 years or over—1, Marsh on Cherub's Prince; 2, Kingston and Son on Hopeful of Edgemoor; 3 and 5, Jones and McKerrow on Bonnie Boy of Riverdale and Chene King; 4, Mountain Bros. on Kitchener's Express. Bull 2 years, under 3—1, Marsh on Marie's Cherub of the Prairie; 2, Woodbury on Rose's Golden Cherub; 3, Golinvaux on Grace's Memento; 4, Hughes on Betty's Prince of Prospect Hill; 5, Dairyland Farm on Cloth of Gold's King. Bull 1 year, under 2—1, Mountain Bros. on Simplicity's Winner of Iowanola; 2, Dairyland on Lalla's Prince; 3, Marsh on Golden Laddie of the Prairie; 4, Jones and McKerrow on Dora's King; 5, Woodbury on Cherub's Bo-Peep Prince of Appletree Point Farm. Bull calf 6 months, under 12—1 and 5, Marsh on Prince Charming of the Prairie and Blossom's Prince of the Prairie; 2, Golinvaux on C. C. Memento; 3, Kammiller and Carr on Oh Boy of Fairmont; 4 and 6, Mountain Bros. on Lilly's Express of Iowanola and Dorothy's Cherub of Iowanola. Bull calf under 6 months—1, Woodbury on Deanie's Marose of Appletree Point; 2, Steele on Bonny Boy of Maplewood; 3, Kingston on Aristocrat of Muskego; 4, Mountain Bros. on Lydia's Express of Iowanola; 5, Marsh on Excelsior of the Prairie.

Cow 5 years or over—1, 4, and 6, Jones and McKerrow on Imp. Mildred 2d of Les Godaines, Imp. Bordeaux of Courtil Brie, and Governor's Ella of McKerrow's Farm; 2, Marsh on Hayes Express 5th; 3, Conklin on Cifs; 5, Kingston on Violet of Tol Val. Cow 4 years, under 5—1, Frizzell on Susie of Skillet Creek; 2, Dairyland Farm on Velma of Mapledell; 3, Mountain Bros. on Engleside Pretoria Vrangue; 4, Schmidt on Glenwood Daisy's Rouge of Grand Home; 5, Woodbury on Morning Glory of Appletree Point. Cow 3 years, under 4—1 and 4, Mountain Bros. on Engleside Pretoria Queen and Simplicity Glenwood of Iowanola; 2, Jones and McKerrow on Kate of Aurelian Farms; 3, Woodbury on Fisherman's Ellerslie; 5, Hageman on Adel of Burnham Beach. Heifer 2 years, under 3, —1, Jones and McKerrow on Century Girl of Edgemoor; 2, Kingston on Itchen Queen of Edgemoor; 3, Mountain Bros. on Lady Ruth of Iowanola; 4, Dairyland on Genevieve of Mapledell; 5, Woodbury on Katherine Ridgeway of M. G. Best 2-year-old heifer in milk —Mountain Bros. on Lady Ruth of Iowanola. Heifer 18 months, under 2 years—1 and 2, Marsh on Honey Bloom of the Prairie and Golden Locks of the Prairie; 3, Jones and McKerrow on Edelweiss of Edgemoor; 4, Mountain Bros. on Dorothy Arnold of Iowanola; 5, Hagness on Ferby's Kathleen of A. D. F.; 6, Kingston on Lilian of Edgemoor. Heifer not in milk, 12 months, under 18—1, Marsh on Princess Pretoria of the Prairie; 2, 4, and 5, Jones and McKerrow on Spring Maid of Edgemoor, Dancing Girl of Edgemoor, and Ultra's Governess Chene; 3, Kingston on Wonder Girl of Muskego. Heifer calf 6 months, under 12—1 and 4, Marsh on Sensation of the Prairie and Honeydew of the Prairie; 2, Kingston on Hopeful Miss of Sun-

(Continued on page 550)

EDITORIAL COMMENT



In this country the consumers want food cheap, while the producers of food do not. This is a basic fact in human nature beyond which statute law and the powers of government cannot go. The only real law between consumer and producer is the law of supply and demand. If the food is bountiful then the prices will be low and the producer must submit; if the food is scarce the prices will be high and the consumer must submit.

The general clamor to have prices regulated by law is urged by two classes of men—crank reformers and demagogic politicians. The latter always follow in the wake of the farmer like vultures after an army on the march.

In an editorial September 3, 1920, we made the statement that through co-operative effort the farmers of the United States effected a saving of $5,434,000 last year. A much larger saving was made than by this co-operative effort of farmers. We should have stated that co-operative farmers' associations in the northern and western states, whose organizations were promoted by county agents last year, effected a saving to its members of $5,434,000.

It should be borne in mind that there are many successful co-operative enterprises which have not been organized by county agents. Mr. R. N. Wilson, secretary of the Agricultural Legislative Committee of California, called our attention to the fact that the co-operative organizations of that state effected a much larger saving to its members than $5,434,000. Our editorial pointed out the value of intelligent co-operative effort and the saving of $5,434,000 is a sum sufficient to well illustrate the point of the editorial, but since the saving of $5,434,000 was directly attributed to the county agents of the North and West, it is only right that we should make this statement of correction.

COST OF PRODUCTION AND FIXING PRICES

It has been held by many that the only true way to arrive at the proper price for farm products is to consider the cost of production and then add a fair profit. This would be fixing prices arbitrarily and disregarding all other factors. We have never been able to accept this as being wise to advocate or to practice. We do not believe that it can be carried out successfully; moreover, that farmers would desire any such plan of selling their products if they fully understood its results.

Elsewhere in this issue will be found an article, entitled, "The Story of the California Raisin Trust". In discussing the fixing of prices Mr. Steen says: "At first prices were fixed on the basis of cost of production plus a fair profit. This was soon abandoned because it was not practical. One year the cost might be 2 cents per pound, the next year 5 cents per pound. The consumer who eats raisins cares nothing for the cost of production. He adjusts his purchases to his wants and the prices he must pay. The raisin growers soon fell back on the law of supply and demand which they discovered was not so bad when the manipulation was removed from it."

It seems to us that what is desired in the marketing of farm products is to eliminate the speculator as far as possible and have the farmers cooperate in preparing their products for market and in directing their sale. The man who produces an article has a right to set a price on it. A farmer who has a cow to sell sets the price or at least consents to an offer. He has the same right in selling any of his products, but before he sets prices on them, he should determine the supply of the products and how much the market will pay.

It can be said that unless the farmer receives the cost of production he will fail. No business can exist unless it sets a price for its commodity that will return cost of production plus a fair profit. Our efforts should be directed upon the organization of intelligent co-operative arketing enterprises. Depend upon the farm bureau and other agencies for securing statistics and information indicating the supply of various farm products and their prospective demand and then see that the law of supply and demand is not curtailed or suppressed. The raisin growers' experiences soon led them to see the fallacy of fixing prices upon the cost of production plus a profit and they returned to the law of supply and demand for determining the market prices of their products. The principle of marketing raisins is the same as the principle of marketing dairy products. The dairy farmer should well consider the experience of the raisin grower for it will assist him in formulating plans to conduct his business on the proper basis.

BUTTER VS. OLEOMARGARINE

At Rochester, New York, an experiment was made to determine the relative value of butter and oleomargarine in the feeding of children. Seven children whose average age was 11 years were fed on a uniform ration except that the butter fed in the first six months' period was replaced by oleomargarine the second six months. During the third period of six months butter was again furnished. The average gain made by each child for the first period with butter was 4.93 lbs.; with oleomargarine for the second, 2.89 lbs.; and with butter for the third period, 7.69 lbs.

It has been stated by the manufacturers of oleomargarine that it is wholesome, nutritious, and equal to butter for nourishing children. Experiments carried on with young animals show that vegetable and animal fats are not equal to milk fats for producing growth.

The experiment carried on at Rochester, New York, in order to compare the food value of butter with oleomargarine, was the first to be conducted with children. The results obtained from this experiment are more striking than we had anticipated. It should be borne in mind that the ration the children received was the same, except in two periods of six months each they received butter and in one period of six months oleomargarine. Without question, no milk formed a part of the diet of the child. Those who hold that oleomargarine is as good a food as butter for the growing child should think well of the results obtained in the experiment conducted at Rochester, New York.

FARM LABOR

Mr. W. R. Hale, manager of Wilco Farms, Illinois, takes issue with us upon the question of farm labor. We publish elsewhere in this issue a communication from him, and in the following editorial discuss some of his statements.

We have recognized for several years that there has been a shortage of farm help and that a great deal of it has been incompetent. While this is true we do not think that from the standpoint of agriculture, as a whole, we are in serious condition. Without question, certain farmers, especially those with large acreage, have been placed in a serious situation because of the lack of labor and its incompetency.

We are not unmindful of the fact that in certain sections of Michigan and New York there are a number of thousands of idle farms. These farms are not operated because many of them are very poor in fertility, nonproductive, and because industries have offered a higher price for labor than could be obtained from the operation of these farms. Without question the men who own these farms, or the men who have to operate large farms in sections where there is a large demand for labor in the mines, steel mills, or factories, have had to contend with situations which may be termed serious. But, notwithstanding this, agricultural production is above the average.

This spring a number of manufacturers became concerned about the farm labor situation and held several meetings. At some of these sessions statements were made that led a number of these good business men to feel that we were to have famine in this country; that the prospective wheat crop would be far below our needs, and so it was in the case with many other crops.

At that time there was no way of knowing even the approximate production of wheat but with the acreage of winter wheat, with its prospective acreage to be sown to spring wheat, we did not consider that there was any information to indicate that we would be short of breadstuff, nor could we see from the acreage and reports any necessity of being concerned about the lack of supply of other crops. The government reports now indicate that we have almost an average wheat crop and with the three hundred million bushels left over it gives us over one billion bushels of wheat or nearly enough to supply us for two years. Our corn crop is one of the largest in the history of our country; our potato crop is above the average as also our oats and rye. Flax is about up to the average. Milk production has been sustained and in New York at the present time the condenseries and evaporated milk plants are closed. Market conditions of condensed and powdered milk do not warrant them to continue their manufacture. There is a surplus of these products.

It is plain that we could not have produced this good crop and saved it as we have unless there had been labor. We have recognized that the farmer has to wor harder than he should; that the season was favorable; but the very fact that the crops have been produced in larger quantities than the average does not indicate that there has been a serious shortage of farm labor when agriculture is considered as a whole. The most serious part, we believe, of the agricultural situation today is our large production and it is somewhat an open question as to whether the markets of this country and of Europe will absorb our crops at a price in keeping with other commodities.

Our editorial entitled, "South Over-supplied with Labor", was written to point out how agricultural practices there could be improved and how labor could be utilized to better advantage. It needs no argument that a strong, robust person can handle more than one mule. If the South were to give every farm laborer two mules to handle, it would almost double the amount of work that is being done at the present time. It is not uncommon to find on well managed farms men, driving 4 to 6 horses, doing nearly 4 to 6 times the amount of plowing or cultivation that is done by one man and one mule.

Further, we must take into consideration that the tractor and the truck have come into use, making it possible to do more work with man labor on the farm. In short, there are labor saving devices of all kinds which have made it possible for a reasonable number of people to leave the farm without seriously handicapping our agricultural production. We would not have it inferred that we do not appreciate that there is a shortage of farm labor and that more could be used, but we do not see that the farm labor question is serious when we are producing more than we need to feed and to clothe our people.

In other words, we view the agricultural labor situation not from the standpoint of individuals operating large farms but rather from the whole and have considered that notwithstanding the shortage of labor we have produced one of the largest crops in our history and if we have a serious situation it is because of over-production rather than under-production.

How Much Meat and Butter

For family of eight including two children, what estimate of dressed pork should be sufficient for a year, the pork to be worked up in smoked hams,

shoulders, and a few dressed in summer months, for use during harvest and threshing? Same family has one dressed beef early in winter, dressing about 600 to 700 lbs. for fresh meat and canning, which should be taken into consideration.

How much butter for home consumption should be sufficient?

Dickinson, N. D. W. R. E.

Miss Marlatt, of the Home Economics Department of the Wisconsin College of Agriculture, replies to this inquiry, as follows:

"There are two possible answers. If the family is willing to use meat but once a day and will depend to some extent upon poultry and fish, they would need for bacon, ham, shoulders, side meat, head cheese, pickled pigs feet, and sausage, four hogs, dressed weight 180 lbs. each. This is an estimate, of course, and is on the basis that they would need one-half pound of meat a day per person, which is a fairly liberal allowance. However, remembering the experience of my childhood days on the farm, I am inclined to think that the majority of farm hands would demand meat in some form three times a day. Under such conditions there might easily be required one pound of meat per day per person in place of one-half pound. This would double the number of hogs required.

"With reference to the amount of butter which would be required for home consumption, we would state that for eight people one-half a pound to three-fourths of a pound a day should be sufficient for table use alone. If butter is used for cooking, it is very difficult to make any estimate of the amount which would be used."

Reseeding Alfalfa

I seeded Grimm alfalfa last spring. It came up well but a heavy rain washed under many plants. Alfalfa is now ten inches high but is thin in spots. Should I sow more seed this fall, or wait until spring? Many alfalfa plants are turning yellow. What causes this?

Muscoda, Wis. B. E. S.

While alfalfa seeded in the fall may make some growth and possibly live through the winter, it would be preferable to defer seeding until early spring. The thin spots can then be seeded by hand just as the frost is coming out of the ground or when the ground has become somewhat settled. The disk drill may be run over the field and both alfalfa and a light seeding of oats may be made. We have followed the latter method with very good results and we believe it will prove satisfactory under the conditions outlined. The oats help to keep down the weeds and at the same time will add somewhat to the hay crop from the first cutting.

The plants turning yellow indicates a lack of nitrogen in the soil or possibly that the soil itself may be somewhat acid. This may be corrected by applying a light dressing of manure in the first case or the use of, say, two tons of ground limestone per acre if the soil is acid. It is possible that neither of these conditions exist and that the color of the alfalfa is merely due to a drouthy season which it may have passed through and that this difficulty will be wholly overcome next year.

Feeding Sugar Beets

Are sugar beets good for dairy cows and what is their feeding value? Are they hard on their kidneys?

Wayland, Mich. R. H. R.

Sugar beets are an excellent feed for dairy cows but because of the labor in harvesting and the expense of handling, we do not consider them as economical as corn silage. They have a larger amount of nutriment than mangels or rutabagas but it is generally held that the latter will yield somewhat more per acre and are less difficult to handle. Sugar beets are not hard on the kidneys but if fed in too large quantities there is a tendency to scour the animals. This is due to the high sugar content of the beet.

Sugar beets may be fed in such amounts as the cow will consume with relish and to the extent that they will not tend to cause scours. It would be well to start with not over 20 lbs., gradually increasing this to 30 to 40 lbs. We have known of mangels being fed in amounts up to 80 or 100 lbs. but we question whether this would be desirable in the case of sugar beets.

Sugar beets will contain, on the average, about 16 lbs. of dry matter and this dry matter is considered equal, pound for pound, to the dry matter found in grain. Some investigators consider beets as being a form of watery concentrate rather than a roughage like silage, and that they will replace grain at the rate of about 5 to 6 lbs. of sugar beets to 1 pound of grain. They are nearly equal, ton for ton, to corn silage in feeding value and as compared with mixed clover and timothy, it would take about 3 tons of sugar beets to equal 1 ton of mixed hay.

Winter Wheat Sowed by Mistake

Kindly advise me about my wheat. I bought some summer wheat and sowed it and now it turned out to be winter wheat instead of summer wheat. As soon as I saw that it was not summer wheat I pastured it. Now I will spread manure over it and can I leave it lay and raise a crop of it next spring? Some say I can and some say I can't.

Kiel, Wis. H. D.

There are no experiments to show what results you will get if you leave this wheat intending to raise a crop from it next spring. However, I would not recommend it as the chances are the wheat has attained such a growth that it will winter-kill rather easily. I have experimented with sowing winter wheat during July and have found that it attained such a growth that it was entirely winter-killed. However, if pastured closely you may have checked the growth enough so that it would be safe to leave it. It could be plowed next spring if it showed too much winter-killing and another crop put on the ground. If you top-dress this with manure you must be very careful to use fine manure and have it well spread as small bunches of the manure will almost certainly kill out the wheat under it.

With these suggestions in mind you can probably determine for yourself whether the winter wheat is in such condition that it will be safe to let it go through another winter.

B. D. LEITH.

Wisconsin College of Agriculture.

Ropy Milk

A neighbor of mine sells milk to a milk man and the milk man claims that after the milk sets for fifteen to twenty hours that the cream on the milk gets ropy. This neighbor is feeding his cattle mostly silage and his pasture is poor and he feeds some grain. What would be the cause?

Stroudsburg, Pa. J. A. B.

Ropy milk is due to bacteria which get into the milk from outside sources and it is not always easy to locate the source. Sometimes this may come from the water in which the cans or milk utensils are washed; sometimes from the water in the cooling tank and sometimes from bacteria which the cattle may pick up on their udders and bodies by wading through marshy ground or other wet places. Sometimes it may come from a stable infection, but this would be very unusual. About the only method to pursue is to exercise particular care that all milk utensils are thoroughly sterilized with boiling water and are then allowed to dry out thoroughly, either with artificial heat or by standing in the sun.

If this does not overcome the trouble, the next point of attack would be to see that the cooling tank is thoroughly cleaned out and preferably disinfected with a 12-ounce can of chloride of lime or bleaching powder to 100 gallons of water. As an additional precaution, all milk utensils might well be immersed in this solution. If neither of these treatments remove the trouble, then recourse should be had to keep all possible contamination away from the cows and out of the milk.

It may be possible that the water tank is the source of the infection, in which case it would be necessary to clean and disinfect this. The infection may come through the cows wading through wet places in the pasture, and the only proper procedure then is to restrict the cows from such areas. In addition, it would be well to see that the cows are thoroughly brushed off and possibly the udder and flanks washed in a disinfecting solution somewhat similar to that used for the milk cans. In all cases where the disinfecting solution is used, care will have to be exercised that it be properly rinsed off or time permitted for the odor to evaporate; otherwise, the milk will take up this odor.

Size of Cow Stalls

Kindly let me know the standard width of a cow stall and what is the regulation length for ordinary cows from manger to edge of gutter.

Harlem, Mont. J. A. S.

The standard width for cow stalls is three feet, six inches, although in the case of Jerseys and where there is a special desire to gain additional room, the width is sometimes cut to three feet, three inches. However, most present-day barns are built in 14-foot bents, which makes it more convenient to install 4 stalls to every bent. In case posts intervene, it may be necessary to vary the width somewhat but we would hesitate to recommend anything less than the standard width of three feet, six inches.

The length of a cow stall should vary according to the size of the cows. The smaller breeds, such as the Guernseys and Jerseys, will ordinarily be accommodated on a platform 4½ feet long between the stanchion and the gutter. The larger breeds, such as the Holsteins and Shorthorns, will require as much as 5 feet. It is also necessary to provide for heifers as well as aged animals, and for this reason provision is made in some barns so that the platform will be, say 4 feet six inches at one end and 5 feet at the other. However, with the patent stanchions now on the market, it may be quite as well to have the length about right for the medium sized cow to be kept and this can be varied to suit each individual by means of the alignment device which is common to practically all these patent stalls.

Selling Milk and Cream

My father sells 100 quarts of milk daily from a herd of ten Guernseys whose average test is 4.6% butterfat. The wholesale dairy to whom we sell our milk has made us the following offer: To take all our milk at 10c, all our cream at 80c, or part milk and part cream. Which would be the most profitable? We raise calves and so could get rid of the skimmilk.

St. Paul, Minn. W. V. F.

Selling the milk as whole milk would bring $10 for the hundred quarts. This amount of milk would weigh approximately 215 lbs. and if it tests 4.6%, it would contain 9.89 lbs. fat. At 80c per pound fat this would give a return of $7.91. According to these figures, our inquirer would have to receive a return of $2.09 from the somewhat less than 200 lbs. of skimmilk that he has left on the farm through selling cream.

For feeding pure-bred or high grade calves, we consider skimmilk to be worth not less than $1.00 a hundred and, in most cases, it is worth considerably more than this. However, it is quite possible that the cows are producing more milk than can be economically consumed by the calves and for this reason it might prove profitable to sell the surplus milk and only separate enough to provide skimmilk for the calves. Indeed, for feeding calves under six months of age, we do not feel there is a desirable substitute for skimmilk. We appreciate that men have had success in feeding skimmilk substitutes but it requires greater care and it is seldom that these calves will show as good growth or be as attractive as animals receiving skimmilk.

Emptying Test Bottles

HOARD'S DAIRYMAN:—Getting the cold acid and milk from a milk test bottle is a disagreeable job. One likes to make the test and get the stuff into the bottles but the cleaning up is another matter. Some years of testing have taught me that there is an easier way to clean out the test bottles.

When I was making regular trips to certain farms on official testing work I had a bottle emptying device there waiting for me. I made it during sparetime and put it away when I was ready to leave for the next job.

In lots of cases the vessel used for emptying the acid and milk into was a crock. Acid doesn't harm this sort of a vessel as it would any tin or metal vessel. So I had a board with holes bored through that would allow the neck of the bottle to pass through easily and not the lower part of the milk test bottle. Then I could warm a cold bottle up and dump it into the crock, then another, and so on until one or two were empty. These would be taken out and others placed in the holes over the crock.

Not only are your fingers saved from a pretty hot hand hold but the work can be done five times as fast since one can only hold two bottles at a time and must wait until they are all emptied before getting two more bottles. The time saved is valuable on a big testing job.

In a few places where I had to empty bottles in a sewer I made a board with the holes in and two standards at the ends. This made the stand higher than the length of the bottle necks.

Ohio. EARL ROGERS.

Eleventh Annual Dairy Cattle Congress

(Continued from page 547)

ny Slope; 3, Jones and McKerrow on Topsy's Ultra Lily; 5, Mountain Bros. on Kitchener's Pet of Iowanola. Heifer calf under 6 months —1, Jones and McKerrow on Chene King Northern Lady; 2, Marsh on Mayflower of the Prairie; 3, Woodbury on Appletree Point's Dolly Dimple; 4, Skaar; 5, Golinvaux on Cherry Pit; 6, Kingston on Dame of Muskego. Cow having official yearly record begun at 2 years, under 5—1 and 4, Jones and McKerrow on ———— and Governor's Ella of McKerrow's Farm; 2, Mountain Bros. on Engleside Pretoria Vrangue; 3, Hageman on Adel of Burnham Beach; 5, Schmidt on Marcus Glenwood's Daisy.

Exhibitor's herd—1, Jones and McKerrow; 2, Mountain Bros.; 3, Kingston; 4, Dairyland Farm; 5, Schmidt. Breeder's young herd—1, Marsh; 2, Mountain Bros.; 3, Woodbury; 4, Bohart. Calf herd—1, Marsh; 2, Jones and McKerrow; 3, Mountain Bros.; 4, Kingston; 5, Woodbury. Get of sire—1, Marsh; 2, Mountain Bros.; 3, Jones and McKerrow; 4, Golinvaux; 5, Kingston. Produce of cow—1, Marsh; 2, Kingston; 3, Woodbury; 4, Mountain Bros.; 5, Jones and McKerrow. Advanced Registry cow—1 and 2, Schmidt; 3, Bohart. Dairy herd—1, Jones and McKerrow; 2, Mountain Bros.; 3, Schmidt; 4, Woodbury; 5, Bohart.

Senior and grand champion bull—Cherub's Prince. Junior champion bull—Prince Charming of the Prairie. Senior and grand champion cow—Imp. Mildred of Les Godaines. Junior champion cow—Honey Bloom of the Prairie.

Holsteins

The Cattle Congress has never seen a Holstein show to compare with this year's. Not only was it larger than previous shows, but in point of quality it was way ahead of any previous Congress. Ordinarily one or two animals in a class are outstanding, but here there were many classes where the difference between first and second or even between first, second, and third was a matter of fine points or personal opinion.

The credit for this improvement, to a considerable extent, at least, belongs to the state breeders' associations that are responsible for the state herds, for besides state herds there were but three large exhibitors, Cass Farms of Iowa with 26 head, Marlow and Randall, Minn., with 13, and the Minnesota Holstein Co. with 12. The Wisconsin state herd included 27 animals entered by 17 exhibitors; the Kansas lot, 19 from 9 herds; and the Minnesota exhibit 23 head from 12 different herds in addition to the two above mentioned. Iowa added to this 58 animals entered by 11 exhibitors bringing the total of the black and white show to 152 animals representative of 51 midwest herds. In addition a Nebraska herd of 19 animals was scheduled to appear but failed because of transportation difficulties.

Although there were only four entries among the aged bulls competition was keen, and the ringside followers were pretty well divided into three camps, each of them sure that a different entry was the winner. Johanna Bonheur Champion 2d from the U. S. D. B. herd of Kansas, a consistent winner at earlier fairs, was in the best of form and found favor in the judge's eye. He is a little small and not stretchy enough to suit every one, but showed better through the flanks and over the hips than Iowana Mercedes Homestead, the Iowa State College bull second in line. The latter is a splendid type of bull, long bodied, with plenty of scale and style, but was unfortunately poorly shown. Wisconsin's entry, Cedar Lawn Canary Paul from Baird Bros.' herd, has the size, a good body, and the best of hips but showed a little too rough over the shoulders and low in the back to displace either of those above him.

The three entries in the three-year-old class included Mayowood Farms' Johanna Glenda Lad, an easy first. He is of somewhat the same type as the aged winner but possesses greater scale, is better over the shoulders, and longer bodied; good enough in fact to defeat the former for senior championship and later win final honors from the junior champion U. S. Korndyke Homestead Segis, the U. S. D. B. yearling calf.

The fifteen aged cows made the best class of the black and white show. They were, in fact, the best class of Holstein cows we have seen this season. The first four were extremely close with Irene Sarcastic De Kol, the Kansas entry, a ringside favorite. She is a cow of wonderfully good type but showed to a slight disadvantage, being due to freshen shortly. In consequence she carried more flesh than the judge apparently favored and he placed her fourth. Doetje Nellie Concordia, owned by Aitken Bros. of Wisconsin and first in the final lineup, is a very good type of dairy cow, especially good when one remembers that she lacks but a month of being 12 years old. Following her in line were Geraldine De Kol Paladin Paul, the Minnesota entry that in color and general conformation make her appear a sister or daughter of Minerva Beets, and Princess Concordia Segis 2d owned by M. Breen and Son of Iowa.

Minnesota showed a wonderfully good four-year-old in De Kol Albin Princess 2d owned by N. P. Hanson, an outstanding winner in a class of 6. Stylish, with plenty of quality and the best of type she was not only outstanding in her class but finally went up as senior and grand champion with the Aitken aged cow, her closest competitor.

Grahamholm Cornucopia Segis Lad, Mayowood's junior yearling, won junior champion for Minnesota over Belle Gem Longfield 2d, Wisconsin's winning senior yearling, Princess Maplecrest Pontiac De Kol, the first prize junior calf from the same state, and Miss Inka Homestead, the Minnesota Holstein Company's winning senior calf.

The state herd class, a new one for the show, brought out four entries, Minnesota, Wisconsin, Kansas, and Iowa, that were lined up in the order named. These four with at least one more will show at the National and it is far from a certainty that they will line up in the same order there.

H. C. Davis of Washington did the judging. Following is a complete list of the awards:

Bull 4 years or over—1, U. S. D. B. on Johanna Bonheur Champion 2d; 2, Iowa State College on Iowana Mercedes Homestead; 3, Baird Bros. no Cedar Lawn Canary Paul; 4, Cass Farm Co. on King Aaggie Hengerveld. Bull 3 years or over—1, Mayowood on Johanna Glenda Lad; 2, Wapsimoor on Sir Wapsie Flossmor; 3, Hetts on King Fan Segis. Bull 2 years, under 3—1, Schroeder on Sir Hengerveld Pietertje Ormsby; 2, Clarinda S. H. on King Pietertje Fayne Ormsby; 3, Mayowood on Ondine Homestead Posie; 4, Lashbrook on Sir Walker Segis Homestead; 5, Stubbs on King Fobes Genista Homestead; 6, Hetts on Juliana De Kol Lyons. Bull 1 year, under 2—1, McCoy on U. S. Korndyke Homestead Segis; 2, Carnation S. F. on Matador Segis Walker Piebe; 3, Iowa State San. on King Pietertje Ormsby Piebe 6th; 4, Wilson and Cotter on King Pietertje Ormsby Piebe; 5, O'Leary on East Troy Sir Ollie. Bull calf 6 mos., under 12—1, Minn. Holstein Co. on Sir Inka Superior Segis; 2, Hargrove and Arnold on King Piebe; 3, Iowana Farms on Iowana Johanna Korndyke; 4, Chestnut on Johanna Bonheur Ella De Kol; 5, Wieffenbach on King Pontiac Parthenea Champion; 6, U. S. D. B. on U. S. Lona Hilldale Skylark Champion. Bull calf under 6 months—1, Mast; 2, Kelley on King Bess Ormsby De Kol; 3 and 4, Hargrove & Arnold on King Pietertje Ormsby Piebe 23d and King Pietertje Ormsby Piebe 18th; 5, Cunningham on Joe Calamo McKinley Pietje.

Cow 5 years or over—1, Aitken Bros. on Doetje Nellie Concordia; 2, Mineral Spgs. S. F. on Geraldine De Kol Paladin Paul; 3, Breen on Princess Concordia Segis 2d; 4, Appleman on Irene Sarcastic De Kol; 5, Minn. Hol. Co. on South Side Inka De Kol. Cow 4 years, under 5—1, Hanson on De Kol Albin Princess 2d; 2, Boeckman on Jessie Tritomia De Kol 4th; 3, Barney on Sadie Cornucopia Eibertje; 4, Miller on Canary Lunde Pontiac Walker; 5, Cass Farm Co. on Almeda Luecke Hengerveld 5th. Cow 3 years, under 4—1, Miller on Canary Lunde Pontiac; 2, Hollyhock Farms on Queen Rag Apple Colantha; 3, Romig; 4, Aitken Bros. on Johanna Ferncliff McKinley; 5, Cass Farm Co. on Pearl Johanna Pontiac De Kol. Heifer 2 years, under 3—1, Stubbs on Delana Mechthilde Fobes; 2 and 3, Miller on Zella Rose Ormsby and Miss Canary Lunde Korndyke; 4, Minn. Hol. Co. on Far Oaks Miss Homestead Rue; 5, Scheming on Jewel Posch Segis. Heifer 18 months, under 2 years—1, Trieloff Bros. on Belle Gem Longfield 2d; 2, Minn. Hol. Co. on Far Oaks Inka Homestead; 3, Marlow & Randall on Mankato Ormsby Pietertje; 4 and 6, U. S. D. B. on Johanna Bonheur Segis De Kol and Johanna Bonheur Juliana Inka; 5, Minn. Hol. Co. on Far Oaks Fannie Homestead. Heifer not in milk, 12 months, under 18—1 and 3, Grahamholm on Grahamholm Cornucopia Segis Lad and Grahamholm Colantha Segis Kaan; 2 and 4, Jefferson Co. Farm on Princess Beauty Calamo and Inka Calamo Beauty; 5, Kansas State College on Canary Paul Inka. Heifer calf 6 months, under 12—1, Minn. Hol. Co. on Miss Inka Homstead; 2, Halback on Alice Hengerveld Bess Ormsby; 3, Mayowood on Ondine Gretchen Colantha; 4, Grosser on Lizzeta Beauty Segis Korndyke 2d; 5, U. S. D. B. Heifer calf under 6 months —1, Holloway on Princess Maplecrest Pontiac De Kol; 2, Halback on Esther Bess Pietertje; 3, Spaulding on Queen Segis Piebe Mercedes; 4, Grahamholm on Grahamholm Pauline; 5, Andris & Son on Ruby Johanna Burke Canary. Cow having official yearly record begun at 5 years or over—1, Minn. Hol. Co. on South Side Inka De Kol; 2, Baird Bros. on Aaggie Nephie Hengerveld; 3, Marlow & Randall on Feronia of Shady Nook. Cow having official yearly record begun at 2 years, under 5—1, Cass Farm Co. on Lulu Baby Girl; 2, Barney & Sons on Sadie Cornucopia Eibertje; 3, Aitken Bros. on Johanna Ferncliff McKinley.

Exhibitor's Herd—1, U. S. D. B.; 2 and 4, Cass Farm Co.; 3, Marlow & Randall. Breeder's Young Herd—1, Minnesota Hol. Co.; 2 and 4, Cass; 3, Marlow & Randall. Calf Herd —1, Minn. Hol. Co.; 2, Hargrove & Arnold; 3, Cass Farm Co.; 4, Marlow & Randall. Get of Sire—1 and 5, Hargrove & Arnold; 2, Minn. Hol. Co.; 3, Cass Farm Co.; 4, Aitken. Produce of Cow—1, Cass; 2, Miller; 3, Minn. Hol. Co.; 4, Marlow & Randall; 5, Aitken Bros. Advanced Registry Cow—1, Minn. Hol. Co.; 2, Cass. Dairy Herd—1, Miller; 2, Aitken; 3, Cass.

Senior and Grand Champion Bull—Johanna Glenda Lad. Junior Champion Bull—U. S. Korndyke Homestead Segis. Senior and Grand Champion Cow—De Kol Albin Princess 2d. Junior Champion Cow—Grahamholm Cornucopia Segis Lad.

Brown Swiss

Five Brown Swiss herds made the best showing the breed has ever had at Waterloo. Howard C. Barker of Ohio made the placings and found good dairy qualities in every class. His comment was especially favorable on the groups which filled the ring with a representation which was good advertising for the big brown cow. The Hull herd of Ohio furnished an extreme illustration of the hardships show cattle undergo. It arrived late at Waterloo after an eleven-day trip during which they were in a car nine days. They were shown under this handicap.

Vogel's College Boy won his class and the grand champion for the Ohio herd, defeating Bohart's winning two-year-old, Zell A. W., and the leading junior, Howard Carl, owned by Mooney and Larrabee of Iowa.

The aged cow group was one of the best seen. Betty of Lakeview, grand champion of the 1919 National, and shown by A. E. Bower of Ohio, led the class. She was shown dry but well deserved her rating, particularly since Swiss Valley Girl 9th and 7th, in second and third places, showed the effects of their long journey. The winner took the championship in the open and the Advanced Registry contests. The Iowa herd took the junior purple for females with the junior calf, Janette L. 2d.

Seven firsts and two championships went to Hull Bros., six firsts to Bo-

(Continued on page 570)



WISCONSIN VITEX DAIRY FEED

4-All is a balanced ration for beef cattle, sheep, hogs and horses. It has made a record for quick gains at low cost.

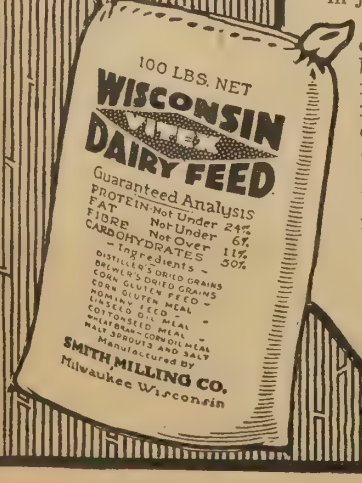
THESE crisp fall days sharpen the appetites of your cows. They'll eat you out of house and home on a whole grain ration.

You can reduce feeding costs and get a bigger milk yield by feeding Vitex Dairy Feed, the Wisconsin-made mixed feed containing Distiller's Grains, Gluten Feed, Linseed Oil Meal, Cotton Seed Meal, Wheat Bran and other products scientifically mixed in just the right proportion.

Vitex has the right amount of protein, fat, fibre and carbohydrates to make it a correctly balanced ration. It is regularly used on thousands of Wisconsin's successful dairy farms.

Ask your feed dealer for Vitex and 4-All. If he does not handle them, write us.

SMITH MILLING CO.
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Factory Whistles *and* Farm Production

How modern machinery is helping to solve the problem

FROM the jumble of strikes, transportation troubles, and political confusion an alarming condition stands out—Industry is draining productive labor from the nation's farms.

The "hired man" has become a rarity in many sections of the country. The factory whistle allures with the promise of high wages and short working hours. Government reports show a farm-labor supply which is only 72.4% normal.

In this grave situation modern machinery offers a partial solution. Reports of the Department of Agriculture show that the scarcity of labor has had the least effect in districts where farming is done by modern machinery. This brings home again—and in a striking way—the advantage and efficiency of tractors.

Yet farmers who use less than scientific lubrication on their tractors are not getting utmost efficiency. They may not realize it, but their fuel consumption is excessive and their oil consumption often is positively extravagant. They are playing with loss of power, frequent breakdowns and quick depreciation.

Scientific lubrication means *engine results.* Gargoyle Mobiloils when used as specified in our Chart of Recommendations have in hundreds of public and private tests affected a fuel economy from 17% to 25% and a saving of oil up to 70%.

To sum up: Scientific tractor lubrication insures full power, reduces breakdowns, and thus assists in the solution of a national problem—Farm Production.

* * *

Gargoyle Mobiloils are put up in 1-gallon and 5-gallon sealed cans, in 15-gallon, 30-gallon, and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a book containing complete automobile and tractor charts and other valuable data.

GARGOYLE

Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC BRANCHES:	New York	Philadelphia	Detroit	Minneapolis	Kansas City, Kan.
	Boston	Pittsburgh	Chicago	Indianapolis	Des Moines

Chart of Recommendations *for* TRACTORS

(Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

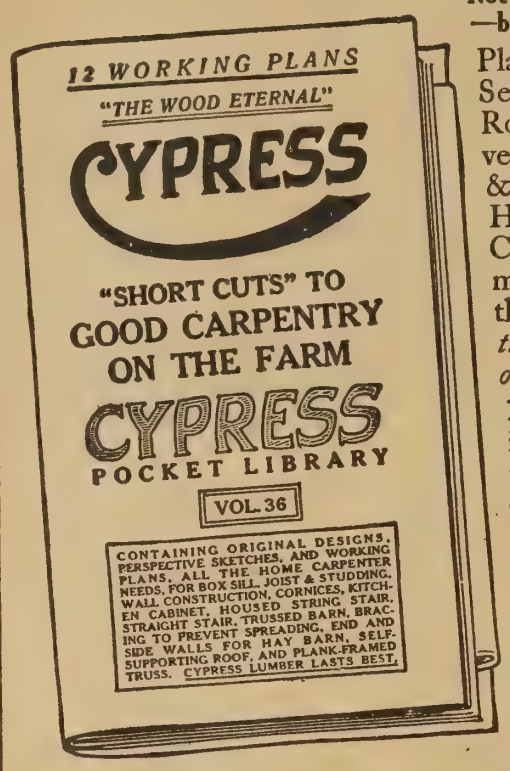
If your tractor is not listed in this partial chart, consult the chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for all Tractors.

NAMES OF TRACTORS	1920 Summer	1920 Winter	1919 Summer	1919 Winter	1918 Summer	1918 Winter	1917 Summer	1917 Winter	1916 Summer	1916 Winter
Allis-Chalmers (General Purpose)	A	A	A	A	A	A				
" All Other Models	BB	A	BB	BB	A	A	BB	A	A	A
All Work	B	A	B	B	A	A	B	A	B	A
Appleton	BB	A	BB	A	BB	A	BB	A		
Aultman-Taylor (18-36)					BB	A	BB	A	A	A
" " (22-45)	BB	A	BB	A						
" " (15-30) (Waukesha Eng.)	BB	A	BB	A						
" " All Other Models	B	A	B	A	B	A	B	A	A	A
Avery (5-10)	A	A	A	A			A	A	A	Arc.
" Motor Cultivator & Planter	A	Arc.								
" All Other Models	B	A	B	A	B	A	B	A	B	A
Bates Steel Mule	B	A	B	A	B	A	B	A		
Bean-Track-Pull	B	A	A	A	A	A	A	A		
Big Bull			B	B	A	A	B	A	B	A
Buckeye (Findlay, Ohio)	B	A	B	A	B	A	B	A	B	A
Case (9-18)					A	A	A	A		
" (10-18)			BB	A						
" (10-20)					A	A	A	A	A	A
" (12-25 & 20-40)					BB	A	BB	A	B	A
" (15-27)	BB	A	BB	A						
" All Other Models	B	A	B	A			B	A	B	A
Clettrac	BB	A								
Cleveland			BB	A	BB	A	BB	A		
Coleman	B	A	B	A	B	A	B	A		
Common Sense	BB	A	BB	A	BB	A	BB	A	A	A
C. O. D.			BB	A	BB	A	BB	A	A	Arc
Craig	BB	A	BB	A						
Creeping Grip			BB	A	BB	A	BB	A	B	A
E. B. (9-16)			B	A	B	A				
" (Reeves)	B	A	B	A	B	A	B	A	A	A
" All Other Models	A	A	A	A	A	A	A	A	A	Arc.
Flour City (20-35)	B	A	B	A	B	A	B	A	A	Arc.
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Fordson	BB	A	BB	A	BB	A				
Gas Pull					B	A	B	A	B	A
Grain Belt	BB	A	BB	A	BB	A	BB	A		
Happy Farmer					B	A	B	A	B	A
Hart Parr	B	A	B	A	B	A	B	A	B	A
Heider	BB	A	BB	A	BB	A	BB	A	B	A
Hesston			B	A						
Hollis			BB	A						
Holt Caterpillar (Model 18)							BB	A		
" " (Model 65)	BB	A	BB	A	BB	A	BB	A	BB	A
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Huber	BB	A	BB	A	BB	A	BB	A	B	A
Illinois	B	A	B	A	B	A	A	A		
Indiana	A	A	A	A						
K. C. Prairie Dog	BB	A	BB	A	BB	A	BB	A	B	A
La Crosse	B	A	B	A						
Liberty	B	A	B	A	B	A				
Lightfoot			BB	A	BB	A				
Minneapolis	B	A	B	A	B	A	B	A	B	A
Mogul (8-16)					A	A	A	A	A	A
" All Other Models			BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A	BB	A
Monarch	BB	A								
National			BB	A	BB	A				
Neverslip (20-12)			B	A	B	A	BB	A		
" (30-18, 10-6)			BB	A	BB	A				
" All Other Models					B	A				
New Age			BB	A	BB	A	BB	A		
Nilson	BB	A	BB	A	BB	A	BB	A	B	A
Oil Pull (14-28, 10-20)					BB	A				
" " (12-20, 16-30)	B	A	BB	A						
" " (20-40)	B	A	BB	A	BB	A				
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Parrett	B	A	BB	A	BB	A	BB	A	B	A
Pioneer	B	A	B	A	B	A	B	A	B	A
Royer	B	A	B	A	B	A				
Rumely (8-16)					BB	A	BB	A	BB	A
" (12-24)					B	A	B	A	A	A
Russell (Giant)	B	A	B	A	B	A	B	A	A	Arc.
" All Other Models	BB	A	BB	A	BB	A	BB	A	A	Arc.
Sandusky	BB	A	BB	A	BB	A	BB	A	A	A
Square Turn (15-30)					BB	A				
" " (18-35)	B	A	B	A	B	A				
Titan	BB	A	BB	A	BB	A	BB	A	BB	A
To-Ro	A	A	A	A						
Townsend	B	A	B	A						
Trundaar	BB	A	BB	A	BB	A				
Turner Simplicity	BB	A	BB	A	BB	A	BB	A		
Twin City (Model 15)									A	A
" " (Model 16)			BB	A	BB	A				
" " (Model 12-20)	BB	A	BB	A						
" " (Model 20-35)	BB	A								
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Velie			B	A	A	A				
Wallis	BB	A								
" Cub					B	BB	B	BB	A	Arc
" (Junior)			BB	A	BB	A				
Waterloo Boy	A	A	A	A	A	A	A	A	B	A
Wheat			B	A						
Whitney	BB	A	BB	A	BB	A	A	A		
Wisconsin	B	A	B	A	B	A	BB	A		

VALUABLE THIS BOOK EVERY DAY & *of 48 pages.* **YOURS** FREE ON REQUEST

"SHORT CUTS" TO GOOD CARPENTRY ON THE FARM

Not simply "how to use," —but HOW BEST TO USE



Plank-framed Truss, Self-supporting Roof. How to Prevent Spreading. End & Side Walls of Ideal Hay Barn. Kitchen Cabinet—and many other plans that will *save you the time of figuring them out yourself.*

12 Full Size Working Plans (Plus 48 pages of text) Free on Request (and no obligation.)

(We sell no lumber—Build of any kind of lumber you think best.) Cypress is best for all non-rot uses—and is worth insisting on—but that is up to your own lumber knowledge. GET VOL. 36 ANYHOW—NO COST—then use your own judgment as to your materials. Can we do more? (We want you to use Cypress only where Cypress is *best* for *you.*) **JUST DROP A CARD** with your name and address on it, and ask for Vol. **36**—Also ask for Vol. 1 (U. S. Gov't Rept. on "The Wood Eternal.")

SOUTHERN CYPRESS MANUFACTURERS ASSN.
103 Perdido Bldg., New Orleans, La. or 103 Heard Nat'l Bank Bldg., Jacksonville, Fla.

KING SEGIS PATENT LOCK
Ear Tags, Bull Staff and Rings. Description and prices sent on application. 300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business. H. A. Meyer, Syracuse, N. Y.





The "STAY THERE" Aluminum Ear Markers are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalog and prices mailed free. Ask for them. Address Wilcox & Harvey Mfg. Co., 568 W. Randolph St., Chicago, Ill.

"*LITTLE* THINGS"

That Guarantee Little Trouble and Little Expense

Besides the supreme United States qualities of close skimming, easy turning and easy cleaning—features of which the owner is conscious in every-day use—here are a few of the construction details that stamp the United States Cream Separator as a fine, long-lived, finished mechanism:

One-piece sanitary frame — easy to clean; heavy enough to prevent excessive vibration.

All gears enclosed; no wear from grit and dust.

Automatic oil-splash system — introduced by the United States; imitated by others.

Low and most practical-shaped supply can.

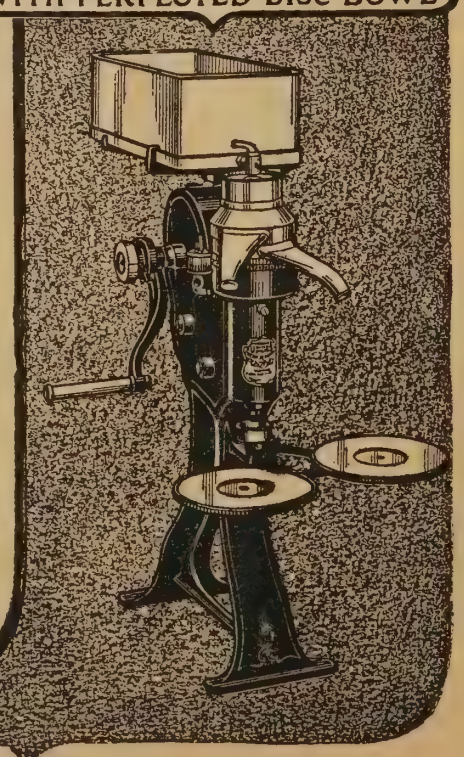
These and many other superiorities guarantee freedom from disappointment and frequent repairs.

Write for catalog and convince yourself that your next separator is to be a United States.

Vermont Farm Machine Corporation
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UNITED STATES CREAM SEPARATOR
WITH PERFECTED DISC BOWL



Washington State Fair

(Continued from page 537)

West on Middledale of Green Hill and Middledale Julette; 3, Wallace and Fordyce on Bessie of Antrim. Cow 3 years and under 4—1, Smith on La France of Fircrest Farm; 2, Vander Greind Bros. on Lilac of Bralee. Heifer 2 years and under 3—1, West on May of High Rock. Senior yearling heifer—1 and 2, Wallace & Fordyce on Princess Twinkle and Philipina of Groton; 3, Smith on Lura of Pleasant Point; 4, West on Reuben's Pearl. Junior yearling heifer—1, Wallace & Fordyce on Catherine's Dimple Queen; 2, Vander Griend Bros. an Bakerview Bonita; 3, West on Middledale Bernice. Senior heifer calf—1 and 2, Majewski, on Zaro Dallas and Zaro's Diamond; 3, Smith on Fircrest Rosebud. Junior heifer calf—1, Smith on Fircrest Sequel's Pearl.

Junior and grand champion bull—Woodvale Radium. Senior and grand champion female—La France of Fircrest Farm. Junior champion female—Zaro Dallas.

Ayrshires

Exhibitors: Washington State College and E. W. Van Tassell, both of Washington.

Judge: Chesley F. Jenness, Iowa.

There was little competition on Ayrshires, although the presence of Mr. Van Tassell's 19 head furnished entries in most of the classes. His Willowmoor bred Peter Pan 25th had no opposition in the aged bull class, and in two other bull classes the state college had no competition. Mr. Van Tassell fared well in the female classes, and took all the first awards on groups and both grand championships. Everything in the state college display, except the 2-year-old bull, was bred at Pullman. This was also true of the state college Guernseys and Jerseys, and the combined exhibit formed an excellent demonstration of results that can be accomplished by breeding up from small beginnings.

The Ayrshire awards were as follows:

Bull 3 years and over—1, Van Tassell on Willowmoor Peter Pan 25th. Bull 2 years and under 3—1, W. S. C. on Queen's Scottish Cavalier. Senior bull calf—1 and 2, W. S. C. on Chinook Peter Pan Ban and Chinook Cavalier Alf; 3 and 4, Van Tassell on Stewart of Wenatchee and Wenatchee's Robin Hood. Junior bull calf—1, W. S. C. on Chinook Cavalier Caddy.

Cow 4 years or over—1 and 3, Van Tassell on Glengarry's Scottish Queen and Stewart Girl of Wenatchee; 2, W. S. C. on Princess Wilma of State College. Cow 3 years and under 4—1, Van Tassell on Stewart's Robin. Heifer 2 years and under 3—1, W. S. C. on Chinook on Peter Pan Elsie; 2, Van Tassell on Queechie's Choice of Wenatchee. Senior yearling heifer—1 and 2, Van Tassell on Stewart's Girl of Wenatchee 2nd and Lady Bruce of Wenatchee 3rd. Junior yearling heifer—1 and 2, Van Tassell on Lady Scot of Wenatchee and Scottish Queen of Wenatchee. Senior heifer calf—1, W. S. C. on Chinook Cavalier Alice; 2, Van Tassell on Lady Bruce of Wenatchee 4th. Junior heifer calf—1, Van Tassell on Scottish Queen of Wenatchee 2nd.

Championships—Senior and grand champion bull—Willowmoor Peter Pan 25th. Junior champion bull—Chinook Peter Pan Ban. Senior and grand champion female, Glengarry's Scottish Queen. Junior champion female—Chinook Cavalier Alice.

Condensed Milk Manufacturers Closing Factories

Will Cease Operations Until Conditions Improve—Prices Decline with Decrease of Exports

During the past two months the condensed and evaporated milk market has steadily become more demoralized and has now reached a critical stage with many manufacturers.

Export business which stimulated increased production and consequently the building of many new factories during the war is now at a standstill. The domestic market has been flooded with goods offered at cut-rate prices by companies which have been exporting. Foreign demand has decreased partly on account of the increased production of Holland, Norway, and Denmark which is being offered in this and other countries at prices below our own.

Hand-to-Mouth Buying

It is reported that jobbers and wholesale grocers, in expectation of still lower prices, are not taking large stocks and are buying largely for immediate sale to retail trade. The "tight money" condition is said to be a factor with many manufacturers and jobbers, causing them to unload at least a portion of their stocks previously made of high-priced sugar at prices near or below actual cost.

Stocks in the hands of manufacturers on September 1 showed an increase, while unfilled orders had become practically "nil" on bulk goods and less than those of August 1 on case goods. Some firms reported that their stocks were larger than ever before and that the bottom had practically dropped out of the market.

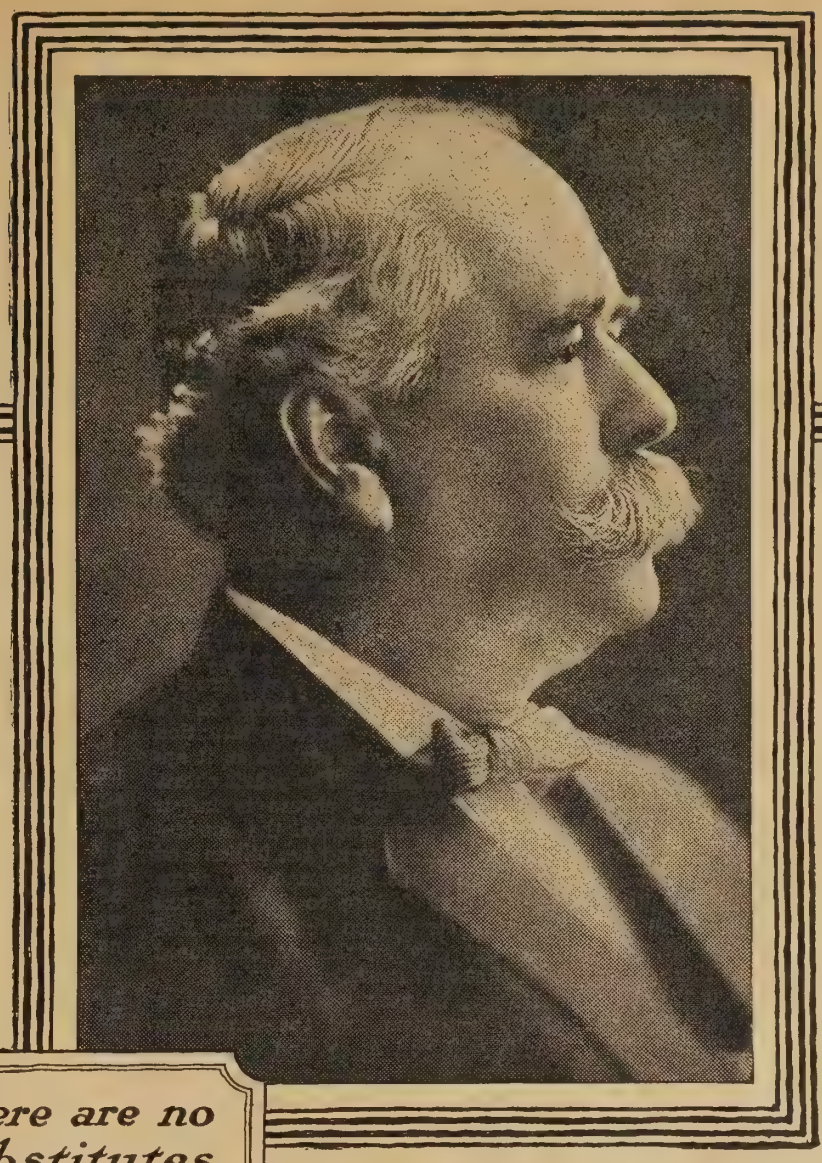
The fact that producers in most sections are contending for higher prices for milk on October 1 presents a serious problem to manufacturers. Some few manufacturers have offered to co-operate with producers by manufacturing stocks and holding them until sold, before determining the prices to be paid the milk producers. Others announce that they will close their factories until the present situation improves. Such action will result in a curtailed supply and will permit present stocks to be disposed of at prices more satisfactory to holders.

Of the 20,500,000 lbs. of condensed milk exported in August, over 10,000,000 went to the United Kingdom, nearly 3,000,000 to Cuba, and nearly 1,500,000 to the Straits Settlements. Of the 5,000,000 lbs. of evaporated exported, France took nearly 2,000,000, the United Kingdom 1,220,000, and Cuba nearly 375,000, and other countries less than 200,000 lbs. each.

Current prices on evaporated case goods range from $5 to $7 per case, and on condensed from $8 to $10.50, with advertised brands bringing the higher prices.

Skim condensed bulk is quoted at $8.75 to $9.50 per hundredweight, and condensed whole milk in bulk at $15 to $16.—U. S. Bureau of Markets.

Emerson has said that the most valuable product of a farm is not crops but character, and that men take out of the earth much more than they put into it.



Dairy Pioneering

IN every great industry you will find some man—some dominant personality—whose thoughts and ideals are so closely identified with it that they become part of the industry itself.

To dairymen and dairy farmers, the name of P. M. Sharples means **Progress.** That is because the improvement of dairying has been the one big thought of P. M. Sharples for nearly forty years.

There are no substitutes for dairy foods

P. M. Sharples

Birth of Made-in-America Separator

Back in 1884, Mr. Sharples undertook to give the American dairyman a more efficient method of separating milk. As a machinist he had set up and repaired the cumbersome, inefficient foreign machines with which the American dairymen were first supplied. The first big task he set for himself was to build a better separator—an all-American machine.

His first Separator won high favor with American dairymen.

Sharples improvements followed, one after another, until all were finally embodied in the Sharples Suction-feed Cream Separator. This machine overcame the wasteful, fixed-feed principle and made uniform clean skimming possible *at any speed.*

Saving Millions of Pounds of Butterfat

Through this machine, Mr. Sharples realized his first dream of Progress. It made possible the saving of millions of pounds of butterfat which was translated into millions of dollars of added prosperity to the dairy industry.

To help other branches of dairying, Mr. Sharples invented the accepted standard machines for the separation of whey and for clarifying and emulsifying milk.

An Organized Interest in Dairying

But machines alone could not express Mr. Sharples' ideas of service to the industry. He gathered around him an organization of men who believed with his own faith in the future of dairying—shared his foresight and vision in connection with its development and multiplied his own energy in giving life to his ideals.

These men have not stopped at selling Sharples machinery and saving money to the dairymen. They have worked hand in hand with the faculties of agricultural colleges, with the officials of experiment stations, with breeding associations, with the National Dairy Council—with every agency, to make the dairying industry better and more powerful.

A Sharples Keynote for Dairymen

It is a Sharples slogan—"There are no substitutes for dairy foods," that has become the rallying cry of dairy farmers throughout the world. It voices the faith of P. M. Sharples. It expresses the belief that makes the Sharples organization a powerful part of every movement for the upbuilding of the industry.

With this confidence as a foundation, the Sharples organization has built the greatest separator business in the world—selling more Sharples separators than are sold of any other make, American or foreign.

Get Acquainted at National Dairy Show

These men of the Sharples organization want to meet other dairymen at the Sharples Exhibit at the National Dairy Show at Chicago. They will be there to give service. They will help any dairyman with the solution of the many problems of the dairy industry.

The Sharples Building in Chicago, 565 West Washington Boulevard, is permanent headquarters for the Middle Western Sharples forces and for any dairyman who can make use of their services. Visitors are welcome any time.

THE SHARPLES SEPARATOR COMPANY

WEST CHESTER, PA. Branches: CHICAGO, SAN FRANCISCO, TORONTO

P-140

DON'T BE STAMPEDED

Butter and Cheese Shortage Greater Than the Condensed Milk Surplus

CLOSE all condenseries for four months and turn the milk into butter and cheese, yet even then we would not make up the shortage devloped in the production of butter and cheese for the first nine months of this year.

This is a startling statement, and ought to quiet somewhat the alarm over the present situation. Indeed, we view the present milk situation and its possibilities much as a strong, solvent bank fears a money panic and the consequent run on the bank. Lack of confidence spells disaster. Let us keep our heads and be sensibly optimistic. We recognize the seriousness of the present situation as it affects the milk producer, but even he should see the silver lining in the cloud and so sit tight.

The skeptical will want proof of the above assertion. Here it is:

For the first nine months of 1920 there was received at the markets of Chicago, New York, Boston, and Philadelphia, a total of 320,465,376 lbs. of butter and 122,131,582 lbs. of cheese. To manufacture this required 7,951,904,478 lbs. of milk. During the corresponding nine months of 1919 the receipts of these four months totaled 380,944,620 lbs. butter and 143,737,927 lbs. cheese or a milk equivalent of 9,437,216,290 lbs.

These four markets, as compared with last year, are short in their receipts of butter and cheese to the extent of about a billion and a half pounds of milk. It is safe to assume that the shortage of all markets is considerably larger than this, but let us for a moment compare this shortage with the total production of condensed and evaporated milk last year. During the twelve months of 1919 the condenseries and evaporated milk plants used approximately 4½ billion pounds of whole milk, or an average of 1½ billion pounds in four months. This is just the amount of the shortage that has already developed in butter and cheese during the first nine months of this year, as shown above.

So we repeat. If the condenseries and evaporated milk plants should turn all their milk into butter and cheese until February 1, they would only make up the shortage already shown in the four markets mentioned. The factories that have closed estimate that the so-called condensed milk surplus will disappear by January 1, so it would seem that there are several factors of conservatism in the statement that the present situation is not necessarily as serious as it appears at first sight. The year's shortage of butter and cheese is larger than the figures quoted, the condenseries cannot make up the billion and a half pounds shortage in three months, and failure to manufacture ought to strengthen the market and wipe out any surplus of condensed milk that now exists.

Do not be stampeded. Keep up a kindly optimism and the darkening clouds will roll away and expose to view the bright sunlight of hope and prosperity. Other factors may intervene to render the situation less favorable, but the closing of condenseries does not mean that the bottom will drop out of the milk market or that the prices of butter and cheese will recede materially from their last year's average.

Pooling Progress in New York

There is every indication at this writing that the policy of blending the proceeds from the sale of every member's milk into a common pool will be an assured fact. Contracts are pouring into the headquarters of the Dairymen's League by the thousands. Letters and telegrams are coming from every county and every section of League territory, assuring the League that the local branches are either already over the top or soon will be.

County meetings have been held in every county in League territory and with one or two exceptions these county meetings voted unanimously to sign the co-operative association contract, one of the articles of which provides for the pooling of the proceeds of the members' milk. These meetings were followed by local meetings in nearly all of the 1,100 branches in every community of the six states in which the League is operating. Local branch meetings are still being held at this writing. They have been the best attended of any meetings since the dairymen had their first controversy with the dealers in the fall of 1916. The same spirit prevailed. At literally hundreds of them every dairyman signed the co-operative contract and order for pooling. Every individual producer is now being canvassed by local committees of dairymen.

The opposition to this policy of the organization has been exceptionally small, considering the large number of members and has been due in almost every case to a lack of understanding of the true principles in the contract. The almost unanimous support which this policy has received from the farmers shows that every producer, whether his market has been temporarily interrupted or not, realizes the necessity of placing his business on a better co-operative basis.

Dairymen who have been producing milk for the fluid market have been as quick to sign as those whose market is now temporarily interrupted because of the failure of the manufacturers to buy. These men realize that the time is likely to come at any moment when they themselves may be without a market, and they realize also that unless pooling of the proceeds is made effective so that the producers of manufactured milk do not suffer great loss, this milk will be placed on the fluid market and so lower the prices that no one can afford longer to produce milk for any purpose. Unless such a method can be made effective soon, it is certain that thousands of dairy cows will have to be sold for beef, and consumers will later face a great scarcity of and high prices for dairy products.—E. R. EASTMAN, Dairymen's League News.

Farm Bureau and Marketing

Farm Bureau federations of thirteen middle west states have asked the American Farm Bureau Federation to create a national wool selling agency for their state wool pools. This action was taken at a meeting of presidents and secretaries at Manhattan, Kansas, during the latter part of September. These states have wool pools totaling 30 million pounds now in storage.

This further step of co-operative marketing is intended to get the full market price based on world's supply and demand. Growers say that each of the state pools selling separately are competing against each other and buyers have taken the advantage of that by hammering prices. A member from each wool growing state will be added to the present wool committee of the American Farm Bureau, and the wool pools of the western states will be asked to take part.

"No matter what price this wool brings, the principal of wool pooling is economically sound," said J. F. Walker, chairman of the committee. "Farmers have done their own warehousing and grading, and will sell direct to manufacturers. Last year they have profited from 10 to 15 cents a pound over the old way of selling to the country buyer at the front gate. This has not made the consumer pay more but has encouraged production."

Shoddy and Virgin Wool

Mr. Walker said the practice of chopping up old woolens and reworking them into cloth has interfered with the wool market. "Virgin woolens have advanced 250 per cent since 1914 while shoddy has advanced from 400 to 800 per cent. I visited a middle west woolen mill recently where not a pound of virgin wool was being used. This mill sold six-pound blankets made of woolen rags for $18 each, wholesale. These blankets sold in retail in Chicago for $35 to $42. This practice compels the sheep grower to compete with the rag man and gives the consumer a product that will not wear one-fourth as long as virgin wool."

Favor Truth in Fabric Bill

To overcome this trouble the farm bureau federations will favor the "truth in fabric" bill recently introduced into Congress. This bill requires manufacturers to label their goods, stating exactly the amount of shoddy used. The tariff question was discussed and it was brought out that there is a duty of 30 per cent on woolen cloth to protect American manufacturers, but not a cent on unmanufactured wools to protect the wool growers.

Marketing Holds Farmers' Attention

At the Kansas meeting the marketing of dairy products was discussed and a recommendation made to the National Asscciation to call a conference of all organizations. Co-operative marketing seems to hold the center of attention of middle western farmers. At the national grain marketing conference called by the American Farm Bureau Federation in July, a similar conference for live stock marketing was asked for. This conference will be called the fore part of October and all farm organizations will be represented. The fruit and vegetable growers have asked for a national conference which will be held soon.—Illinois Agircultural Association.



FRED KOENIG

The Extension Department of the Holstein-Friesian Association of America has secured the services of Mr. Fred Koenig for its publicity work. Under President Aitken's direction he will supply news to agricultural and dairy publications.

Mr. Koenig has had good experience in agricultural journalism and comes well prepared to take charge of the duties of his new position. He is a graduate of the Iowa State College and has specialized in dairy husbandry.

Coming Events

Oct. 18-22—Wisconsin Junior Live Stock Exposition, Madison, Wis.

Louisiana State Fair, Shreveport, La., October 28 to November 7. W. R. Hirsch, Secretary.

Nov. 9—11, 1920, Wisconsin Buttermakers' Association meets in Madison. Secretary, H. C. Larson, Wisconsin.

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.



GRAND CHAMPION BULLS AT THE NEW YORK STATE FAIR

Left to right: Gamboge's Royal Majesty, Jersey sire in the Inderkill Farms, New York, herd; the Ayrshire bull, Auchenbrain Toreador, owned by Middlesex Meadows Farm, Massachusetts; and Pencoyd's Secret Marose, the Guernsey bull owned by U. A. Woodbury II, Vermont.



"Register of Merit" Jerseys on the Oak Grove Jersey Farm of Mr. William M. Knight, Eagle, Wisconsin. A Milwaukee Air Power System serves Oak Grove Farm. Read Mr. Knight's letter below

Good Cows Deserve *Good Care*

OAK GROVE JERSEY FARM

PURE BRED JERSEY CATTLE AND REGISTER-OF-MERIT STOCK

W. M. KNIGHT, PROPRIETOR

Phone 87

EAGLE WIS.

Sept. 21st, 1920

Milwaukee Air Power Pump Co.,
Milwaukee, Wisconsin.

Gentlemen:

I am glad to say, in answer to your inquiry, that your Milwaukee Air Power Water System which you installed for me four years ago, is operating up to every expectation.

A good water system is important to anybody in the dairy industry, and my cows drink plenty because the System gives water that is always fresh and cool.

I am a "Milwaukee Booster" because the System saves me trouble every day and never causes any trouble itself.

Very truly yours,

W. M. Knight.

House them right, put running water in their barn. Install electric lights. In the early morning and at night you need good light to care for them properly.

Have good, fresh water always ready for them to drink —it means more milk.

Milwaukee Systems provide water *direct from the well*—always fresh, always cool, never stored.

Milwaukee Systems include electric lighting if desired—operated by the same power as the water system.

Milwaukee Systems are simple, economical, efficient—can be installed on a small scale and added to afterward as desired.

Milwaukee Systems are not expensive—they soon pay for themselves by making your farm more valuable and producing greater profits for you.

Milwaukee Systems are easy to install. Every installation is exactly right for each farm, because it is put in under the guidance of an *expert* who knows how to adapt it to any peculiar local conditions. The *Expert's* advice and services are *free*. Get in touch with the Expert near you. Write us for his name and address—today.

MILWAUKEE AIR POWER PUMP COMPANY
876 Third Street, Milwaukee, Wisconsin

Milwaukee
Air Power — WATER EITHER OR BOTH LIGHT Systems

Ask the Expert

Let us send you the name and address of the Water and Light Expert—our representative—who lives near you. He will help you figure out a practical system for your farm — without charge for his investigations



Could you use 3 hours more a day?



A Western Electric lamp post outside means an up-to-date farmer inside.

"As a rule we farmers don't give much thought to the value of our time. But we suddenly realize that time is worth money, when milking the cows or mixing the feed keeps us from bigger jobs, out in the fields.

"Last year I made up my mind that I would look for a farm plant with power enough to do real work. The one I picked was the Western Electric Power and Light Outfit, and please notice that putting the word Power first in the name describes the outfit very well. It is powerful. But I'm not going to praise it up to the skies. I just want to describe this outfit and the work it is doing for me, and let you judge whether it would suit your needs too.

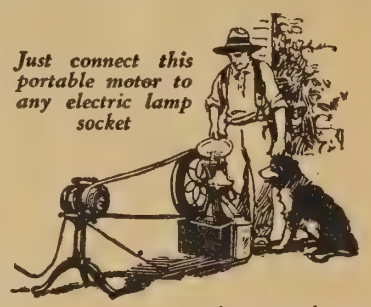
The battery lasts longer

"It is the 'tapering charge' that makes the Western Electric battery last so long. The charge doesn't strain the batteries, because as they fill, the current gradually slacks up by itself. These batteries are powerful too. They can run my portable motor for hours and hours on a single charge. Or they can operate ten electric lamps for thirteen and a half hours.

"Then there is the generator, built for endurance and hard work. In fact, it will run such a combination as an electric iron, twenty lamps and a one-sixth horsepower motor just as long as you keep it going.

"With the batteries and the generator working together, you just add the capacity of both. That explains how I can use electricity to milk the cows, separate the cream, churn the butter, turn the grindstone and pump water.

Just connect this portable motor to any electric lamp socket



The powerful engine is a big help

"The Western Electric Outfit has an extra size engine, with a pulley all ready to be hitched up to a lot of the machinery I used to turn by hand. So taken all in all, you can see how I save at least three hours a day for work in the field. times when farm-hands are so few and far between, it is mighty important to have this dependable help that my electric power outfit furnishes."



The Western Electric Vacuum Sweeper cleans your house quickly and easily.

A farmhand you can always depend on—Western Electric Power and Light



Western Electric Power & Light

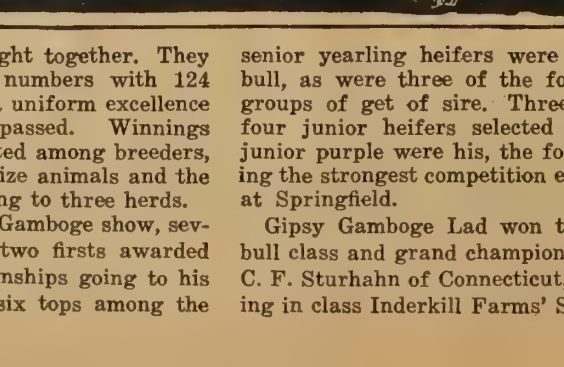
Makes the Battery last longer

How to save time and labor

Booklet H. D. 6 gives some facts and figures on how the Western Electric Power and Light Outfit helps solve the farm labor problem. For your copy write to the Western Electric Company at Chicago, or 195 Broadway, New York.

Some good territory still available for live-wire representative.

Write for Booklet H. D. 6



Eastern States Exposition

(Continued from page 531)

Produce of Cow—1 and 4, Emmadine; 2, Hillswold; 3 and 5, Schlehuber.

Senior and Grand Champion Bull—Langwater Renown. Junior Champion Bull—Deanie's Marose of Appletree Point. Senior and Grand Champion Cow—Fisherman's Ellerslie. Junior Champion Cow—Emmadine Buttercup.

Jerseys

Jerseys put up one of the strongest exhibits ever brought together. They ranked second in numbers with 124 head but were of a uniform excellence that was not surpassed. Winnings were well distributed among breeders, six having first prize animals and the championships going to three herds.

It was a Sybil's Gamboge show, seven of the twenty-two firsts awarded and three championships going to his get. Five of the six tops among the senior yearling heifers were by this bull, as were three of the four high groups of get of sire. Three of the four junior heifers selected for the junior purple were his, the four making the strongest competition ever seen at Springfield.

Gipsy Gamboge Lad won the aged bull class and grand championship for C. F. Sturhahn of Connecticut, defeating in class Inderkill Farms' Syracuse grand champion, Gamboge's Royal Majesty. Prospect Farms of New Jersey won the junior purple on Buttercup's Jolly.

Bagot's Crocus, owned By C. F. Sturhahn, a real dairy cow of milking form, won in a splendid class of aged matrons. Her closest contestant was Majesty's Crocus, Belleview Farm's entry shown dry. She has marked excellence but met too many good fresh cows to stand at the top. Four cows headed the three-year-olds, all so worthy of winning that one judge favored the third for first honors. No breed has brought out a closer class of high quality, it being apparent that the winner must be made grand champion. The referee judge favored the strong dairy form of Fauvic's Nic Nac, A. F. Barnes' New York State Fair grand champion, and pleased an intensely interested ringside by putting her in first place. She was followed by Belleview's Bagot's Gamboge Crocus, a daughter of the aged winner. Green Farm Sybil, the $12,000 daughter of Sybil's Gamboge, went to third place.

Each of the younger female classes was a good one. The junior yearling got the purple but lost to the three-year-old for the grand.

F. E. Duffy of Connecticut and Professor E. B. Fitts of Oregon judged with J. C. McNutt as referee judge. Failure to agree on type quickly, as well as the closeness of the classes, prolonged the judging. Judge McNutt was called into many classes, usually agreeing with the Oregon judge's selection of animals of more scale and dairy substance than favored by Mr. Duffy.

The awards by classes were as follows:

Bull 3 years or over—1, Sturhahn on Gipsy Gamboge Lad; 2, Inderkill on Gamboge's Royal Majesty; 3, Westbrook on Golden Noble of Westbrook; 4, Mansfield Hall on Double Finance. Bull 2 years, under 3—1, Sturhahn on Sybil's Gipsy King; 2, Prospect on Hautville's Fontaine; 3, Frelinghuysen on Fern's Noble Oxford Sultan; 4, Barnes on Secret Prince. Senior yearling bull—1, Tenney on Oakland's Cowslip Prince; 2, Westbrook on Westbrook Fontaine Lad; 3, Mansfield Hall on Marjorie's Double Finance. Junior yearling bull—1 and 3, Prospect on Buttercup's Jolly and Prospect's Fairy Boy; 2, Barnes on Fauvic's Western King; 4, Frelinghuysen on Dairylike Fern's Financier; 5, Mansfield Hall on Double Finance's Noble; 6, Westbrook on Gauntlet's Golden Noble. Senior bull calf—1, Sturhahn on Majesty's Broadland's Pride; 2, Prospect on Rustic Majesty; 3, Inderkill on Sybil's Bean's Count; 4, Frelinghuysen on Peerless Golden Fern; 5, Mansfield Hall on Victoria's Noble Oxford; 6, Barnes on Fauvic's Premier. Junior bull calf—1, Prospect on Hamilton Golden Lad; 2, Inderkill on Sybil's Gamboge 2d; 3, Westbrook on Westbrook Fontaine King; 4, Frelinghuysen on Benedictine's Sultan.

Cow 5 years or over—1, Sturhahn on Bagot's Crocus; 2, Belleview on Majesty's Crocus; 3 and 5, Inderkill on Tiddledywink's Stella and Heather Countess; 4, Frelinghuysen no Nesta's Lass; 6, Barnes on Imp. Lilith. Cow 4 years, under 5—1, Belleview on Oxford Majesty's Gipsy 2d; 2 and 6, Barnes on Fauvic Duchess and Chestnut Grove Silver; 3, Sturhahn on Majesty's Gamboge Buttercup; 4, Westbrook on Viola Farceuse; 5, Burnham on Knight's Dorothy. Cow 3 years, under 4—1, Barnes on Fauvic's Nic Nac; 2 and 3, Belleview on Bagot's Gamboge Crocus and Green Farm Sybil; 4, Sturhahn on Zellina's Sybil, Fol.; 5, Inderkill on Imp. Golden Lustre; 6, Prospect on Ivy's Mountain Elf. Heifer 2 years, under 3—1, Belleview on Sybil's Gamboge Katharine; 2, Sturhahn on Sybil's Finance, Fol.; 3, Inderkill on Oxford's Majesty Beauty 2d; 4, Barnes on Combination's Bright Baby; 5, Westbrook on Topaz of Westbrook; 6, Frelinghuysen on Netina's Golden Maid. Senior yearling heifer, not in milk—1, Inderkill on Sociable Sybil; 2 and 3, Belleview on Green Farm Sybil's Sister and Sybil's Gamboge Bounce; 4, Barnes on Fauvic Gipsy Maid; 5, Sturhahn on Sybil's Gamboge Queen; 6, Frelinghuysen on Sea Lass Sybil. Junior yearling heifer, not in milk—1, Belleview on Sybil's Creolo; 2 and 5, Inderkill on Lucinda's Princess Matilda and Miss Warder's Sybil; 3, Sturhahn on Bagot's Gamboge Sybil, Fol.; 4, Barnes on Fauvic Cherry; 6, Prospect on Oxford Majesty's Olivia. Senior heifer calf—1 and 2, Belleview on Sybil's Golden Ceyba and Royal Majesty's Blanchette; 3 and 6, Prospect on Fairy Boy's Oxford Fern and Prospect's Oxford Viola; 4 and 5, Frelinghuysen on Me Cids Sea Lass and Imp. Ruby's Golden Maid. Junior heifer calf over 2 months—1, Prospect on Prospects Fairy Glen; 2, Inderkill on Dairylikes Pretty Princess; 3, Mansfield Hall

(Continued on page 568)



The Sewing Machine and the Milking Machine

"Stitch! Stitch! Stitch!
Till the heart is sick and the brain
benumbed as well as the weary hand!"

That was the "Song of the Shirt" before Elias Howe invented the sewing machine.

Now the "Song of the Shirt" is sung in an hour or two of easy sewing with a machine.

Today the milking machine is taking the place of hand-milking, releasing hundreds of thousands of men for other work about the farms or enabling them to milk three times the number of cows they formerly were able to milk.

The profit the dairyman derives from the milking machine is not alone in the labor saved or the greater quantity produced. The elimination of the milker's hands in the milking process and the sealed top of the container give him a milk to sell for which he gets a better price. With the milk thus protected from contamination during the milking operation it is necessary only to keep the inside of the machine clean.

Here the choice of a machine equipped with a

WEAR-EVER ALUMINUM TRADE MARK

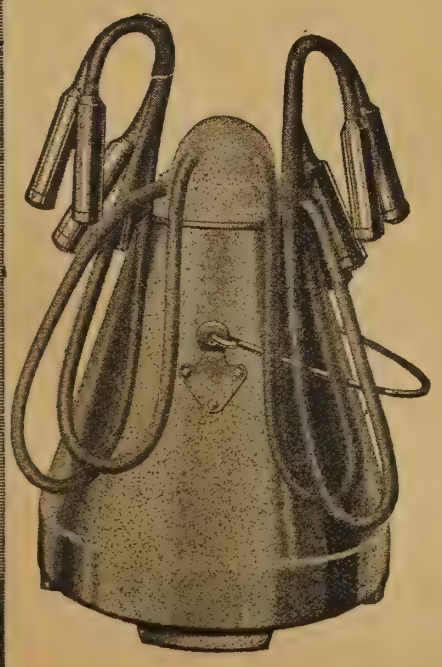
"Wear-Ever" Aluminum Milk Pail

WEAR-EVER ALUMINUM TRADE MARK

becomes important. The **"Wear-Ever"** milk pail is easy to keep clean because it is made of solid aluminum and has NO JOINTS OR SEAMS—no cracks in which bacteria can lodge. The **"Wear-Ever"** milk pail is as clean as it looks. It CANNOT RUST. It is light in weight. It will give years and years of service. It is made of the same silver-like metal the housewife knows and likes so well in her aluminum cooking utensils.

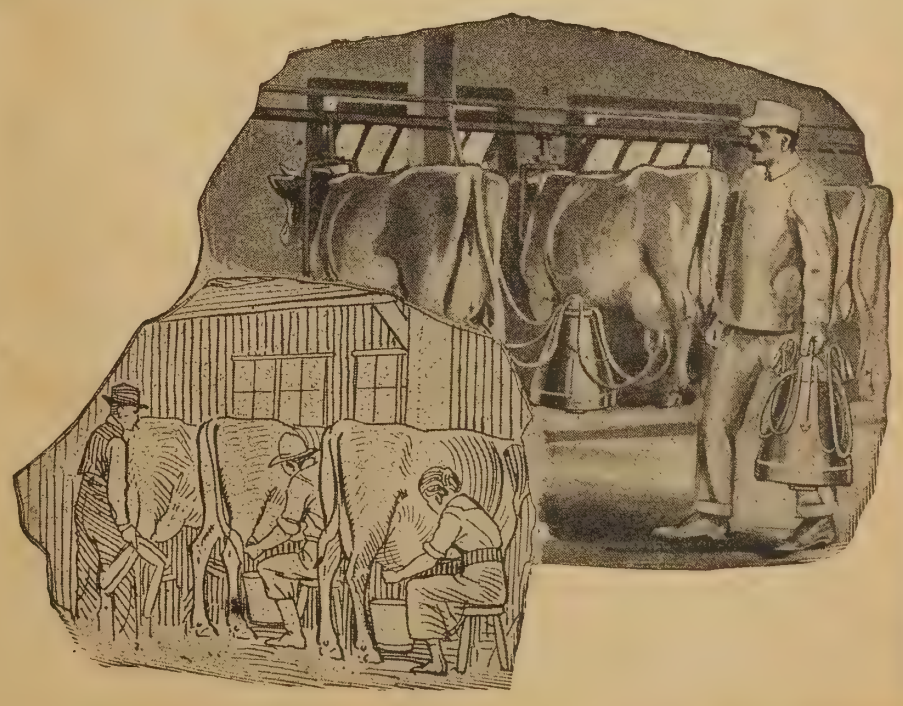
The Aluminum Cooking Utensil Co., New Kensington, Pa.

In Canada "Wear-Ever" utensils are made by Northern Aluminum Co., Limited, Toronto, Ontario





The ear for the bail on the "Wear-Ever" Pail is so constructed that the bail cannot possibly fall flat against the side of the pail. As a result the bail is always held about an inch away from the side insuring a quick and easy grip.



The Oregon Milk War

Dealers Win the First Skirmish

E. K. HILL, OREGON

ON the theory that the Oregon Dairymen's Co-operative League has in itself a "power and control that might be exercised injuriously to the public interest and the public good," Circuit Judge John McCourt on September 28 denied the application of the league for a temporary injunction against the Portland milk distributors and the Nestle's Food Products Company, and vacated a restraining order issued last month, prohibiting a campaign against the league.

The league charged in its petition for a temporary restraining order that eleven Portland milk distributors, the Nestle's Food Products Company, Frank S. Glass, representative of the Nestle's Company, A. M. Work, manager of the Portland-Damascus Milk Company and C. M. Gregory representing most of the city distributors, were interfering with the contract rights of the league. The specific charges were that the defendants, by a series of advertisements and by circulation of propaganda, were attempting to persuade members of the league to violate their marketing agreement with the league.

The defendants denied such interference and contended that the marketing agreements were in restraint of trade and therefore contrary to public policy and void.

The dispute dates from the early part of July, when the league announced to the distributors that after July 7 there would be an advance in the price of whole milk of 40 cents a hundred pounds, bringing the market price to $3.60 a hundred. This the distributors objected to and refused to pay.

The decision of Judge McCourt holds that the marketing agreements of the league do not effect a complete restraint of trade, but a partial one, as others in considerable number are engaged in the same trade. In conclusion Judge McCourt stated that in his opinion "the restrictions upon trade provided by the parties to the combination should not be supplemented with the strong arm of equity by the issuance of temporary injunction", although final hearing may prove that the marketing agreement and the combination of which they are a part "are reasonable".

Control of 70 per cent of the milk supply of Portland has been placed in the hands of five men by the agreement, and the entire income from an industry, the investment in which aggregates more than $5,000,000, has been signed over to them with the authority to retain and supply a large part thereof before making returns to the producers.

Under the co-operative organization existing before the present league (organized in June of this year) came into existence, Judge McCourt finds that the producers "stabilized milk prices" and secured for the producer "a fair price which yielded him a reasonable profit and enabled him to continue in the business. It would appear that the result claimed is all that could be desired and that restraint of trade beyond what was necessary to produce that result would be unnecessary and, therefore, unreasonable. The marketing agreement, with its fines and penalties and forfeitures and exclusive marketing privileges over a long period, was not present in the former organization; the result, to which the producers were entitled, was secured without it."

Although the plea was made that the league was organized under and in compliance with the federal statutes dealing directly with co-operative agricultural associations, Judge McCourt held that farmers' organizations are not entitled to any greater privileges than combinations among any other class of people, and continued: "The federal food control statutes are temporary enactments; the powers given by them are not being exercised and they furnish no guide to the public policy of the state. Moreover, as a general rule, federal statutes do not control or influence the determination of the public policy of the state.

"There is a wide field for co-operation in the production and marketing of milk short of a control that oppressively and injuriously affects the public. There is room in that field for activities that will secure for the producer a fair and profitable price for his product and yet not fall under the ban of the law."

It is hinted that the case will be carried to the supreme court.

Washington, D. C., Weekly News

[Special to Hoard's Dairyman]

Washington, Oct. 14—Unable to prevent the milk producers of the Maryland—Virginia Association from putting into effect their price advance Oct. 1, to 44 cents per gallon, justified, so every person connected with that association says, by the shortage of milk and the increasing costs of production in this territory, Health Officer Dr. W. C. Fowler of the District of Columbia has turned his attention to the butter business to stir up the next mess of trouble.

Last week Dr. Fowler served notice on butter dealers in Washington that he had discovered a lot of poor butter in use here in the lunchrooms and restaurants, and that as a result he hereafter would bring prosecutions against any dealer who sold butter containing less than 83 per cent of butterfat. Several of the larger distributors were called into his office and given personal notice to this effect. Remonstrance proved unavailing. Dr. Fowler unearthed a law passed by Congress in 1898, prescribing food standards for the District of Columbia, and read to his astonished hearers a paragraph from that law which specifies in its definition of butter that it shall be deemed to be adulterated if it contains less than 83 per cent of butterfat.

Just what the result of this new crusade will result is a question. Dr. Fowler stated that a single sample of butter does not in his opinion constitute a case sufficient to warrant persecution, but if he finds several samples of butter sold by any dealer that are not up to 83 per cent test, he will certainly enforce the law.

One big butter handler says that any effort to enforce the law will leave Washington without butter, for a time at least, as he does not know where butter measuring up to this test can be purchased. If it can be had at all it will be at an advance in cost from 10 to 16 cents a pound above market prices he says. The net result of this would be to vastly increase the sale of butter substitutes here.

No one interviewed, except Dr. Fowler, ever heard of the 83 per cent law before. However, there is no doubt that the law is on the books, as he states. Just why he should undertake to enforce it when the rest of the world is fairly content with 80 per cent butter, just at this time, after having lived alongside this 83 per cent law as District Health officer ever since it was passed 22 years ago, is the question the butter dealers would like answered.

⚜

Distinguished visitors from Holland are spending several days in Washington in conference with dairy experts of the Department of Agriculture, while on a general study trip to various dairy centers and agricultural institutions. In the party are Professor B. Van der Burg, of the College of Agriculture at Wageninges, Holland; Dr. A. J. Swaving, Acting Chief of the Dairy Division of the Department of Agriculture Industry and Commerce of the Imperial Holland government at The Hague. They were accompanied at the Department of Agriculture by Dr. B. Gratama, commercial attache of the Holland legation. The party was taken to the Beltsville Experimental dairy farm by Chief Rawl of the Dairy Division on Tuesday and were greatly interested in Professor Meigs' work in feeding and in the breeding experiments as well as the other work of the big experiment station.

⚜

The beginning of a three-times-a-week service, supplemented by a weekly letter of the latest market information, under the title "Marketgrams" is announced by the Bureau of Markets. Nearly 40 publications have already asked for this service, it it stated. Another development of the market news service is noted in a co-operative arrangement perfected this week with a farm bureau in Western New York, whereby the special grape news of the fruit section is asked for by the farm bureau which in turn distributes it to its entire membership each morning. The market news service is one of the growing activities of the department.

⚜

Attorney General Palmer's decision to oppose the so-called Prince plan for the packers' disposition of the stockyards, meets general approval. In a statement to the press, Attorney General Palmer says his plan, if carried out, will of itself constitute a violation of the anti-trust laws. He further criticizes F. H. Prince for previous activities in connection with stockyard ownership and says that any proposal of the kind petitioned for will be undesirable if the F. H. Prince Co. has any connection with it.

The final hearing will be on October 7.

New York Butter Market

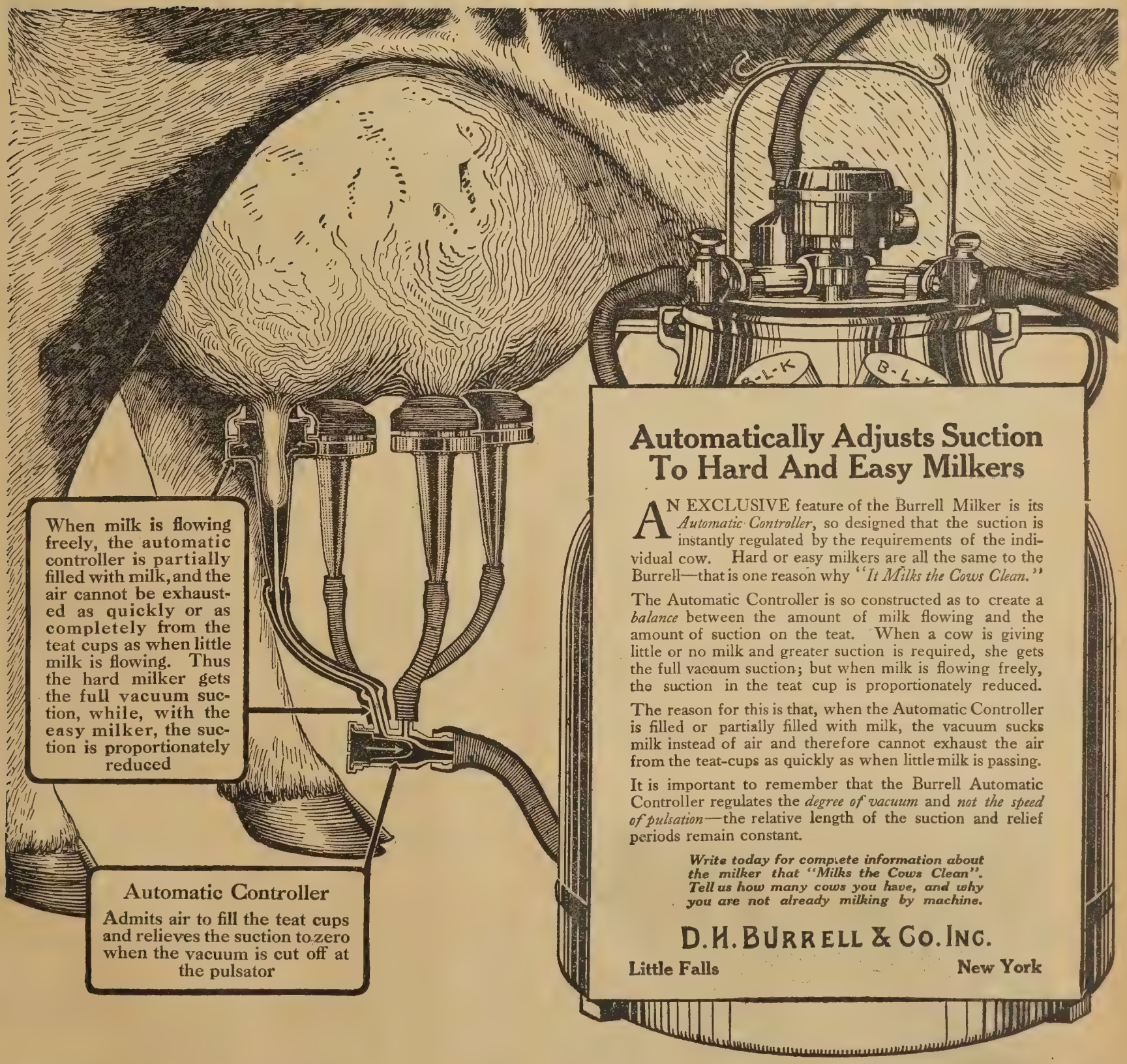
NEW YORK CITY, October 5:—While newspaper reports indicate that there is a price slump affecting many commodities, it is very apparent that as yet high quality butter is not affected. Reporters on several of the large New York dailies have been trying, through the columns of their newspapers, to convince their readers that the prevailing high quotation on butter is due to manipulation on the part of butter receivers. They state that the law of supply and demand has been discarded, giving as proof of their statements that enormous quantities of foreign butter are being imported, creating an over-supply. However, regardless of the half-truth of their statements, it remains true that the quotations on high quality butter are due to demand and nothing else. The consumer is alone responsible for the high quotation. He demands nothing but the best, as he has learned to do during the past few years of unprecedented prosperity, and refuses to buy any of the medium to low grades of butter with which the market at the present time abounds. It is very true that Denmark is shipping considerable butter to this country and it is equally true that Argentine is sending greater quantities. While the Danish butter, on the whole, is of good quality, the Argentine butter is of mediocre to poor quality and merely adds to the accumulations of that class of butter that are held in stores and storages in this city.

Butter receipts are very liberal for this season of the year but contain only a small percentage of strictly fancy butter. Buyers are looking for butter containing grass flavors and are as critical as during June and July. Under those conditions it is not surprising that the quotations on extras and higher scoring butter continue to advance. The same conditions obtain in all the large butter markets, which is ample proof that statements of news reporters regarding the manipulation of the market are false. A close study of quotations should convince even the most skeptical that the prevailing quotations are due to natural economic causes. When it is seen that quotations on seconds have declined during the week, while those on fancy butter were advancing, it is quite apparent that the law of supply and demand is still operating.

During the fore part of last week, it was apparent that newspaper agitation was having some effect on the butter market, as from Monday until Thursday the quotations on fancy butter declined 2c. From Monday until Thursday, there was an absolute lack of activity in the market and many dealers felt that a slump could not be avoided. It is undoubtedly true that the slump in part could be attributed to the warm oppressive weather that prevailed at that time. On Friday, with the change of weather conditions, there was a revival of activity and the price on upper grades advanced 1c. That was followed by successive advances of ½c on Saturday, 1c on Monday and 1c today. There is an insufficient supply of fancy butter to satisfy the demand, while dealers are greatly worried over the fact that their supplies of butter scoring under 91 is continually increasing. It is difficult to determine why there should be such an over supply of low scoring butter, but, aside from the fact that Argentine is shipping large quantities of such butter to this country, creameries which invariably make fancy butter during the greater part of the year are now shipping butter of very mediocre quality. Weather conditions are now favorable to high quality production and it is hoped that a greater percentage of high quality butter may soon be forthcoming. Established quotations today are: Extras (92 score), 63½c; higher scoring than extras (93 score or higher), 64@64½c; firsts (90—91 score), 56@62½c; firsts (88—89 score), 50½@54c; and seconds (83—87 score), 47@49c.

W. B. LIVERANCE.

TRADE MARK BURRELL B-L-K MILKER



Automatically Adjusts Suction To Hard And Easy Milkers

AN EXCLUSIVE feature of the Burrell Milker is its *Automatic Controller*, so designed that the suction is instantly regulated by the requirements of the individual cow. Hard or easy milkers are all the same to the Burrell—that is one reason why *"It Milks the Cows Clean."*

The Automatic Controller is so constructed as to create a *balance* between the amount of milk flowing and the amount of suction on the teat. When a cow is giving little or no milk and greater suction is required, she gets the full vacuum suction; but when milk is flowing freely, the suction in the teat cup is proportionately reduced.

The reason for this is that, when the Automatic Controller is filled or partially filled with milk, the vacuum sucks milk instead of air and therefore cannot exhaust the air from the teat-cups as quickly as when little milk is passing.

It is important to remember that the Burrell Automatic Controller regulates the *degree of vacuum* and *not the speed of pulsation*—the relative length of the suction and relief periods remain constant.

Write today for complete information about the milker that "Milks the Cows Clean". Tell us how many cows you have, and why you are not already milking by machine.

D. H. BURRELL & CO. INC.

Little Falls **New York**

"It Milks the Cows Clean"



KING SEGIS PONTIAC COUNT

Second Breeders'



Minnesota Stat

Oct. 28-29—St. P

The Consignors—

E. C. SCHROEDER FARMS, Moorhead
E. C. Schroeder, Owner

ARDEN FARMS, St. Paul
J. M. Hackney, Owner

WOODLAKE and CLOVER FARMS, Minneapolis
John B. Irwin, Owner

MUDCURA FARMS, Shakopee
Dr. H. P. Fischer, Owner

NORTH STAR HERD, Lake Elmo
W. S. Moscrip, Owner

MINERAL SPRINGS STOCK FARM, Savage
Stewart, McIntyre & Hansen, Owners

MANKATO HOLSTEIN FARMS, Mankato
Marlow & Randall, Owners

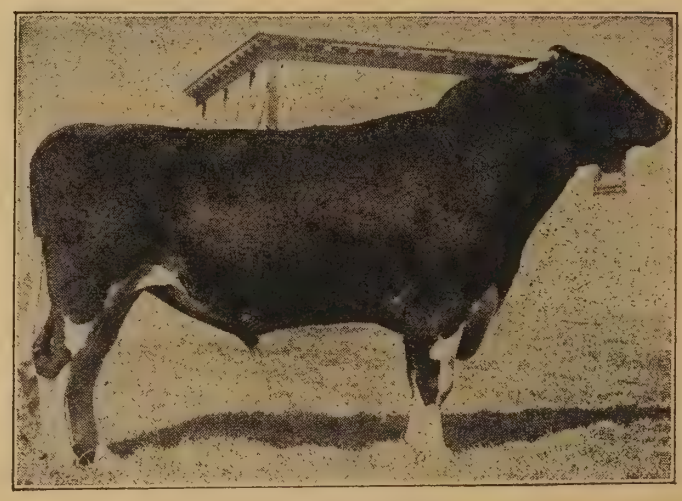
KIEKENAPP FARMS, Faribault
E. B. Kiekenapp, Owner

IDEAL FARMS, Moorhead
Steidl Brothers, Owners

HALLOCK STOCK FARM, Hallock
W. W. Sugden, Owner

FLECKS REGISTERED HOLSTEIN FARM,
Faribault,
Edw. Fleckinstein, Owner

LONG LAKE LIVE STOCK COMPANY, St. Paul



DUKE PIETERTJE KORNDYKE ORMSBY

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Hol

Do You Want A

There are a number offered in this Sale that are good enough t
not all in at the time this copy is written; but we will give you t

1. — A son of SIR PIETERTJE ORMSBY MERCEDES 4s
Brook Bess Burke, Greatest Mother of the Breed, that is out
PION 3-year-old for 7 and 30 days, sister to Spring Brook Bs
Glen Canary De Kol 2d — 1,323 lbs. of butter in one year. T
Schoeder Farms.

2. — A son of KING KORNDYKE PONTIAC LASS, the
holder at that time of all records for 7 to 100 days. The dar
TIAC COUNT — MOLLIE VEEMAN SEGIS PONTIA
months, 32.5 lbs. butter from 608 lbs. milk at 5 years and no
bulls ever offered by Arden Farms, a calf of wonderful pedi

AND THESE ARE ONLY TWO. There will be others o

90-Day Retest Tu

For Cata

The Minnesota Holstein-F
406 Market Bank Building



SIR PIETERTJE ORMSBY MERCEDES 37TH



Foundation Sale

e Fair Grounds

'aul—Oct. 28-29



PIEBE LAURA OLLIE HOMESTEAD KING

O
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sota
eirs

EAL Herd Sire?

stand at the head of any herd anywhere. Final entries are among those already entered as samples: —

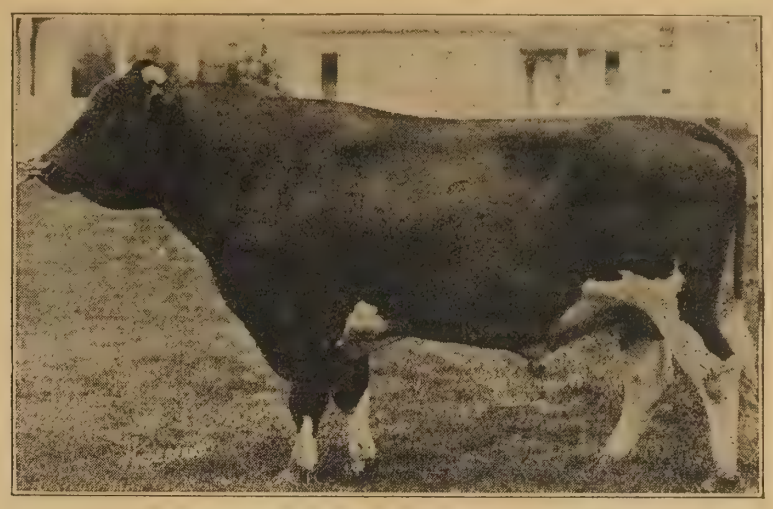
he $65,000 son of Sir Pietertje Ormsby Mercedes and Spring GLEN CANARY DE KOL, former WORLD'S CHAM- Burke 2d and dam of the highest living record 4-year-old, is one of the greatest young bulls ever offered by the

of the first cow to produce 44 lbs. of butter in a week and this calf is one of the best daughters of KING SEGIS PON- 8.6 lbs. butter from 502 lbs. of milk in 7 days at 2 years, 4 oing great guns on yearly test. Here is one of the greatest

al worth.

erculosis Guarantee

Address
esian Breeders' Association
Minneapolis, Minnesota



SIR PIETERTJE ORMSBY MERCEDES 41ST

Among the Entries—

Several daughters of KING SEGIS PONTIAC COUNT bred to PIEBE LAURA OLLIE HOMESTEAD KING.

Daughters of "PIEBE" bred to "COUNT".

Daughters of KING KORNDYKE COLANTHA ORMSBY from such dams as JENNIE WREN PIETERTJE, 1,000-lb. daughter of SIR PIETERTJE ORMSBY MERCEDES.

Daughters of SIR ORMSBY HENGERVELD KORNDYKE, the only living son of Minnesota's greatest foundation cow, PIETERTJE MAID ORMSBY. Some of these heifers are from daughters of KING SEGIS PONTIAC COUNT.

A 30-lb. daughter of KING SEGIS PONTIAC and a show cow, bred to DUKE PIETERTJE KORNDYKE ORMSBY, $33,000 son of SIR PIETERTJE ORMSBY MERCEDES.

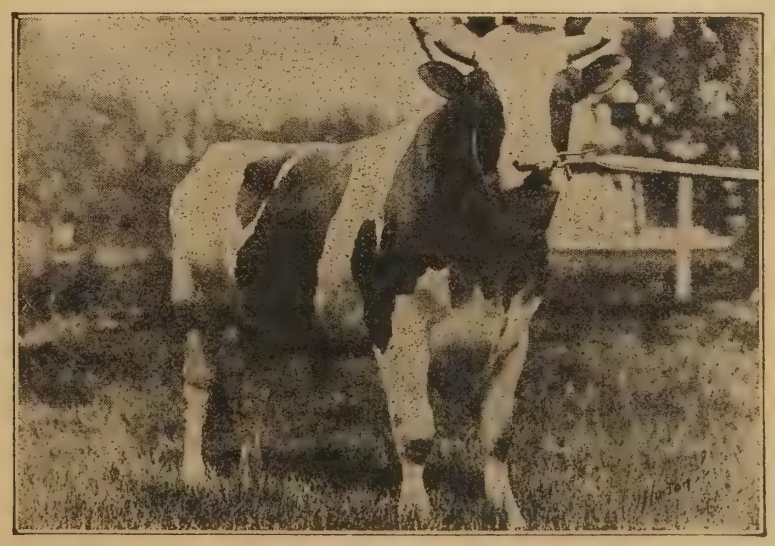
Another big, beautiful 30-lb. cow, 980 lbs. in a year — bred to SIR PIETERTJE ORMSBY MERCEDES 37th.

Daughters of the 44-lb. bull, KING KORNDYKE PONTIAC LASS, some bred to "PIEBE", some bred to "COUNT".

Daughters of SIR ORMSBY BANOSTINE CHAMPION, the son of DUCHESS SKYLARK ORMSBY.

Others too numerous to mention; but about the best that Minnesota can offer.

Real Foundation Animals — The Kind to Tie To



KING KORNDYKE COLANTHA ORMSBY

MARKETS

MILWAUKEE, Wis., Oct. 7—Butter—Creamery, tubs, 59c; prints, 60c; extra firsts, 58c; firsts, 56@57c; No. 1 packing stock, 34@35c; No. 2 do. 20@30c.

Eggs—Fresh firsts, recandled for city trade, 56@57c; current receipts, country candled, 54@55c; checks, 37@41c; dirties, 41@44c.

Cheese—Twins, 25½c; Daisies, 26¾c; Longhorns, 26⅝c; fancy Brick, 25½c; Limburger, new, 1 lb., 24½c; Limburger, new, 2 lbs., 24c.

CHICAGO, Oct. 7—Butter—Creamery extras, 60c; standards, 55½c; dairy, firsts, 48@58c; seconds, 43@46c.

Eggs—Ordinary, 49@55c; firsts, 57½@58½c.

Cheese—Twins, 25½c; Young Americas, 26c.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

For Sale

Green Meadow Warrior (58910), a yearling son of Langwater Renown (39636), who was first prize and Grand Champion Bull at Eastern States Exposition and just sold for $8,000. The Dam of Green Meadow Warrior is Imp. Viola of the Isle (35247), A. R., 16,519 lbs. milk and 717.79 lbs. fat. He is large and well grown, is fawn and white, clear nose, and a fine individual.

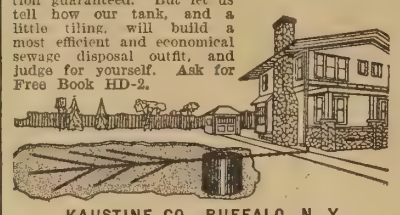
We also have younger bulls by Renown and out of Daughters of Pencoyd's Golden Secret (16550). For price and all particulars address

Walter Jauncey, Manager, Green Meadow Farm, Williamstown, Mass
Herd on Federal Accredited List

Enjoy All the Modern **Sanitary Comforts**

Baths, toilets, etc., are now possible for the rural home (school, factory, or other buildings). The HYDRO-KAUSTINE SEPTIC TANK is easy and inexpensive to put in; gives no evidence of location or use; insures 100% sanitation; requires no attention; has no upkeep, and

No Operating Cost Designed on approved principles; built of enameled Armco iron; ready to set up; operation guaranteed. But let us tell how our tank, and a little tiling, will build a most efficient and economical sewage disposal outfit, and judge for yourself. Ask for Free Book HD-2.



KAUSTINE CO., BUFFALO, N. Y.
Manufacturers and Sanitary Engineers

PLUMBERS: An Interesting Selling and Installing Offer for You

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by
RADISSON FARM, ANOKA, MINN.

150 Head — 150 Head

Dispersal Sale of

High Grade Holstein Cattle

One Mile North of Enos, Ind., on the Brazelton Murdock Farm

October 27th

We will sell 150 head of Fresh Cows, Springer Cows, Springer Heifers and a nice bunch of 6-month- to 18-month-old heifers and 4 Registered Bulls—good ones—two of them come from Purdue University herd.

Enos, Ind. is 60 miles south of Chicago on N. Y. Central R. R. and 15 miles north of Kentland, County Seat of Newton County. For further information address

Brazelton Murdock Co. - Morocco, Ind.

Lake County Holstein Sale

Libertyville, Ill., October 18, 1920

65 Choice Holsteins from 19 Different Herds

This is a hand picked lot of cattle, the best that could be selected from 19 of the good herds of Northern Illinois.

Their breeding represents the blood of such famous sires as Sarcastic Lad, Colantha Johanna Lad, Johanna McKinley Segis, K. K. S. V., and King Segis Pontiac.

Every animal is tuberculin tested and sold subject to a 60-90 day retest.

For further information, write or wire

Illinois Holstein-Friesian Association
R. N. Thompson, Field Sec. 130 N. Wells St., Chicago, Ill.

80 Registered Virginia Holsteins

Consigned to the 3rd Annual Sale by Virginia Holstein-Friesian Breeders.

State Fair Grounds, Richmond, Va., October 28th, 1920

Selected only from Herds under State and Federal Supervision.

All animals will be sold with the U. S. B. A. I. Tuberculin Certificate with the usual 60 to 90 days retest privilege.

AMONG OUR OFFERINGS ARE:

A cow that was the first Junior 2-year-old in Virginia to produce 13,000 lbs. of milk. In four years she has produced 48,867 lbs. of milk, containing 2,126 lbs. of butter. She has milked as high as 93 lbs. per day.

A bull calf whose two nearest dams averaged 1,065 lbs. butter, average test of dam over 4%. Ten young cows with A. R. S. O. yearly records. Fifteen cows with A. R. O. seven-day records. A choice bunch of bred 2-year-olds sired by A. R. Bulls and out of high producing dams.

The VIRGINIA HOLSTEIN-FRIESIAN CLUB have spared no pains to make this an outstanding offering in the dependable quality of every animal in it. The Club is proud of the State's position in the number of accredited herds. Virginia has a higher percentage of herds under Federal supervision than any other state.

Write W. L. Kirby, Richmond, Virginia, for Catalogue.
Col. G. W. Baxter, Auctioneer. Backus in the Box.

Washington County Holstein Sale

Fair Grounds

West Bend, Wisconsin

November 3d, 1920

60 Registered Holsteins

Individuality has been the first consideration in making selections for this sale.

Washington County, though not conspicuous for holding numerous public sales is nevertheless recognized as one of the oldest and most substantial Holstein communities in Wisconsin.

JOHANNA DE KOL VAN BEERS, the second 40-lb. cow of the breed was bred and raised in Washington County. This year's Senior and Grand Champion Holstein bull at the Wisconsin State Fair was raised and developed in Washington County. Considerable of his blood and that of many other noted sires is represented in the animals to be sold in this sale.

Watch next week's issue for more detailed description

Washington County Holstein Breeders' Ass'n
J. W. Gehl, Secretary

Second Annual Consignment Sale

of the

Lake County Holstein Breeders' Association

To be held at the Fair Grounds

Crown Point, Indiana

October 25th, 1920

65—HEAD—65

These cattle have been selected from the best herds in the county. Most of this consignment have A. R. O. records or are from A. R. O. dams. The Lake County herd won first place at the Indiana State Fair.

For Catalogs Write

C. Harry Newton, Secretary
Crown Point Indiana

Dairying Thirty Years Ago

Taken From the Issue of Hoard's Dairyman for October 17, 1890

Our thanks are due and are most cordially tendered to the Breeder's Gazette of Chicago, for the use of the cuts used to illustrate and explain the excellent article of T. L. Haecker, of Madison, Wisconsin, in the paper, "The Form of the Jersey". Mr. Haecker is one of our most intelligent breeders of dairy stock and has the happy faculty of conveying much needed information to his brother dairymen. Study these outlines of the form of great performers, whether as sires, dams, or butter-tub fillers. Compare them with your own breeders and see how near the animals you put your trust in for profit come to being fashioned like these great performers. Have them with you when you buy your breeding animals, for you may rest assured there is a similarity of contour in great performers at the churn as well as at the race track.

⚜

We have heard of "shoe-box butter" and have heard John Gould hold up to ridicule the practice of doing up packages of butter in the remnants of worn out garments that had not had the hems and buttonholes cut out; but we always thought John was gassing to raise a laugh. But we take it all back and hereby send him notice that he is "a man of truth and veracity", and if he wants a pennon to raise in corroboration that such things are done, we have the "bunting" ready for him. Mr. Chas. L. Hill, of Rosendale, sent it to us and gives his word —"good as gold'—that he saw it taken from a jar of butter on which it had been used as a covering, and was marketed in that village. It is evidently the bosom and part of a collar of an old shirt and has two good buttonholes, well worked, and a button still intact. We think it safe to say the woman who put that on doesn't take the Dairyman and never heard John Gould denounce the practice of adorning jar butter with old shirt-flaps.

⚜

We call attention to the warning thrown out by Professor Henry in regard to the adulteration of cow foods by an admixture of the oat hulls that come from the oatmeal factories, with other grain foods, and all palmed off under the general head of "mill feed",—the purchaser thinking that because he sees the shuck of the oat, he has the vital substance of it with it, when he is most emphatically "sucked in" about it. Take heed to these faithful warnings and help "spot" those who deserve to be "spotted" as dishonest dealers. As near as we can ascertain from the food tables, oat bran, which is about what the oat hulls are, is worth only about two-thirds as much per ton as wheat bran. It is sold from the factories at about $7 per ton. Of course, when mixed with feed said to be worth a dollar per 100 lbs., it is a swindle of the buyer.

To Improve Wisconsin Cheese

Taking steps to drive from the world market so-called green cheese which is undermining Wisconsin's reputation as a dairy state, the State Division of Markets has issued a drastic order forbidding the 2,750 cheese factories in Wisconsin packing or shipping or delivering or paraffining whole milk American cheese unless it has been out of the press at least three days and is dry.

Due to pressure by buyers to obtain cheese, particularly during the war, and due to efforts of some cheesemakers to crowd into cheese all the water that the product would hold, the market has been clogged with cheese prematurely packed or paraffined, which cheese develops rind rot before it reaches the consumer and often involves a total waste of its food value. This waste is ultimately heaped on the consumer who either pays for the unfit cheese or bears the increased price of good cheese caused by the dealers' loss on the cheese which has deteriorated in transit.

The order makes it criminal not only for cheese factories to ship but also for all buyers from factories to receive any cheese in green condition. It also requires, under penalty of fine or imprisonment, that the cheesemaker or operator stamp upon each cheese the date of removing from the press and the date of packing, together with the cheese factory's number to be issued by the Division of Markets, so that a chain of evidence to attach guilt to the party violating the order may be established.

All persons affected by the order are given until November 1 to comply. This new order follows an order requiring dealers to pay for full weights, instead of on the even pounds as has been done heretofore.

It is just as profitable to remove weed seeds from the woodlot, as it is to weed the garden; besides you can burn the wood from the crooked, defective trees, and from those that are not good timber species.

September Condensery Prices

Prices paid producers for 3.5% milk delivered at factories during September are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms operating approximately 71% of the total factories in the United States.

Geographic sections	No. firms reporting	Price per cwt. Range	Ave.
New England	4	$3.75–$4.02	$3.89
Middle Atlantic	99	2.60– 4.00	3.64
South Atlantic	6	2.60– 3.90	3.20
East North Central	101	2.30– 3.80	3.14
West North Central	5	2.30– 3.00	3.69
South Central			
North Central	19	2.57– 3.73	2.84
South Western	13	2.45– 3.49	2.83
United States	247	2.30– 4.02	3.31

The wholesale prices given below are based on reports made by manufacturers covering actual sales of condensed and evaporated milk delivered to jobbers, wholesale grocers, and similar buyers at manufacturers' distributing points on basis of cash short time credit. Foreign prices are given as f. o. b. or f. a. s. points of export in section in which sales were made:

Geographic sections	Sweetened condensed per case* 14 oz. cans Domestic	Foreign	Unsweetened evaporated per case* 16 oz. cans Domestic	Foreign	Sweetened condensed bulk per cwt. Unskimmed	Skimmed	Unsweetened evaporated bulk per cwt. Unskimmed	Skimmed
New England	$10.13	$10.60	$6.52	$7.00	$20.25	$13.62	$12.02	$10.30
Middle Atlantic	9.93	10.11	6.43	6.87	20.00	14.75	13.38	6.52
South Atlantic	10.31	10.60	6.12	7.00	18.21	14.25	12.00	5.55
East North Central	10.33	10.60	6.15	7.00	19.80	15.01	11.35	7.20
West North Central	10.30	10.60	6.22	7.00	20.33	16.50	9.03	
South Central	10.29	10.60	6.50	7.00	20.00	14.50		7.00
North Western	10.30	10.60	6.20	7.00	20.13	16.33		7.02
South Western	10.38	10.60	6.18	7.00	20.00		11.24	
United States	10.21	10.42	6.28	6.97	19.69	14.90	12.11	6.82

*Case contains 48 cans.

The Cheapest Feed You Can Buy

Which is the feed for you to use?

The feed for which you pay the least money?

Or the feed which produces biggest profits?

Figure it out for yourself. You may save three or four cents on a cow's feed with a low price ration.

Or you may get one, two or three quarts more milk with Larro.

Which pays best?

Write us for names of successful dairymen in your neighborhood who use Larro because it's the cheapest feed they can buy—the feed for biggest profits.

The Larrowe Milling Company

201 Larrowe Bldg., Detroit, Mich.

Larro-feed

MANY IMITATIONS PROVE ITS SUPERIORITY



"You Get More Milk or Your Money Back"

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Broadening Out

[Continued]

"If we can keep up with that bird," laughed Bob, "we'll make Chicago in short order, and besides it will help us a lot in finding our way through and out of the city if he goes through."

"How do you know he is headed for Chicago?" asked Jimmy.

"Oh, by the way he is pounding along. He acts just as though he was headed for a place of some importance. Some car he is driving too. This is the supreme test for you, Lizzie."

"Step on her, Bob," urged Jimmy. "There is a bird in back of us doing his best to get by. Don't let him in. If you do others will do the same thing and then we will lose our man."

And Bob did step on her. She shot out almost from underneath his control and before he could cut off some of her speed he found himself running along side of the big Pierce Arrow he had been following. The driver of the big car looked down upon its little running mate and asked if they wanted to go by. "Just as though we could, if he didn't want us to," Bob afterwards commented.

"Oh, no," Bob reddened. "All we want to do is to keep up if you are headed for Chicago. We want to go through and we thought that if we followed you it would make it easier for us."

"All right, sir, young man, follow me and I'll get you right into the heart of the city and show you how to find your way out."

"Thank you," replied both boys in concert, and again dropped in behind the big car. The trip through the city was uneventful, other than requiring all of Bob's attention to keep out of the way of the numerous autos rushing up and down Michigan Avenue. "Just follow this avenue," the driver of the big car had told them. "It will take you out into South Chicago and from there on you can take the Jackson Highway which will lead you into Indiana."

The boys were glad to get out of the big city as quickly as possible, and they soon found themselves spinning through Gary, Indiana. "It's about time we were looking for a place to roost," volunteered Jimmy, "but I'll be jiggered if this place looks good to me; too many niggers and foreign element here, judging from the population on the streets. Must be a manufacturing town, I guess, that's why so many of this kind is attracted here."

"Guess you're right, Jim," added Bob. "It sure is a tough looking place, maybe all right, but I'm not in favor of taking any chances. Let's see, what town do we strike next?" as he reached for the map showing the auto routes through Indiana. "Crown Point. I guess I can make that by seven-thirty. The roads are considered good all through Northern Indiana, so we should make good time."

And this they did, for just as Bob had predicted, they pulled up to the one hotel the city could boast of at seven-twenty. After they had stored the car for the night and had supper and they were comfortably settled in their room, Jimmy remarked, "This is more like it. I feel at home here. None of them things called elevators that shoots you up so fast you can't catch you're breath, and are liable to send you up through the ceiling. Yes, and another good thing," he added in the same breath, "I didn't see none of those guys dressed up in blue uniform with brass buttons to snatch all the dimes that people are foolish enough to give them. They've got plenty of brass without advertising it. The idea," he added in disgust, "I've always carried my own junk around and I guess I can do it on this trip. I'm for making these small towns for our lodging, Bob. What do you say to that?"

"They're all right, but we want to see some of the larger places. It's a good education, Jimmy, to get used to some of that stuff. It's the way of the world, and we've got to recognize the conventions of society whether we want to or not. When we are with the Romans, we must do as they do, at least for a part of the time."

"Well, I'll take the country Romans for mine, fellow," he replied. "They're more of my style."



GETTING INTO THE LAND OF COTTON

"Oh, you'll be thinking differently by the time you have spent a few dimes on hotel porters and dining room waitresses," returned Bob.

"Do you mean to tell me, Bob, that you've got to pay a regular price for your meals and then give the waiters or waitresses something for bringing it to you?"

"Yep, that's the way they do in the cities, Jim," he replied as he tossed himself about on the white covered bed.

"Well, I'll be blamed if any of those waiters get my dimes out of me for carrying my grub, but when it comes to a good looking waitress, one of those red headed ones," he grinned, "well it might be a little different. And I might even go a little stronger than a dime if she was the real quality," he laughed outright at his own boldness upon the subject.

"Time'll tell what you will do," remarked Bob, "but you want to be careful how you conduct yourself, young man, or I'll tell that little girl that you think so much of up there in Madison. And now come on to bed. Tomorrow we want to make a banner run on these good Indiana roads."

"Flat tire," announced Jimmy, as they were looking over the car the next morning ready for the day's run. "Funny thing, put up a car all right the night before and then find this. Looks to me as though some one stuck a pin in that casing, Bob," he whispered, "thinking that we would give them a job of patching the inner. Don't suppose they get much work at places like this anyway."

"They don't get any such jobs from us," Bob whispered back. "We'll just take care of that ourselves. Get out the vulcanizing outfit, Jim, and we'll make that inner as good as new in half an hour."

The tube was soon fixed and the boys were well along on their way before eight o'clock. "We should make LaFayette by noon," said Jim, who was trying his hand at the wheel this morning.

"That's where the Purdue College of Agriculture is located," commented Bob. "Guess we'd better not stop there though only for dinner; we want to get into the South as soon as possible. What's the squeaking noise, as though something was rubbing on one of the wheels?" he asked.

"I've been waiting to hear that," answered Jimmy. "I'll bet it's one of those shock absorbers. I noticed this morning that it was getting pretty low," as he applied the brakes to the car.

"Sure enough, that's the cause," said Bob, as the two were examining it. "They'll have to come off there. We'll make the run, though, as far as LaFayette and then we'll take them off before we get into trouble. I never did think they were of much account anyway."

True to schedule, they reached the city at 12:10 and following a hurried dinner they proceeded with the removal of the rear shock absorbers. It took them about an hour to do the job, and they were well on their way when Bob suddenly discovered that he had left his wrist watch in the wash room of the hotel.

"I wouldn't lose that for anything if I could help it," he said with some uneasiness. "It keeps excellent time and besides Aunt Ella gave it to me last Christmas, and what she would say about being so careless, only I myself know. There's only one thing to do, Jim, and that is to go back and trust to luck that some one found it and left it with the clerk at the desk."

"Do you really mean it?" inquired Jimmy, as though he didn't consider the watch worth the try.

"Of course I mean it, so stop and turn around; we must go back," Bob commanded.

The clerk replied that he had not seen nor heard nothing about such an article. Bob's jaw dropped. "Well, there's one more chance and that is that maybe one of those nigger boys in the wash room picked it up," he said to Jimmy. Hastening to the wash room, he found the two niggers engaged in a game of crap shooting and as Jimmy afterwards laughed, "it was harder to tell which rolled the most, their eyes or the dice."

"Hey there, boy," said Bob to the one nearest him, "did you see anything of a wrist watch that was left on the wash stand here during the noon hour?"

"No, sah, I never did see any such thing round here," he replied.

"Sure you are telling the truth?" said Bob sternly.

"Yes, sah, I sure is," he returned.

Then Bob turned to the other one, who had apparently paid no attention to the conversation. "Well, what about you, Jack?" said Bob. "And be sure that you tell me the truth. Here's one dollar for you if you can produce it," he added, holding up a silver dollar as he spoke.

Then quickly came, "Yes, sah, mistah, I's got that watch all stored away, cause I's knowed you'd come after it."

"Well, get it then," commanded Bob," and you'll get your dollar. After an undue amount of time searching for it among a jar of dirty towels, he brought it forth with a grin of satisfaction and handing it over to Bob took the dollar in exchange.

"You are certainly lucky, Bob, and if you hadn't told that black rascal there was a dollar waiting for the one that found it, he would have lied about it and you never would have seen it again," said Jimmy.

"Oh, I knew the only way to get it was to offer a reward," answered Bob. "But I got it back cheap enough, I consider. I should certainly hate to lose that watch."

That night found the boys in Franklin, Indiana, and the next afternoon they had reached Louisville, Ky., where they spent the remainder of the afternoon and evening with a friend, who informed them that the roads leading to Nashville were not in very good condition.

"Why, I thought we travelled the Dixie Highway all the way to Nashville," said Jimmy, "that surely ought to be in good condition. We hear so much about that up in the North as being the leading highway into the South."

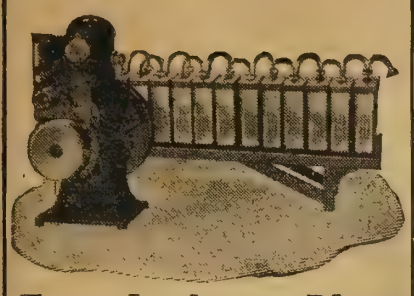
"It's too bad that it is the leading highway into the South," answered his friend, "for in parts of Kentucky it is in very bad shape at present."

"Can a Ford make it?" inquired Bob.

"Sure it can, but it won't be very pleasant either riding or driving, and you'll have some loose bolts to tighten by the time you get across the state. You must remember," he added, "that you are now getting into the South and you can't expect as good roads as you have in the North, at least they have never had that reputation. Of course you'll strike some good roads. I don't want to scare you out, fellows," he laughed. "There are hundreds of tourists who are making the South so I guess you can make it. I only want to warn you not to expect too much of us."

"By the way," broke in Jimmy, "when we were ferrying across here to Louisville we met two fellows with a kind of truck auto, rigged up for camping out. They had been down through Kentucky and had intended to go farther south. They had a great

REGALITE



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A ¾ k.w. generator directly connected with a 2 H. P. air cooled motor. Capacity 45 20-watt lamps. Willard storage battery. Dealers wanted. Write for particulars.

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Come to the Sweeney School of Auto, Tractor & Aviation Mechanics—greatest in the world. Pack your grip—say good-bye to $4 a day—and strike out for the big money.

Eight Weeks of the Sweeney System trains young men mechanically inclined to make and repair autos, tractors, gas engines, auto tires, etc. No previous experience. Use tools instead of books. 35,000 graduates.

FREE Send name for 72-page catalogue. Hundreds of pictures of men working in Million Dollar Trade School. Pack your grip—come today. I guarantee railway fare round trip if you find a single misrepresentation. Emory J. Sweeney, Pres.

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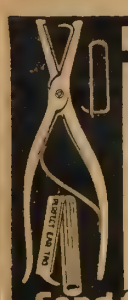
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tale of trouble," he laughed. "They declared the roads were impassable and that the dealers actually sold gas with so much water in it that the carburetor had to be drained every half hour or so. They condemned everything most severely, and they even carried a bottle of ether with which to prime the car, claiming that the gas was so poor it would not start the car at all when the motor was cold."

"Well, well," laughed their friend, "you certainly have had a generous introduction to Dixie land, and I hope you will not be quite so hard on us when you tell your friends of your trip. Just let us down kind a easy you know. We're coming, but we've got a long ways to go and we know it too. Some day all of you fellows will want to live down here."

"How many generations away is that time?" slyly inquired Jimmy, bringing a laugh from everyone.

"Can't just tell that," he answered uneasily, "but it's coming, that's the talk down here."

Jimmy couldn't resist the temptation not to take a shot at the opening his remark had left. "Talk's cheap, and it takes money and work to build good highways, so I think that time is at least two generations away. We'll go on tomorrow morning, Bob. We can't afford to sit around here and grow old."

Everyone enjoyed this bit of sarcasm, and Jimmy was convinced that what he had said was only too true as they were travelling over the Dixie Highway the following day.

"Guess dad was right, when he said that we wouldn't have any car left if we took this trip," said Bob, as they plunged from one hole into another.

"You are lucky to be driving this afternoon," commented Jimmy. "You can at least keep yourself from the danger of having your head poked through the top of this thing," he laughed, as he had just safely landed on the seat again. "I'm up in the air most of the time, or at least between the top and the seat. Here is one time when I wish that we could just hit the high places. Hank Ford didn't take these roads into consideration when he planned the model for these short-bodied Lizzies," he gurgled as he started upward again.

Just at this instant Bob brought the car to a sudden stop. "Try your hand at it, Jim; I'm all in, and besides you seem to think that driving is easier than just sitting here."

"Well, I'm not very keen about the job, Bob," he replied, "but I suppose it is only fair that I do my share of the hard work."

"Hurrah, Bob," shouted Jimmy, as he stopped the car and stretched himself. "We're over it at last; there's the Tennessee line. See the sign?" as he pointed toward a big board sign to the left which read, State Line. "Hope that means the end of this highway. Guess it must be that the people of Tennessee don't want the world to think that they own any of these roads we have just left," he smiled, "so they put up this sign to let 'em know just where they begin. Hope these Tennesseeans have something better to show us."

"You know what we thought of the road that passes through Zion City, Jim?"

"Yes, and I haven't forgotten what they were either," he replied. "They weren't quite as bad as these but considering that the Zionites are so religious, makes them seem a lot worse than anything we have passed over today. Why I lost all the religion I ever had, Bob, going through that city," he added, as they started their tour across Tennessee.

[To be continued]

An Open Letter to Exhibitors

In the Junior Live Stock Exposition, Madison, October 18-22

You have made entries for the Junior Live Stock Exposition. I presume your calf, sheep, or pig is in excellent condition for the show, but remember the exposition is a demonstration of boy and girl efficiency—that it is a place where you may learn.

You can learn best by having your entry at the show. If you have failed to bring him to high standard the exposition is the place where you will learn that most effectively and it is the place also where you will learn to correct your mistakes if you have made any. If you have made your animal practically perfect, it will be a place where you can teach other boys and girls how to make theirs perfect.

Above all, it is a place to which you should come because it is your show, organized and carried on to help you develop yourself into the most efficient stockman possible. The object of writing this letter is to encourage you to come even though you may be disappointed in the way your entry has developed. It will be profitable for you.

You have started out to educate and train yourself to be a high class stock man. You will find the Junior Live Stock Exposition a splendid school in which to get instruction and beyond that to get an inspiration that will be immensely valuable to you. Don't be afraid that you will be humiliated if you do not win. The winner of the first prizes will not be the one who will get all the benefits out of the show. Even though you might stand at the foot of the class you will learn as much and perhaps more than the one who holds the first prize winner.

Come and learn—that's the purpose of the show. We want you here with your entry so that you can get out of the experience the benefits that you may enjoy through the opportunities that the show will give you. You will find the other boys and girls congenial, sympathetic, and helpful. The officers of this and affiliated associations are anxious to help you. Come to enjoy yourself and learn all there is to learn, which will be much.

We hope to meet you personally at Madison, October 18—22.

W. L. HOUSER, President,
Wis. Live Stock Breeders' Ass'n.

Junior Letters

Hoard's Dairyman Juniors:—I am eleven years old and in the fifth grade. My teacher's name is Miss Black.

We have fifteen head of cattle. They are grade Holsteins, eleven of which are milking. I have a bull calf three months old. I feed him ten quarts of skimmilk every night and morning. My father has four horses. Their names are Babe, Stub, Bob, and Major. As I will have to feed my calf I will quit.

Wisconsin. Arthur Hanson.

Hoard's Dairyman Juniors:—I have two rabbits and they are Belgian hares. We are milking 20 cows now and sending our milk to Rigley. We will soon begin to use some silage. I have a bicycle and I have a bull calf.

Texas. Lawrence Kelley.

Hoard's Dairyman Juniors:—We live on a 210-acre farm. We have 57 head of cattle. Some of these are pure-breds and others are highly graded.

We have 500 chickens. They are all the Barred Rocks.

I am 8 years old and will be in the 4th grade. My brother is 6 years old and will be in the 2nd grade.

I wish the juniors good luck.

Iowa. Francis Schroeder.

Hoard's Dairyman Juniors:—I am 14 years old. I have been on a farm about two years. I am not the owner of any stock or poultry, but expect to be by next spring. My mother and I have raised between 150 and 200 chickens this year.

My father rents the 160-acre farm upon which we live. My father, oldest brother, and myself do most of the work.

Michigan. Percy Passmore.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Having rented my farm will sell entire herd of 26 registered and high grade Holstein cows and heifers, result of years of careful selection and breeding. Most of them to freshen by February. All bred to grandson of K. K. S. V. 27.43-lb. herd bull. Bull also included if desired. Sold reasonable if taken at once. E. M. BICKFORD, Plain View Farm, Neponset, Illinois. 10*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

Holstein Bulls—Ready for service, 37-lb. sire. IDEAL STOCK FARM, Dexter, Iowa. 10-4

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

High grade Holsteins. 40 head springers, $140.00. JNO. H. WALL, Elkhorn, Wisconsin. 12-3

Registered Holstein cows for sale. Due to freshen soon. M. RIENKS, Route 2, Sparta, Wis. 12-2

Waukesha County Holsteins. Choice registered and high grade cows, heifers and bulls. SCHLEY & JOHNSON, Waukesha, Wis. 19-spl

$150.00 buys choice registered Holstein sire ready for service out of 34-lb. bull. HATCH HERD, Ypsilanti, Michigan.

Holstein pure-bred and high grade heifer calves well marked from 27- to 30-lb. sires. $30.00 to $50.00 C. O. D. crated. PLAIN VIEW FARM, Neponset, Illinois. 13-2

Pure-bred Holsteins—three heifers, five and nine months old, one from 20-lb. dam, 31-lb. sires, $125.00 each. Three weeks old heifer calves, best of breeding, $80.00 each. Several bull calves, three weeks old, $37.00. Shipped C. O. D. subject to inspection. YOHN STOCK FARM, Watertown, Wis. 13-2

Extra well bred, yearling, pure-bred, Holstein bull for sale cheap. W. D. HOSTROP, Fonda, Ia. 13-2

For Sale—8 heifers sired by Prilly King, dam 32.88, eight heifers bred to 32.88 bull. OSCAR WESTERHEIDE, New Douglas, Ill.

For Sale—30 choice, high grade, Holstein cows, springing and fresh. Also 6 well marked heifer calves, $30.00 each, express paid to your station. CRAWFORD STOCK FARM, Mukwonago, Wis. 13*

For Sale—Carload choice bred and heavy springing Holstein heifers, mostly sired by 31-pound bull. CHARLIE DEARTH, Mineral Point, Wis. 13-4

Seven young registered Holstein cows, 2 just fresh, 5 due soon. Also 9 yearlings. All choice individuals. Herd on accredited list. Liberty Bonds taken. O. E. MULLEN, Watertown, Wisconsin. 13-3

72 head—Stephenson Farm—72 head. We are selling our entire herd. There are a few of the original pure-breds and also some very high grade cows, heifers and yearlings. For particulars write CHARLES A. PHILLIPS, Kenosha, Wis. 13-2

For Sale—Canary Homestead Oak De Kol No. 89469. This sire has 33 A. R. O. daughters. His dam has a record of 29.55 and his sire's dam 34.96. Gentle and a sure breeder. Will consider trade for a bull of equal breeding or an A. R. O. cow. PETERSON BROS., R. 1, Blair, Wisconsin. 13-2

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

STOCK FOR SALE

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

For Sale—A carload of high grade Guernsey cows made up from the pick of Polk County Guernsey herds. What you want in grades. Polk County Guernsey Breeders' Association, J. H. STEWART, Sec., Clear Lake, Wis. 8*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

For Sale—Cows, bulls. Registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wisconsin. 10-5

Guernsey bulls for sale two months to eighteen months old. From A. R. cows. May Rose and Sequel breeding. Send for sale list. Also several big type Poland China boars, sired by The Comet and he by Liberator. Real boars at reasonable prices. DALE E. RUNDELL, Ore Hill Farm, Livingston, Wis. 10-4

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

For Sale—Registered Guernsey bull calves. Prices, $50.00 to $75.00. ADOLPH THOMPSON, Route 6, Wausau, Wisconsin. 12-2

Seventeen months old registered son of an Imported Guernsey bull. $250.00. FRED KUNESH, Haugen, Wis.

Guernsey bulls—Two weeks to two years old. Grandson of Langwater Cavalier, 18 months, $150. EDWIN B. MAULE, Coatesville, Pa. 13-2

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-8

We have a few young registered Jersey cows and heifers for sale. Write for particulars. SHARON HILL FARM, Coraopolis, Pa. 10-5

Sunny Crest Farm Jerseys. Federal and state accredited herd. Bull, 19 months, $150.00. Younger bulls, $50.00 and up. Sire's dam, Gold Medal cow, Edith Marigold, 819 lbs. butter as 4-year-old. M. EMERSON & SON, Wheeler, Wisconsin.

For Sale—Six registered Jersey heifers from one to two years old. M. C. VOSBURG, Fort Atkinson, Wisconsin. 13-2

For Sale—14 head pure-bred Canadian Ayrshire females, two to six years old, mostly springers; good individuals, tuberculin tested. Also one two-year-old bull. Price for quick sale, $3,500. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-4

For Sale—Registered Ayrshires, cows, heifers and calves; bull calves and a few bulls ready for service. Write or come. GEO. A. NELSON, Milltown, Wis. 12-2

Registered Brown Swiss bulls. Write for breeding and prices. F. A. TURNURE & SONS, Route 3, Rockford, Ill.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 13*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

For Sale—Two registered Cheviot rams. Glimmeiglen breeding, $30.00 each. ROY B. FREEMAN, 107 South Barnard Street, State College, Pa.

For Sale—Pure-bred Shropshire ram lambs and yearlings. F. S. HALLADAY, Green Bay, Wis. 13*

RABBITS AND GUINEA PIGS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

Guinea Pigs—Pet stock. $.75 each. N. SANDERS, Fisk, Wisconsin.

SWINE

5 big boned March Poland China boars, and 4 gilts. Also 2 Shetland ponies. P. A. BLACKFORD, Hillsboro, Iowa. 12-2

For Sale—Some Duroc spring boars. Sired by the world's greatest boars and out of the largest and best sows in the state. Several by Pathfinder that sure are killers. BRIAN L. RUNDELL, Livingston, Wis. 5-spl

Duroc Jerseys—Both sex, all ages, registered and unregistered. ROUND TOP FARMS, Damariscotta, Maine. 13-4

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

Mammoth Pekin drakes, $5.00 and $6.00. W. R. LUETH, Walworth, Wisconsin. 13-2

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Illinois. 12-4

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

MACHINERY

For Sale—Sharples milking machine, four single units, pipe lines, vacuum tank and pump, complete for 60 cows. Have used only a short time. Also new set of tubes and rubbers for same. Price, $400.00. THE FLOREX GARDENS, INC., North Wales, Pennsylvania. 11-3

For Sale—Universal Milker. 2 double units and pump complete, $350.00. Never used. Address BOX 392, care Hoard's Dairyman. 12-2

For Sale—20-h. p. Baker steam traction engine. Some repairs needed; but a bargain at the price. Write for details. A. D. ELLISON, Marengo, Ill. 12-2

For Sale—No. 60 Typhon, combination ensilage cutter and silo filler with self feeding table. Only slightly used. Complete except feed pipe. Price on request. THE NUTRITIA COMPANY, Lawrenceburg, Indiana. 13-2

One New Perfection Milker complete; also extra double unit. Reduced prices. FELIX JULIUS, Stockton, Illinois.

For Sale—Sharples turbine drive separator, turbine drive tester. Little Giant steam boiler. Perfection churn and worker. Also butter printer. Good condition. L. L. GILLESPIE, Hopkins, Mo.

For Sale—Hinman Milker, three units, complete for sixty cows. Used three months. F. O. B. $175.00. WM. C. PERRY, Alexandria, Indiana.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

TOBACCO

Tobacco—Kentucky's Best Leaf, chewing or smoking, all tobacco, no dope. Direct from farmers. Trial offer, 2 lbs. $1.00 postpaid; 10 lbs. $4.50. KY. TOBACCO ASSN., Dept. L, Hawesville, Ky. 11-4

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

Farmers, Stockman—Samples of printed envelopes and letterheads for your business, postpaid, free. HOWIE PRINTING CONCERN, Beebeplain, Vt. 13-3

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

BUTTERMAKERS

Buttermaker wanted—In answering this advertisement, state age, experience and salary wanted. FARMERS' WAUKON CREAMERY CO., Waukon, Iowa. 12-4

MOLASSES

Molasses—Kentucky Country Sorghum, made the good "old fashioned way". Pure cane molasses, no adulterants. Sample and price list mailed for 10c. S. ROSENBLATT, Hawesville, Ky. 12-4

BEETS FOR SALE

Beets for Sale—Crosby Egyptian table beet by the ton or carload. WALTER DAVENPORT, Accord, N. Y. 13-2

PHONOGRAPHS

Phonographs from factory to home. Save 70%. Write for prices and free trial offer. SCHMIDT MFG. CO., 213 W. 69th St., Chicago.

FEED BAGS

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 11-4

FARMS FOR SALE

New York State Farm Bargain—190 acres of good, tillable soil within fifty miles from Buffalo on state highway. Buildings in A-1 shape and include large, commodious house, barns and outbuildings. All grain crops, ten acres of potatoes included. 400 apple trees, 75 pear trees. Two fish ponds on property fed by living stream and stocked with bass, pike, etc. Live stock includes four horses, sixteen cows, twenty-five sheep and one hundred chickens; fifty tons of hay go with crops. This place fully equipped and we consider it one of the best bargains ever gone through our office. HARRISON REAL ESTATE CORPORATION, 15 W. Eagle Street, Buffalo, N. Y.

Must sell my excellent stock, corn, grain and alfalfa farm in Walworth County, Wisconsin. Address BOX 405, Hoard's Dairyman.

FARMS FOR SALE

Hardwood cut-over land, silt loam, clay sub-soil. Neither sandy nor gravelly. Close to town. Good roads, good schools, in the heart of the dairy country. You deal directly with the owners. No agents and no commissions. Easy terms. Also improved farms. Write for map and booklet No. 4, NORTH WESTERN LUMBER COMPANY, Land Department, Stanley, Wisconsin. 2*

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

$1,500 cash secures 200 acres, 23 cattle, and pair horses, wagons, machinery, tools, quantity hay, fodder, potatoes; prosperous farming country; 2 miles to R. R. town, all advantages; machine-worked loam fields, spring-watered pasture, valuable wood, variety fruit, 800 sugar maples with sugar house, and equipment; 7-room house, running water, piazza, maple shade; slate-roof barn, running water, silo, several other buildings; owner left alone insists immediate sale, throws in everything for $6,500, only $1,500 cash, balance easy terms. Details this and farm for $1,200 page 29 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free. STROUT FARM AGENCY, D L Marquette Bldg., Chicago, Ill.

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Fifty-eight acre farm complete with house, barn, silo, windmill, etc., near Lake La Belle, within ten minutes ride from Oconomowoc. Apply C. E. DINGWALL CO., 536 First Wisconsin National Bank Bldg., Milwaukee, Wisconsin. 12-4

Illinois farms for sale—Several choice grain, stock and dairy farms, located convenient to St. Louis, at bargain prices. Free descriptive matter. IRVING M. CLARK, Brighton, Illinois. 12-4

Land that is real land in St. Louis County. "The County of real farms". Now is your chance to get one of our reasonably priced farms at little cost. We need good farmers to supply our markets. We are offering our lands on a small down payment and give you a long time to pay balance. Remember a great railroad stands back of this offer. Send for free information today. L. B. ARNOLD, Land Commissioner, 154 Wolvin Bldg., Duluth, Minn. 12-4

80-acre farm for $3,500. Good clay soil, 30 acres cleared, balance wood-land. Almost level, log house and barn, well, near village, school and creamery. Write for further particulars and bargain list. DEPT. 23, Ev. Luth. Colonization Co., Merrill, Wis. 12-2

Would you like $1,000 monthly milk check from 230-acre farm, modern buildings, priced $10,000? Come East! Write NEW YORK FARM AGENCY, Westfield, New York. 9-spl

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin.

South Dakota—If you have $2,000 to put into a farm come to South Dakota where land is still selling at low price. You can own your own farm. The state will loan you money at low rates to help you stock your farm. Write for information. DEPARTMENT OF IMMIGRATION, Capitol F15, Pierre, South Dakota.

New York State greatest alfalfa farm bargains, wonderful land and water, best location and markets. Send for my free list of farm bargains. FRANK J. BASLOE, Herkimer, N. Y.

275-acre farm on state road 3 miles from town, creameries, state school, high school. District school joins farm. One of most productive farms in heart of dairy section. Two full sets of buildings in good condition. 80 head of cattle, 4 horses, all crops, tools included. Price reasonable. MARCH FARRINGTON, Owner, Delhi, N. Y.

Best Southern Dairy Opportunity—206 acres good soil within two miles town of 20,000. Electric light and power from town, modern home, new herdsman's bungalow, running water to all buildings and tenant houses, modern 150-cow barn, concrete silos, De Laval-electric milker. Milk wholesaling 50c gallon, 18% cream, $2.20 gallon; great retail demand unfilled at 20c quart. Little competition. Will sell with or without herd and equipment. Owner's business elsewhere requires attention. Farm alone, $30,000 A real bargain. Address 107 DENNISON STREET, Little Rock, Ark.

Choice Dairy Farm—450 acres. Excellent buildings. Three miles from town of 2,000. Grass for 500 cows annually. Easy terms and immediate possession. NORMAN HORN, Appleton, Minn.

Oklahoma farms. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla. 13-2

For Sale—320 acres splendid hardwood land within 1½ miles of Sheldon, Wis. Sufficient timber and wood on this land to pay for it at the present prices and market. Will divide. Address BOX 404, care Hoard's Dairyman.

For Sale—120 acres fine land Cass County, Minn. Small house. 11 acres cleared and in cultivation, balance easily cleared. Across road from district school, splendid roads built or building. Good chance for young man to develop fine property. Address BOX 403, care Hoard's Dairyman.

For Sale—196¼ acres within 1½ miles of Essex, Ontario, Canada. 18 miles from Detroit, Mich. Fine electric and railroad communication. Soil A-No. 1, well tiled, buildings good and has been used for dairy and special seed corn. If you want something good write to BOX 402, care Hoard's Dairyman.

For Sale by Owner—420-acre farm in Lake County, Illinois. Best of soil. Good set of buildings including house, two barns and silo. Two miles from town. Price for quick sale $120 an acre. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-6

For Sale—150 acres highly productive, new house and barn, running water, concrete floors, patent stanchions stock barn, tie up 100 head stock, 3 silos, creamery, poultry houses; buildings insured $12,000.00. Gently sloping land, worked with tractor. Improved road, near large town. Price $11,000, cash $5,000. CAMPBELL BROS., Oneonta, N. Y.

300-acre dairy farm with thirty-three head of Holsteins, including pure-bred sires. Modern dairy barn, all new buildings, two silos, two houses, located 1½ miles from creamery and cheese factory and on the condensery route; five horses and complete all new farm equipment. 100 acres under cultivation; 50 acres of pasture, balance marsh and trapping lands. GREENLAW & THOMAS, Oshkosh, Wis. 13-4



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Guernseys. Work to begin at once. Write inclosing salary desired and credentials to NORTHLAND COLLEGE, Ashland, Wis. 10*

Dairyman—Single, good buttermaker. Empire milking machine, electric equipment. Must understand handling help. Foreman—Single, competent to handle help and work on general farm. Blacksmith—Experienced in gas engine and machinery repair. Give reference, age, wages wanted in first letter. Positions steady for dependable men. FRED S. PLAATES, Mgr., Agricultural Dept., St. Mary's Training School, Des Plaines, Illinois. 12-2

Wanted—Single man to milk and take care of small private dairy herd, pure-breds. Live with superintendent on farm. W. F. STANTON, Lake Geneva, Wisconsin. 12*

Wanted—Two four-time milkers for Official Test work. Swiss or Danish preferred. P. FROST SPAULDING FARM CO., Warren, Minn. 12-3

Herdsman of experience with abortion. Good proposition. Address BOX 394, care Hoard's Dairyman. 12-2

Wanted—Reliable dairyman of experience with labor of his own to operate dairy and Advanced Registry Breeding on shares or salary, shares preferred, next year. High-class, pure-bred, Holstein-Friesian herd. Also pure-bred poultry business for eggs. Forty-thousand dollars yearly business. Very near railroad, post office, good school and churches. Reference required. EDWARD HOLLAND, Eastville, Va. 12-2

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

Experienced man for general dairy farm work. $60.00 to start. LEE P. GRANT, Bloomville, N. Y. 12*

Wanted—Married man for general farm work. Must be good dry milker. Will furnish part of living. Pay $60.00 per month. Address BOX 58, Foxburg, Pennsylvania.

Firemen, Brakemen, $350-$300 monthly, all railroads, everywhere, experience unnecessary. RAILWAY ASSOCIATION, Desk W5, Brooklyn, N. Y. 13-3

Wanted—Married man to operate 120-acre dairy farm in Southern Wisconsin on salary. Position open March 1. Address BOX 400, care Hoard's Dairyman. 13-2

Wanted—By November first, married man on 200-acre dairy farm, just at the edge of town. Must be willing to take the wagon on retail route. Wife to board help. State age, experience and salary wanted. W. W. PAUL, Champaign, Illinois.

HELP WANTED

Wanted at Once—Good, reliable single man for general farm work. Must be steady and on the job and understand machinery and gas engines. Must be a good, live worker. Middle-aged man preferred and one with practical experience. Must be kind with stock and good hustler. Steady job to right man. State wages in first letter. C. H. HICKS, Marshalltown, Ia.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Wanted—Position as managing herdsman by first class married man, 28 years old. Broad experience in breeding Holsteins, and Advanced Registry feeding. College training. Highly recommended. BOX 374, care Hoard's Dairyman. 12-2

Wanted—Position as calf and young stock man. Holsteins preferred. 14 years experience. ALBERT C. ROUSSEAU, Grand Isle, Vt. 12-2

Farm manager with energy push and proven ability, desires position on a modern farm, where results will be appreciated. Agricultural graduate. Experienced in soils, crops, A. R. O. work, care, feeding and judging of dairy cattle, poultry, handling men. County agent three years. Excellent references. Address BOX 401, care Hoard's Dairyman. 13-2

Position wanted as farm manager or superintendent of pure-bred stock farm by practical and scientific farmer in live stock breeding and feeding. College graduate; A-1 calf raiser. Have made some very creditable A. R. records. Experienced in managing men, producing certified milk, caring for and operating modern farm machinery, life time experience as a farmer. Married, no children. 33 years old. Conscientious, ambitious, honest and industrious with no bad habits. Best references as to ability and character. Address P. E. DAHL, Box 432, Frazee, Minn.

Wanted—Position by a working manager, A-No. 1 dairy farmer in every way. Twenty years practical experience. Hollander, married. 36 years old. Will go anywhere. Address H. DOUWENGA, Route 2, Box 71, Marlow, Okla.

I want a job. American; age 30 years; married two children. A-1 dairyman, farmer and calf man. Fit for A. R. O. work. Understand how to feed for short or long time tests. Not afraid of hard work or long hours. Capable of managing. GEO. THOMAS, care University Farm Dairy Dept., St. Paul, Minn.

Wanted—Position as barnman, single, lifetime experience. Registered Holsteins. State particulars. HARVEY NEUMANN, Metamora, Ill.

Middle-aged married herdsman wants situation after October 15. Understands feeding, calf raising, A. R. work and all methods pertaining to certified dairy. 15 years' experience. Would like small private dairy with furnished house, garden, etc., or straight testing proposition. No family. References. Jerseys preferred. Central or Eastern states. Address BOX 399, care Hoard's Dairyman.

Farm Manager—Married, will be available after November 1st to handle dairy farm that can pay about $3,500 and perquisites. Address 3RD FLOOR, 2307 Maryland Ave., Baltimore, Md. 13-2

Milk News From Washington

HOARD'S DAIRYMAN;—Seattle is in the midst of another "Milk War". Producers are demanding an increase from $3.65 per hundred to $4.17 per hundred for milk testing 3.6%. Distributors contend that they have loaded on all the traffic will bear and that another raise to the consumer, which would be necessitated by the increase demanded by producers, will result in a sharp decline in consumption.

A milk strike has been threatened. Charges and counter-charges have been made by both sides to the controversy.

On Monday, September 28th, after a large delegation of producers had called on Mayor Caldwell, explaining their inability to reach an amicable agreement with the distributors, it was decided to place the matter in the hands of a committee. Accordingly, the mayor selected two members of a committee serving last spring to arbitrate a similar dispute, Dr. F. E. Smith, chief dairy, food, and milk inspector of the City of Seattle, and A. R. Priest, chairman of the civic bureau of the chamber of commerce. The third and new member of the committee appointed was Joseph Passonneau, director of farm markets with the Washington State College. Mr. Passonneau is at present engaged in making a survey of Seattle's milk supply and it was believed that his experience in this work and his familiarity with the various factors involved would be of material value in effecting an agreement satisfactory to all parties.

⚜

Under the managership of Mr. Carl Christensen, the Snohomish County Dairymen's Association is successfully operating the condensery at Snohomish which they recently purchased from the Bradner interests of Seattle. At the present time they are processing and canning about 24,000 pounds of milk daily, practically all of which is produced in the Snohomish Valley. Most of the product is being disposed of under the brand formerly used by the King County Dairymen's Association which was acquired by the Snohomish Association shortly after the failure of the latter's condensery enterprise at Tolt, Washington.

⚜

Homer F. Detrick, secretary of the United Dairy Associations of Washington, reports that the seven western counties of the state in which they have been operating now have 60,000 cows signed up.

"Satisfactory progress is being made in our efforts to procure better prices for the producers," he says.

The associations are planning on the construction of a number of farmer-owned and operated plants throughout the western portion of the state. They are now operating one condensery and in a few days will take control of another. They recently purchased the Lynden Creamery in Whatcom County and are now constructing a powdered milk plant and condensery at Burlington in Skagit County.

⚜

The Snohomish County unit of the United Dairy Associations is making preparations to operate the powdered milk plant and condensery at Arlington, construction of which has been completed. Under the terms of the purchase agreement it is to be operated for thirty days by the present owners before the association acquires control. This is one of the several plants to be operated throughout Western Washington by the State Association, through the county units.

⚜

Farmers in the Sequim Prairie district of Clallam County have purchased the Glendale creameries and are now operating plants on the co-operative plan at Dungenesse and Sequim.

Washington. ALTON D. HURLEY.

No accomplishment is impossible when people work together.

The War Is Over!

Changing conditions make it necessary for me to give my entire time to business interests in the West.

My FARM is therefore FOR SALE

Must be Sold and Will be Sold this Month —

O C T O B E R

It consists of 480 acres clay loam on one side of road running into a lighter loam on other side.

Buildings

are in good condition and consist of

1 9-room bungalow, 3 other houses for men, 1 horse barn, 1 cattle barn, 140x36, with ell, 64x36 basement under entire barn, fully equipped, 3 other barns for hay and grain storage. Creamery equipped with steam power. Other buildings such as ice house, chicken house, granary, etc. Stock—50 head pure-bred registered Holstein cattle, 4 teams horses, hogs, chickens, etc. Tools—tractor, hay loader, grain binder, corn binder, milking machine, wagon, sleighs, etc.

VALUE — at last Inventory it was Worth $128,000

There have been some additions since.

Price — $65,000

Don't ask questions but get here at once if you expect to get this bargain.

Francis Farms, Cheboygan, Mich.

Use The "Humane" Lever Stanchion

From 2 to 50 swinging stanchions may be opened and closed with one throw of the lever. One cow or as many as desired may be kept in and the rest let out at the same time.

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Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

DALY FOOD STOCK FEED $14.00 FOR 50 GALS **MOLASSES**

Best and Greatest Stock Feed ever discovered. Equal to corn and cheaper. Barrels weigh 625 pounds, over 50 gallons. The feeders using 60-barrel car lots cheaper. Can be mixed with roughage to replace grains. Will ship right draft to bill of lading payable on arrival at your station. Sample and book free.

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She's the cow that will convert her feed of grain and fodder into pails of milk.

Remember, the better the appetite, the greater the food consumption, the greater the milk production. Hence, good health, a strong appetite and good digestion are the absolute essentials of a big milker.

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It contains Nux Vomica, that greatest of all nerve tonics. It whets the appetite, brightens the eye, invigorates the system. It contains Quassia, that bitter Stomachic tonic that produces appetite. It contains Iron that helps to replenish rich red blood, so essential to a cow in milk.

Lastly, but just as important is it—it contains Laxatives and Diuretics that cause the kidneys to filtrate and the bowels to operate regularly, so as to throw off and carry off the waste material. There is no clogging of the system where Dr. Hess Stock Tonic is fed.



Good alike for cattle, horses, hogs and sheep. It keeps animals healthy, the whole herd thrifty. It expels worms. Always condition your cows for calving with a course of Dr. Hess Stock Tonic before freshing.

Dr. Hess Stock Tonic is compounded strictly on scientific lines. You buy it according to the size of your herd. Tell your dealer how many cows you have. He has a package to suit. We guarantee good results in the milk pail.

25 lb. Pail, $2.50 **100 lb. Drum, $8.50**

Except in the far West, South and Canada. Smaller packages in proportion.

DR. HESS & CLARK **Ashland, Ohio**

Dr. Hess Dip and Disinfectant

Keeps the Dairy and Stables Healthful and Clean Smelling

Eastern States Exposition

(Continued from page 556)

on Double Finances Snowdrop; 4, Westbrook on Farceuse of Westbrook; 5 and 6, Barnes on Fauvics Rozel and Fauvics Ivy. Cows producing 600 lbs. fat or over in test begun at 5 years—1, Inderkill on Heather Countess; 2, Mansfield Hall on Fox's Draconis. Cows producing 400 lbs. fat or over in test begun at ages between 2 and 5 years—1, Barnes; 2, Burnham on Knights Dorothy; 3, Mansfield Hall on Fox's Draconis.

Senior and Grand Champion Bull—Gipsy Gamboge Lad. Junior Champion Bull—Buttercup's Jolly. Senior and Grand Champion Cow—Fauvic's Nic Nac. Junior Champion Cow—Sybils Creolo.

Ayrshires

Ayrshires led the show. One hundred and fifty head put up the only kind of exhibit a breed can afford to make before business farmers who crowd the ringside of this strong eastern show. The best types of Ayrshire were there—well fitted and well shown. John Cochrane of Pennsylvania judged and made consistent placings in classes which furnished many close ratings.

The aged bulls were a class which drew a large ringside. Auchenbrain Toreador, Middlesex Meadows Farm's Syracuse grand champion, met his first defeat, Foulton Embassador owned by Wendover Farm, New Jersey, leading the class. The two are of different type. The first is a little more upstanding, a little finer, of greater length, and more level rump. He is a finished animal of excellent form. The winner shows in greatly improved condition from last year, being free from excessive covering and clean cut. He has a longer rib and evidences more masculinity, depth of chest, and capacity. The ringside favored the winner. Geo. White's two-year-old, Ringmaster's Brae Burn Diplomat, won his class. Middlesex Meadows' yearling, Southcraig Imperial, beat two good ones, Wendover Embassador and H. P. Hinckley's new herd sire, Bargenoch Predominant. Mr. Cochrane considered the blue ribboner so good that he put him over all other juniors. The aged bull fought his hardest battle in class and was made grand champion.

Nineteen aged cows brought as much merit into the ring as any show in years. The showing was of high worth because of the excellence throughout the group rather than having an exceptional individual or two. Ardyne of Hilltop won for Wendover. She is not flashy but uniformly good. Westburn Royal Rose, from the same herd, was showier, larger, and better bodied but lacked in udder, and another cow or two had excellence in udder but the winner was without serious fault. Lochfergus Ruby, from Woronoake Heights, a cow of very considerable Ayrshire quality, was second. Henderson's Betty, milking 70 lbs. per day, was too much faded from that work and the wear of shipping to repeat her Syracuse winning for Weymouth Farm and went to fifth place. The four-year-olds were not so good; Evamere's Bertha led for Middlesex Meadows among strong three-year-olds; and Wendover won in all the younger female groups excepting that for junior calves in which first money went to Middlesex Meadows. The senior calf, Ambassador's White Heather of Wendover Farm, a winner in a splendid line-up of twenty-one head, was made junior champion, the aged winner taking the grand. The New Jersey herd annexed the blue in all the groups and totalled five of the six purples.

The list of awards follows:

Bull 3 years or over—1, Wendover on Foulton Ambassador; 2, Middlesex Meadows on Auchenbrain Toreador; 3, Woronoake Heights on Strathglass Goldpiece; 4, Monstone on Lessnessock Gems Good Gift; 5, Weymouth on Ryanogue Gwynette's Boy. Bull 2 years, under 3—1, White on Ringmaster's Brae Burn Diplomat; 2 and 3, Hannah on Prince Fissaway of Bonnie Doone and Sir Douglas Haig of Bonnie Doone. Bull 1 year, under 2—1, Middlesex Meadows on Southcraig Imperial; 2 and 5, Wendover on Wendover Ambassador and Wendover Circulation; 3, Hinckley on Bargenoch Predominant; 4, Weymouth on Irene's King of Weymouth; 6, Woronoake Heights on Woronoake Sir Robert 2nd. Senior bull calf—1, Wendover on Ambassador Circulation of Wendover; 2, Weymouth on Elsie's Spectator of Weymouth; 3 and 4, Woronoake Heights on Woronoake Tip and Woronoake Bonnie; 5, Hinckley on Federal Hill Jazz; 6, Middlesex Meadows on Nancy's Chancellor of Middlesex. Junior bull calf—1 and 3, Wendover on Foulton Ambassador 2d and Wendover Ambassador 2d; 2, Weymouth on Weymouth Bircey Bob; 4 and 5, Middlesex Meadows on Nona's Middlesex Chancellor and Middlesex Royal Champion; 6, Woronoake Heights on Woronoake Sir Robert 11th.

Cow 5 years or over—1 and 3 Wendover on Ardyne of Hilltop and Westburn Royal Rose; 2, Woronoake Heights on Lochfergus Ruby; 4, Monstone of Duchrae Jenny; 5, Weymouth on Henderson's Betty; 6, Middlesex Meadows on Maple Leaf Jean. Cow 4 years, under 5—1, Wendover on Nethercraig Buttercup; 2, Hinckley on Envious Nannie 2d; 3, Woronoake Heights on Woronoake Pearl 2nd; 4 and 5, Weymouth on Springburn Rose 2nd and Miss Hughina. Cow 3 years, under 4—1, Middlesex Meadows on Evamere's Bertha; 2 and 3, Wendover on Barclay's White Flora 3rd and Nethercraig Sunflower; 4, Weymouth on Evamere's Betty; 5, Middlesex Meadows on Townfoot Barbara; 6, Hannah on Meg Gretchen of Bonnie Doon. Heifer 2 years, under 3—1 and 2, Wendover on Miss Allan of Wendover and Wendover Brown Canary; 3 and 4, Middlesex Meadows on Cavalier's Buntie Belle and Ringmaster's Britta of Brae Burn; 5, Weymouth on Weymouth Viola Nox; 6, White on Bride's Princess. Senior yearling heifer—1, Wendover on Wendover Gay Lass; 2, Monstone Farms on Rose Escape 2nd of Weymouth; 3, Woronoake Heights on Woronoake Lady 2nd; 4, Weymouth on Lady Dairy Belle of Weymouth; Middlesex Meadows on Middlesex Maud. Junior yearling heifer—1 and 2, Wendover on Wendover Crusader Princess and Farm Spicy Lady 2nd; 3, Middlesex Meadows on Britta of Weymouth; 4 and 5, Woronoake Heights on Woronoake Lady 3rd and Nellie 2nd. Senior heifer calf—1 and 3 Wendover on Ambassador White Heather of W. F. and Ambassador's Yellow Kate of W. F.; 2, Monstone Farms on Monstone Heather Honey; 4, Middlesex Meadows on Alta Crest Mist; 5, Monstone Farms on Monstone Stately Maid. Junior heifer calf—1, Middlesex Meadows on Middlesex Henney; 2, Woronoake Heights on Woronoake Jessolyn; 3 and 5, Wendover on Wendover White Lady and Wendover Ambassador's Gay Lass; 4, Weymouth on Young Bonnie Jean of Weymouth. Six-hundred-lb.-butterfat, A. R., mature cows—1, Middlesex Meadows on White Heather of Torr. Four-hundred-lb.-butterfat, A. R., under 5 cows—1 and 4, Woronoake Heights on Lochfergus Ruby and Woronoake Nellie; 2, Middlesex Meadows on Maple Leaf Jean; 3, Wendover on Netherton Brown Canary 5th; 5, Monstone Farms on Agawave Hargrove.

Senior and Grand Champion Bull—Foulton Ambassador. Junior Champion Bull—Southcraig Imperial Imp. Senior and Grand Champion Female—Ardyne of Hilltop. Junior Champion Female—Ambassador's White Heather of W. F.

Barren Cows

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We say this confidently because it has been used with such marvelous results by so many breeders. Every cow at Hood Farm is treated with the Breeding Powder, and we know that it does make barren cows and heifers breed; we know that it checks and prevents abortion; we know that it makes cows clean quickly, thereby saving us hundreds of dollars annually.

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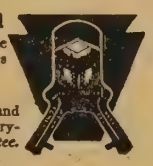
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VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Chronic Bloating

Cow is about 12 years old. Last calf about 12 months old. She bloats or swells in left side at night. She has poor appetite and has fallen off in milk. I am giving some hay and some hulls and corn meal and bran. I have given her salts and ground ginger, but no improvement.

Scotland Neck, N. C. G. S. W

Tuberculosis is so often the cause of chronic bloating, such as you describe, that you should at once have the tuberculin test applied by a qualified veterinarian. There is no remedy for the disease. It causes bloating by enlarging the mediastinal lymph glands so that they press upon the gullet and prevent belching of gas. Foreign bodies in the stomach would be another incurable cause of bloating. If you care to try treatment give a dram each of formaldehyde and fluid extract of nux vomica night and morning in a quart of water.

Butter Prices for September

From the daily quotations of the United States Bureau of Markets, we have compiled the following table giving the monthly averages of the daily wholesale prices for September, 1919 and 1920, on 92 score butter (extras) in the four principal markets, together with the total receipts of butter at these markets:

	Av. price		Receipts	
	Sept. 1920	Sept. 1919	Sept. 1920	Sept. 1919
	cents	cents	tubs	tubs
Chicago	56.5	56.9	206,072	17,414
New York	59.13	58.98	198,853	261,999
Boston	59.35	57.94	90,156	69,879
Philadelphia	59.62	59.28	62,641	55,218
			557,722	562,510

Butter receipts during September decreased 22 per cent and the average price per pound increased about 3c. As compared with September, 1919, the receipts were nearly 5,000 tubs less and the average price per pound practically the same or a fraction of a cent higher. The total receipts for the 9 months ending September 3, are 5,086,752 tubs as compared with 6,046,740 tubs during the corresponding period last year or a decreased receipt of over a million tubs.

Ninety score butter averaged 53.24 cents for September on the Chicago market with centralizer butter at this market selling for 53.58 cents. Jobbers' prices on extras sold to retailers during September averaged 57.76 cents in Chicago and 61.76 cents in New York.

Cheese Prices for September

Cheese prices, as well as butter, advanced during September, the increase over August on the Wisconsin Boards amounting to slightly over 1½c per pound but in New York increasing scarcely one-half cent. As compared with a year ago, the September prices are from 2 to 3c lower. For the 9 months ending September 30th, the total receipts at Chicago, New York, Boston, and Philadelphia amount to 122,141,582 lbs. as compared with 143,737,927 lbs. during the corresponding period of 1919. This decrease of 20 million pounds in receipts indicates a healthy condition of the cheese market as does also a decrease of 8 millions in the storage stocks on hand in these four cities.

The daily quotations of the United States Bureau of Markets show the following average quotations on cheese (style, Twins) for three large markets in September, 1920, and 1919:

	Average price	
	cents	cents
Wisconsin boards	26.39	28.27
Chicago	25.78	28.21
New York	27.	30.21

Longhorns averaged 27.64c on the Wisconsin boards for September as compared with 25.82c for August.

Farming is just one emergency after another; so the successful farmer is the one who is ready for any emergency. Have you arranged for all the needed barn repairs to carry you through next winter?

Increase Your Milk Flow



Use Acorn Water Bowls

AUTOMATIC CONTROL—FRESH SUPPLY AT EVERY DRINK

Write for Circular and Prices
For Sale by Dealers Everywhere
JOHN W. LADD CO. Detroit—Cleveland

A GUARANTEED REMEDY FOR CONTAGIOUS ABORTION



Save calf, cow and herd by the use of *Aborno.* Easily administered by hypodermic syringe. Kills abortion germs quickly without injuring cow. Write today for free booklet with letters from users and full details of our moneyback guarantee.

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

Bone Spavin Even established cases yield to **Fleming's Spavin and Ringbone Paste,** or money back. $2.00 a bottle postpaid. Send for FREE Vest-Pocket Veterinary Adviser. Describes Spavins and 200 other horse and cattle ailments.

FLEMING BROTHERS, 255 Union Stock Yards, Chicago

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

Alfalfa Hay
The Choice Dairy Kind

We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.

W. A. Ferson Hay Company, Kansas City, Mo.

"You'll Always Find"
says the Good Judge



That you get more genuine satisfaction at less cost when you use this class of tobacco.

A small chew lasts so much longer than a big chew of the ordinary kind. And the full, rich real tobacco taste gives a long lasting chewing satisfaction.

Any man who uses the Real Tobacco Chew will tell you that.

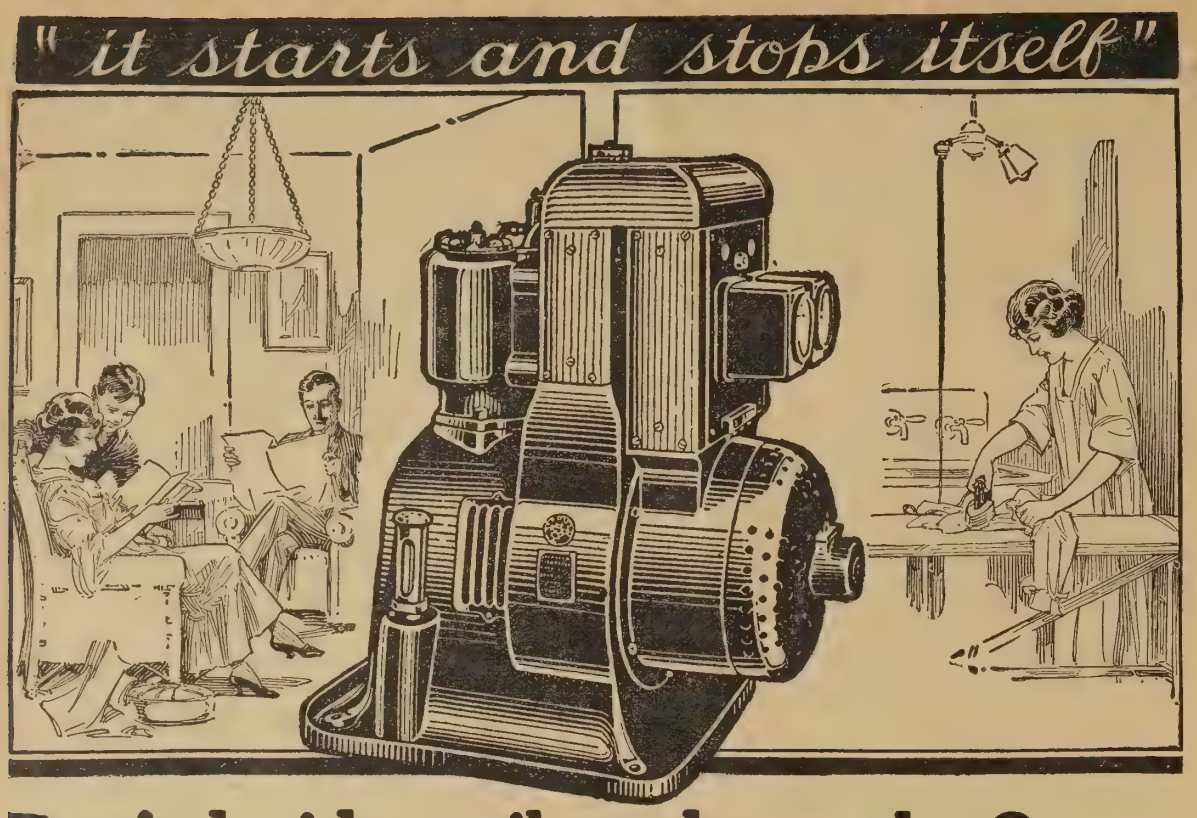
Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Sale Announcements

Oct. 16—Ayrshires. Fred Tschudy & Sons at Monroe, Wis. Sale Manager, Amos Burhans, Waterloo, Ia.
Oct. 16—Holstein Dispersal. John B. Martin, Grand Rapids, Mich.
Oct. 18—Holsteins. Lake County Holstein Breeders' Sale at Libertyville, Ill. R. N. Thompson, People's Life Bldg., Chicago, Mgr.
Oct. 18—Holsteins. West Michigan Holstein Breeders' Semi-annual Sale. W. R. Harper, Middleville, Mich., Sec.
Oct. 19—Holsteins. Jackson, Mich. Second Michigan State Holstein Sale.
Oct. 19—Holsteins. West Concord Security Sale at West Concord, Minn.
Oct. 20—Holsteins. East Lansing, Mich. Central Michigan Holstein Breeders.
Oct. 20—Holsteins. Dr. F. W. Caldwell, Lexington, Mo. C. M. Long, Sale Mgr., Sedalia, Mo.
Oct. 21—Holsteins. Carver County Breeders' Sale at Waconia, Minn.
Oct. 21—Guernseys. A. C. Ramseyer, Smithville, Ohio.
Oct. 21—Holsteins. Owosso, Mich. Shiawassee County Holstein Breeders.
October 22—Holsteins. Central Pennsylvania Holstein-Friesian breeders' second annual sale at Hughesville, Pa.
Oct. 23—Holsteins. Dispersion J. B. Ruffner herd at Lebanon, Ohio.
Oct. 23—Holsteins. Dispersion and Consignment Sale at Lake Park Farm, Sheboygan, Wis.
Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 25-26—Holsteins. Wellington District Guarantee Sale, Wellington, Ohio.
Oct. 26—Ayrshires. Consignment Sale Vermont Ayrshire Club, Rutland, Vt.
Oct. 26—Holsteins. Consignment Sale at Mauston, Wis. F. H. Everson, Lake Mills, Wis., Mgr.
Oct. 26—Guernseys. Jones & McKerrow Quality Sale at Waukesha, Wis.
Oct. 27—Guernseys. E. J. Himmelberger's complete dispersal sale of registered Guernseys at Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Mgr.
Oct. 27—Holsteins. Lake Mills Breeders' Consignment Sale at Lake Mills, Wis. F. H. Everson, Manager.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28—Holsteins. Dispersal of herd owned by Thompson Estate at Barneveld, Wis. F. H. Everson, Manager.
October 28—Guernseys. F. G. Eberhardt complete dispersal sale of registered and grade Guernseys at Mishawaka, Ind. F. E. Fox, Sales Mgr., Waukesha, Wis.
Oct. 30—Holsteins. The Porter County Holstein-Friesian Ass'n., Valparaiso, Ind.
Oct. 28—Guernseys. Chapin, Ill. The Farmers' State Bank & Trust Co., Jacksonville, Ill.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 30—Holsteins. Daniel S. Johnson's Holstein Sale at Rockdale, N. Y.
Nov. 3—Guernseys. Lakeville Guernsey Breeders' Sale at Libertyville, Ill.
Nov. 3—Guernseys—The Lake County Guernsey Breeders' Ass'n., Libertyville, Ill. W. E. Watkins, Secretary.
Nov. 3—Holsteins. Washington County Holstein Sale at West Bend, Wis.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
Nov. 15—Holsteins. Walworth County Holstein Breeders' Sale at Elkhorn, Wis. Ben Bachhuber, Mgr.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.



Don't decide until you know the Owen

The Owen costs one-third as much to operate as other units. Cheaper per candle-power than kerosene lamps

At last farmers are able to secure the perfected Light and Power. This plant is the Owen. Until the Owen came, farmers had to be content with makeshift units. Crude, too small, expensive to operate.

Still many bought these temporary units. They could no longer content themselves with kerosene lamps and the lack of electric power. Many hesitated, waiting for just such a plant as the Owen.

Now those who have already bought units are replacing them with this final-type plant. Each day we are receiving orders from farmers who have been waiting.

The Owen's success has been instant. It is a new conception. It offers you betterments such as have never been offered by any other plant.

The Owen starts and stops itself. It is completely automatic. No running down to the cellar to turn it on or off. When the batteries are partially discharged, the engine starts automatically. When they are fully charged, it stops automatically. When you require more current than the batteries should care for, the engine starts automatically. Even the lubrication is automatic. Aside from the matchless convenience this automatic control offers, it also multiplies the life of the batteries—overcoming costly replacements formerly necessary.

As a result the Owen costs you but one-third as much to operate as other units. It offers you illumination and power at less per candle-power than kerosene lamps.

OWEN
ELECTRIC
Light & Power
For Farm and Home

The Owen has a "silent valve" engine which cannot leak. Compression remains perfect. Grinding of valves and scraping of carbon are unnecessary.

It will light as high as 100 lamps without flickering. It has more capacity for running a water system, churns, cream separators, washing machines, milking machines, electric fans, irons and toasters.

Dozens of such reasons as this should urge you to know the Owen before you decide. Write for illustrated booklets and complete information.

R. M. Owen & Co

General Sales Office, 1825 South Michigan Ave., Chicago, Ill.

Eleventh Annual Dairy Cattle Congress

(Continued from page 550)

hart, and three firsts and two championships to Mooney and Larrabee and Bower.

The placings by classes follow:

Bull 3 years and over—1, Hull Bros. on Vogel's College Boy; 2 and 5, Mooney and Larrabee on Hefty Boy of Valley Grove and Carl the 6th; 3, Bower on Nick's Prize Master; 4 and 6, Bohart on Sunny Hill Bob and Beauty 2nd's Master. Bull 2 years, under 3—1 and 3, Bohart on Zell A. W. and Beauty C's N. M.; 2, Hull on Ethel B. Militor. Bull 1 year, under 2—1, 3, and 5, Bohart on Tassa's M. Nick, Tassa's Bob, and Nick's Master 2d; 2, Mooney and Larrabee on Czar; 4, Hull on Vernon D. Bull calf 6 months, under 12—1 and 3, Bohart on D's Dick and Beauty 2d's Dick; 2, Mooney and Larrabee on Ceylon 2nd; 4, Hull on Jerry of Lakeview; 5, Bower on General of Sedgely. Bull calf under 6 months—1, Mooney and Larrabee on Howard Carl; 2, 3, and 5, Bohart on Bozeman Boy, Master A's Bob, and Little Nick's Dick; 4, Bower on Dutch Boy.

Cow 4 years or over—1, Bower on Betty of Lakeview; 2 and 3, Hull on Swiss Valley Girl 9th and Swiss Valley Girl 7th; 4, Mooney and Larrabee on Sally Verbegge; 5, Bohart on Master's Bernice. Cow 3 years, under 4—1 and 4, Bower on Elsie of Lakeview 3d and Ethel of Lakeview; 2, Mooney and Larrabee on Chalfonte; 3, Bohart on Brownie's Perfection. Heifer 2 years, under 3—1, Hull on Forest Girl 7th; 2 and 3, Mooney and Larrabee on Marie Gronzer and Jeanne L; 4, Bower on Silver Girl; 5, Bohart on Beauty D. Heifer 1 year, under 2—1 and 2, Bohart on Alice C and Bob's Mascott; 3 and 4, Hull on Sophie of Lakeview and Lucille of Lakeview; 5, Bower on La Mark 3d of Sedgeley. Heifer calf 6 months, under 12—1 and 5, Hull on Dottie of Lakeview and Vogel's Valley Girl 6th; 2 and 3, Bohart on Dick's Charm and Dick's Gallatin Girl; 4, Mooney and Larrabee on Jeannet 2d. Heifer calf under 6 months—1 and 3, Mooney and Larrabee on Janette L. 2d and Little Egypt 2d; 2, Hull on Lottie H. of Lakeview; 4 and 5, Bower on Anna Dean and Kate of Bower Farm. Cow having official record begun at 5 years or over—1 and 2, Hull on Swiss Valley Girl 7th and Nan of Lakeview. Cow having official record begun at 2 years, under 5—1 and 3, Bower on Betty of Lakeview and Elsie of Lakeview 3d; 2, Hull on Swiss Valley Girl 9th; 4 and 5, Bohart on Master's Bernice and Master's Beauty C.

Exhibitor's herd—1, Hull; 2, and 5, Mooney and Larrabee; 3, Bower; 4, Bohart. Breeder's young herd—1, Bohart; 2 and 4, Mooney and Larrabee; 3, Hull. Calf herd—1, Mooney and Larrabee; 2, Bohart; 3, Hull. Get of sire—1, Bohart; 2 and 4, Mooney and Larrabee; 3, Bower. Produce of cow—1, Hull; 2, Mooney and Larrabee; 3 and 4, Bower; 5, Bohart. Dairy herd—1, Hull; 2, Mooney and Larrabee; 3, Bower; 4, Bohart.

Senior and grand champion bull—Vogel's College Boy. Junior champion bull—Howard Carl. Senior and grand champion cow—Betty of Lakeview. Junior champion cow—Janette L. 2d.

Ayrshires

Adam Seitz of Wisconsin won every class excepting one in which his Ayrshires were entered at Waterloo. Contesting breeders were B. B. Simmons and Sons and Stephen Bull of Wisconsin and C. H. Peverill of Iowa. A total of seventy-eight head were shown; L. S. Gillette of Iowa judging.

Cavalier's Lord Roseberry easily led a class of three aged bulls and defeated Cloverdale's Choice Goods, Peverill's winning two-year-old. The calf classes brought in two good ones for the blue ribbons, Cavalier's Sherry Redman and Cavalier's Ping Pong. The former, the senior calf, was the best male shown and well earned the grand championship awarded him. He excelled the senior champion in lines and finish and is a bull which promises to develop a masculinity and style the older animal does not have.

Imp. Chapmanton Nell 3d won over Imp. Beuchan Lady Lofty, the two being well ahead of their competition. Both were dry but the latter was congested in udder from nearing parturition and was sore as she walked. Chapmanton Nell 3rd was a bit down in the loin but was a popular winner. Cavalier's Silver Actress won the two-year-old class. The calf classes were the best of the females. Beuchan Lady Lofty 2d, out of the second prize aged cow, headed the seniors. In the juniors, Cavalier's Mesalliance defeated her sister, Cavalier's Ella, which has been junior champion at previous shows of the season, once under Judge Gillette. She was selected to compete for grand championship but lost to the aged cow.

The placings by classes follow:

Bull 3 years or over—1, Seitz on Cavalier's Lord Roseberry; 2, Bull on Friendlesshead Victor; 3, Simmons & Sons on Cavalier's Goldfinder. Bull 2 years, under 3—1 and 3, Peverill on Cloverdale's Choice Goods and Cavalier's Fashion Plate; 2, Seitz on Cavaliers Silver Mint. Yearling bull—1, Seitz on Cavalier's Wonder Boy; 2, Peverill on Rosebud Buster; 3, Bull on Garclaugh Ivanhoe. Bull calf 6 months, under 12—1 and 2, Seitz on Cavalier's Sherry Redman and Cavalier's Cupbearer; 3, Simmons on Cavalier's Jerry of Ayrcroft; 4, Bull on Aldebaran Crest. Bull calf under 6 months—1, Seitz on Cavaliers Ping Pong; 2, Bull on Aldebaran Hugh; 3, Peverill on Cavalier's Good Gift; 4, Simmons on White Robin of Ayrcroft.

Cow 5 years or over—1 and 2, Seitz on Chapmanton Nell 3d and Beuchan Lady Lofty; 3 and 5, Peverill on Value's Pride of Oak Valley and Sylva Good Gift; 4, Simmons on Silver Beauty of Bullrush Farm. Cow 4 years, under 5—1, Bull on Craigley Ada; 2, Simmons on Tossie of Pewaukee. Cow 3 years, under 4—1 and 3, Seitz on Barclay's Nightingale and Howie's Glen of Valley View; 2, Peverill on Beauty of Cloverdale. Heifer 2 years, under 3—1 and 2, Seitz on Cavalier's Silver Actress and Cavaliers Silver Queen; 3, Peverill on Rosebud Nellie Carlton; 4, Bull on Aldebaran Ella; 5, Simmons on Cavalier's Nancy of Pewaukee. Heifer 18 months, under 2 years—1, Seitz on Cavalier's Creampot of S. C. 2d; 2, Bull on Violet Finlayston 2d; 3 and 4, Peverill on Rosebud Nellie Carlton and Rosebud Stonehouse Lucy; 5, Simmons on Cavalier's Snowball. Heifer not in milk, 12 months, under 18—1 and 2, Seitz on Netherall Kathleen 2d and Cavalier's Lady Queen; 3, Simmons on Cavalier's Nancy 7th; 4 and 5, Bull on Aldebaran Blossom Again and Aldebaran Delightful. Heifer calf 6 months, under 12—1 and 3, Seitz on Beuchan Lady Lofty 2d and Cavalier's Lila Lee; 2, Simmons on Cavalier's Snowdrop of Ayrcroft; 4, Peverill on Rosebud Fair; 5, Bull on Aldebaran Flirt. Heifer calf under 6 months—1, 2, and 3, Seitz on Cavalier's Mesalliance, Cavalier's Ella, and Cavalier's Lady Bountiful 2d; 4, Peverill on Rosebud Nona; 5, Simmons on Cavalier's Nancy 8th of Ayrcroft. Cow having official yearly record begun at 5 years or over—1, Seitz on Chapmanton Nell 3d; 2, Peverill on Enid Lessnessock. Cow having official record begun at 2 years, under 5—1 and 3, Seitz on Beuchan Lady Lofty and Barclay's Nightingale; 2 and 4, Peverill on Value's Pride of Oak Valley and Lessnessock Carlton.

Exhibitor's Herd—1 and 2, Seitz; 3, Peverill; 4, Bull; 5, Simmons. Breeder's Young Herd—1, Seitz; 2, Peverill; 3, Bull; 4, Simmons. Calf Herd—1, Seitz; 2, Peverill. Get of Sire—1 and 2, Seitz; 3, Peverill; 4, Simmons; 5, Bull. Produce of Cow—1 and 2, Seitz; 3 and 5, Simmons; 4, Peverill. Advanced Registry Cow—1, Peverill. Dairy Herd—1 and 3, Peverill; 2, Simmons.

Senior Champion Bull—Cavalier's Lord Roseberry. Junior and Grand Champion Bull—Cavalier's Sherry Redman. Senior and Grand Champion Cow—Chapmanton Nell 3d. Junior Champion Cow—Cavalier's Mesalliance.

Beet Pulp Supply Larger

Offerings of new crop beet pulp have been on the market in the West since about September 1 and the movement of the new crop from the sugar beet sections of Michigan and other central western states is expected to begin in early October.

The condition of the sugar beet crop, according to the September report issued by the Bureau of Crop Estimates, indicates a crop of 8,929,000 tons as compared with an estimated yield of 6,421,000 tons in 1919.

Each ton of beets produces about 90 pounds of dry beet pulp. Not allowing for wastage or for the amount of wet mash that might be sold to the consumers direct from the mills, the amount of dry beet pulp available will be approximately 400,000 tons, or about 45 per cent more than the supply for 1919.

Imports Augment Domestic Supply

The domestic supply last year was supplemented by importations from Holland and Southern Europe. These importations are expected to continue for some time and will provide a supply until the new domestic crop is available. It is reported that the foreign crop of sugar beets will be from 30 to 35 per cent larger this year than in 1919.

Beet sugar manufacturers usually contract for their beet pulp output with large feed wholesalers or manufacturers who handle the sales and distribution to the dealers and consumers. A considerable part of the output is usually sold early in the season and shipped to the dealers direct from the mills.—U. S. Bureau of Markets.

Neither let mistakes nor wrong directions, of which every man, in his studies and elsewhere, falls into many, discourage you. There is precious instruction to be got by finding we were wrong. Let a man try faithfully, manfully, to be right, he will grow more and more right.—THOMAS CARLYLE.

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

Berkshires for Sale

First class fall and spring Boars. At prices from $50.00 and up.

Write for particulars.

Cedar Crest Farms
J. K. Dering, Owner, Lake Villa, Ill.

BROWN SWISS

Brown Kate Breeding

For Sale—Two bull calves from A. R. dams and sired by a grandson of Brown Kate.
University of Wisconsin
Department of Animal Husbandry
Madison, Wisconsin



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.
RA INMA N, Secretary Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.
BOX 747, PEORIA, ILL.

Brown Swiss Cattle
Stock For Sale
Correspondence Solicited
HULL BROS., Painesville, Ohio

Two Registered Brown Swiss

Bull Calves, 2 and 5 months old. Dehorned. Price very reasonable.
H. A. Jones, New Ulm, Minn.

AYRSHIRES

Wisconsin Ayrshire Breeders' Association

Aldebaran Farms
Choice Stock For Sale
RACINE, - - WISCONSIN.

Union Valley Farm Ayrshires

A few finely marked and bred for production heifers; also some well marked bull calves for sale. Herd headed by Midland General No. 17404. R. R. Chicago, Milwaukee and St. Paul.
F. A. Bollig, Black Earth, Wisconsin.

Ayrvale Farm
Herd Sire Norah's Netherton No. 19427

Dam's 4-yr.-old record 12,364 lbs. milk, 517 lbs. butter. Young stock of both sexes for sale.
A. J. McNab, Black River Falls, Wis.

Orchard Home Stock Farm

Herd headed by Cavalier Beuchan Lindsey and Star of Silver Pet, bred for production, both sexes for sale.
J. A. Dalton, - Oconomowoc, Wis.

EDELWEISS FARMS
AYRSHIRES

Young stock for sale. Our aim is breeding for production. **Fred Tschudy & Sons, Monroe, Wis**

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson o Brown Kate, record 1,080 lbs. butter in year.
WM. NISBET & SONS, Richland Center, Wis.

For complete sale list of pure-bred and grades address the secretary,
STEPHEN BULL, - Racine, Wisconsin.

Brown Swiss Cattle Make Good

They are owned largely by farmers rather than by record specialists. Under ordinary farm conditions they establish their superiority as generous and highly economical producers of milk and butterfat.

Farmers find in Brown Swiss cattle size, beauty, quality, hardiness, docility, thriftiness and production combined to suit the most exacting farm standards. Their economy has been demonstrated in mixed herds by the maintenance of milk flow and physical condition beyond that of other breeds in proportion to feed consumed.

A Brown Swiss herd was ranking herd in a Wisconsin Cow Testing Association surpassing the next highest herd, a Holstein herd, by an average of 18 lbs. fat per head.



BETTY OF LAKE VIEW
1st and Champion, National Dairy Show—1919
Grand Champion, Waterloo Dairy Cattle Congress—1920

Most Brown Swiss records are made under Farm conditions. The high record is 19,460 lbs. milk and 798 lbs. fat. 275 cows, all ages, average 11,146.1 lbs. milk, with 444.44 lbs. fat. Average herd milk runs about 4%. Many cows have given over 10,000 lbs. in a year on two milkings a day.

Brown Swiss cattle are always salable at good prices.

Brown Swiss Breeders' Association
Ira Inman, Secretary Beloit, Wisconsin



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd



A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals.

Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.

JOHN R. VALENTINE, Prop. **PHILIP C. PALMER, V. S. Mgr.**

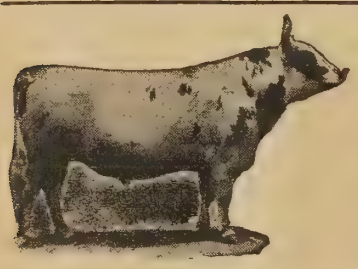
Middlesex Meadows Ayrshires

No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.

We offer Nona's Chancellor of Middlesex, the six month's grandson of a champior out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.

A. Henry Higginson

SOUTH LINCOLN, MASS.



We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37063). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager, **ROSEMONT, PENNSYLVANIA**

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS

Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., **Willoughby, Ohio.**



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

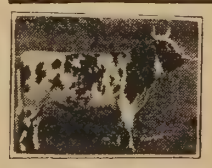
Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph **William Hunter**
SPENCER, MASSACHUSETTS



Milking Cows

Fresh and Bred Heifers
and Sons of
Ringmaster's B. B. Diplomat
For Sale

DUNCRAGGAN, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, **Frankford, Phila., Penn.**

Blackburn Farm

Herd Sire ADDINGTON'S CHAMPION No. 19561 {
Rena's Champion No. 11816
17 A. R. daughters incl.
Henderson's Dairy Gem
Addington Queen 3d No. 29558
Mature Record 19,315 lbs. milk

Paternal Grandfather—Finlayston

Maternal Grandfather—Nox'emall

For Sale—3 young bulls by Champion out of 3 A. R. Cows—Records 9,894 lbs., 14,374 lbs., 10,906 lbs.

SEWICKLEY, PA.



Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of

Ravinia Ayrshires

With a Ravinia Bull and Get the Uplift of This World's Greatest Production Ayrshire Herd

You want more milk, bigger records, better profit.

It's aard to get these things!

Even with the best feed and care you can only do it by putting at the head of your herd a sire in whom great production has been bred and fixed for generations.

This is just what has been done at Willowmoor and Ravinia.

This herd has made more Advanced Registry records and more world's records than any other. You can depend upon a bull from this herd to bring you more milk, bigger records, and better profit.

In order to give two people a definite chance to get this production uplift, we are listing in this issue.

Two Ravinia Bulls

This Exceptional Offering Will Not Be Made Again

Make your choice and telegraph the Martinsville farm to reserve your lot number. Get your order in first for your choice and send check or draft with shipping instructions by first mail.

Ravinia Peter Pan 12th

Sire: Willowmoor Peter Pan 50th.

Dam: Willowmoor Buntie. Record: 12,703 lbs. milk, 481.12 lbs. fat.

A well grown calf; about half and half in color; lots of constitution and a good individual.

This young bull gives you the wonderful show blood of Beuchan Peter Pan and Morton Mains Queechy with the great size and dairy quality of Willowmoor Peter Pan 50th. The blood of Ryanogue Hattie and the show and milk record of the dam, Willowmoor Buntie, finish off an extremely desirable ancestral backing. Price, $650.00.

Martinsville, Ind.

Ravinia Diana's Ben Hur

Sire: Lily's Ben Hur.

Dam: Willowmoor Diana. Record, senior 3, 10,194 lbs. milk, 380.43 lbs. fat.

A good calf, more white than red, straight and a good individual.

This fine future herd sire will bring you the world's record blood of Lily of Willowmoor, of Netherhall Brownie 9th, and of Carston Evelina in the closest possible combination. Every cow in his four generation pedigree has an Advanced Registry record. The average production for every female in his four generation pedigree is 12,361 lbs. milk, 549.81 lbs. fat. He will breed production and profit into your herd. He is a remarkably good buy at $500.00.

Preston, Kan. **Axial, Colo.**

GOSSARD BREEDING ESTATES

Consignment Sale *of the* Vermont Ayrshire Club

On Oct. 26th, 1920, at the Rutland Fair Grounds will be offered 50 head of selected Ayrshires from 25 breeders of the Vermont Ayrshire Club. These animals include many prize winners of the past season and come from blood lines famous in Ayrshire history.

If you want a winner at the show or a producer at the pail, come to —

Rutland, Vermont

October 26, 1920 — 10:30 A. M.

For Catalogue or Information Write

C. W. Wilson - Vergennes, Vt.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL. **Wellington, Ohio**

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

ASHBROOK FARM

L. E. ORTIZ, Proprietor

IMPORTER AND EXPORTER OF

AYRSHIRES

Morris Plains, New Jersey



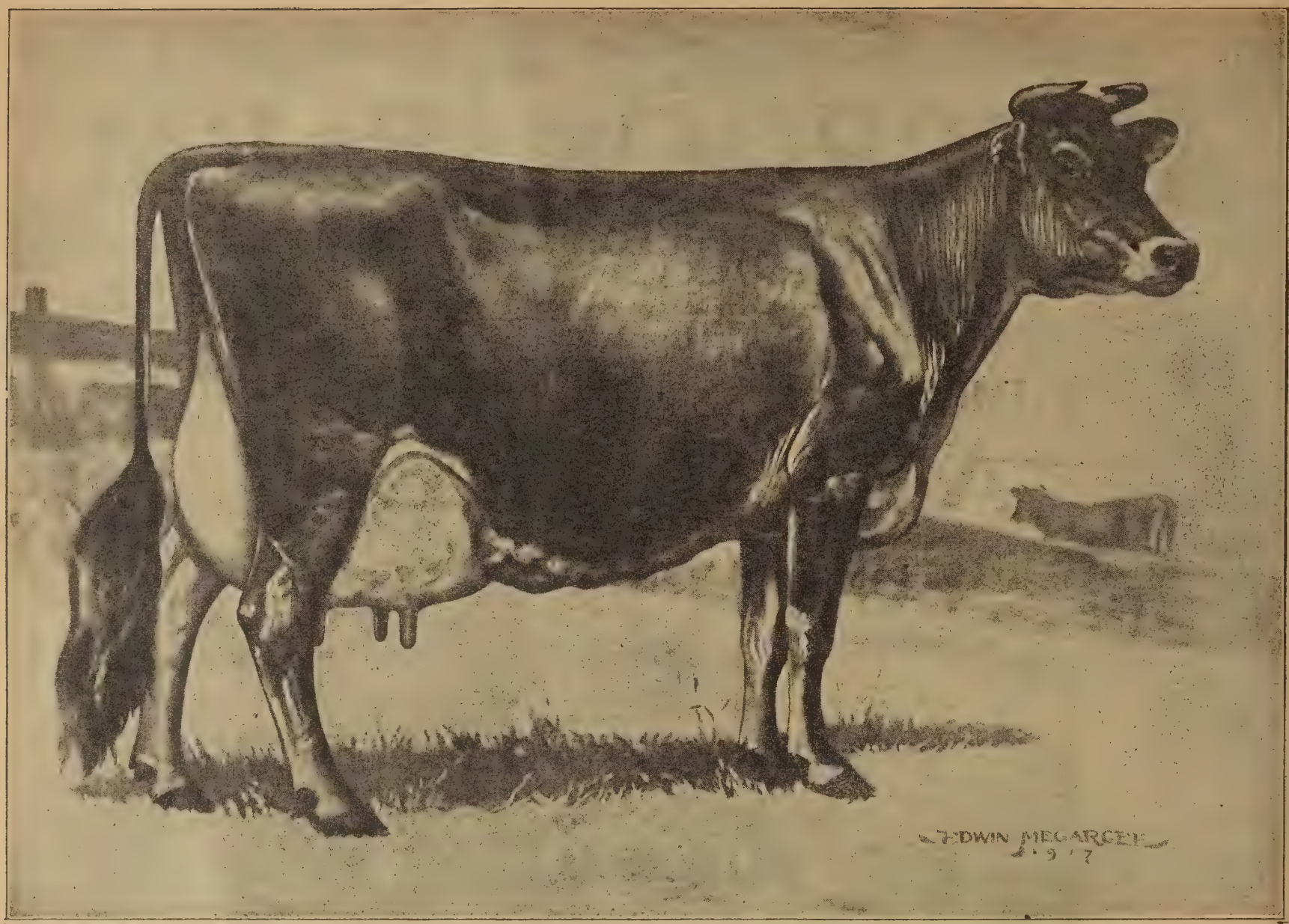
Part of a consignment of forty-four Ayrshire cows selected for a recent exportation to Hawaii. Competent judges appraised the group as "the largest and best shipment of Ayrshires ever exported from the United States".

Let Me Supply Your Wants
I Guarantee Everything You Buy

Address

L. E. Ortiz—Wendover Farm

Bernardsville New Jersey



All You Can Ask of a Cow Is Given by the JERSEY

IF you want dairy profits, the Jersey is the cow for you. Her economic production has given her a world-wide reputation. Read "Jersey Facts"—it answers the question, "Which is the Best Dairy Breed?"

If you want rich milk and cream, there is more butterfat and other solids in Jersey milk than in that of any other breed. In the booklet, "Jersey Milk, The Key to Dairy Profits," dairy farmers all over the country describe how Jerseys are making profits for them. Get it.

If you are a working farmer and require cows that "make good," choose Jerseys, the cows for the everyday man. Remember that Plain Mary, Vive La France, Lulu Alphea, all world's champions, were developed on humble farms. Be sure to read "The Story of Plain Mary"—it is filled with romance, yet is just one case in a thousand in which Jerseys have brought prosperity to a farm.

If you are about to buy a bull for use on grades, remember that Jerseys are the world's best bulls. They not only increase butterfat production but also milk production. They improve the dairy conformation of a herd. Send for the booklet, "Better Bulls" and learn why it pays to breed Jerseys.

Get all possible information before you decide on a breed. Send in the coupon for the free booklets. Check off those wanted. Write today.

THE AMERICAN JERSEY CATTLE CLUB
324-E West 23rd Street New York

American Jersey Cattle Club
324-E West 23rd Street **New York**

- Jersey Facts ☐
- Jersey Milk ☐
- Key to Dairy Profits ☐
- Better Bulls ☐
- Story of Plain Mary ☐

Name----------

Address ----------

Purity and abundance are the two essentials of water supply. Wells and springs are the usual sources of farm water, but both may easily be contaminated, and the vicinity should therefore be inspected for possible sources of pollution.

JERSEYS

MERIDALE JERSEYS



Interested Prince 2d 95708

Sire of 27 Register of Merit cows, including Interested Jap's Santa, 15,569 lbs. milk, 1,007 lbs. 85% butter.

His pedigree blends the blood of those conspicuously prepotent cows, Interest and Sayda.

He has 50% the same blood as five Gold Medal cows in the Meridale Herd. A few of his sons are for sale, out of excellent Register of Merit cows.

AYER & McKINNEY
300 Chestnut Street, Philadelphia, Pa.

Jersey Bulls

If you want to breed size, type, large production and improve the breeding on and up qualities of your herd, write us for prices and descriptions of some herd improving bulls we have for sale.

HOOD FARM, INC.
Lowell, Mass.
N. B. Price list of Forty females on request.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son Whose Son sold at auction $7,500 Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

$500—$500 Delivered at Your Station

We offer two very choice registered Jersey heifers, two and one-half years old, lately fresh. We will pay express to any station.
H. E. ANDERSON, Whitewater, Wis.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. **R. C. Green & Son, Albion, Wis.**

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion. Address: **J. Q. Emery & Son, Edgerton, Wis.**

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.

GUERNSEYS

For Sale
Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.
Federal Tuberculosis Free Accredited Herd.
Mountain Bros., Carrier 485, Des Moines, Ia.

Guernseys for Sale

Twenty females, cows and heifers, a number of May Roses. Mostly bred to Laverna's Ultra May King 24660 and Gerar Pearl's Royal 58411, who is full brother to three class leaders. Also several sons of Langwater Royal, Langwater Raritan and Laverna's Ultra May King from A. R. cows or cows on test, several ready for service. All are priced to sell.
M. T. Phillips, - Pomeroy, Pa.

FOR SALE

A registered Guernsey bull 18 months old, a sure breeder. Also an 18-month-old heifer bred June 5, 1920. Their grandams were imported. Price for the two $350.00.
John Walls, Mystic, Iowa.

Guernsey Bulls

May Rose on both sides. Dams in A.R. or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

Registered Bulls — $100 and Up

West View Farm offers registered Jersey bull calf, born April 15th, 1920, solid color and a good one. Dam on test and making a good record. Double grandam made 609 lbs. butter in one year. Price $100.00 f. o. b. here. Also other bulls one to nineteen months old. Good ones priced right.
Registered Berkshire pigs eight to ten weeks old, $15.00 either sex. Also yearling sows. For size, type, and prolificacy you can't do better.
W. C. BROOKOVER, Route No. 1, Chandlersville, Ohio.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.
RALPH TRATT, WHITEWATER, WIS.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.
Folly Farm, - Libertyville, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,816.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Thorn Hill Farm Guernseys



If you want a well bred young Guernsey Bull at reasonable price—May Rose and Glenwood strains—write me. Have always several on hand, all my own breeding, out of A. R. Cows with records up to 736 pounds of fat. Also a few heifers each year. A Federal Accredited Herd. **August Ziesing, Deerfield, Ill.**

Dispersal Sale

40 Registered Guernseys

21 cows, 10 heifers, 9 males

Chapin, Illinois

Thursday, October 28, 1920

Property of the estate of Arthur L. French, deceased.

This herd was bought or bred by Arthur L. French, late President of The Farmers' State Bank and Trust Company, since January, 1917, and every animal owned by him at his death will be sold.

Chapin has the Wabash & C. B. & Q. railroads and is 10 miles west of Jacksonville which has the C. & A. Wabash, C. B. & Q. and C. P. & St. L. railroads.

Guernseys will be tuberculin tested before sale.
Catalogues sent by executor on request.
Sealed bids may be sent executor.
Sale under tent. Lunch served.

The Farmers' State Bank and Trust Company
Executor
Jacksonville, Illinois.

MARA ALVA

75 Head Registered Guernsey Cattle

to be sold at Public Auction

Mara Alva Farms, Smithville, Ohio

Thursday, October 21, 1920

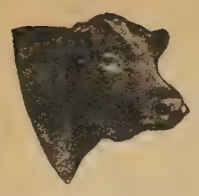
This offering will consist of 25 choice cows in milk or close springers. A fine lot of bred heifers, a few choice bulls and a beautiful collection of yearling heifers most suitable for calf club work.

Many of the cows and heifers are in calf to Wardem Ultra King (27922), Senior Herd Sire at Mara Alva. It will perhaps be sufficient to say that Wardem Ultra King is by a son of the famous NE PLUS ULTRA and out of Queen of May Rose (28326), one of the choicest daughters of May Rose King (8336), making him a bull of superb breeding.

Cows and heifers in calf to this Bull should find ready sale, with those wanting the choicest of foundation stock.

This is Mara Alva's fifth semi-annual sale of registered Guernsey cattle and you are cordially invited to attend.

A. C. Ramseyer, Proprietor
Col. F. W. Andrews & Sons, Auctioneers
Catalogue on request



Economy in Production ← GUERNSEYS → Quality of Products



Twelve years ago a Virginia farmer purchased a few Guernseysey heifers and a Guernsey bull for $1,000. Thirty selected descendants of this foundation have a value today of tens of thousands of dollars. Guernseys and profit are truly synonymous terms. Send for our free literature.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 86, PETERBORO, N. H.

Tilden Farms' Guernseys

The Largest Guernsey Herd in Wisconsin



HOPE'S MAY ROSE OF MAPLE HILL 35903

Hopes May Rose of Maple Hill (35903) combines those rare attributes so necessary to a prepotent sire, the ability to sire both individuality and production. His first nine daughters are now on test and as two-year-olds every one of them will exceed the best production of their dams by a comfortable margin. A competent Guernsey judge on reviewing them recently declared that they showed more uniform type of higher standard than any herd header in use in a Guernsey herd of today.

200 Registered Females

About sixty of these are imported animals selected by us on the Island and comprising individuals from the best known Island strains such as the Valentine and Sequel families.

The other females are of our own breeding or selected by us for foundation stock. They are daughters of Sir Rosewood of Linda Vista, a grandson of May Rose King, and other good sires. About fifty of them are Advanced Registry cows with a number of them with records of over 600 pounds of butterfat.

We have a number of SONS OF HOPE'S MAY ROSE OF MAPLE HILL (35903)

out of cows such as these. We are offering them at reasonable prices and they will help to improve your herd.

COME AND SEE THEM

and be convinced of the wonderful prepotency of this sire. We still have about *30 Grade cows for sale.* These are the remainder of our dairy herd of three hundred head which we have disposed of to make room for pure-breds. As we expect to close out all grades this fall, these are priced to sell. If interested, call and see them.

Tilden Farms, James H. Murphy, Manager, Delavan, Wis.



GROUP OF BUILDINGS ON ONE OF THE TILDEN FARMS, DELAVAN, WIS.

HILLSCROFT FARM

Offers for Sale Guernsey Bulls

HILLSCROFT'S PROUD WARRIOR

Dam, Felice of Falcon's Flight 71209. Sire, Falcon's Proud Warrior 47559. Born March 31st, 1920. The dam f this bull is now producing 40 lbs. of milk.

BULL CALF

Dam, Florham Bell 2nd of Oakhurst 54984, A. R. record. Sire, Rosie's Golden King of Oakhurst 31630. Born August 9th.

E. W. Simons, Bantam, Conn.

A Great Sire IS FALCON'S PROUD WARRIOR

considered by many to be

The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.2 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

BIG BARGAINS IN GUERNSEY BULLS

In order to make room, I must sell 10 bulls. Sired by my great May Rose bull and out of Ledyard Bay dams. This combination gets size, type and production. Priced for quick sale. (Herd Federal tested for tuberculosis)

Otto W. Post. Ensenore, N. Y.

R. R. Station—Owasco Lake

Appletree Point Farms



PENCOYD'S SECRET MAROSE 48332

The "Get" of this bull is being exhibited along with the rest of our show herd at the New England Fair in Worcester, Mass.; Connecticut State Fair at Hartford; New York State Fair at Syracuse; Eastern States Exposition at Springfield, Mass.; Waterloo Dairy Cattle Congress at Waterloo, Iowa; and National Dairy Show at Chicago. Write for information about bull calves and a few females, some being daughters of Langwater Peerless.

U. A. WOODBURY, II, Burlington, Vermont

CLELAND FARMS' GUERNSEYS

We always have a few good females in both bred heifers and cows in milk to offer.

At this time we can offer two choicely Golden Secret bred bulls most ready for service.

CLELAND FARMS, Chagrin Falls, O.

Raemelton Farm

Offers for Sale

Four Guernsey bull calves from four to eighteen months old. All are sired by Florham Squire, No. 33996, and are out of Advanced Registry dams.

The herd is Federal Accredited.

Raemelton Farm, Mansfield, Ohio.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM

Ray F. Frisby, Prop., - St. Charles, Minn.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls

All ages sired by Caribou Gold's King and Rosewood of Briarcombe; out of dams who are daughters of Governor of the Chene 1297 P. S., Langwater Raritan, Prince Charming, Violet of the Forgettees and others. Write for prices.

PETER SIMON, ALTURA, MINN.

LANGWATER GUERNSEYS

The following are the figures of the sale of fifty-one head at auction September 21st



LANGWATER WARRIOR AND 4 OF HIS GET

Fifty-One head sold for $146,125—an *average* of $2865.

Twenty-Seven head, where both sire and dam were bred at *Langwater Farms,* sold for $119,525,—an *average* of $4427.

Eleven daughters of *Langwater Warrior* (*26509*) sold for $70,825—an *average* of $6438.

Sixteen animals, get of *Langwater Warrior* (*26509*), including one three-year-old bull, one yearling bull, and three bull calves, sold for $88,525—an *average* of $5,532.

Seven animals sired by *Langwater* bulls out of imported cows, sold for $11,125—an *average* of $1,589.

Seventeen imported animals in calf to *Langwater* bulls sold for $15,475—an *average* of $910.

In addition to this, LANGWATER STEADFAST (31672), sire: LANGWATER ROYAL MASTER, dam: LANGWATER DAIRYMAID, sold at private sale for $25,000. This price is not included in the above averages. Including this price in the average of the twenty-eight animals sired by LANGWATER bulls and out of LANGWATER cows, it would make the average for the home bred animals $5,161.



LANGWATER STEADFAST AND 4 OF HIS GET

LANGWATER GUERNSEYS breed true to type, and set the fashion for the breed. We have several promising bull calves for sale, and there will be an opportunity to purchase others during the coming year. No more females are for sale until they are offered again at public auction.

For Prices and Particulars Address

Langwater Farms, North Easton, Massachusetts

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Young Bulls 6-10 Months Old

From tested dams or dams now on test making from 450 to 750 lbs. fat. They are sired by excellent bulls of May Rose, Clara Sequel, and other breeding as good. Price $100 to $500. Write for more complete information.

CORIUM FARM, F. J. Rueping, Owner, Fond du Lac, Wisconsin

Homestead Farm

Offers some

Choice Bulls For Sale

To avoid inbreeding, will dispose of a son of "Pencoyd's Golden May Secret" (39626) also five grandsons of Pencoyd.

Eight sons of Pine Blossom's Cherub (44600).

A grandson of Imp. King of the May, out of a daughter of Pencoyd's Golden May Secret.

Also seven cows that are all safe in calf to good bulls.

Five of these cows have A. R. records. Prices on all this stock reasonable considering quality.

Herd under Federal supervision for tuberculosis.

Write for sale list.

W. G. Jamison & Sons

R. 2, Appleton, Wisconsin

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

BIRCHWOOD GUERNSEYS

Young Bulls for sale, some of serviceable age. They are good bulls and most of them out of A. R. cows and sired by very good bulls.

Send for sale list.

M. L. Welles, Rosendale, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

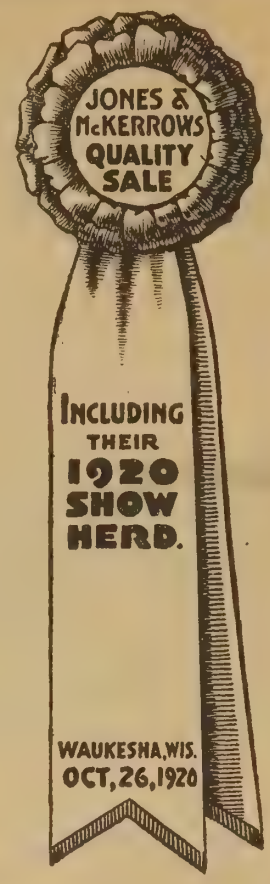
Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.



Forty Production Guernseys

From Two of Waukesha County's Most Noted Guernsey Herds

1920 SHOW RECORD

State Fairs —	Illinois	Wisconsin	Minnesota	So. Dakota
Grand Champions	1	1	1	2
Champions	1	2	2	4
1st Prizes	4	9	11	11
2d Prizes	6	4	2	6
3d Prizes	4	4	4	3

105 prizes won at four leading state fairs

Breeding and Production

The fact that these forty head of animals represent only select stock from the Jones & McKerrow herds and that there is not a blemish nor inferior animal in the sale should mean much to the prospective buyer looking for something choice. Proof that these are production bred Guernseys is found in the records of the animals themselves and their immediate ancestors. That they possess correct blood lines is seen in the study of the pedigrees of the great herd sires used in the Jones & McKerrow herds; and that they are unexcelled in individuality is shown by their 1920 show record.

Mildred II of Les Godaines A. R. (4111), grand champion cow, 1920, Illinois, Wisconsin, Minnesota state fairs, has a record of fat 702 lbs., milk, 14890 lbs., and is the dam of one A. R. cow.

Silver Glen of Home (60755) on A. R. test in class B. B. has made 286 days fat 593 lbs., milk 12,807 lbs. Will finish with over 700 lbs. fat making her a class leader.

Kate of Aurelian Farms, fat 473 lbs. in class G. First prize three-year-old cow at Illinois and Wisconsin state fairs.

80% of the herd are A. R. animals or are from A. R. dams.

70% of the females of milking age have creditable A. R. records or are making a good showing on test.

There are 19 mature cows and nearly all of them are heavy in calf to Ultra King of Edgemoor (42532), a son of a 614-lb. four-year-old daughter of Ne Plus Ultra and Yeksa's Tops of Gold's Boy, a son of the sixth leading cow of the breed and the present Wisconsin champion butter cow, having a record of 981 lbs. fat.

12 sons and daughters of Ultra King of Edgemoor out of high record dams or dams now on test.

Few, if any, sales in America have sold more outstanding prize winning and high producing animals than will be offered in Jones & McKerrow's Quality Sales.

All animals will have a Federal test and will be sold on a sixty-day retest guarantee.

AUCTIONEERS
LOVE, BENJAMIN and JONES

Catalogs upon request only

JONES & McKERROW

Waukesha - - - Wisconsin

Absolute Dispersal Sale

of a Herd of

40 Registered — GUERNSEYS — 20 High Class Grades

to be sold by F. G. Eberhardt, at Mishawaka, Indiana, Thursday, October 28th, 1920

GOVERNMENT ACCREDITED HERD! ! ! FREE FROM TUBERCULOSIS! ! !

BERCADO FARM, owned by Mr. Eberhardt, is located four miles east of Mishawaka, on the Lincoln Highway. A fine dairy herd has been built up by the owner, and breeders should avail themselves of this opportunity to make some choice selections.

St. Austell Souvenir's Dandy Laddie No. 39720

will be offered in the sale, together with TWENTY daughters and sons. He is a very well bred animal, being sired by St. Austell Souvenir (28040), a son of Jethro's May King of Linda Vista A. R., double grandson of the great bull, Imp. King of the May (9001) (A. R.), and out of Imp. Christine of St. Sampsons A. R., milk 11,645.- lbs., 608.06 lbs. butterfat.

Seven Daughters of Imp. Dairyman of Sarnia No. 38931

He is by Governor of the Chene (A. R.) sire of 100 A. R.daughters, and out of Violet of Corbinez, whose daughter, Violet IV of Corbinez has a record of 16,336.4 lbs. milk, 756.72 lbs. butterfat.

Other Choice Offerings Are:

Imp. Danceaway of South Bend Sunnyside Farm (71741)
Sire: Raymond of Blaye Farm, 1st prize R. A. A. S. 1914; 1st prize States Show, 1915 (By Alderney Raymond A. R.).
Dam: Imp. Danceaway of Sarnia (65362), granddaughter of Prince of Sarnia (A. R.)

Imp. Ellalee of South Bend Sunnyside Farm (71740)
Sire: Douglas (95 PS) 1st prize R. A. A. S. 1915, 1916.
Dam: Imp. Ellalee of Sarnia, by Nelson of the Cacheliere (A. R.).

Imp. Dusty of Sarnia (64359)
Sire: Duke of Portland (143 PS) by Chieftain 11 (A. R.).
Dam: Princess Patricia (1119 PS) by Prince Albany (A. R.).

Imp. Coralass of Sarnia (63534)
Sire: Raymond of Carriere Viron (98 PS) A. R.
Dam: Daisy of the Brayes II (1149 PS) 1st prize R. A. A. S. 1910, 1912.

Be With Us October 28th, 1920

Auctioneers: Love and Benjamin **Write for catalogue to F. E. Fox, Sales Mgr., Waukesha, Wis.**

SOON READY FOR SERVICE



KING BOY OF PROSPECT
Dropped January 10, 1920

Sire—Anton's King Confidence (43517). Dam—Companion of Prospect (43218). A. R. 4069
King Boy is one of the best young bulls we have ever raised. His conformation is faultless. He carries good depth and width, and a top line that is as level as the floor.

His sire has six May Rose crosses and his dam has a record 764.65 lbs. of butterfat as a junior 4-year-old.

The dam of King Boy is an excellent individual and a daughter of a double grandson of Imp. Masher's Sequel.
This calf is priced to sell.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.

Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right. and animals guaranteed to suit. W. A. Cloues, Mgr.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.
B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Capitol View Farm Guernseys

to be offered at an

Absolute Dispersal Sale

Wednesday, Oct. 27, 1920, at Lansing, Mich.

E. J. Himmelberger, Owner

An exceptionally choice lot of registered Guernsey cows and heifers, also a few fine bulls, will be offered at this high class sale. **Entire herd under Federal supervision and has just passed second clean test.**

Prize Winners Included in the Sale

At the 1920 **Michigan State Fair,** Mr. Himmelberger was successful in winning many prizes including: 1st prize Junior Yearling bull; 1st prize Junior Yearling heifer; 1st prize Senior Yearling heifer; 2nd prize Senior Heifer calf. All of these animals are listed in the sale.

Fifteen Daughters and Two Sons of

Golden Nassau of Pencoyd No. 29103 are offered. This bull is sired by **Langwater Pencoyd** A. R. (who is by Dolly Dimple's May King of Langwater A. R. and out of a 592-lb. 2-year-old daughter of Imp. King of the May A. R.); and out of **Gold Preel of Pencoyd** A. R. milk 11,392 lbs., butterfat 622 lbs., sired by **Imp. Golden Secret of Lilyvale** A. R.

All Females are Bred

To **Upland's Monarch of the May** No. 32430, who is by **Florham Monarch** No. 20771 (A. R.) a son of Ne Plus Ultra A. R. and out of a 543-lb. daughter of Pretor (A. R.); dam is **Ellen May Queen of Glenmore** A. R., milk 16,139 lbs., butterfat 816.24 lbs.

Auctioneers: Love and Benjamin

Send for catalogue at once to

F. E. Fox, Sales Manager, Waukesha, Wis.

GUERNSEYS

Seventy Head at Auction

Second Annual Consignment Sale

of the Lake County Guernsey Breeders' Association

The Fair Grounds

Libertyville, Illinois

Wednesday, Nov. 3rd, 1920

All animals are sold subject to 60-day retest

Auctioneers: Love, Benjamin and Grabbe F. E. Fox in the Box

For Catalogue, address

W. E. Watkins, Sec., Libertyville, Illinois

Only 40 minutes from Chicago. Good train service on C. M.& St. P. and North Shore Electric R. R. via Lake Bluff

os..octon County Poultry Culled

Twenty-two poultry culling demonstrations were held recently in Coshocton County, Ohio, with an average attendance of 59 per demonstration, making a total attendance of 1,298. Of these 1,298 persons, 400 pledged to cull their flocks, totaling 29,008 birds. But this was not all, as 100 community leaders were present at these demonstrations and went back to their communities and taught the people of their communities how to cull their flocks. The reports from these community poultry men and women are not yet due, but from indications and reports of progress it would seem that at least three-quarters of the 128,000 fowls in Coshocton County will be culled, or that is 96,000 fowls would be culled. If 40% of these fowls or 38,400 of them were eliminated, as each cull wastes about $2.00 worth of feed according to Department Statistics, this would make a savings in feed to the poultrymen of Coshocton County of $76,800.

G. C. MUSGROVE, County Agent.

HOLSTEINS

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct lescendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

WILLOWPINE FARM

has for sale a few exceptionally good young bulls who combine both type and breeding. They are from heavy producing dams and sired by Canary Inka Fobes Oak, whose dam is a 25-lb. cow and whose sire is from a 30-lb. dam who is a full sister to a 34-lb. cow. Don't miss this opportunity of getting a good bull at a reasonable price.

H. B. Kellicut, R-2, Westby, Wisconsin

Grandsons of Sir Pietertje Ormsby Mercedes

Sired by Sir Pietertje Ormsby Korndyke, a Sir Piet. Bess Burke bull.

Dams are line bred Johanna cows with A. R. O. and cow testing records.

The calves are straight, growthy individuals and are six months old.

For pedigrees and prices write to

H. A. Brace and Sons, Lone Rock, Wis.

Pabst Stock Farm

First Semi-Annual Sale

OCTOBER 9th, 1920

Sale will start at 10:30 A. M.

Oconomowoc, Waukesha County, Wis.

Wayside Lawn Farms

offer

Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 3 to 9 months old. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,

Friesian Park Farm, Richland Center, Wis.

Yearly Record

ZEHRINGHURST



HOLSTEIN FRIESIANS

Accredited Herd

Zehringhurst Farm

Offers

A few splendid young bulls that have show ring type that are backed by short and long time records and by the best productive breeding Ohio has produced.

They are guaranteed right and are priced to sell.

Oscar O. Zehring, Prop., Germantown, Ohio

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

Very Select Small Herd of Holsteins For Sale

3 head of 4-year-olds, five 2-year-olds. All sired by King Colantha Clothilde and out of daughters and granddaughters of King Segis. All with A. R. O. records.

Free from tuberculosis.

H. L. ORR, Rock Stream, N. Y.

Lake Mills' Breeders' 22nd Semi-Annual Consignment Sale

Wednesday, October 27

at Lake Mills, Wisconsin

A Lake Mills Quality Sale

A Consignment of Choice Animals, Selected and Approved, Tuberculin Tested and Guaranteed to be as Represented

Among the Entries Are—

Daughters of the 31-lb. sire, King Korndyke Veeman Wayne, due right after the sale to a 32.68-lb. sire.

A Beautiful Daughter of a 31-lb. cow.

A 24.09-lb. son of King Pontiac of Brothertown.

A 23.65-lb. cow, two of her daughters and her sister. You'll want the whole family.

A Son of a 36-lb. sire.

A Show Cow, Granddaughter of King of the Pontiacs.

Sons and Daughters of the Show bull, King Segis Pontiac Isaac.

A Dandy Daughter of Sir Fan of Rock and bred to Woodcrest Clyde, a 33-lb. Show Bull.

A 19.25-lb. cow bred to "The Mighty Monarch", a 47.35-lb. son of King of the Pontiacs.

Look for Next Week's Ads

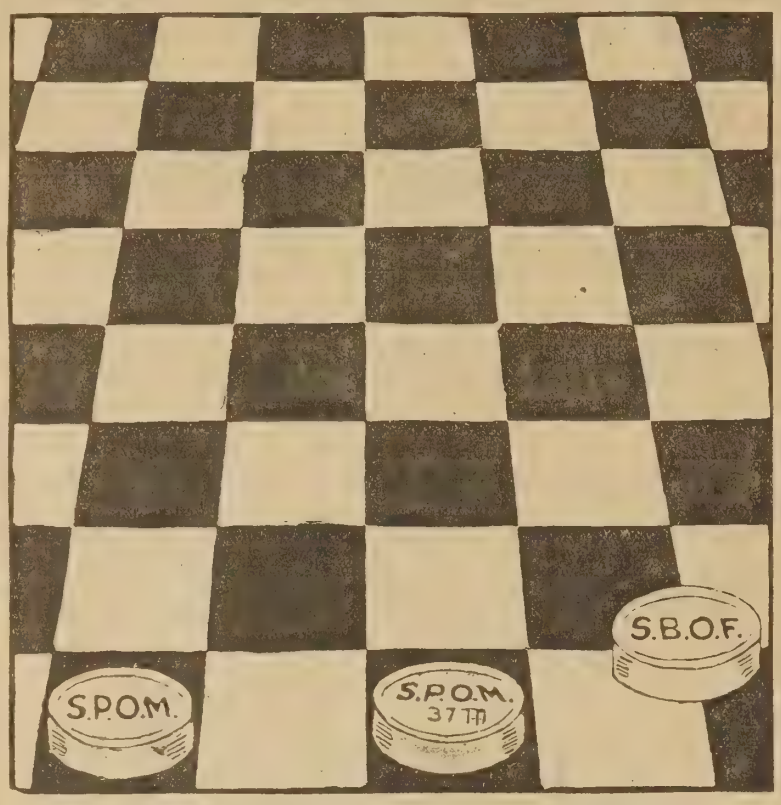
F. H. Everson, Sale Manager

Auctioneers — Mack, Kelley and Krause

Catalogs Ready at Sale Time

Sir Bess Ormsby Fobes

Is Arriving With His Illustrious Sire and Grandsire



"Bess" was recently sold to Hollyhock Farms for $25,000. He is undoubtedly one of the best individual 3-year-olds in the country. His sons and daughters now arriving in our herds give promise that he will soon be in the king row with his sire, S. P. O. M. 37th and his grandsire, S. P. O. M.

His dam, Wisconsin Fobes (1,153 lbs. butter in a year—4 A. R. O. daughters) is one of Wisconsin's greatest foundation cows.

We still have a very few of those good sons of "Bess" from heavy producing dams for sale. One or two are ready for service.

Otto W. Schinke
R. 1, Jefferson, Wis.

B. W. Rabenhorst
Jefferson, Wis.

Waukesha County Holsteins

For Sale

10 carloads of pure-bred bulls of serviceable age and younger at prices ranging from $100 up. Will ship satisfaction.

18 carloads of grade Holstein cows fresh and springing at prices ranging from $140 to $250.

Several herds of choice pure-breds at farmers' prices. If you want foundation stock of any kind, write for information or come and see Waukesha County. (32,000 head of tuberculin tested cattle.)

Waukesha County Holstein-Friesian Breeders' Association
Office 254 Broadway - Waukesha, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. S. A. BAIRD & SON, WAUKESHA, WIS.

HOLSTEIN BULLS AND HEIFERS ! !

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

PABST KORNDYKE SEGIS

a son of Korndyke Segis Johanna heads my herd. His dam, Pabst Citronella, made 669.4 lbs. butter, 16,867.8 lbs. milk in 1 year as a 2-yr.-old, 26.285 lbs. butter in 7 days as a 4-year-old.

HERMAN LUEBKE, R. 8, WATERTOWN, WIS.

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 to 9-month-old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale 3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

$100 Bull Bargain

4 week-old bull calf. Light in color. Fine individuality. Sire's dam has three records over 900 lbs. butter. Dam is a daughter of a 37-lb. sire. Clean herd. Check or bond takes him.

CHIC DAIRY FARM Juneau, Wis.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - Burnett, Wisconsin.

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Dispersion and Consignment Sale

Sheboygan, Wis., October 23, 1920

60 Registered Holsteins

Including the Complete Dispersion of the Model Stock and Dairy Herd, and that of Silbernagel, together with a splendid Consignment from the Lake Park Farm Herd



KING ABBEKERK PONTIAC SEGIS 3D
Sired by the highest record son of "Count" and from the highest record daughter of Piebe Laura Ollie Homestead King. Nine females in the sale bred to him.

The Model Stock and Dairy Herd

25 head — all of them descended from 2 foundation cows. This herd has been established for 14 years, and none but very good sires have been used. Every animal of milking age has a cow testing association record, many of them being leaders in the local association.

King Segis Concordia Cora, a 4-year-old son of King Segis Concordia Hengerveld is included in the herd as are his daughters.

Silbernagel Herd

22 head, all but the herd bull being descended from a single foundation cow that is still in the herd. In this herd, too, every animal has a C. T. A. record, one of them heading the association list last year. Several members of this herd have produced from 10,000 to 12,000 lbs. milk in 6 months under ordinary herd care. His herd sire, Cleveland Segis Pontiac Prince, a 3-year-old, is out of a 26.27-lb. daughter of King Segis Pontiac Veeman. She is now on year test and will finish with over 900 lbs. as a 4-year-old.

His sire, King Veeman Pontiac Alcartra, a 30-lb. bull, is also the sire of a 26-lb. junior 2-year-old now going at a 900-lb. clip.

Cleveland Segis Pontiac Prince will be sold.

Lake Park Farm Consignment

10 females — 5 of them A. R. O. cows — 5 young heifers from A. R. O. dams and by Cleveland King Segis Pontiac, he from a 29-lb. junior 3-year-old daughter of Wase Korndyke Segis, the best proven son of Johanna McKinley Segis. The cows' records run from 12.5 lbs. as a junior 2-year-old to 23.5 lbs. at full age. All but one of the 10 females are in calf to King Abbekerk Pontiac Segis 3d, he by the highest record son of "Count" from the highest record daughter of Piebe Laura Ollie Homestead King.

5 bulls All sons of King Veeman Pontiac Alcartra, whose daughters are making splendid records. All are out of A. R. O. dams, 2 of them now on year test and going at a 1,000-lb. clip.

The sale will be held at Whippermann Bros'. Lake Park Farm 2 miles south of Haven and 4 miles north of Sheboygan. Free transportation from both depots to the farm.

Every animal over 6 months old will be tuberculin tested.

For catalogs write

E. C. Whippermann, R. 1, Sheboygan, Wisconsin

Green County Holstein Breeders' Association

Semi-Annual Consignment Sale

Fair Grounds, Monroe, Wis., Oct. 28 - 29

150 Picked Registered Holsteins

from the best herds in Green County. 120 females of excellent breeding. Good individuality, some with records up to 25 lbs. of butter. 30 bulls all of breeding age, good individuals, sired by 30-lb. bulls and many of them from high record A. R. O. dams.

All the animals in this Sale have been picked by the Sale Manager and if you are in the market for Holsteins of quality and individuality don't forget our dates.

We will sell all cattle on a 60-day retest.

The Green County Calf Club will sell 22 calves, among which are the 1st and 4th prize heifers and the 3rd prize bull at the Wisconsin State Fair.

Monroe is on the lines of the Illinois Central R. R. and the C. M. and St. Paul R. R. which gives us good shipping facilities.

Come out to the Fair Grounds Oct. 28 and 29 and we will meet you on the level and sell to you on the square.

Auctioneers:
Col. Robt. Haeger, Col. Edgar Eells, Col. R. E. Hellen
S. T. Wood in the Box

For information and catalogs write

H. D. Schindel, Field Sec'y, Box 132, Monroe, Wis.

---

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Two Ormsby Bulls

Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

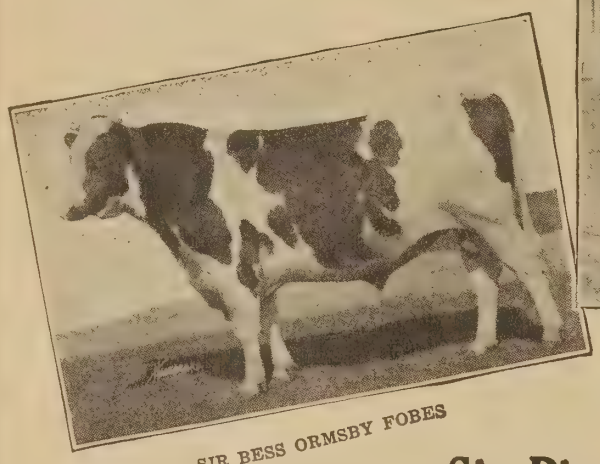
Both tuberculin tested and guaranteed right.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Hollyhock Farms' Holsteins

Sires in Service

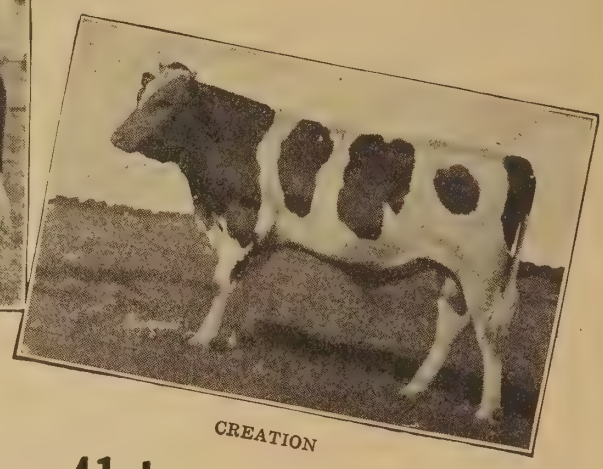
A Son and Two Grandsons of Sir Pietertje Ormsby Mercedes



SIR BESS ORMSBY FOBES



SIR PIETERTJE ORMSBY MERCEDES 41ST



CREATION

Sir Pietertje Ormsby Mercedes 41st

We selected "41st", the $65,000 bull, for our senior sire because we believed he represented the best breeding to be obtained anywhere. His sire, Sir Pietertje Ormsby Mercedes, is unquestionably the greatest sire of long distance producers the breed has produced as well as being a sire of show ring winners.

His dam, Spring Brook Bess Burke is known everywhere as the greatest of foundation females. She has produced 34.81 lbs. butter in 7 days, 1,094 lbs. in a year and has 5 A. R. O. daughters, 3 above 30 lbs. and 3 above 1,100 lbs.



MARY SEGIS BEETS

31.82 lbs. butter, 533.6 lbs. milk in 7 days. Now on year test and going strong.

Sir Bess Ormsby Fobes

This is, we believe, the best individual son of his great sire, S. P. O. M. 37th, he, a son of S. P. O. M. and Spring Brook Bess Burke 2d. "Fobes'" dam is Wisconsin Fobes, a really great foundation cow with 1,153 lbs. butter in a year and 4 A. R. O. daughters including a 29.78-lb. 2-year-old.



PABST KORNDYKE CORNFLOWER

38.43-lb. 3-year-old with 151.71 lbs. in 30 days (world record). 1,002.46 lbs. butter, 22,656.3 lbs. milk in a year as a jr. 2-year-old (state record). The highest priced Holstein female ever sold at public sale.

Creation

Creation is a son of Creator, full brother to S. P. O. M. 37th, and is from Champion Dora Korndyke (1,315 lbs. butter in a year) the highest yearly record daughter of King Pontiac Champion. Thus Creation and "Fobes" are the logical junior sires to follow "41st", the 3 representing what is, we believe, the best combination of long distance breeding that could be obtained.



BONNY JOHANNA MOORE DE KOL

29.64 lbs. butter, 518.9 lbs. milk in 7 days; 694.42 lbs. butter, 18,124.8 lbs. milk in 305 days.

Our Breeding Herd

In selecting the foundation animals for our breeding herd we kept in mind two essentials at all times: — type and production. We have, of course, combined good breeding with these, but the first two were always essential. Some of these females had very good records at the time; since then all have had or are having a splendid opportunity to prove their productiveness and we are more than pleased with the records they have made.

Cows like Queen Colantha Posch, Pabst Korndyke Cornflower and the others shown here are representative of the foundation stock we have selected.



QUEEN COLANTHA POSCH

32.08 lbs. butter, 590 lbs. milk in 7 days. 1,183.57 lbs. butter, 27,725.4 lbs. milk in 1 year at 9 yrs., 11 mos.

We Have For Sale

Some splendid young bulls of serviceable age and younger, most of them sons of King Pontiac Artis Sadie Vale, a 34-lb. son of King Korndyke Sadie Vale. They include a son of Mary Segis Beets and others as good.

We also have a very few young sons of "41st" for sale.

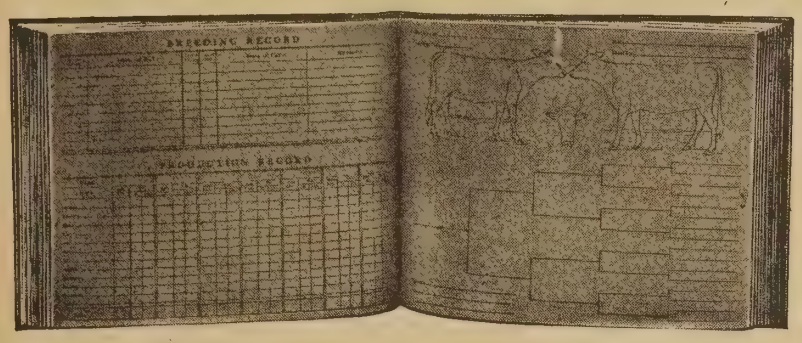
GUSTAVE PABST, Owner F. J. SOUTHCOTT, Manager

Dousman, Wisconsin

Mr. Breeder of Registered Cattle

Here's something Hoard's Dairyman has worked out for your convenience! It gives you a neat, handy place for

All the Records You Need To Keep



Breeding Record
Production Record

Four Generation Pedigree

In a Book You'll Be Glad To Show

96 Pages
"A-No. 1" Paper
Indexed
Bound in Buckram
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Price $2.50 postage prepaid. Just what you've been looking for! Make checks and money orders payable to—and mail order direct to

HOARD'S DAIRYMAN, FORT ATKINSON, WISCONSIN.



See Them At The "National"

Sir Johanna Fayne Segis Pontiac, our herd sire, and Pabst Pontiac Madrigal, a 25-lb. 2-year-old daughter of King Pontiac Champion, have been selected from Rock River Farms Herd for the Illinois Show Herd at the National.

They will be in the open classes as well.

ROCK RIVER FARMS, H. W. ALLYN, Supt., BYRON, ILL.
"The Home of Sir Johanna Fayne Segis Pontiac"

---

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL. Pontiac, Mich.

Sexauer Stock Farm

For Sale: A bull born Oct. 22, 1919. Outstanding individual, evenly marked in color. From a 27-lb. cow, 624 lbs. milk. He is sired by Woodcrest Pietje Clyde (33 lbs.) whose daughters, so far tested, averaged 19.25 lbs. as junior 2-year-olds. Write for other information and price.

John Sexauer & Sons, Belvidere, Ill.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Grandsons and Granddaughters of Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

Come to Michigan — October 19-20-21

Three Great Holstein Days

225 Choice Healthy Holsteins

Carefully selected individuals with good breeding and sold with 60-90 day retest privilege

Last Call! Second Michigan State Sale

Tuesday, OCTOBER 19, Jackson

70 Michigan's Best Holsteins

Selected from herds that have passed at least one clean test under state and federal supervision.

All high-class individuals with good records.

An unusual opportunity to select foundation stock of genuine merit in a sale where the buyer is protected by every possible guarantee.

Central Michigan Holstein Breeders'

Third Annual Sale

Wednesday, OCTOBER 20, East Lansing

75 Head Carefully Selected Animals

Sold with 60-90 day Retest Privilege

Shiawassee County Holstein Breeders'

First Annual Sale

Thursday, OCTOBER 21, Owosso

80 Choice Registered Cows and Heifers

Sold with 60-90 day Retest Privilege

These three sales are within easy reach. Jackson is on the main line of the Michigan Central Railroad, 75 miles west of Detroit and 200 miles east of Chicago, and is 75 miles from Toledo and 100 miles from Fort Wayne on the New York Central Lines. Lansing is only an hour's ride from Jackson via the Michigan Central Railroad or interurban, and Owosso is an hour from Lansing with the same connections. The best of shipping facilities in every direction.

Attend these three sales. We will hold the cattle for you until the close of the series.

Sales managed by

The Michigan Holstein-Friesian Association

H. W. Norton, Jr., Field Secretary,
Old State Block, Lansing, Michigan.

Watch for Them at the National

Sons and Daughters of King Pietertje Ormsby Piebe

— one of the greatest of long distance sires living.

They won in both the open and group classes at the Dairy Cattle Congress and will be very strong contenders at the National.

We hope you will look them up and notice particularly the strong and very similar dairy type they all possess.

King Pietertje Ormsby Piebe is a real transmitting sire and one of his sons at the head of your herd will transmit those same excellent qualities to his offspring.

Let us tell you about the one or two we have for sale.

Hargrove & Arnold, Norwalk, Iowa

Maxwell Farms' Holsteins

Have Removed to

Hollywood, California

We invite you to call and see us there

You will find at the Head of Our Herd
TRITOMIA PIETERTJE ORMSBY

He is a son of the great Sir Pietertje Ormsby Mercedes. His dam, Alice Tritomia Ormsby, 34.43 lbs. butter in 7 days, 1,100 lbs. in a year is a granddaughter of the same famous sire.

MAJOR PIETERTJE ORMSBY

"Major", too, is a son of Sir Pietertje Ormsby Mercedes and is from Bess Mercedes Korndyke, a granddaughter of that wonderful cow, Spring Brook Bess Burke 2d. Bess Mercedes Korndyke made 818 lbs. butter in 305 days and dropped 3 calves during the year of her record.

OUR BREEDING HERD

includes a large number of daughters of **Sir Ormsby Skylark,** the foundation sire of the Maxwell herd and the fountain head of the Ormsbys' as well as daughters of King Segis Pontiac and Woodcrest Hengerveld De Kol.

We Still Have a few corking good young bulls for sale and they are priced right because of our removal to California.

Maxwell Farms, Hollywood, Calif.
David G. Maxwell, Owner. C. R. McBride, Mgr.
Address all correspondence to Garden Court Apts. Hollywood

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*
At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*
2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont,** the **First Tuesday and Wednesday of every other month,** Feb.4-5; Apr.1-2; June3-4; Aug. 5-6; Oct. 7-8; Dec. 2-3, 1919. *Come to Brattleboro, the Holstein-Friesian Capitol of America.*

Address The Purebred Live Stock Sales Company.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA



A Son of Woodcrest Sir Clyde

born March 1920, three-fourths white and straight as a line. His sire is a son of the great 33-lb. and 970-lb. cow, **Alma Clyde.** His dam has 26.43 lbs. in 7 days, 105.6 lbs. in 30 days, 98.8 lbs. milk in a day. She has 3 records averaging 25 lbs. and 3 daughters with 2-year-old records of 20.2 lbs. 18.38 and 18.2 lbs. in 7 days.

Write for photo, price and pedigree.

W. B. BARNEY & SONS - - - - - Chapin, Iowa

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons,* out of a 35-lb. daughter of *King Segis.* His dam is by a son of *King Segis Pontiac Alcartra,* who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra.*

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y.

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.

BLUEBELL FARM, RICEVILLE, IOWA.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

Grandson of Sir Pietertje Ormsby Mercedes 37th

Born May 15, 1920, out of a daughter of Sir P. O. M. 44th. This royally bred calf is a fine individual and priced right for the farmer or small breeder. Let us tell you about him.

CERRO GORDO FARMS, Mason City, Iowa



OAK DE KOL OLLIE HOMESTEAD (85529)

Grand Champion National Dairy Show 1916 and 1917

Sire of first prize "Get of Sire" 1917. Sire of Iowana Mercedes Homestead, first prize two-year-old bull at National Dairy Show 1917. Oak De Kol Ollie Homestead is also a maternal brother to Iowana Sir Ollie, Grand Champion at National Dairy Show in 1919.

Oak already has four daughters that average over 20,000 pounds milk and 830 pounds butter.

A few sons of "Oak" from daughters of Sir Johanna Fayne (9 20,000-lb. daughters).

Show Ring Type With Yearly Production

IOWANA FARMS, *(Herd under Federal Supervision)* **Davenport, Iowa**

Facts in BLACK & WHITE

Stock the Farm With Purebred Holstein Cattle

In spite of the increasing cost of feed, dairying offers you a better opening today than it ever has in the past.

The scales and the Babcock test have systematized the industry until it is no more uncertain than any other business. Even city business men are awakening to its opportunities. Every year it becomes clearer that with large-yield cows, the cost of milk and butter production can be brought down to a point that makes dairying profitable. Have you ever figured out what your farm would be worth to you, if stocked with purebred Holsteins?

Send for Free Illustrated Booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

YOUR CHOICE OF 30 YOUNG BULLS OUT OF YEARLY RECORD COWS

FROM AN ACCREDITED HERD—325 FEMALES

OUR HERD SIRES



KING OF THE ORMSBYS

KING OF THE ORMSBYS is sired by Sir Pietertje Ormsby Mercedes (twelve 1000-lb. daughters) and out of Spring Brook Bess Burke 2d, the world's largest dairy cow and the only cow in the World with three 7-day records above 35 lbs. butter in connection with three year records each above 1000 lbs. Her best records are 38.22 lbs. in 7 days and 1290.93 lbs. in a year.

SIR INKA PRILLY SEGIS is a 30-lb. son of King Segis. He has 84 young daughters at Winterthur; 30 have freshened and 10 of these made above 20 lbs. at first freshening. At their second freshening they are coming back with from 25 to 28 lbs. 17 of his daughters have completed semi-official records, and 12 of these averaged 757.73 lbs. butter and 19,172.30 lbs. milk at an average age of 3 y. 6 m.



SIR INKA PRILLY SEGIS

KING OF THE SADIE VALES is sired by King Korndyke Sadie Vale (the only bull with a 40-lb. dam, a 40-lb. sister, and a 40-lb. daughter) and out of a 38-lb. "Sadie Vale" cow. Both his sire and dam are out of 41-lb. cows. The five nearest dams of King of the Sadie Vale each weighed over a ton and produced over 100 lbs. of milk a day. His three nearest dams average 40.19 lbs. butter in 7 days and 159.51 lbs. in 30 days.

JOHANNA KING SEGIS is out of a 40-lb. cow and sired by a yearly record son of King Segis. The dam of Johanna King Segis was the first cow to make 541 lbs. butter in 120 days and the second to make 40 lbs. in 7 days. Johanna King Segis now has 8 daughters with semi-official records and these average over 700 lbs. butter and 18,000 lbs. milk. All his daughters born at Winterthur will be given an opportunity to make semi-official records.

Write for Price List Describing Their 30 Sons out of Yearly Record Cows

WINTERTHUR FARMS, WINTERTHUR, DEL.

84 Cows With Yearly Records — 65 Cows Now On Yearly Test

Buy Holsteins in Ohio

Wellington, Ohio

October 25-26, 1920

Wellington District Guaranty Sale
45 Grades — 85 Pure-breds

The grade cows and 2-year-old heifers

bred to freshen this fall and winter will be sold Oct. 25 as will some of the pure-breds.

The grades are the best to be obtained and include the entire herd of M. L. Fuller, several of which, have C. T. A. records of from 10,000 to 14,000 lbs. of milk.

The registered cattle include

the entire herds of J. G. Beal and Frint, Mays and Garver, as well as one or two of the good ones from 35 other herds.

Included in the Frint herd

are 12 daughters and granddaughters of Lavera Hortensa Beauty, former world record cow with 21 lbs. butter at 13 years.

Every animal in this herd of 35 head has been raised on the farm.

The Beal herd includes

a granddaughter of King of the Pontiacs, a granddaughter of King of the Black and Whites and a number of daughters and granddaughters of Sir Johanna Colantha Glade, a 32-lb. son of Colantha Johanna Lad.

Other Consignments Include

Daughters and granddaughters of Fairview Pontiac Beets Korndyke, he, a 27-lb. son of Pontiac Korndyke and the sire of 31 A. R. O. daughters including Wellington Vashti Korndyke, a 30-lb. 3-year-old.

Granddaughters of King of the Pontiacs.

A granddaughter of King Korndyke Sadie Vale.

Daughters and granddaughters of Rosehall Pontiac Pietertje, one of the best sons of King of the Pontiacs.

Several first prize winners at the 1920 Ohio State Fair.

Remember

Every animal over 6 months of age will be tuberculin tested and sold subject to a retest guarantee.

Every animal has been inspected and is one of the best obtainable in this, the oldest Holstein district in Ohio.

Write for catalogs to

Ohio Holstein Breeders' Ass'n

Howard C. Barker, Field Sec. **Tiffin, Ohio.**

An Ohio Holstein Dispersion

October 23 at Lebanon, Ohio

J. B. Ruffner Herd — 70 Head

This sale is necessitated because of severe injuries received by Mr. Ruffner while in the Army.

It Will Include

A number of A. R. O. cows with records up to 26 lbs. and daughters of A. R. O. cows.

Young daughters of Reinickel Sarcastic Segis Fayne and cows bred to him. He is by a grandson of Sarcastic Lad and from a 33.45-lb. granddaughter of King Fayne Segis.

Some splendid 2-year-old heifers bred to a half brother of Reinickel Sarcastic Segis Fayne out of a 25-lb. daughter of Sir Fayne Concordia and to a 26-lb. grandson of King Lyons.

Granddaughters of Colantha Johanna Lad, their sire from a 31-lb. dam that produced 1,130 lbs. butter, 25,000 lbs. milk in a year.

Every animal over 6 months tuberculin tested and sold subject to a 60-90 day retest.

Write for catalogs to

Ohio Holstein Breeders' Association

Howard C. Barker, Field Sec. **Tiffin, Ohio.**

Proven Type and Production



SIR HENGERVELD PIETERTJE ORMSBY

The winning 2-year-old at both Minnesota and Waterloo this year. A son of Chloe Pietertje Ormsby, world's record daughter of S. P. O. M. with 30.81 lbs. in 7 days at 4 years and 4 months, 1,149.53 lbs. in 1 year at 4 years and 4 months.

Three records that average 1,006.18 lbs. butter all made under full age. (World's record). Such production and type seldom go together.

A half interest in this remarkable young sire is for sale to the right breeder.

MINN.-OTONNA HOLSTEIN FARM

H. W. Schroeder, **Grand Meadow, Minn.**

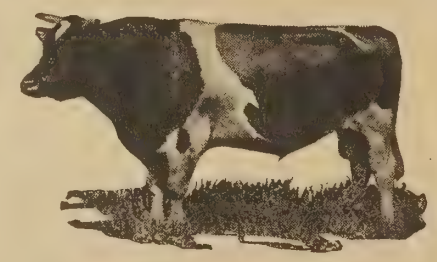
At Owatonna, Minn., after Dec. 1

State and Federal Accredited Herd

Use A Son of "Piebe"

from one of our good year record cows to head your herd. He will bring what you want—better individuality and increased production.

Piebe Laura Ollie Homestead King is, as you know, the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk in a year as 2-year-olds. He is a show bull as well, and his sons are as good.



We have one or two left that are almost of serviceable age. Write or wire today if you are interested.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - **SYRACUSE, NEW YORK.**

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, **Poland, New York.**

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,

Box 253. **Cortland, N. Y.**

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

M & P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, **AVON, N. Y.**

Ormsby Bulls

One splendid bull carrying four crosses of the blood of Sir Pietertje Ormsby Mercedes. Also two bulls carrying two crosses. All light in color and from dams to be tested.

One bull nearly ready for service from a 15-lb two-year-old dam that goes on year test this year. Blood lines represented are Champion Dora Korndyke, Canary Paul and Sir Johanna Fayne. This bull was a second prize winner this fall. Prices: $200 to 350.

CANNON FALLS HOLSTEIN FARM

CANNON FALLS **MINNESOTA**

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, **Forest Lake, Minn.**



Two full brothers
Sired by Sir Pietertje Ormsby Mercedes 14th.
Dam, a beautiful 4-year-old running strong on year work.

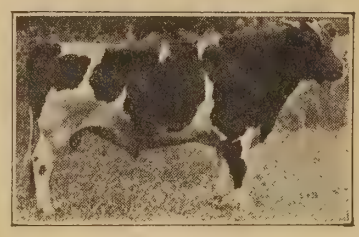
We are offering for sale one of these choice sons of

Sir Pietertje Ormsby Mercedes 14th

The other we are keeping to use in our own herd.

See them and their sisters at the

National Dairy Show



S. P. O. M. 14TH

Mankato Holstein Farms

(A Federal Accredited Herd)

Marlow & Randall

Mankato, **Minnesota**

Dispersion Sale of Holsteins

Lexington, Mo., October 20th, 1920

15 Pure-breds — 35 Grades

Consisting of fine Herd Bull, Mature Cows, Heifers and Calves

Owing to time required for his professional duties Dr. F. W. Caldwell, County Agent of Lafayette Co., Mo., will disperse his entire herd of Holstein cattle.

A few years ago Dr. Caldwell selected cows of some of the best families of the breed as the foundation of a herd. He then went to the famous herd of the Kansas Agr. College for a herd bull. He, of the Josephine, Pontiac and Homestead families. It is these cows and their offspring he is offering in this sale.

The following are some of the pure-breds:

Josephine Pontiac Homestead No. 169951, 5-year-old herd bull; 3-year-old Bairdland Pontiac Johanna, granddaughter of Pontiac Champion; 3-year-old Occidental Duchess Segis 5-year-old Miss Woodcrest Savannah Beauty; 5-year-old Juliana Pietertje Wayne; 5-year-old Occidental Viola Homestead; 7-year-old Darlyne Hengerveld Tirania; 5-year-old Johanna Katydid De Kol. Bull calves: Josephine Hengerveld Homestead, Josephine Pontiac Pietertje, and De Kol Johanna Josephine. Heifers: Josephine Duchess Segis, Josephine Pietertje Wayne and two heifers out of Bairdland Pontiac Johanna. Certificates of registry and transfer will be furnished with all pure-bred cattle.

The Grades

Consist of fifteen milking cows and twenty yearling and two-year-old heifers. Good indivduals, well marked and in calf to the herd bull in most instances.

As this is a small sale it is not possible to advertise it extensively. Hence there will be a good opportunity for bargains.

A Josephine Herd Bull

is at the head of this herd. He has good lines, is two-thirds white and sires calves of good individuality and is gentle. Get him at your price.

Sale Starts at 10 A. M. in Pavilion

Lexington is forty miles east of Kansas City on the C. and A. and Mo. Pac. R. R's. All cattle will be tuberculin tested within thirty days of the sale. The usual ninety-day retest will be granted.

For extended pedigrees or further information, address

C. M. Long, Sales Manager, Sedalia, Mo.

Pres. Mo. State Holstein Association

Col. Fred Ball, El Reno, Okla., Auctioneer **Dr. F. W. Caldwell, Higginsville, Mo., Owner**

Come to Missouri for Healthy Holsteins

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

FOR SALE
A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - - E. GRAND FORKS, MINN.

Pine Row Holsteins

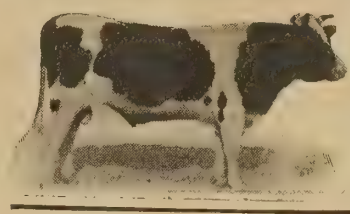
Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.



$200 — Buys this ten months old Bull

If you like deep middles, straight rumps, square udders with well placed, easy milking teats, in your herd—**Breed for those points.**

Be sure it is in the dams back of your herd sire. It's all there in this bull, we've bred three generations of his dams, and his dam is a 19-lb. cow. This calf is good all over and nicely marked. Send for his pedigree and photo and see.

Just the bull for a good grade herd.

A. J. LASHBROOK, NORTHFIELD, MINN.
(Federal Accredited Herd)



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.

Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

Wright Co. Holstein Breeders' Sale

65 head, bulls, cows and heifers with excellent type, guaranteed absolutely right in every way. Don't forget the date, October 5th, 1920. Howard Lake, Minn. Sale in New Sale Pavilion, at Fair grounds. Send for Catalogue.

Chas. Oby, Maple Lake, Minn.

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm

William Schmidt, Prop. St. Peter, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

SIZE

King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired", weighs 2,311 lbs. at four years. His dam is the highest record daughter of Sir Johanna Fayne with 32 lbs. in seven days and 941 lbs. for the year. We offer his sons from high record cows. Yearly record backing.

Flecks Farms, Faribault, Minn.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

King Oak Segis Pontiac



***Sired by* Count**

***From* Piebe Fayne Dam**

We do not claim

that King Oak Segis Pontiac is the greatest sire in the world or the most perfect, nor did we listen to such claims when we went out to buy him. But, in looking over his pedigree, we found a few things which caused us to put our faith in King Oak.

He is the son of King Segis Pontiac Count — "The Marvel of All Sires" — who is the sire of eight daughters who have year records of over 1,000 lbs. of butter. His daughters have broken far more than one hundred world records. He is also the sire of a 21,000-pound three-year-old. He is the youngest sire in the world having 8 daughters with year records of over 1,000 pounds of butter. His two and three-year-old daughters have made more 100-lb. records than those of any other sire.

King Oak Segis Pontiac's dam, a daughter of Oak De Kol Ollie Homestead, has a three-year-old record of 23.59 and 512.8 lbs. of milk in seven days, made on a three-quarter udder under adverse circumstances. Her dam was a daughter of Sir Johanna Fayne, one of the greatest sires of the breed. Her dam was from Wisconsin Piebe Laura, one of the greatest foundation cows known and now holding the world's record for her age.

This pedigree record looked good enough to us so that we had faith. We went to "Arden Farms" and viewed King Oak Segis Pontiac. When we saw what a remarkable individual he was, our faith was strengthened. We took him to Oak Dale Farms and at the appearance of his first calves, we saw that he was backing up our judgment. Our faith became conviction.

So convinced are we of the final outcome of the combination and blood that King Oak carries, mingled with the blood of our foundation dams, that we do not hesitate to ask our friends and fellow breeders to come to Oak Dale Farms and buy breeding that cannot be duplicated.

Oak Dale Farms

INCORPORATED

AUSTIN - MINNESOTA

ARDEN FARMS

will consign to the

Second Foundation Breeders' Sale

Minnesota State Fair Grounds — St. Paul, Minn. — October 28 and 29

The Blood of the "BIG FIVE"

KING SEGIS PONTIAC COUNT
"The Marvel of All Sires"

PIEBE LAURA OLLIE HOMESTEAD KING
"The Present Day Sensation"

KING KORNDYKE PONTIAC LASS
"Our 44-lb. Bull"

SIR ORMSBY HENGERVELD KORNDYKE
"Our Ormsby Bull"

SIR JOHANNA BESS SEGIS
The only bull in the world with the double cross of
WISCONSIN BESS PIEBE LAURA

Also the blood of the
WORLD'S CHAMPION DAUGHTERS OF KING SEGIS
PONTIAC COUNT

I will sell Seventy Head
SIXTY FEMALES — TEN BULLS

I will sell daughters of "Count" bred to "Piebe"
I will sell daughters of "Piebe" bred to "Count"
I will sell daughters of "Ormsby" from daughters of "Count"
I WILL SELL TWENTY-FIVE DAUGHTERS OF THESE FIVE GREAT BULLS
I will sell forty-seven females bred to these five great bulls to freshen this winter
A L S O the best lot of bull calves we have ever offered in public sale

If you are going to be in the market for a herd sire, it will pay you to wait and look them over

No Herd in the World has Broken so Many World's Records in so Short a Time as Arden Farms' Herd

In no herd in the world will you find greater breeding, combining the blood of the greatest bulls and greatest cows of this great breed of cattle — We are giving the public a chance to buy some of this blood

Come — whether you buy or not

It will be worth your while to make the trip to see this wonderful herd of cattle and how we do things at Arden Farms — *come and bring the boys*

J. M. Hackney, 602 Merchants Bank Bldg., St. Paul, Minnesota

Remember the Date — October 28 and 29 — Minnesota State Fair Grounds

Your Future Herd Sire !

Have You Ever Realized Why I Bought King Korndyke Pontiac Lass to Use on the World's Champion Daughters of King Segis Pontiac Count ?

It was because after fifteen years' experience I have come to the firm conviction that *Line Breeding* is bound to secure the best results and that the greatest sires and cows of the Holstein-Friesian breed can be found in the pedigrees of *King Segis Pontiac Count* and *King Korndyke Pontiac Lass*

I Make This Statement Advisedly and Without Fear of Contradiction

At the Second Foundation Breeders' Sale

Minnesota State Fair Grounds, October 28 and 29

I Will Sell One of the Best Bred Calves Ever Raised on Arden Farms



SIR VEEMAN SEGIS PONTIAC KORNDYKE H. B. (292572)
Born January 11th, 1920.

His dam: MOLLY VEEMAN SEGIS PONTIAC, one of the greatest daughters of KING SEGIS PONTIAC COUNT, with this wonderful record:

At 2 years, 4 months, 4 days:		At 5 years, 3 months, 13 days:	
Butter, 7 days	28.61 lbs.	Butter, 7 days	32.48 lbs.
Milk, 7 days	502. lbs.	Milk, 7 days	608.6 lbs.
Butter, 30 days	107.45 lbs.	Butter, 30 days	119.27 lbs.
Milk, 30 days	1,836.2 lbs.	Milk, 30 days	2,789.4 lbs.

She is now on yearly test and in 200 days, has to her credit: butter, 614 lbs.; milk 15,863 lbs.

I think she will go over the 1,000-lb. mark. I shall run her again as a six-year-old. If she had no other record than the one made as a two-year-old, this calf would be worthy of the place of your future herd sire.

His sire's dam: — K. P. PONTIAC LASS has the following record:

Butter, 7 days	44.18 lbs.	Milk, 60 days	4576.40 lbs.
Milk, 7 days	585.90 lbs.	Butter, 90 days	426.68 lbs.
Butter, 30 days	171.50 lbs.	Milk, 90 days	6866.40 lbs.
Milk, 30 days	2361.40 lbs.	Butter, 100 days	465.16 lbs.
Butter, 60 days	308.81 lbs.	Milk, 100 days	7601.50 lbs.

ALL WORLD'S RECORDS WHEN MADE—WONDERFUL TYPE AND PRODUCTION

In a five generation pedigree of this bull there are more great sires and cows of the breed than I have ever seen in any other pedigree

I will have nothing to say about the price—that will be up to you

We Can't Raise Any Better on Arden Farms

J. M. Hackney, 602 Merchants Bank Bldg., St. Paul, Minnesota

The Blood of PIETERTJE MAID ORMSBY, greatest transmitting cow of the breed — whose son was again first and whose grandson was second among the money winning sires of the past year — whose great granddaughter was first and whose granddaughter was second among the prize winning females — the blood of this great cow is strong in the animals we have consigned to the

National Dairymen's Holstein Sale

October 13 and 14 — During the National Dairy Show — Coliseum, Chicago



KING ORMSBY COLANTHA DE KOL

Sire:—*King Korndyke Colantha Ormsby.* His breeding is given with that of King Bess. His daughters are making exceptionally large records in all divisions. His granddaughters are typical *Ormsbys* and remarkably uniform.

Dam:—*Miss Ormsby Grace De Kol,* a 31-lb. daughter of *Sir Ormsby Hengerveld De Kol* and a ¾ sister to *Pietertje Maid Ormsby.* She is a cow of great size, smooth finish and all quality. Now on yearly test.

Here is a bull that carries the best of *Ormsby* breeding, an outstanding individual and ready for light service.



BESS JOHANNA RUBERTA 2D

Sire:—*King Bess,* who is by our *King Korndyke Colantha Ormsby* (two nearest dams average 1,250 lbs.; his grandams are *Pietertje Maid Ormsby* and *Colantha 4th's Johanna*). His dam is *Bess Pietertje Ormsby Mercedes,* 1,235-lb. daughter of *Sir Pietertje Ormsby Mercdes* and *Spring Brook Bess Burke. Four nearest dams average 1,207 lbs. for the year.*

Dam:—20-lb. 3-yr.-old daughter of *Sir P. O. M. 38th* and out of a 22-lb. granddaughter of *Colantha 4th's Johanna.*

A stronger *Ormsby-Bess Burke-Johanna* pedigree would be hard to imagine. World's records close up and plentiful on both sides.



DUCHESS COLANTHA ORMSBY 2D

Sire:—*Sir Ormsby Akkrummer Hengerveld,* whose three nearest dams average over 34 lbs. for 7 days and 1,100 lbs. for the year. His get were second this year at the California State Fair. Our junior sire and one of the most richly bred of the *Ormsby* bulls.

Dam:—A daughter of *King Korndyke Colantha Ormsby* and *Oakhurst Duchess Clothilde,* the dam of *Duchess Skylark Ormsby.*

As a foundation *Ormsby,* it would be difficult to improve on this royally bred heifer.

Woodlake & Clover Farms

The Home of the Ormsbys

John B. Irwin - Minneapolis



To the

Second Foundation Breeders' Sale

Minnesota State Fair Grounds **St. Paul** OCTOBER 28th and 29th

We have consigned 25 head of foundation animals, mostly heifers and young cows, with a few richly bred **Ormsby** bulls.

Among the females is a daughter of **Sir Ormsby Akkrummer Hengerveld,** the 39-lb. son of Sir Ormsby Banostine Champion, that is out of a 29.87-lb. daughter of **Sir Pietertje Ormsby Mercedes.** Also a beautiful granddaughter of **Duchess Skylark Ormsby** bred to **Sir Pietertje Ormsby Mercedes 38th,** and another that is from a 29.37-lb. daughter of **Beryl Wayne Paul DeKol.** With these and other Ormsby heifers we have consigned several royally bred young cows with calf to **Sir Ormsby Hengerveld Korndyke,** the son of **Pietertje Maid Ormsby, King Korndyke Colantha Ormsby,** our senior sire, or **Sir P. O. M. 38th,** one of the greatest of the sons of **Sir Pietertje Ormsby Mercedes.**

Among the males is a son of **Sir Ormsby Akkrummer Hengerveld** from a **30-lb.** daughter of **King Colantha Walker.** He is ready for service. Also a son of **Sir Ormsby Hengerveld Korndyke** that is from a dam which combines in the closest possible manner **Pietertje Maid Ormsby, Duchess Skylark Ormsby** and **Colantha 4th's Johanna** — a youngster fit to head any herd.

These are only samples. We suggest that you set aside those dates and send for a catalog. **The Foundation Breeders' Sale** will interest you.

E. C. Schroeder Farms' Consignment

to the Foundation Breeders' Sale

Minnesota State Fair Grounds, October 28th and 29th

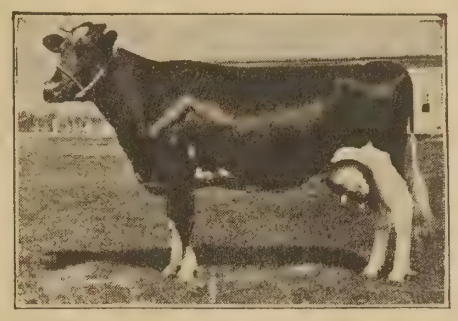
Eight Heifers — All Two Years Old or Under — Year Record Backing



JENNY WREN PIETERTJE
Butter 365 days 1,000.51
Butter 7 days 30.21
Her yearling daughter will be sold.



BESS PIETERTJE ORMSBY MERCEDES
Butter 365 days 1,235.33
Butter 7 days 33.23
Two of her granddaughters to be sold. One bred to "37th".



QUEEN PIEBE MERCEDES
Butter 365 days at 4 yrs. 4 mos..... 1,389.45
Milk 30,230.20
A yearling heifer from her daughter will be sold—in calf to "37th".

(1) Jenny Wren Pietertje 2d — Born April 23, 1919

Sire: King Korndyke Colantha Ormsby, son of Miss Korndyke Maid Ormsby, 1,255 lbs. in a year, and by son of Colantha 4th's Johanna.

Dam: Jenny Wren Pietertje, the 30-lb. 1,000-lb. — $10,000 daughter of Sir Pietrtje Ormsby Mercedes and the world's record 13-year-old, Jenny Wren Lassie 2d.

Bred April 28th to splendid grandsn of "DUKE".

(2) Queen Piebe Korndyke Ormsby — Born September 16, 1918.

Sire: King Piebe Ormsby Mercedes, sire of the junior champion heifer at Minnesota State Fair. He is from a 1,136-lb. 4-year-old daughter of Sir P. O. M. and by a 1,235-lb. grandson.

Dam: Queen Piebe Korndyke. Now on yearly test. She is the only daughter of Queen Piebe Mercedes, the world's record four-year-old with 1,389 lbs. in a year.

Bred April 30th to **Sir Pietertje Ormsby Mercedes 37th.**

(3) Jenny Wren Colantha Ormsby — Born February 1, 1919.

Sire: King Korndyke Colantha Ormsby (See No. 1).

Dam: Jenny Wren Mercedes, 24-lb. four-year-old full sister to Jenny Wren Pietertje. She won first at the National in 1914.

Bred April 11th to "37th".

(4) Lady Rhoda Korndyke Cornucopia — Born April 6, 1919.

Sire: Sir College Cornucopia 2d, son of the famous milk producer, College Belle Wayne. She has 35 lbs. butter and 824 lbs. milk in 7 days.

Dam: Rhoda Korndyke Pontiac Beets, a 28.99-lb. daughter of a 30-lb. son of Pontiac Korndyke. Her dam is a 27-lb. daughter of a 27-lb. cow.

(5) Bess Ormsby — Born January 21, 1919

Sire: King Korndyke Colantha Ormsby. His three nearest dams average above 1,000.

Dam: Bess Pietertje Ormsby Korndyke. Now on test and will make over 800 lbs. She is a daughter of Bess Pietertje Ormsby Mercedes, 1,235-lb. daughter of Sir P. O. M. and Spring Brook Bess Burke.

Bred May 4th to Sir P. O. M. 37th.

(6) Nannette Pontiac Ormsby — Born October 31, 1919

Sire: King Bess, a son of King Korndyke Colantha Ormsby and Bess Pietertje Ormsby Mercedes. Five nearest dams average above 1,100 lbs.

Dam: K. P. Nannette, a 20-lb. two-year-old daughter of King of the Pontiacs.

(7) Grahamholm Colantha Elcey Aaggie — Born 9-13-18

Sire: Sir Winana Beets Segis, famous son of King Segis.

Dam: Elcey Aaggie Grahamholm, A. R. O. daughter of Aaggie Cornucopia Johanna Lad and a 28-lb. cow.

Bred April 30th to Sir Pietertje Skylark Ormsby, whose nine nearest dams average 1,000 lbs.

(8) Isabella Pietje Segis — January 21, 1920

Sire: Uneeda King Alcartra, a son of King Segis Pontiac Alcartra from a 33-lb. daughter of the 40-lb. sire, Johanna McKinley Segis.

Dam: Woodcrest Isabella Pietje, a 31-lb. three-year-old now making over 900 lbs. for the year in mature form. She is a daughter of Pietje 22d Son.

His Sire



SIR PIETERTJE ORMSBY MERCEDES 41ST
(More 1,000-lb. sisters than any other sire in the world.)

Also This Splendid Bull

Colonel Glen Ormsby

He combines the blood of our Bess Burke and Glen Canary families and also of two of Minnesota's greatest sires, Sir Pietertje Ormsby Mercedes and Sir Johanna Canary De Kol.

He carries 75% the blood of: Glen Canary De Kol 2d, butter 365 days at 4 years, 5 months, 1,323.36.

His Dam



GLENN CANARY DE KOL
Butter 7 days at 3 yrs. 34.59
Butter 30 days 139.84
(WORLD'S RECORDS 1914-15)

E. C. Schroeder Farms, Moorhead, Minnesota

Third Annual Sale

Porter County, Indiana, Holstein-Friesian Breeders' Ass'n

50 Registered Holstein-Friesian Cattle

Consignment includes heifers and cows bred to or from sires of National note, such as:

Winterthur Ormsby — Seven nearest dams average:

Butter	7 days	35.84
Milk	7 days	630.23
Butter	365 days	1064.37
Milk	365 days	22491.54

Unaland K o r n d y k e Hengerveld — Three nearest dams average:

Butter	7 days	29.03
Butter	1 year	1146.34
Milk	1 year	24151.80

Took second prize at Indiana State Fair 1918-1919.

CREAMELLE PERFECTION — Grand Champion Indiana State Fair 1919. Breeding of the best blood lines.

KING KORNDYKE ISABELLE VEEMAN — His six nearest dams average: Butter 7 days, 32.77. Grand Champion Ind State Fair 1918 and other fairs. A sire whose daughters are proving to be high producers.

WINTERTHUR SADIE VALE DOSEGIS — His dam as a 2-year-old had a record of: Butter, 7 days, 25.20 lbs.; butter, 1 year, 826.19 lbs.; milk, 1 year, 19,116 lbs. Is a grandson of King Segis Pontiac Alcartra and King Korndyke Sadie Vale.

Come to Porter county to get foundation cattle, where the Indiana State Champion cow is, where we have had 8 out of 10 best cows in the Cow Test Association in the State. Had the highest cow 8 months out of 12 in 1919.

Valparaiso, Indiana, October 30th, 1920

Sale will begin at 12:30 o'clock sharp

On Pennsylvania, Nickle Plate and Grand Trunk R. R. Auto Bus from Kouts and Wheatfield.

For Catalogues write A. C. Mohnssen, Valparaiso, Indiana

Burgess Consignment Sale

October 27, Huntington, Ind.

50 Registered Holsteins

From the Herds of H. C. and C. E. Burgess, Ray Muker, I. F. Keisling & Sons, and Geo. P. Sneider

The Sale will Include:

Daughters of Col. Korndyke De Kol, a son of Pontiac Korndyke, whose first 17 daughters to be tested averaged 24.19 lbs. butter in 7 days as senior 3-year-old, with an average fat test of 4.26%.

That wonderful cow, Lenawee Calamity Pet will be sold. She has 5 seven-day milk records that average 765 lbs., the highest being 818 lbs.

There will be 8 cows bred to King Echo Sylvia Korndyke, a 40-lb. brother to the $106,000 bull.

King Quality Korndyke Fobes, the H. C. and C. E. Burgess herd sire, will be sold. His dam produced 32.5 lbs. butter, 717 lbs. milk in 7 days.

10 bulls ready for service are included, all of them from good record dams.

This is a wonderfully good opportunity to buy some real foundation stock at your own price. It is an opportunitv to get started with pure-breds that are heavy milkers and test high.

Every animal over 6 months of age tuberculin tested and sold subject to a 60-90 retest guarantee.

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H. C. Burgess, La Fontaine, Indiana

Auctioneer: W. F. Andrews, Beech City, O. S. T. Wood in the Box
Lunch will be served.

Sir Pietertje Ormsby Mercedes 43d

Will be Sold at the National Dairymen's Sale

October 13-14, 1920, Chicago, Ill.



SIR PIETERTJE ORMSBY MERCEDES 43D

His Sire S. P. O. M. has more 1,000-lb. daughters than has any other one bull and his sons are transmitting the same excellent qualities to their offspring. Several of them already have an excellent list of tested daughters and both their sons and daughters may be found among the prize winners in almost any show ring.

His dam, Aaggie Wayne Peep, is one of the best long time producers of the breed with 3 records that average 1,031 lbs. butter in a year, 2 of them made at less than full age. As a 6-year-old cow she produced 34.59 lbs. butter in 7 days and 1,250 lbs. in a year. She and her full sister, Early Dawn Peep 2d, are world's record full sisters for year production with records that average 1,269 lbs.

"43rd" is just coming into the prime of his life. He is right in every way and fit to head the best herd in the country.

Toyon Farm Association, Mills Bldg., San Francisco, California

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peldora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **O. I. Reamer, North Liberty, Ind.**

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**



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Send for a copy of our book "What the Dairyman Wants to Know." It's free. We shall also be glad to give you the names and addresses of Perfection owners near you.

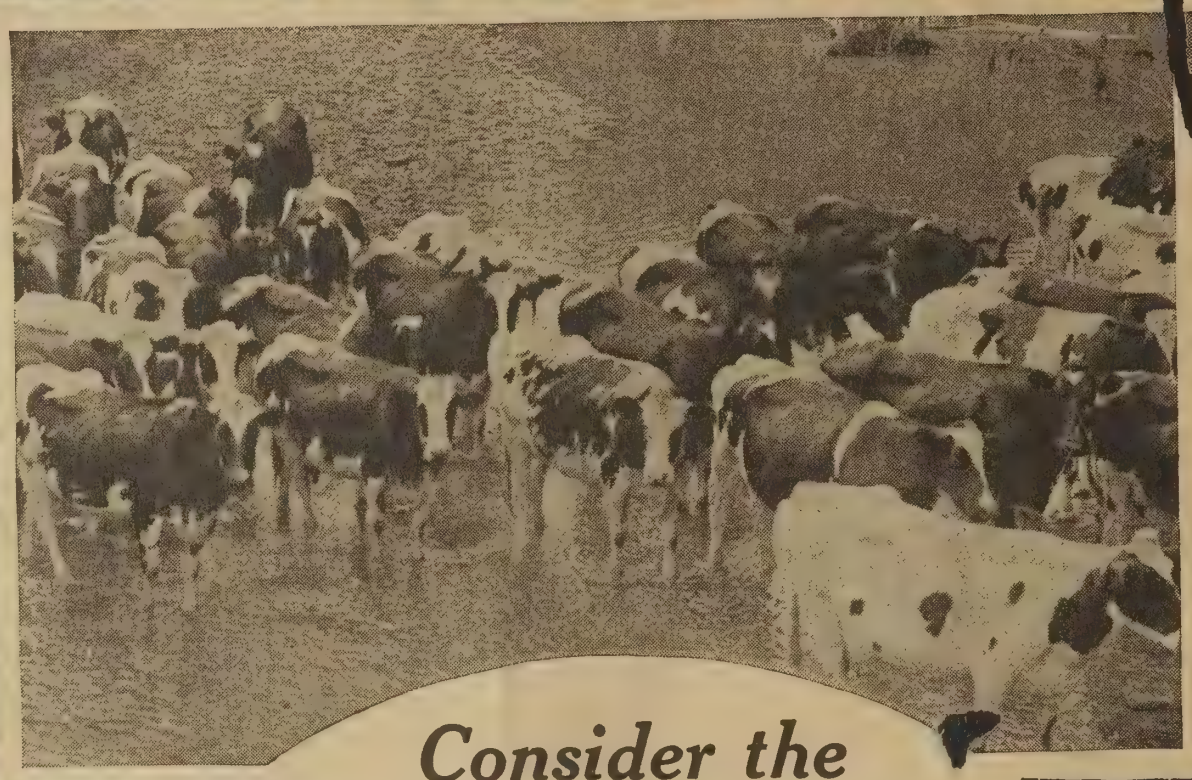
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True Value DAIRY FEED



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That each cow requires a maintenance ration whether milking or dry.

That *feed* is the *source* of milk.

That *feed, in addition* to the maintenance ration, is *necessary* for milk production.

That good dairy cows produce milk throughout the greater part of their lactation period in proportion to the *kinds* and *amounts* of feeds supplied.

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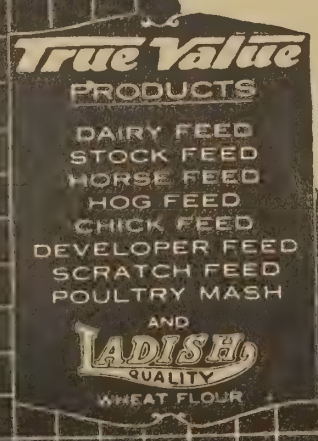
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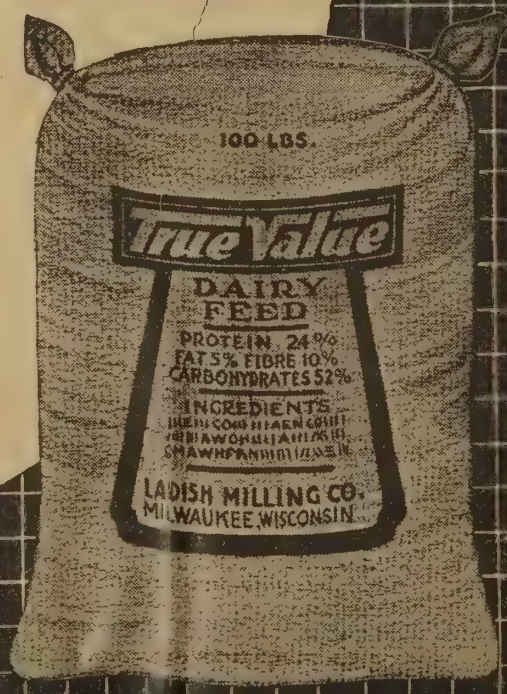
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HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., OCTOBER 22, 1920. | Number 14

SWAT THE SCRUB

J. C. McDOWELL

THE expression, "Swat the rooster", applies to one farm enterprise and to one season of the year. The expression, "Swat the scrub", applies to every class of live stock and to every season of the year. In speaking of our 10 billion dollar live stock industry, the 1919 Year Book of the United States Department of Agriculture says: "Better breeding will save a billion dollars."

If that is true it is a safe assertion that the scrub sire does more damage in this country each year than is done by lightning, hail, and forest fires. Like weeds and rust, like plant diseases and insect enemies, he is an ever present source of expense and loss. That is true in connection with the management of every class of live stock, but it applies especially to dairying. No matter what the average production of the dairy herd may be, the scrub sire will quickly drag the descendants down to the low level of his ancestors.

"Swat the scrub dairy sire" should be the slogan on every dairy farm. With him should go the scrub pure-bred and the grade sire. The intelligent use of good pure-bred dairy sires would increase average production, increase total production, and decrease expenses. It would tend to make dairying more profitable and make food less expensive to the consumer. In short, it would increase the wealth of the world without decreasing the prosperity of any individual in it.

Figures from one bull association in Maryland show that of the 17 daughters of association bulls, 16 excelled their dams in production of milk and butterfat. On an average the daughters produced 1,144 lbs. more milk and 26.7 per cent more butterfat than their dams. On most dairy farms where good pure-bred dairy sires are used, similar and sometimes greater gains come from the use of well bred dairy sires.

On farms where scrub and grade dairy sires are used, the results are quite different. From one farm we have the following figures: A scrub cow, in one year, produced 146.8 lbs. of butterfat. Her daughter, sired by a scrub bull, produced 126.3 lbs. of butterfat. The granddaughter, sired by the same scrub, produced 99.7 lbs. of butterfat. What would have happened had that kind of breeding been continued nobody knows; because, at that point, the owner woke up and replaced the scrub bull with a good pure-bred. If production records are continued on that farm, the next chapter of the story should make interesting reading.

The decreasing records over a series of generations, showing the results of using scrub sires, are not easy to obtain under normal farm conditions, because dairymen who keep such bulls seldom keep records. Doubtless, if the facts were known, figures like those given above could be duplicated in almost every neighborhood. It certainly paid that farmer to swat the scrub.

On many farms the registered bull is sent to the block before the production records of his daughters are available. A Wisconsin farmer sold his registered dairy bull to the local butcher before the production records of any of the daughters were known. During the following year 11 of the daughters freshened and their average production was 15,047 lbs. of milk and 571 lbs. of butterfat. By that time the valuable bull was dead and his hide converted into leather.

At the 1918 National Dairy Show in Columbus, Ohio, one very striking exhibit consisted of the hide of a similar bull. That bull had also been sent to the block before his daughters had made records. If all the good registered bulls could be used to their full capacity, and if all were used as long as they were fit for service, we would soon see a tremendous increase in the average production of our dairy herds. The cow testing association keeps the records of the dams and daughters. The bull association makes it possible to use good bulls to their full capacity and to keep them as long as they are fit for service. If given the opportunity these two organizations will revolutionize the dairy business of this country.

Good pure-bred sires bring increased production, and increased production brings increased profit. Tabulations of over 16,000 yearly records of cow testing association cows show that as butterfat production increased from 150 to 200 lbs., the income over cost of feed advanced from $25 to $40. At 250 lbs. of butterfat the income over cost of feed was $55. At 300 lbs. it was $70. At 350 lbs. it reached $85. At 400 lbs. it advanced to $99. And at 450 lbs. it climbed to $115. The average income all the way gained approximately $15 for every gain of 50 lbs. in butterfat production. In other words, the dairyman gets that much more for his labor, because the $15 is the gain after paying for the feed.

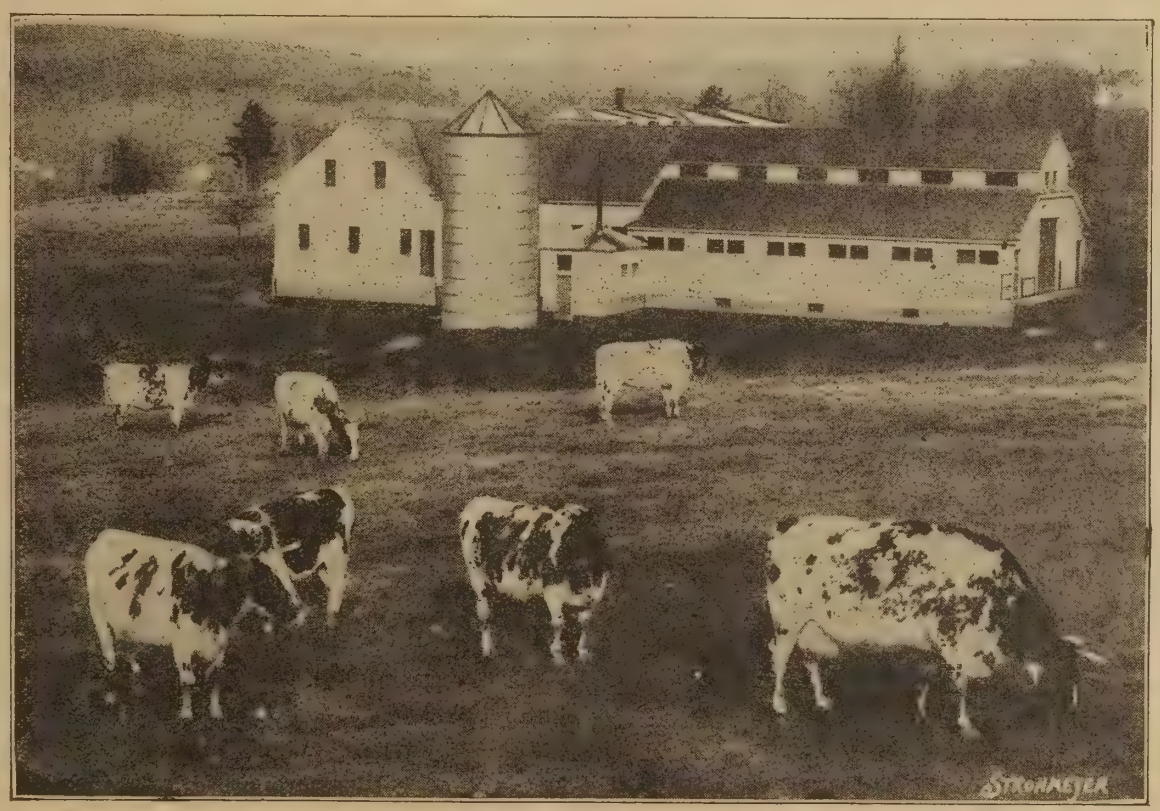
It is fair, therefore, to assume that the dairy sire increases the average production of his daughters as compared to their dams will greatly increase the labor income of the farm. That this is true has been shown by farm surveys made in Illinois, Wisconsin, Washington, and Ontario. Labor income is what the farmer has left for his labor after all other expenses for running the farm have been deducted, such as family labor, interest, insurance, and taxes.

A farm survey of 577 farms in northern Illinois shows that it pays to swat the scrub. On those farms where scrub bulls were used the labor incomes averaged $170; on farms where grade dairy bulls were used the labor incomes averaged $484; and on farms where pure-bred dairy bulls were used the labor incomes averaged $862.

In Dane County, Wisconsin, the results were similar. On the farms where grade dairy sires were used the labor incomes averaged $140. On the farms where ordinary pure-bred dairy sires were used the labor incomes averaged $782. On the farms where carefully selected pure-bred dairy sires were used the labor incomes averaged $2,854. Evidently it pays not only to use pure-bred dairy sires but to select the best of the pure-bred sires.

From a farm survey in Wahkiakum County, Washington, we have the following figures. On those farms where grade dairy sires were used the receipts per cow averaged $64.10 and the labor income averaged $161. On those farms where pure-bred dairy sires were used the receipts per cow averaged $78.40 and the labor incomes averaged $591. The difference in receipts per cow was only $14.30 in favor of the farms on which pure-bred sires were used, but that was a gain of $14.30 for every cow on the

(Continued on page 613)



AYRSHIRE COWS AND BARNS AT BRAE BURN FARM, OWNED BY L. W. NEWTON, MASSACHUSETTS

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Milk Cow Needs Plenty of Feed

"Grain feeding should always be in proportion to milk production. The cow in milk, if a Holstein," says C. H. Eckles, chief of the Dairy Division of the Minnesota College of Agriculture, "should be given about one pound of grain to every four pounds of milk produced. A Guernsey or Jersey needs one pound of feed to three of milk. The dry cow in good condition needs little, if any, grain.

"The cow is a milk machine and feed is the raw material. Like any factory or machine, economical operation is possible only when plenty of raw material is available. Turning a dairy cow loose in a pasture does not insure that she will get sufficient feed to hold up in milk production as she should, especially from now until the time when regular housing and dry feed will be in order.

"Practically every real dairy farmer will have silage available. Don't wait too long before beginning to use it. Within ten days after silo filling is completed, the silage is ready to use and unless pastures are unusually good it is well to begin feeding it.

"The experienced man knows that it is easy to let cows drop down in milk from poor feed, but very hard to bring them back to the high level again later even if good feed is given. Good management means keeping the conditions and feed right all the time so there will be no drop in milk at any time from lack of feed. The cow that has what silage she will eat will be well cared for so far as roughage is concerned so long as the pasture furnishes fair grass. When the grass begins to fail, bring out the alfalfa and clover."

To make people laugh is to make them forget. What a benefactor to humanity is he who can bestow forgetfulness.—VICTOR HUGO.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

A Song of Butter

Butter that is yellow,
Colored up like gold.
Butter that is mellow,
Butter that's too old.
Butter sold in restaurants,
Never made of cream,
Butter that is all a chance,
Not what it may seem!
(But the best, the only kind. What we daily yearn
Is the sort they make at home in a dairy churn.)

Butter that is fashioned
Into pretty shapes.
Butter that is rationed,
Small as Concord grapes.
Butter strong and mussy,
Butter rancid, too.
Stuff that makes you cussy,
When the meal is through.
(But the pure, sweet butter—Ah, to it we turn!
Is the sort that mother gives us from the churn.)

The Log-fire Time

The log-fire time, the time of dreams,
When hissing embers glow and shine.
Ice covers all the meadow streams,
We cork the elderberry wine.
The crops are in, the fields are bare,
The sitting room is full o' joy—
The sound of popping corn is there,
The laughter of a girl or boy.

But, in the hearth, the flames leap high,
The logs are crimson with their heat,
And, dancing sparks above them fly,
We think of jam and turkey meat.

What Fate Betides

A farmer plays a gambling game,
The weather makes it hit or miss.
No two fool seasons are the same;
When fickle fortune grants her kiss.
It rains too much or not at all,
It freezes, when it should be hot.
Some ill-timed day the hailstones fall,
And sleet the next day, like as not.

When crops are fine the labor thing,
Makes any farmer knit his brow.
If crops are small it seems to bring
More hands than chores for them allow.
The bugs and beetles, worms and sich,
The blights and weevils, all combine,
To keep the clan from being rich,
For blights must blight and bugs must dine.

But I have noticed that the herd,
Keeps on, regardless, day and night.
No blasted hopes—no dreams deferred,
No weather problems to set right.
With half a chance, the cows produce,
The dairy products have a sale,
There is no petty, lame excuse,
I've never known the herd to fail.

Jersey Cow—"I have put a complaint in to my landlord. It's almost impossible to sleep here nights. My health is impaired."

Mrs. Holstein—"Why, what's the matter?"

Jersey Cow—"The young folks are holding so many barn dances and husking bees in here, that it is no longer a high class apartment for any self-respecting cow."

The Old Dairyman's Philosophy

When a cow puts her foot in the milk pail it's no worse than the stubborn things men and women do. I've seen more than one man put his foot in it, if you know what I mean.

Next to looking inside the safe deposit vaults of a country bank, there is no fairer sight than a farm cellar at the end of a prosperous season.

A great many farm boys leave the old homestead for the city, but why worry—sooner or later they come back and then they stay for good.

I wonder what would happen if farm mothers suddenly decided to all leave the farm? It's an idea worth thinking about. Mebbe they will, some day, just to teach the young folks a lesson.

The Supreme Evidence of

DE LAVAL

CREAM SEPARATOR SUPERIORITY



Naturally the cream separator does not make or break the average farm user. The majority of them have no sure means of knowing just what their separator may be saving or wasting.

But the big user in the whole milk creamery or city milk and cream plant does know, and in the long run the separator means success or failure in his case.

That's the reason why practically all of the world's users of factory size cream separators use the De Laval, and why the few such machines of other makes occasionally sold soon find their way to the scrap heap. And it may well be remembered that De Laval superiority means relatively just as much to the small as to the big user. Ten dollars a month mean as much to the farmer as ten dollars a day to the creameryman.

It's not only a matter of quantity and quality of cream, but of capacity, labor saving, dependability and durability over a long term of years.

A De Laval catalog helps to make these facts plain. The trial of a De Laval machine does so better still. Every local De Laval agent stands ready to prove them.

If you don't know the nearest De Laval agent simply address the nearest main office, as below

The De Laval Separator Co.

New York	Chicago	San Francisco
165 Broadway	29 East Madison Street	61 Beale Street

50,000 Branches and Local Agencies the World Over

Adventures in Community Team Work

R. M. TURNER, WASHINGTON

TRAVELERS have wondered from what spot came the delicious Orcas Island pears which have appeared for years on the menu of the Waldorf-Astoria in New York, and few have realized that they came across the continent from a small island about twenty-five miles long in the most northwesterly part of the United States.

The island, lying between Vancouver Island and the mainland at the mouth of Puget Sound, is rock-bound and rugged, broken by valleys always in sight of salt water bays and snow capped mountains. So much for the environment of the Orcas Island pear.

Although fruit production is the principal business of the farmers there, nearly all raise a wide diversity of crops, including grain, dairy cows, poultry, and sheep. The sheep pasture in the rugged hills and are brought down on the meadows after the hay is off. But let us consider the organized work of the people.

In reciting the history of farmers' organizations on Orcas Island, one farmer was heard to remark to a friend, "Of all the organizations we have had during the past twenty years, our farm bureau is the most promising. It is surely a growing youngster."

True as this statement is, we must go further to state that although it is yet an infant, it is receiving a conservative, well balanced food from the hands of many of the island's most practical and substantial farmers. And although young, it is already paying for its ration in work and accomplishments.

Take for instance the community meeting held by the Orcas Farm Bureau recently. Fifty-six men and women sat down to a good old community dinner in the Grange Hall at noon. Outside the weeds were just slipping through the ground and growing just as usual. Nevertheless, these farmer families felt that they would be fully repaid for the day's vacation from cultivator and garden.

The advent of the first county agent on Orcas Island in 1920 was met with approval, for the farmers had read a great deal on farm bureau work in the farm papers and knew what to expect. At the first meeting which the agent held on the island, a request was made for the formation of the farm bureau. At the organization meeting a month later forty-eight families joined the bureau and work on the following program was begun:

1. To organize a cow testing association.
2. Ten farmers to keep daily milk records.
3. To test 200 cows for tuberculosis.



A FARM BUREAU POULTRY DISEASE DEMONSTRATION IN PROGRESS

4. To arrange demonstrational fertilizer plots.
5. To get local cannery to handle vegetables also.
6. To pool all the fruit on the island.
7. To hold two drainage demonstrations.
8. To secure a grain warehouse with feed mill.
9. To pool the wool of the island.
10. To hold one clothing and one millinery school.

Since the organization meeting, scarcely a week has passed but some phase of the work was developed or was brought to conclusion. The dairy project leader started the work off by organizing a cow testing association and by securing eleven farmers to keep daily milk records. He furnished the United States Department of Agriculture barn sheets. Also work was started on signing the farmers for the tuberculin test on their cows, making a well rounded dairy program.

Grain Warehouse Needed

The community is isolated and consequently the market facilities are not up to standard. The grain raised is shipped to Seattle by boat usually in the fall at a charge of fourteen dollars per ton freight and wharfage. It is held there until the poultrymen and dairymen need oats, barley, and millrun, and is shipped back in the form of scratch and dairy feeds at a higher figure and with the accumulated freight charges

(Continued on page 616)

Whitewater Calf Industry

ORIN CROOKER, ILLINOIS

CALVES to the number of five or six thousand a year are being shipped by express to all parts of the country from the little city of Whitewater, in Walworth County, Wisconsin. It would be difficult, perhaps, to find a publication circulating in the agricultural field that does not carry from one to a dozen advertisements of "farms" in this region that offer calves of any age and either sex for sale. Consequently, it is natural for the dairymen in Oklahoma, Georgia, or Texas to vision Whitewater as a community circled by farms that produce a remarkable surplus of calves. In fact, one buyer who was attracted by the many advertisements he saw, and who went there to bring home a carload of young animals stated he had formed the idea that calves must grow on trees in that vicinity—and that crop failures in the calf line must be unknown. When he reached Whitewater he found a clean, thriving, busy little town set in the midst of splendid dairy farms, but he failed to find calves growing on trees—nor did he find them growing on the farms in any greater number than in similar dairy districts. Six or seven express trucks filled to capacity with crated calves stood on the depot platform, however, awaiting shipment as he alighted from the train. Had he paused to look over the address labels he would have found the animals were consigned to points in almost any of the states of the Union. The magician who removes three or four rabbits from a silk hat is not less wonderful, perhaps, than these remarkable "farms" in southern Wisconsin that supply dairymen from coast to coast with calves ranging from shipments of a single animal to a hundred or so at a time.

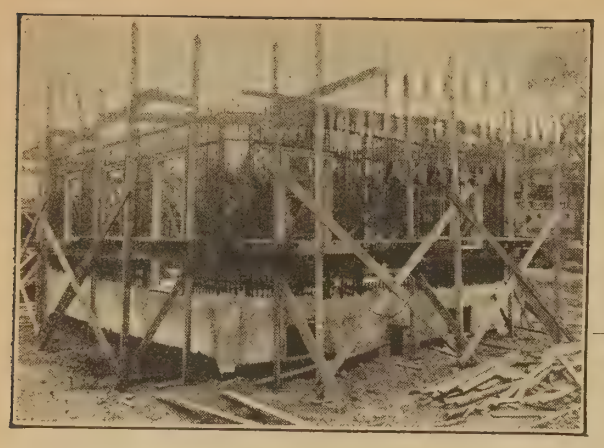
There are two sides to the story which it is proposed to tell in this article, and it is the intention to tell each of them in an impartial way. The writer visited Whitewater, not to buy calves but to satisfy his curiosity in regard to the thriving industry that centers at this point. It is believed that an unbiased account of the situation will benefit both the dairymen of the country and the men engaged in marketing calves in wholesale quantities. First, then, let it be stated that there are in the vicinity of Whitewater the usual number of breeders who have been working for years to build up herds according to the most approved methods. Some of these men have pure-bred animals that have been developed along splendid blood lines. There are also the usual number of dairymen handling grade cows, but whose herds are headed by pure-bred sires. In short, the dairy industry around Whitewater compares most favorably with that of any other similar community in this splendid dairy state. Several breeders of dairy cattle in this vicinity advertise calves and other stock for sale, but less than five per cent, probably, of the calves that are shipped from Whitewater are dropped on the farms that cluster about this point. The Whitewater calf industry, taken as a whole, is essentially a mail order proposition and it has developed to such an extent that it would be a physical impossibility for the dairy farms in this region to supply even a fraction of the calves that are handled by its shippers. This fact, however, should not wholly prejudice one's opinion. There is another angle to the story as will be shown further on, that must appeal to any dairyman who looks at things in a large way.



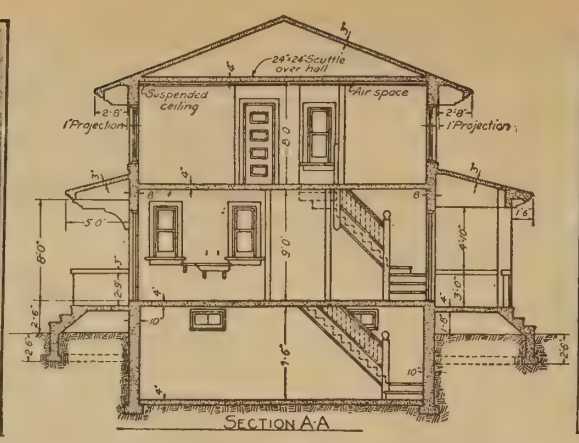
"A CALF NEVER LOOKS LARGER OR FINER THAN IT DOES IN A CRATE"

A word at this point in regard to the history of this industry will help the reader to visualize the situation. About a dozen years ago a certain individual, who has since become one of the largest shippers of young stock from this point, found it necessary to dispose of a few grade calves for which there happened to be no local demand. In an effort to realize more than stock yard prices for them he

(Continued on page 620)



This system of concrete house construction provides for setting up metal fabric on which is placed metal lath. The interior and exterior are plastered with cement mortar, leaving a dead air space for insulation against cold and heat.



A VERTICAL SECTION THROUGH A MONOLITHIC CONCRETE HOUSE

The floors and roof are of concrete as well as the walls and porches. This makes a durable and fireproof construction.



ANOTHER SYSTEM OF CONCRETE HOUSE CONSTRUCTION IS ONE KNOWN AS THE DONALDSON SYSTEM

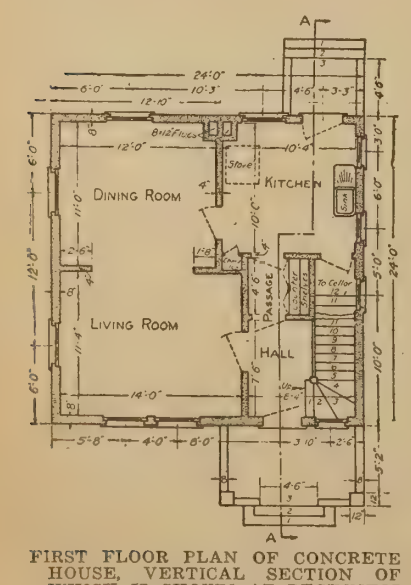
This also is a type of plastered construction and results in an attractive surface finish as well as a durable structure.

PERMANENT FARM HOMES NECESSARY

H. COLIN CAMPBELL, ILLINOIS

ATTRACTIVE and comfortable farm homes are now recognized as more necessary than ever. Similar recognition is being given to the need of more careful planning and building than was devoted to farm house needs a few years ago. The same factors which have prevented many home building plans in cities throughout the country from consummation have also prevented many needed, long planned, and hoped for improvements on the farm.

Cessation of building during the war, followed by the rapid rise in building costs, has created a shortage of farm homes that in a way is comparable to the housing shortage of the various cities. In some respects it may be that this rural shortage of homes is felt more keenly in that much of the unrest of farm labor is due to the unsatisfactory housing conditions on our farms. On the majority of our farms even today, it is unquestionably true that scant regard is given to providing the comforts and conveniences to which farm help is entitled and which as a natural right it expects. So while much study has always been given to the planning of city homes, only recently has there been displayed a tendency to give just consideration to farmhouse requirements. That is the reason perhaps why the average farm home fails to compare favorably with the average city one in the matter of comforts and conveniences so necessary to true home life. Another reason is perhaps due to the fact that more often than not the rural home is planned while it is being built; in other words, if the final product may be considered as having had a plan it has been developed from day to day while actual construction progressed. On the other hand, practically every city home represents the efforts of an architect to crystallize the desires of the future owner or occupant. Many a farm home, in addition to having no plan when originally built, represents a collection of additions from year to year as the household needs demanded different accommodations. Through the initiative of the United States Department of Agriculture and several state agricultural departments, notably Wisconsin, Minnesota, Illinois, and Iowa, experts appreciative of farm home requirements have given considerable study to farm home planning and construction. As a result several standard plans have been developed and published along with many home making and home furnishing suggestions in official bulletins devoted to the subject.



FIRST FLOOR PLAN OF CONCRETE HOUSE, VERTICAL SECTION OF WHICH IS SHOWN AT BEGINNING OF THE ACCOMPANYING ARTICLE.

It goes without saying that rarely should or can two farm homes be planned exactly alike and the result be that each occupant's individual needs will be fully met or met in the best degree. The number in the family to be accommodated, the kind of farming done, which naturally has its relation to the quantity of farm help kept, as well as many other factors such as whether the farm is north where winters are cold or south where they are mild, have their effect not only on the house plan but on the method of construction.

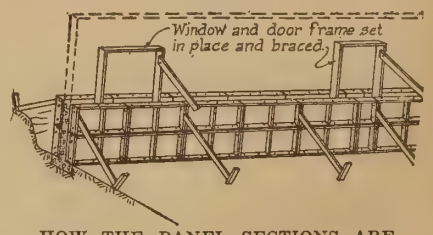
Whether the home is planned for town or country, it is evident that it should incorporate certain fundamental features that may be laid down as essential to the well planned and well built house. The things which everyone expects a house to provide are shelter from the elements, safety for the various personal effects of the family, and a place where the family's social life may be developed and out of which contentment will grow in its fullest measure. It is true that farm home requirements differ in some respects from the requirements that the city home would be expected to meet so the planning of the farm home calls for familiarity on the part of the planner with strictly rural life and the conveniences particularly associated with such life. Work of the farmer and farm housewife occupy a longer day than do the labors of the city dweller. Physical fatigue is probably greater, opportunity for mental recreation probably less. For this reason even with the best of roads those living on farms cannot avail themselves as regularly as can the city dweller of the many means for rest and relaxation which in town are always within a few minutes reach. Therefore, the farm home must supply more in the way of "atmosphere" leading to contentment than might be looked for in the city home. In other words, in the city one can go out and find within easy reach what the home lacks; in the country the home must make up for the absence of nearby diversion.

In order that these ends may be realized, one can readily see how necessary it is to plan carefully the rural home. Nearly everyone knows pretty well what he would like to have included in the home plan but actual planning with reference to relation of rooms and general conveniences to each other, particularly for economy of design, should be placed in the hands of an architect having the ability to interpret the intending builder's desires in a practical way. The writer believes that some day farm women will realize that they can get enough indoor exercise in a house in which all of the rooms are on one floor rather than insisting strongly for the two-story farm house where most of the things which the housewife wants are either upstairs when she is down or vice versa.

The whole idea in home planning should be toward efficiency and labor saving without sacrifice of comfort. The tendency is to reduce size of rooms so that the number of steps the housewife will have to take in housekeeping will be reduced to a minimum. In the past the average big house, whether in town or country, was built without any thought as to whether it was room that was wanted or whether it was evidence that the owner was able to pay for a showplace. The result was that the farm housewife, whose labors are none too light anyway, never saw the end of a day's work. Bedrooms are now being made smaller than formerly, but with more regard for ventilation and sunshine. Kitchens are smaller to save steps; halls, which serve no useful purpose except to take space from other rooms that should be larger, are being eliminated. Dining rooms also are smaller and in many cases are being made either an adjunct of the living room or dispensed with by substitution of a dining nook or alcove. Ceiling heights are being reduced to make heating less expensive. Frills, fancies, and non-essential details are conspicuous by their absence. Many individual pieces of furniture, once regarded as indispensable, are now no longer needed because their counterpart is built in the house. Cupboards, window-seats, china closets, and sideboards are now a part of the architect's plan. These features properly worked out not only make the actual furnishing of the home cheaper, but make it more efficient because they are time and step savers.

In these days more than ever before is it necessary that homes be planned with a view to freedom from burdensome upkeep expense. In all kinds of construction, temporary makeshift methods are giving way to those which secure the closest approach to permanence. With permanence attained in the greatest degree, it is natural that a number of other quite desirable results will also be realized. Chief among these is firesafeness.

A quality home weathers storm, fire, and any other common causes tending toward depreciation, without in any way omitting the comforts and conveniences which home implies. With present increased costs in all directions, it is necessary that cost be determined not on the basis of dollars and cents spent but solely from the standpoint of quality secured.



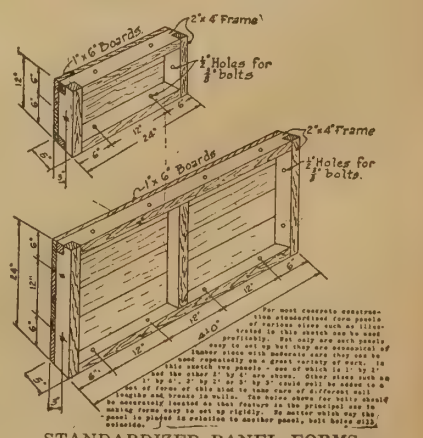
HOW THE PANEL SECTIONS ARE SET UP AND BRACED

It is not surprising that homes, whether in town or country, were in the not very far distant past built of materials that did not endure. Lumber was the most commonly used material because our forests were a ready, cheap source of supply. Now, however, it is necessary to give heed to the needs of the future as well as those of the present. That is the reason why we see an increasing use made of those building materials that make for durable homes.

Concrete as Building Material

Among the foremost of such materials is concrete, and its adaptability is such that in house construction as well

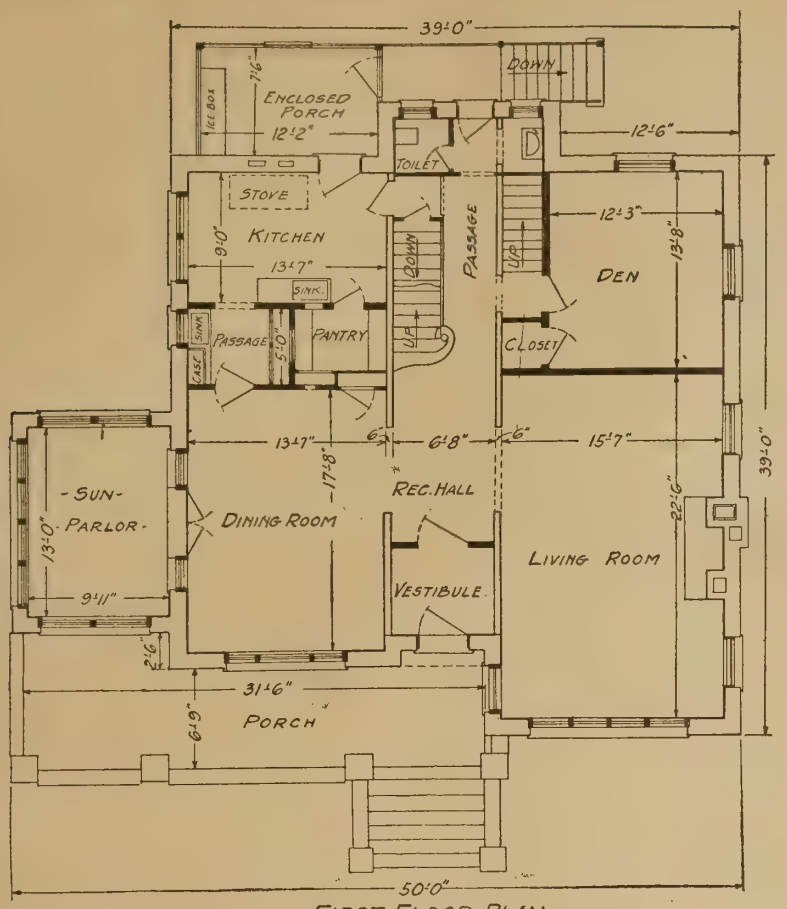
(Continued on page 613)



STANDARDIZED PANEL FORMS

One of these is 1'x2' and the other 2'x4'. Other sizes can also be used to take care of different lengths and breaks in wall. The holes for bolts should be accurately located, so that no matter which way the panel is placed in relation to another panel, the bolt holes will coincide. These forms are easy to set up, are economical of lumber, and can be used repeatedly if given moderate care.

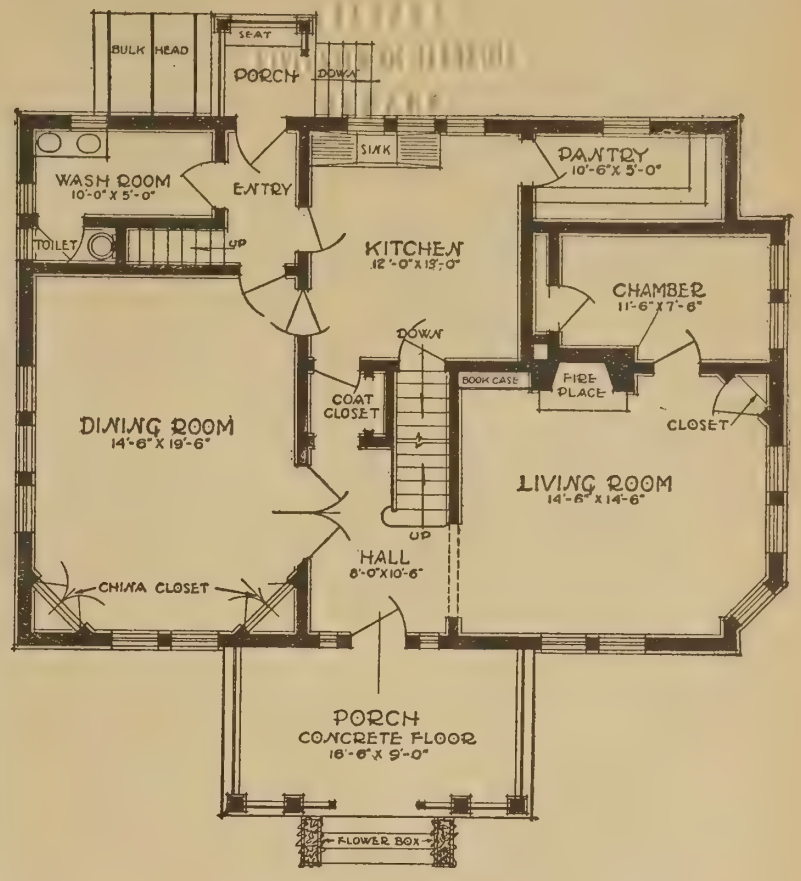
SUGGESTIONS FOR PLANNING FARM HOMES



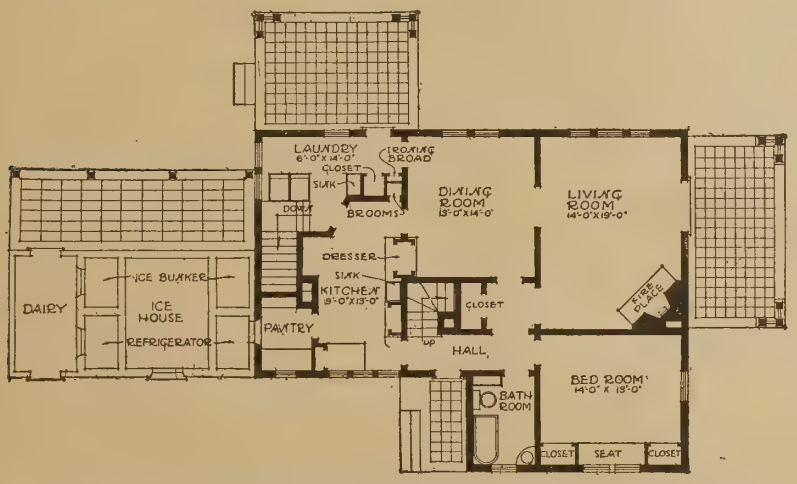
FIRST FLOOR PLAN

THIS FARMHOUSE PLAN PROVIDES MANY FEATURES MOST DESIRABLE IN THE FARM HOME

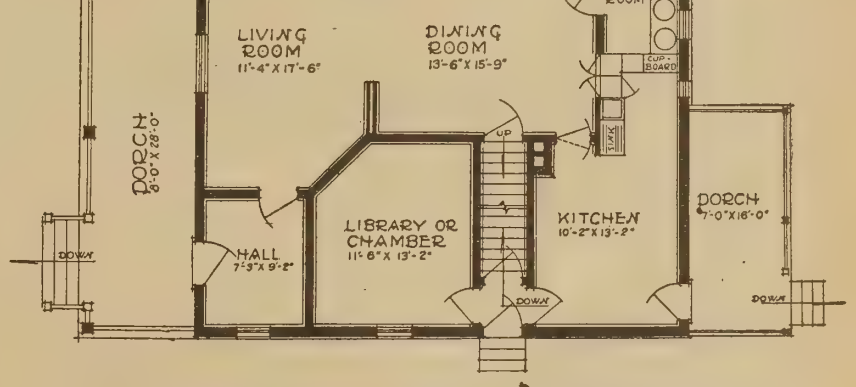
The sunparlor may be used as a sewing room or children's playroom. The den off living room may serve as the farm office. The enclosed porch off the kitchen may be fitted up to serve also as a washroom for farm help—sort of a clean-up place before entering the house.



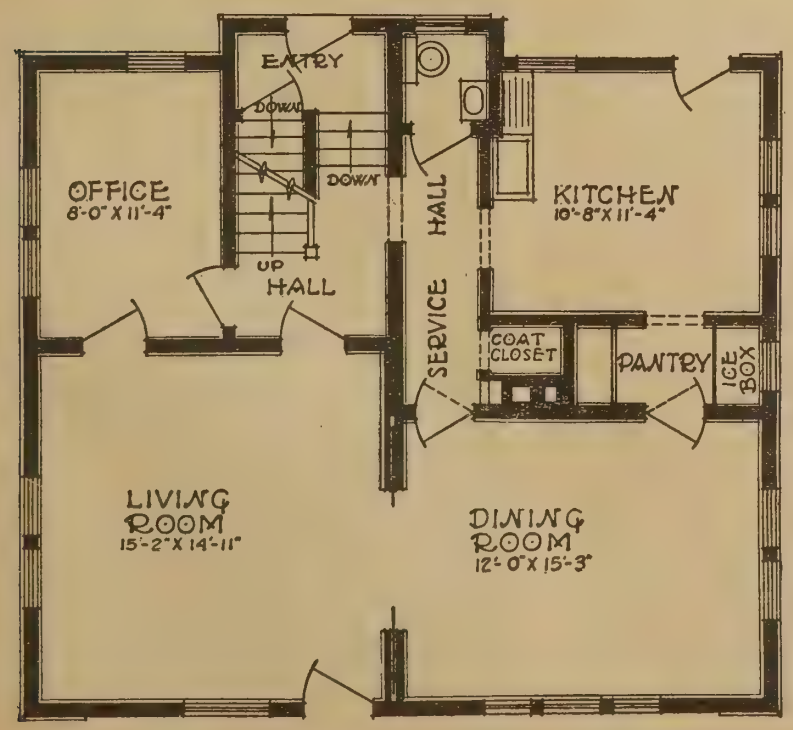
FIRST FLOOR PLAN OF HOUSE DESIGNED BY WISCONSIN COLLEGE OF AGRICULTURE



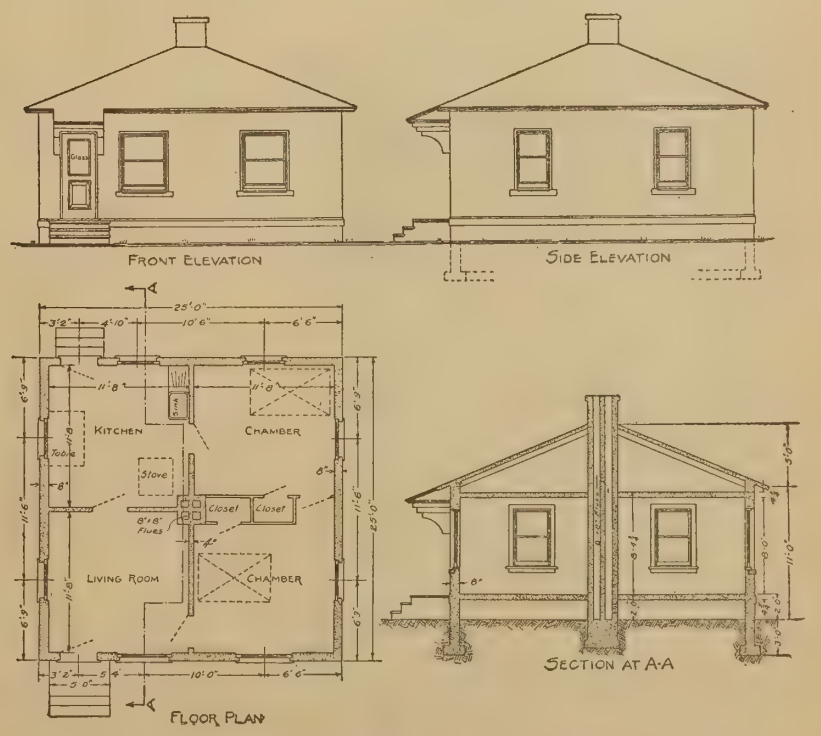
FIRST FLOOR PLAN OF HOUSE DESIGNED BY UNITED STATES DEPARTMENT OF AGRICULTURE



FIRST FLOOR PLAN OF FARM HOUSE DESIGNED BY THE NEBRASKA COLLEGE OF AGRICULTURE.



FIRST FLOOR PLAN OF FARM HOUSE DESIGNED BY IOWA COLLEGE OF AGRICULTURE. IT HAS AN 8' BY 32' PORCH IN FRONT



THIS FARM TENANT COTTAGE MAKES IDEAL QUARTERS FOR THE MARRIED FARM HAND WITH SMALL FAMILY

Construction is concrete throughout, including roof, thus making a permanent, fireproof, expense-free structure. There is plenty of room between the two bedrooms to insert small bath instead of the closets shown and arrange for closet room by separate wardrobes.

Prune Industry Stabilized Through Co-operation

A $25,000,000 Business Handled by a Producers' Marketing Company

HERMAN STEEN, ILLINOIS

THERE used to be a theory that a co-operative marketing organization could not be a success until the industry was nearly down and out. "Farmers won't work together when they have any money in their pockets," said the theorists. "They won't co-operate until they are compelled by dire necessity to do so. They won't learn the principles of co-operation until they have gone broke, or at least are badly bent." This idea was so generally accepted at one time in California that most students of co-operation regarded it as one of the fundamentals to success in co-operative marketing.

Along came the prune growers in 1917 and dropped a bomb upon this theory. The prune growers were reasonably prosperous when they organized, and their industry was distinctly on the up-grade. For several years before 1917, there had been some money made in producing prunes. Growers had suffered a good many ups and downs in times past, however, and they organized to make permanent their temporary prosperity.

The old theory was badly shattered when the prune growers' organization started operations successfully. It completely disappeared in a year or two because the California Prune and Apricot Growers, Inc., soon developed into the nearest approach to perfection that has come out of the co-operative marketing movement in California.

Ups and Downs of Prune Growing

The cause of the alternate periods of depression and prosperity which formerly prevailed in the prune industry was thus described to me by Sheridan W. Baker, a leading grower in Santa Rosa County. "We produced prunes the best we knew how," he said. "A high degree of skill in production was developed among the growers. A period of good prices always resulted in stimulating the industry and inducing larger plantings. When these new trees came into bearing, there was a period of overproduction and low prices, and this resulted in orchards being pulled out.

"Soon the pendulum swung to the other extreme, and we were riding on the crest of prosperity. The money that was made the good years was lost in the poor years that followed as surely as day follows night. I have observed, too, that this same rule applies to nearly all kinds of farming except where stabilization has been effected by co-operative organization."

Local Associations Failed

The prune growers made a number of attempts to organize in periods of depression as long ago as 1900, but the organization thus formed soon failed. Growers in each prune-growing community formed separate associations, but the speculators played one against the other and broke up the local associations.

Nowhere in California has the failure of the local unit as the basis for co-operative marketing been demonstrated more strikingly than in the prune industry. Time after time the prune growers of Santa Clara, of Santa Rosa, of Sonoma, and of other districts formed their separate organizations and saw them follow each other into early graves. Because of the lack of a central agency to gather information, direct sales, and weld the business of the locals together, the locals quarreled among themselves and went to pieces. It reminds one of the sage saying of Benjamin Franklin, "We must all hang together, or we will hang separately."

Another thing which kept the prune growers from uniting was the jealousy which existed between various sections. Santa Clara growers were sure that their prunes were better than those grown in the Santa Rosa district, and vice versa.

A Broader Viewpoint

Finally in the spring of 1917 the growers did succeed in uniting upon one proposition—that they were not getting their share of the consumers' prune dollar. "Prunes are selling too high in New York in comparison to what we get for them," they said. They began looking upon the proposition from the standpoint of the industry and not from the standpoint of individual growers or of districts. When the point was reached, it was easy to organize a state-wide association of market prunes.

The apricot owners joined too; as apricots and prunes grow in the same districts, are processed and handled much alike, and seek the same markets.

For general manager of the new association, the prune growers selected H. G. Coykendall, part producer and part packer, a shrewd business man who knew the prune game as well as any man knew any business. He had the entire confidence of the growers, as he had helped previous organiaztions sell the crops of their members.

Developing Machinery for Marketing

In four months' time Coykendall and the intrepid souls working with him had succeeded in getting 70 per cent of the prune and apricot growers in California to pledge their entire crop to the association for a term of years. They had developed a brand new marketing machine to handle a 110,000-ton crop of prunes which had always been marketed through the eight or ten big speculative firms which formerly dominated the dried fruit business of the Pacific Coast. They had to provide warehouses and packing sheds, secure an outlet for the product, and above all had to finance the undertaking—all in one short summer.

It is a tribute to the resourcefulness and skill of the leaders in this new movement that the prune and apricot crop of 1917 moved to market in machine-like fashion, almost like it had always gone through the new channel. The association fixed a price upon the prunes it controlled, sold them at that price and paid the growers the money received less the cost of handling the crop and marketing it. That same procedure has been followed each year since the beginning.

The Contract with the Growers

The prune and apricot association, like the raisin growers, citrus growers, and all other co-operative organizations in California, has a contract with the growers which binds them to deliver all the dried fruit produced to the association plants. If a grower fails to do so, he may be sued for breach of contract; in fact, a few such suits are brought each year to make examples of a few flagrant violators.

"Our contracts have been held by the courts to be legal and binding," said Manager Coykendall. "We do not spy on the growers to see whether or not they are fulfilling the contracts. The other growers take care of that, and public opinion as a matter of fact is the agency which keeps contracts in force. The chief and almost only agency which causes these contracts to be broken is the speculators, who occasionally offer one grower a premium in order to cause trouble in the association."

Getting Ready to Market

The association now operates 26 packing plants of its own, and has arranged with other packers to handle its fruit through their houses. The prunes are dried, processed, graded, standardized, and packed. The grading is according to quality and size. The number of prunes per pound determines the grade of prunes, and to a considerable extent the price, also.

Every grower receives the same price per pound for the same quality of fruit. There is no speculating in prunes any more. Every grower has the same chance at the market as every other grower, and nobody has any advantage. The crop is pooled, and separate accountings are made to the growers for every separate quality and size of fruit they produce. When the year is over, all have received the same rate of pay for equal quality of fruit.

Financing Crop Movement

An advance to the growers is made at the time the crop is delivered to the association. This is about two-thirds of the amount expected to be paid for that grade that year. In order to make the first payments, it is necessary for the association to borrow large sums of money. This was formerly very difficult to do, but the banks of California have learned that there is no better security than the note of a co-operative marketing association, because that note is backed by the whole crop which the association handles.

As the prunes are sold, money comes in, the notes for the advances are taken up and the growers are paid the difference due them. It takes nearly a year for final payment to be made, though from 75 to 90 per cent of the sale price is received by the grower in the first three months after crop delivery.

An Organization Without Profit

The California Prune and Apricot Growers, Inc., was at first a stock company, but was changed this year into a non-profit organization without capital stock. Each now pays a membership fee of $10. The growers by districts select a voting board of 39, which elects the directors, who in turn have executive direction of the affairs of the company. The voting board is the same as the voting trust of the raisin growers, described in detail last week.

The voting board elects all the directors but one, who is chosen by the governor of the state to represent the public. A number of California co-operative associations have this public representative.

This public representation is a deliberate bid for the support of the general public, as the co-operators believe that the people will be back of any institution which they believe is operated with due regard for their rights. "This has been one of the fundamental reasons for the success of our marketing associations," declares Aaron Sapiro, attorney for several of the organizations. But imagine the



MRS. R. G. WALLACE, SALES MANAGER OF THE CALIFORNIA PRUNE AND APRICOT GROWERS, INC.



H. G. COYKENDALL, GENERAL MANAGER OF THE CALIFORNIA PRUNE AND APRICOT GROWERS, INC.

American Tobacco Company, the International Harvester Company, or the New York Central railroad asking the government to put a representative of the public on its board of directors.

The Growers Fix Prices

In August each year the board of directors meets and sets the scale of prices for the prune crop then about ready to go to market. "We keep the cost of production in mind, but it has very little to do with setting the price," says Manager Coykendall. "We get all the information we can in regard to the size of the prune crop, the probable demand as determined by advance orders and other things, condition of the foreign market, probable competition from other countries, general business conditions, and then proceed to fix a price that makes a living for the grower and is at the same time just to the consumer. That is the exact procedure we follow, and I will leave it to anybody if it is not business-like and fair to all parties concerned."

It is well to note also that while the prune growers have been investigated, their operations have always been approved by the government authorities.

Selling the Prunes

The duty of selling the prunes belongs to Mrs. R. G. Wallace, who holds a business position probably as important as that held by any woman in America. Last year she supervised the sale of over $25,000,000 worth of prunes, and total sales will probably exceed $30,000,000 this year. Half or more of the prunes are sold by the time prices are fixed. They are sold at the "firm-at-opening-price", which means that the contracts are good at whatever price the association sets.

"The speculators have always objected to us setting the price as late as August," Coykendall told me. "They want us to set it six or eight months earlier so they can play with the crop a bit, too. We would be speculators, too, if we fixed the price early when we wouldn't know any more about the size of the crop than a farmer knows about his corn crop when he plants it. We have always stood firm on that principle and will continue to do so."

Swatting the Speculators

Buying the crop from producers and selling it later is only one way of speculating in farm products. Another is buying it when it should be moving in various products. They don't monkey with prunes any more, however, because the California Prune and Apricot Growers, Inc., know just how many prunes every wholesale dealer in the United States can legitimately handle.

When he buys more than that amount, it is evident that he is speculating. Bing! His supply is shut off, and as he can't get enough prunes anywhere else to speculate with, he is compelled to be good. There are a number of chronic speculators, however, to which the prune and apricot growers refuse to sell any product, and, moreover, they refuse to sell anything to any other company, which resells it to these speculative companies.

"We are following up this plan to kill speculation as far as prunes and apricots are concerned," said Mrs. Wallace. "We are against speculation in prunes and apricots because it increases prices to consumers and thereby reduces consumption."

Financing the Warehouses

The physical equipment of the prune and apricot association warehouses and processing plants is owned by a subsidiary company called the Growers' Packing and Warehousing Association, Inc. The California Prune and Apricot Growers, Inc. (the marketing association) pays the other company a certain amount for doing the mechanical work necessary in preparing dried fruit for market. This charge is $7 per ton, the standard charge for handling and packing prunes in all the packing houses in California. There is a considerable profit in doing the work for $7 per ton, so the accumulated profits are used to retire the outstanding capital stock (about $1,000,000). It is expected that this will all be retired in two or three years, except a few shares necessary to retain the corporation form of the company. These, of course, will be held by the marketing company.

The reason why two companies were formed originally is that a company cannot give itself a warehouse receipt. The receipts were necessary to borrow money, to pay advances to the growers for their crops, so the double company plan was devised. This same plan is often used by commercial business concerns.

Better Quality of Product

A separate story might well be written about the improvement in quality of product that has been brought about by the prune growers' association. Prunes are all graded according to one standard, which is now known the world over. In fact, the other handlers of prunes are even compelled to guarantee their prunes to equal the quality of those handled by the association. In 1918, when a rain fell in the picking season, the association worked out methods of saving damaged prunes, and saved several million dollars for growers by the processes developed.

The same story could be told about every important co-operative marketing association in California. "More has been done by co-operative associations to improve the quality of product than by every other agency combined, and then some," says W. H. Heileman, secretary of the California Farm Bureau Federation.

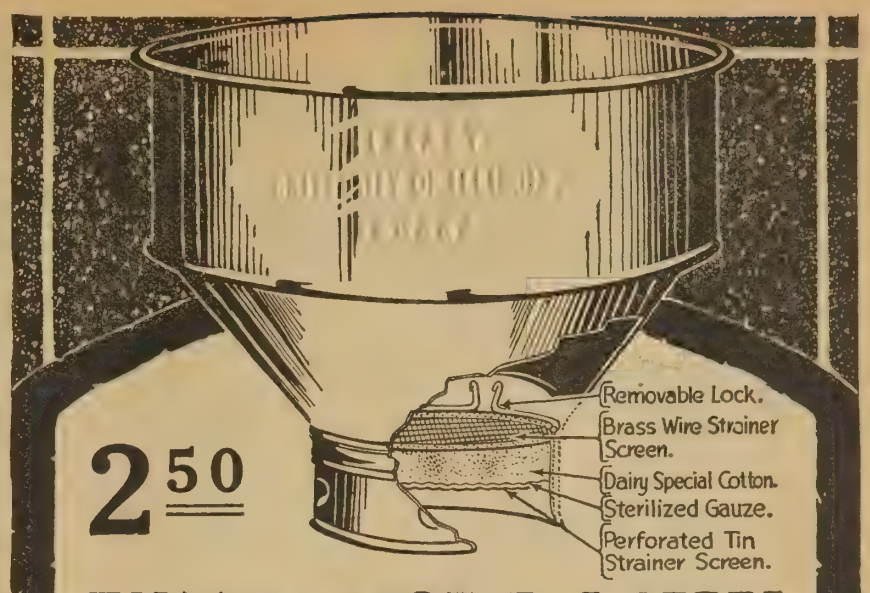
The Problem of Overproduction

The prune and apricot growers, like the citrus and raisin growers, have found that their chief problem is a constantly increasing production, induced by the prosperous condition of the industry. They are careful to point out that there is no overproduction as yet, because the supply of prunes is still consumed year after year, though constantly growing larger. The job ahead of the association may be guessed from the fact that there are now 85,000 acres of prunes in bearing in California, and 65,000 acres more planted. The apricot acreage is increasing in the same proportion.

The association is spending about $300,000 per year in advertising the prunes and apricots in order to help sell the larger crops. "Our advertising campaigns have been tremendous successes," says Coykendall. "They have kept the demand for prunes constantly on the increase."

The strength of the association can be judged from its experience in 1919, when freight exchange went to smash. Formerly half of the prunes produced were exported. The exchange situation cut off the foreign demand, so the association proceeded to sell the whole California crop in America, and the Oregon and Washington prunes were also sold in this country.

The triumph of the California prune and apricot growers represents the highwater mark in the success of producers' co-operation in America. It is well worth study by any other group of farmers who hope to embark in extensive plans of co-operative marketing.—Copyright, 1920, by Standard Farm Papers, Inc.



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Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ida.	Weiser—Payette Co-operative	G. E. Hardin	May	209	23	74.4	R. Makinson
"	Weiser—Payette Co-operative	G. E. Hardin	June	251	22	61.0	R. T. Davis
"	Weiser—Payette Co-operative	G. E. Hardin	July	234	12	54.2	E. D. Ford
"	Weiser—Payette Co-operative	G. E. Hardin	Aug.	243	12	57.9	A. Breshears
Wis.	Wausau—Marathon	N. M. Nelson	"	474	3	47.5	B. McAdam & Son
"	Ellington	Matthew Nelson	Sept.	416	20	51.1	F. H. Zahrt
"	Whitewater	A. F. Probst	"	412	14	80.4	O. B. Roe
"	Amherst—Nelsonville	Geo. W. Baumel	"	379	17	54.5	M. Domaszek
Ia.	Winneshiek Co.	Carl Wennes	"	197	6	43.2	Albert Kioshus
Kans.	Bourbon Co.	T. A. Trull	"	348	7	50.4	W. J. Stevanus
Minn.	Pioneer	H. C. McMurray	"	976	24	71.7	F. C. Steele & Sons
Ill.	Knox Co.	J. B. Countiss	"	212	17	54.6	Zenas Spicer
Wash.	Kahkiakum Co.	W. J. Carter	"	451	88	64.0	Oscar Olsen
Tenn.	Rutherford Co.	W. H. Oliver	"	100	10	58.8	Chas. Pearson

Association Notes

Weiser—Payette Co-operative, Idaho:—This association was organized in May and now has a membership of 34 herds with 312 cows of which the majority are pure-breds. All of the members have pure-bred sires. There is one bull association of six members. The majority of members have silos or will erect them this fall. Butterfat sells for 68c per lb.; butter, 65c; milk, $3.85 per cwt. Local feed prices are: Alfalfa meal, $42 per ton; molasses feed, $63; mill run, $67; soy bean meal, $81; cottonseed meal, $84; linseed meal, $96; barley and oats feed, $58; alfalfa hay, $10 to $12.

Wausau—Marathon, Wisconsin:—Four members are doing A. R. work. One carload of oil meal was purchased co-operatively in August, and a few farmers have been feeding grain with pasture. Four barns have been remodeled and modern steel equipment installed. August market milk sold in this community for $2.40 per cwt. and 6c per point above 4%. The creamery paid 59½c per lb. for fat and the cheese factory 54c. Milk retails for 14c per quart, butter for 60c per lb., and cheese for 35c per lb. Hay is rated at $24 per ton; bran, $46; oil meal, $68; hominy, $68; Wisconsin Balanced Ration, $70; International Dairy Feed, $51; corn meal, $3.15 per cwt.; oats, 60c per bushel; Nutra Feed, $62 per ton.

Ellington, Wisconsin:—September milk testing 4% sold to the condensery for $3.30 per cwt. Milk retails for 8c per quart. Feed prices are: Bran, $45 per ton; oil meal, $68; oats, 55c per bushel.

Whitewater, Wisconsin:—This association hopes to bring the production of every cow to 40 lbs. or more by better feeding, better care, and elimination of poor producers. September market milk testing 3.5% sold for $3.35 per cwt. and 4c per point above. The condensery paid 95c per lb. for fat and the creamery paid 74c. Milk retails for 14c per quart and butter for 65c per lb. Alfalfa sells for $34 per ton; bran, $45; oil meal, $66; cottonseed meal, $68; gluten, $64; oats, 65c per bushel.

Amherst—Nelsonville, Wisconsin:—A number of the members fed grain rations throughout the summer with good results, while others commenced last month. During September a carload of oil meal was bought at a saving to the members of $350. Three carloads of bran have been ordered co-operatively. Three of the members installed modern steel equipment and drinking cups in their barns, and three concrete silos were put up in the last two months. Two milking machines have been installed during the summer. The creamery paid 66c per lb. for fat in September. Milk retailed for 12c per quart and cheese for 40c per lb. Feed prices are: 31% oil meal, $75 per ton; bran, $45; oats, $44; Unicorn, $80.

Bourbon County, Kansas:—September has been the worst month of the summer for cows in this association. Pastures are fine but the flies are so bad that cows have fallen off about half in milk production. The silage crops are so large that the silos will not hold them, and many new ones are being built. Market milk testing 4% sold for $3.13 per cwt. and 3c per point above. The condensery paid 86¼c per lb. for fat and the creamery paid 55c. Milk retails for 15c per quart; butter for 57c per lb., and cheese for 37c. Feed prices are: Oil meal and cottonseed meal, $3.75 per cwt.; bran, $2.20; corn chop, $3; Meads feed, $3.30; oats, 55c per bushel.

Pioneer, Minnesota:—Market milk sold for $4.50 per cwt. in September. The creamery paid 64c per lb. for fat. Milk retails for 12c per quart and butter for 64c per lb. Silage is rated at $4 per ton; hay, $15 to $20; corn, $35 to $40; bran, $40; oil meal, $66; oats, $30.

Knox County, Illinois:—One pure-bred bull was purchased in September, making this association one hundred per cent in the use of pure-bred sires. Two members have exchanged pure-bred bulls. A few of the members have purchased an ensilage cutter co-operatively and have filled their silos. We have 22 members who own 20 silos, which are practically all filled. Several tons of alfalfa hay have been purchased by the members. Some of the members exhibited their cows at the state fair and came home with their share of the honors. One new dairy barn is being built and much interest is shown in it and in everything that helps to better the dairy cows of this association. September market milk testing 3.5% sold for $4.37 per cwt. and 2c per point above. The condensery paid 56c per lb. for fat, and in addition 75c per cwt. for milk. The creamery paid 59c per lb. for fat. Milk retails for 15c per quart and butter for 70c per lb. Feed prices are: Corn and cob meal, $2 per cwt.; ground oats, $2; wheat bran, $45 per ton; cottonseed meal, $66; oil meal, $78; Cow Chow, $75; Dairyfeed, $59; alfalfa hay, $36; corn silage, $8.

Wahkiakum County, Washington:—Four pure-bred females with good Register of Merit backing were purchased, making the owner a total of ten pure-breds. Five good grade cows with C. T. A. records behind them were purchased by other farmers in the association. Twelve cows that had proven themselves to be poor pro-

ducers were sold for beef. The creamery paid 65c per lb. for fat.

Rutherford County, Tennessee:—A consignment sale was held in Murfreesboro September 15th and many members took advantage of this opportunity to dispose of their unprofitable cows. Several high bred and well producing animals were purchased at the J. J. Murray sale on September 28th by members of this association. Feed prices are: Corn, $3 per cwt.; oats, $2.10; wheat bran, $3.60; linseed meal, $4; molasses, $2; cottonseed meal, $3.70; Schumacher, $3.

Dairying Thirty Years Ago

Taken from the Issue of Hoard's Dairyman of Oct. 24, 1890

As a rule, we think farmers who do not believe in keeping cows in milk ten or eleven months of the year are those who have never yet been thoroughly converted to the practice of generously feeding their cows all the time for even seven months. On the other hand, those who really do feed well soon learn that they cannot afford to stop feeding royally and let the cows do nothing but eat five months of the year.

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Some compute that a loss of one pound of flesh from a cow, because of lack of food, results in a loss of a pound of cheese that the cow would have produced had she not been deprived of the food; and further that the loss of a pound of fat from her body from the same cause shrinks a pound of butter from that she produces.

We think that is true provided the cow is not too fat for a milker, to begin with; and also think that such shrinking of her product is but the beginning of a calamity, for it gets the cow going in the wrong way and weakens her for a stalwart producer.

Our idea is the cow should be always in good heart and vigor, and fed so she will yield her maximum of dairy products and not run down in vigor, and not run down to fat, either.

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"Buckeye", in the National Stockman, says dairying is a "side show" in his method of farming, and so he has large cows to raise large calves for meat making, and takes what butter he can get; and says he gets at the rate of 250 pounds per annum from his 1,200-lb. Shorthorns; but says, "if we were making a specialty of butter dairying, why of course we would not breed to a 'butter Shorthorn', but to the best Jersey that we could find; then these half-blood Jersey heifers to another Jersey bull, and presently we would have a herd of Jerseys capable of producing 300 pounds or more of butter per year."

Clearly so, and in the meantime he would have reduced the weight of his cow from 1,200 pounds to 900 pounds at least. Then he could keep twelve cows on what nine such as he has now eat, and instead of having 2,250 pounds of butter and nine calves, he would have 3,600 pounds of butter and twelve calves to show for the same expenditure for food. Where is the profit in running "side shows?" Even this is conceding too much for the so-called "butter Shorthorns;" for those that will yield 250 pounds of butter per annum are scarcer than hen's teeth, while the 300-pound Jerseys are not a rarity at all.

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Thousands and tens of thousands of dollars are lost every year by farmers unwisely concluding they can save some feed that would otherwise not be cropped, but would be lost unless they turn their sensitive cows out in the cold and rain in the fall to pick a few mouthfuls. The loss on their systems is not compensated by eating what they thus get. If any profit is made on them after they have thus suffered, it must come from what they are fed in the manger. The man who knows he would not be comfortable in his ordinary clothing, if he wandered about as the cows do, should know he cannot make any money by thus sending out his cows. He had better send steers, colts, or sheep at such a time, if he has them, and keep his sensitive cows in their stables.

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Mr. C. L. Garilson in Farm, Stock, and Home says of moneyed men who take up agriculture as a means of recreation: "We laugh at their failures and copy their successes."

Growth in Danish Dairy Industry

From the last annual report of the Danish Agricultural Department, as quoted in the report of the British Consul at Copenhagen recently issued by the British Government, the Agricultural Gazette gives the following synopsis: Since the mechanical cream separators were introduced into Danish dairies, about ten years ago, the effect in increasing production has been enormous. From 1883 to 1885 the exports of butter rose from 19,000,000 pounds to 26,000,000 pounds, and then, ascending by what may with truth be termed "leaps and bounds", it attained its present figure, estimated not to be much under 60,000,000 pounds annually. Instead of exporting grain, the country now imports large quantities of corn and other foodstuffs. The adoption of the separator has had a great deal to do with these changes, for not only can ten per cent more butter be extracted from a given quantity of milk than was possible under the old system, but greater quantities of milk can now be dealt with and worked up at once into an article of export.

Timonium Sale Averages $510

In the Timonium sale of Guernseys at Timonium, Maryland, September 23rd, the highest price reached was $2,500, paid by Highland Farm, New York, to S. M. Shoemaker for Laverna's Queen. Louis McL. Merryman sold Glencoe's Miss of Maple Hill for $1,525 to A. S. Zell of Maryland. My Rose of the Prairie, consigned by R. M. Cooper, South Carolina, was purchased by G. B. Fenwick of Maryland for $1,500. The average price of the sale was $510, which, according to Mr. Merryman, president of the Maryland Guernsey Breeders' Association, was a very satisfactory price. The great proportion of the animals sold went to Maryland breeders. The following lists those which sold for $500 or more:

Glendon Land Company, Delaware	
Gerar Hilda	$500
G. B. Fenwick, Maryland	
My Rose of the Prairie	$1,500
Lady Justina of Locust Lane	850
W. T. Peyton, Virginia	
Dorothy's Princess	$700
Highland Farm, New York	
Laverna's Queen	$2,500
A. Stanley Zell, Maryland	
Glencoe's Miss of Maple Hill	$1,525
Governor's Grace	775
G. W. Koser, Pennsylvania	
May Queen of Gerar	$525
King's Elva	525
King's Surprise	525
Herdlea Ultra Queen	2,200
H. W. Leeds, New Jersey	
Rose of Gerar	$525
Bess Bloom of Locust Lawn	650
H. G. Haskell, Pennsylvania	
Follyland Butter Queen	$900

Jersey Cattle Notes

For week ending October 1:

Number of animals registered: bulls, 225; cows, 711; total, 936. Number of transfers recorded: bulls, 225; cows, 603; total, 828.



Faster, Deeper Plowing!

THREE miles per hour, with the pull of a dozen-odd horses ***concentrated*** at the draw-bar—all under easy, quick control of one operator. ("5 Ton"—40—25 H.P., 4 plow), ("10-Ton"—60—40 H.P., 6 plow). Power to leave deep, even furrows in stiffest sod or stubble; to pull a big load of harrows or seeders on the ***mellowest*** seed bed. ***No*** slipping and ***no*** fuel waste. ***No*** packing so cannot injure any soil.

Holt patented steel tracks—heat treated for long service by our own process—have carried business farmers and road makers through season after season of hard work.

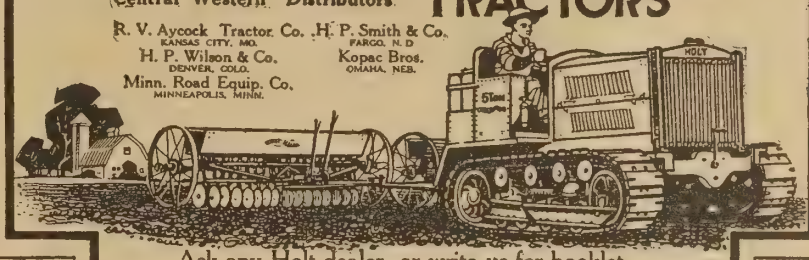
The "Caterpillar" will fit every power job on your farm—belt, field and road and turn you a real profit by ***year 'round service and satisfaction.***

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Send today for Big Special Offer and Low Direct Price on the OTTAWA, the One-Man Saw, the first made and sold direct from factory to user. Greatest labor saver and money-maker ever invented. Saws any size log at the rate of a foot a minute. Does the work of ten men. As easily moved from log to log or cut to cut as any wheelbarrow. 4-Cycle Frost Proof Engine has balanced crank shaft—pulls over 4 H-P. Magneto equipped; no batteries needed. **Special Clutch** lever controlled enables you to start and stop saw with engine running. Automatic Speed Governor. Easy to move, costs less to operate. When not sawing, engine runs pumps, feed mills and other machinery. Pulley furnished.


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Quickest to heat; strongest draft; adjustable grates; ashes removed without disturbing fire; keeps fire 24 hrs.; **Absolutely Safe;** pays for itself in 2 months with 4 cows; **Self-Sinking;** can be used in Wood, Steel or Concrete Tanks of any size. Most reliable, practical, efficient and durable Tank Heater manufactured. Thousands used everywhere.

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Standard Dairy
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The Leafy-Butter-Fat Kind
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We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.

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Two Kansas State Records Broken

R. B. BECKER, Kansas College of Agriculture

WITHIN the past few weeks the senior four-year-old and senior two-year-old records have been broken by Kansas Holsteins, and a new state's record established over all breeds and ages.

Lady Volga Colanthus Segis 414741, at 2 years, 10 months, 1 day of age, produced 20,037 lbs. milk, 608.6 lbs. fat or (760.8 lbs. of 80% butter) in 365 days. In addition she has an "eight months after calving" record of 423.4 lbs. milk, 13.27 lbs. fat in seven days. These records are subject to correction by the superintendent of Advanced Registry.

Lady Volga Colanthus Segis is owned by Geo. Young & Sons. She was sired by Wit Segis Abbekerk 85556, and out of the cow, Lady Volga Colanthus 217904, who recently completed a record of 14,090.2 lbs. of milk, 426.663 lbs. of fat, at 6 years, 6 months, 17 days of age. She is a full sister to two other state leaders: Lady Volga Colanthus 3d and Lady Volga Colanthus 2d. These three full sisters hold three state records which average 20,002 lbs. of milk, containing 605.4 lbs. of fat.

A new state milk record over all breeds and ages, as well as a new fat record in the senior four-year-old class has just been completed by Carlotta Empress Fobes 330881 who gave 24,556.9 lbs. of milk containing 694.558 lbs. of fat.

Carlotta Empress Fobes was sired by Sir Carlotta Pontiac Cronus 2d 108457, and out of the cow, Empress Fobes De Kol 181176. She was bred by Mr. C. W. Dingman of Kansas, who purchased her sire from the Kansas State Agricultural College. Carlotta was purchased by the college as a two-year-old with first calf, and the next year she produced 15,505 lbs. milk containing 437.79 lbs. fat. After completing this record she dropped a heifer calf, and started on the record which now ranks first in the senior four-year-old class and her milk record the highest in the state of Kansas.



KANSAS LEADING SENIOR TWO-YEAR-OLD

Lady Volga Colanthus Segis, owned by Geo. Young & Sons, has just achieved state championship in her class with a production of 20,037 lbs. milk containing 608.6 lbs. fat. She has two full sisters that also hold state championships, the three records averaging 20,002 lbs. milk containing 605 lbs. fat.

Washington Producers Buy Milk Plants

HOARD'S DAIRYMAN:—The Skagit County, Washington, Dairymen's Association has placed $10,000 in escrow to cover a two-year option on the plant of The Federal Condensed Milk Company at Mount Vernon. This, it is claimed by members, will give them ample time to arrange the financing of the deal.

The plant has a capacity of 1,000 cases per day and during the past several flush seasons it has been worked to capacity.

Whatcom County dairymen are preparing to issue bonds to the extent of $200,000 to finance their various cooperative enterprises.

It is stated by officers of the county association that the new powdered milk plant at Lynden is complete and the old building has been remodeled. The machinery is now being installed and the plant will be operating by the first of the year.

During the past six months 660,000 lbs. of butter have been made at the Lynden plant as compared with 680,000 lbs. manufactured during the previous twelve months. As high as 64 cents per pound has been paid for butterfat and the average sale price for butter has been 56 cents. The plant has shown a satisfactory profit and it is felt that the bonds will be sold with little difficulty.

Milk producers in the condensery districts of the Pacific Coast are viewing with alarm the present condensed milk market situation. During the past week canned milk has witnessed a decline of fifty cents per case and the price paid to producers has dropped.

The Carnation Milk Products Company in a letter sent to producers on Oct. 1 states:

"We are announcing a decline in our price for fresh milk to $2.50 per cwt. for the first half of October, and as this decline is so unusual, we feel that it calls for an outline of the conditions that have necessitated it.

"The curtailment of purchases by all foreign countries, largely due to the inability of the foreign nations to finance such purchases, has reduced exports this year to approximately one-half of the exports for the year 1919.

"Restrictions of credits by banks in this country, resulting in jobbers and retailers reducing stocks to absolute minimum quantities, have caused the manufacturers to accumulate heavy stocks of canned milk in addition to the stocks accumulated through reduction in export trade.

"Public announcement has been made that over forty condensed milk plants in the East will discontinue manufacturing on October 1 for at least ninety days, but will continue to receive milk from their patrons and turn it into butter or cheese, or other channels which are best available.

"Over seventy-five per cent of the canned milk production of Washington and Oregon has had to find a market in other states, largely east of the Rocky Mountains, and the recent heavy increases in freight rates, coupled with heavy declines in price of canned milk, particularly in the East, have made it impossible for the time being to meet competition on the basis of prices which have been prevaliing.

"After very careful and serious consideration we have concluded that until conditions become more favorable, a curtailment in our manufacture, as well as adjustment in prices, is required.

"As a partial solution of the problem, we have decided to notify our Kent, Washington, and Forest Grove, Oregon, patrons that we will permanently close those two factories as soon as practicable, and we expect to relocate the machinery, at a later date, in factories close to the markets where the product will be sold. At our other factories we are compelled to curtail the manufacture of canned products temporarily, but we feel we owe it to our patrons to handle their milk at the best price possible under the circumstances, converting whatever is necessary into butter or other channels.

"We greatly regret being compelled to take this action, but under the conditions now existing, not only in the United States but in the world's markets, we have no alternative. We view the ultimate future with confidence, and are already redoubling our efforts in increasing and expanding our markets, both domestic and foreign, so we may continue to provide a greater outlet for milk produced in the districts served by our condenseries.

"We believe our entire actions in the matter are for the ultimate good of the dairying industry here in the Northwest."

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At the Washington State Fair, held in Yakima, about fifty Holstein breeders in attendance effected a state organization, electing F. S. Stimson, owner of Hollywood Farms at Seattle, president, and R. L. Rutter of Ellensburg secretary.

In discussing conditions throughout the state it was stated that the demand for high-grade Holsteins is increasing and breeders are finding it increasingly difficult to supply a sufficient number of animals for the buyers.

The meeting was adjourned to assemble again at the Pacific International Live Stock Show, to be held in Portland, Oregon, Nov. 19th. A name for the organization will be decided upon at that time.

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J. E. Wrage of Arlington, president of the Washington Guernsey Cattle Club, opened the second annual convention of that association which was held at the state fair. About one hundred members were present.

Acting State Commissioner of Agriculture F. H. Gloyd spoke on a proposed bill to be submitted to the legislature appropriating funds to reimburse breeders who lose any of their stock on account of the tuberculin test administered by the state department.

Washington. ALTON D. HURLEY.

Another 800-lb. Fat Jersey Record for Oregon

On her Register of Merit record, recently finished, Minetta of Ashwood 330962 produced 16,872.4 lbs. milk, 860.36 lbs. fat at four years, five months of age at start of test. This record qualifies her as the fourth highest junior four-year-old of the Jersey breed and the second highest, for the same class, in the state of Oregon.

Minetta has now completed three consecutive years' Register of Merit records, qualifying for Class AA on the first two, and she will again enter this class on her latest record when she drops her calf. The records are:

	Milk lbs.	Fat lbs.	Age yrs.	Age mos.
	11,478.8	566.32	2	0
	12,913.6	710.58	3	2
	16,872.4	860.36	4	5
Total for 3 yrs.	41,264.8	2,137.26		

She has averaged 13,755 lbs. milk and 712 lbs. fat with calf each year.

The sire of Minetta of Ashwood is Eurybia's Prince 74218, the sire of six daughters in the Register of Merit with an average production of 11,514 lbs. milk and 551 lbs. fat. The productive ability which this bull has inherited he has transmitted to his offspring.

Her dam is Minetta F. 213563, a Register of Merit cow with a record of 414 lbs. fat, Class AA, having carried a calf 280 days during her test.

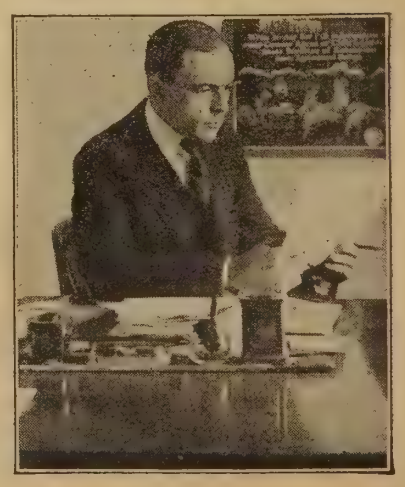
Minetta of Ashwood was bred by John F. Forbis, Oregon, owned and tested by N. H. Smith, Oregon.—American Jersey Cattle Club.

To Strengthen Information Work of Department of Agriculture

Secretary Meredith has reorganized the departments of publication and information work of the Department of Agriculture, and the appointment of a Director of Information to have general supervision of all these activities, both in Washington and in the field. He has named E. B. Reid, formerly chief of the division of publications, to the new position. Mr. Reid's relation to the work will be similar to that formerly held by Assistant Secretary Ousley, who had charge of such activities during the war period.

Harlan Smith, formerly in charge of the office of information, has been appointed Chief of the Division of Publications. The work now being performed by the Office of Information hereafter will be known as the Press Service, which will be in charge of Dixon Merritt, and will continue under the immediate direction of the Chief of the Division of Publications.

The Director of Information will bring about closer co-ordination of the information and publication work of the various bureaus with that of the Division of Publications and will be charged with formulating and executing plans for developing and improving the information of the department as a whole to the public.



HARLAN SMITH

Uncle Sam's Hired Men Who Serve You

Dr. Carl L. Alsberg Is Food Taster to H. R. H., The American Public

H. P. SHELDON

This is the seventh of a series of articles this publication is running, in co-operation with the U. S. Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITOR.

DR. Carl L. Alsberg, Chief of the Bureau of Chemistry, U. S. Department of Agriculture, gave evidence of the profession he was to follow quite early in life. On April 2, 1877, without given name, middle name, or degree, he lifted his voice in unison with two or three million other New York City babies and announced that he was interested in food. His first demand in life was for pure food for himself, and it seems likely that his last demand will be for pure food for other people. He has already done a good deal of talking about it and a great deal of even more effective acting.

Back in the old days there was one individual in every royal court whose doubtful pleasure it was to taste every morsel of food from the king's plate before it was passed to his majesty. If, after taking an experimental sip of the king's wine, the royal taster threw a fit and died on the floor, it was assumed that the wine was not good for a healthy king to drink, and they got a new bottle —and a new taster.

The New York infant who howled so lustily in 1877 is now taster for His Royal Highness, the American Public. Fortunately for Dr. Alsberg and for the public he serves, it is no longer necessary to obtain a new taster every time a new food poison is discovered. If it were, Alsberg would need more lives than the toughest Thomas cat that ever squalled beneath a midnight moon, and I shall prove this later.

He graduated from Columbia College in 1896 with the degree of Bachelor of Arts, and received the degree of Doctor of Medicine in 1900 from the same college. After extending his studies in the leading universities of Europe, Dr. Alsberg returned to America to teach biological chemistry at Harvard University, where, three years later, he was made chief of the Department in Biochemistry.

In 1908, he was appointed chemical biologist in charge of the Poisonous Plant Laboratory, Bureau of Plant Industry, United States Department of Agriculture, and in 1912, when Doctor Wiley left the Bureau of Chemistry, Doctor Alsberg was selected to take his place as its new chief.

Carl L. Alsberg is best described by a trenchant Yankeeism—"a good, sizeable man." He has a very pleasing personality and a very rank old pipe. His eyes are the quick, interested eyes of one who loves his work and his fellow men.

We have seen how the old style Royal Taster depended upon his palate to protect his patron, and how his life, though interesting, was short. He was appointed to his post by that power of influence which rests between the words "probably" and "surely"—if he accepted he'd probably die, but if he didn't accept, he'd surely die.

But Carl L. Alsberg doesn't depend upon his palate to detect the harmful element in an adulterated article. His instrument, provided by the American public, is the Bureau of Chemistry, and it is so broad in its organization that it is almost impossible to enumerate its agencies or to detail its many functions. Almost it would be easier to name the interests and industries not touched by Doctor Alsberg's organization, but one may obtain a bird's-eye view of the Royal Taster's job by glancing over this partial list of the subjects studied by the chemists and engineers at Washington.

Most people like their fish, poultry, and eggs fresh and sweet, and these three items are among the most important on our list of foodstuffs. All three are travelers; the fish must journey inland from the sea; the poultry and eggs must come from the country to the city, and all are extremely perishable. Doctor Alsberg's chemists have done a great deal to perfect packing, shipping, and storing methods for these and other perishable food products.

Methods of preserving and packing permit a more complete utilization of the fruits and vegetables. "Wealth lies not in what we have but in what we waste" is an axiom never lost from sight by the Bureau of Chemistry. Doctor Alsberg applies the principle to more things than food. Clothing and the leather that goes to shoe us wear the longer for the nearly magical touch given the processes by the workers down there in Washington.

A cry went up from the cloth factories when the war cut off that brilliant and variegated stream of color that flowed into this country from Europe. It called attention to a new industrial need, and this bureau of a thousand interests fostered a dye industry that is to be America's own.

Somewhere in the list of the thousand and one things that the bureau is doing—in several places, probably—you will find items which concern you directly, as they all do indirectly, and it will be easier to understand why a scientific knowledge of chemistry is only one of Doctor Alsberg's qualifications for his post.

Every little while a group of these unscrupulous manufacturers and dealers face the courts and make an effort to explain why they put glue in the gelatin they sold, or why the canners' product issued under their brand happened to be composed of putrid, decomposed articles instead of the wholesome product they advertised it to be. No manufacturer or dealer can long escape the Alsberg probe if his product is adulterated, misbranded, or poisonous. The Bureau of Chemistry will get him in the end—be sure of that!



CARL L. ALSBERG

Medicines, too! America uses a good many thousands of gallons of patent medicines each year and the doctor sees that the stuff is properly marked. A patent medicine manufacturer can no longer place a mixture of tea and tire cement on the market with the statement that it will cure everything from mumps to compound fractures. He can still make it, but he has to label it correctly and must not offer it to the public as a cure for ailments that it will not cure.

The work of the Bureau of Chemistry with by-products heretofore considered worthless has made possible the manufacture of domestic dyes of such quality and in such quantity as may free us from dependence upon foreign manufacturers. These experts found the corn cob, the poor despised corn cob, to be crammed with latent wealth. A valuable binder suitable for cardboard manufacture is taken from it, as well as fluids that are extremely essential in the manufacture of certain other products. Dr. Alsberg's organization went to work upon the cull lemons and citrous fruit problem. Thousands of tons of citrus culls were thrown away in the days before the government chemists found a way of saving the material. Now there are four concerns in California which turn out 1,500,000 pounds of citric acid, 500,000 pounds of citrate of lime, and 50,000 pounds of lemon oil each year. Orange culls are used in an equally profitable manner.

Out in the wheat fields of the Pacific Northwest the farmers were sustaining an annual loss of $1,000,000 a year from thrasher fires and explosions in 1914. The worst of it was that no one really knew what caused the explosions or started the fires. But the Bureau of Chemistry found out. It was dust! Just ordinary grain dust, but capable, under certain conditions, of all the condensed deviltry contained in a case of "TNT". Last year the fire and explosion losses dropped to $15,000, and this man, who saw in chemistry the key to many problems, was responsible for the good that has been done.

He's doing the same thing for the dusty factories and elevators where, in the 20 months before the preventive work was begun by the Bureau of Chemistry, 36 men and women had been killed, many more injured, and $7,000,000 worth of property

(Continued on page 619)

The Story of a Producer



STAR OF WILSON

STAR of Wilson No. 214175 lead the Oostburg, Wisconsin, Cow Testing Association last year with a production of 16,716 lbs. milk containing 591 lbs. fat. She is a pure-bred Holstein owned by J. P. Brill, Jr.

Star commenced her year's cow testing association work in July, 1919, when pastures were short and dry. She was dried off in November and freshened on January 9, 1920, presenting her owner with twin heifer calves. Although she freshened in very thin condition, her owner was persuaded to enter her on a seven-day test period, with the result that 43 days after freshening she made 573 lbs. milk containing 17.6 lbs. fat. Knowing that Star was going to make an increase over her previous year's work, her owner was persuaded by the association tester to give her some special care from the time of her freshening to the end of the association year, nearly six months. She averaged 80.7 lbs. of fat per month during this period.

The eight tons of milk produced by Star was delivered to a local cheese factory and was valued at $476.46. The total cost of feed was $180.01, leaving a profit of $296.45 above cost of feed. In other words, she returned $2.64 for each dollar expended for feed.

Star is not only a producer but she is a reproducer as well. She has three producing daughters and they all give promise of being as good, if not better than their dam. While Star was yet a young calf, her owner came near selling her on account of her markings and type but was persuaded by a member of his family to keep her. Little did he dream at that time that she would some day be the leading cow in one of Wisconsin's best cow testing associations.—W. W. REED, Tester.

EDITORIAL COMMENT



THE FARM BUREAU

We desire to call our readers' attention to an article elsewhere in this issue which gives a resume of pending agricultural legislature which will be presented to congress when it convenes. It is not our purpose to comment upon the merits of any of these bills, for the brief review of each one clearly sets forth their purpose and object and the reader can determine for himself whether they are the kind of bills that should be enacted into laws. We desire to emphasize, however, that through the American Farm Bureau Federation there are representatives in Washington looking after agricultural legislation. This character of work points out clearly one of the many things which the American Farm Bureau Federation can do for the farmers.

It should be borne in mind that the farm bureau does not need to enter politics in order to secure the passage of bills of benefit to agriculture, but can work with any congressman or senator, regardless of which party he belongs to, in order to have these bills enacted into laws. It is a mistake to think it is necessary to form a farmers' party in order to secure legislation highly desirable for the advancement of agriculture. There will be far less objection to enacting these bills into laws if the representatives of the American Farm Bureau Federation concentrate their efforts to secure the support of congressmen and senators, regardless of party, rather than attempt to make them political issues.

RAISINS AND MILK

The raisin growers of California have found it valuable to advertise their product. They recognized the raisin is not an essential food but that it is a desirable food and to create a market for their product spent the sum of $440,000 last year and their total crop was sold for $40,000,000.

Before they organized on a co-operative plan they sold raisins as low as 1½ cents per pound and speculators claimed an overproduction. In 1912, 35,000 tons of raisins were produced. They were handled by speculators who claimed an overproduction and therefore the low price was paid to the raisin growers. In the year 1919, 190,000 tons, or an increase of 500%, were produced and the entire crop was cleaned up before the end of the season, and these raisins sold at 10 cents per pound. This shows the value of intelligent co-operation and the value of advertising a product in order to create a larger demand for it.

We have pointed out many times the food value of milk and its products, the under-consumption, and that we could increase the consumption of dairy products at least 300% without asking the consumer to use more dairy products than are economical and are needed for proper nourishment. Yet the dairy interests hesitate to contribute a sufficient sum to allow our National Dairy Council or the State Dairy Councils to carry on an effective advertising campaign. The men interested in the advancement of dairying as a whole do not comprehend the value of advertising in order to create a demand for a product that will increase consumption and bring a price that will be remunerative to those who produce it. The raisin growers received 1½ cents a pound for their grapes before they formed a co-operative organization for marketing them and 35,000 tons were held up to them as being an overproduction. Through co-operative effort and proper advertising they increased the consumption of raisins from 35,000 tons per year in 1912 to 190,000 tons in 1919 and sold them at 10 cents per pound.

Dairy farmers with a food that is essential to growth and health and one that is economical should take courage in what the raisin growers have done and resolve to spend a certain percentage of their income for the advertising of their products. The dairy industry of the United States amounts to over $3,000,000,000. If the dairymen would contribute a sum for advertising their products in keeping with that contributed by the raisin growers of California they would spend nearly $300,000,000 annually. It would not require anywhere near this amount to put on an effective advertising campaign throughout the nation because the many agencies, the schools, the child's welfare associations, and the sanitary boards are more than willing to help in spreading information concerning the value of milk and its products as foods.

AN INTERVIEW—HEBE-MADE

On the dairy page of a prominent farm paper which has come to our desk today appears an advertisement of the Hebe Company entitled, "What one dairyman learned about Hebe". It contains a number of questions supposed to be asked by a dairyman in the office of the cocoanut oil substitute and answered at length by an advertising expert of the company. This Hebe-made dairyman is made to ask the very pertinent question, "Is not the real purpose of Hebe to develop a market for cocoanut fat rather than a market for skimmilk?"

The faithful cocoanut oil employee promptly replies, "Decidedly not". He states the quantity of skimmilk and cocoanut oil used in making this milk substitute and repeats the oft-made but unproved assertion that it benefits the dairy industry "by developing a human food market for skimmilk". He does not dwell on the fact that every can of this product selling from grocery store shelves destroys the market for condensed and evaporated milks—real, one hundred per cent dairy products.

This "interview" is untimely. It comes when many communities are having great difficulty in finding "a human market" for their whole milk. Many condenseries have closed their doors and others have greatly reduced the price the farmer receives. Where there is no other local market for milk than the condensery, the dairy industry is in a perilous situation.

Were a real dairyman, not Hebe-made, to visit the headquarters of the substitute, particularly if he has lost his market because his condensery cannot sell its product, much interest would be added to the "interview" advertised. The dairyman would hardly confine himself to questions; he would do some of the explaining, and in no uncertain terms. Hebe manufacturers may deceive some publishers into carrying its paid advertisements but the owner of dairy cattle, selling milk fat in competition with cocoanut oil, is a little slow to see its "benefits" to the dairy industry.

THE DAIRY SITUATION

The closing of a number of condenseries and powdered milk plants has left a considerable quantity of milk without a market. The cheese factories and condenseries, in sections occupied by condenseries, have been closed many times and in many cases the machinery has been taken away and the buildings torn down. We have pointed out the wisdom, the good business sense, for farmers to ever be in position to market their own products and the present condensed milk conditions emphasize the importance of keeping cheese factories or creameries in all dairy communities.

The tremendous demand for food during the Great World's War stimulated the condensed milk business far beyond the needs in normal times and today there are more condenseries than necessary for supplying the demand for condensed and powdered milk. In 1919 the condenseries used 4,600,000,000 lbs. of milk. This is not a large amount when we consider that we produce about 90,000,000,000 lbs. per year. It requires only a surplus, however, that depresses the price of milk to a point below the cost of production. We are inclined to the opinion that the milk from the condenseries and which will be manufactured in butter or cheese or used for direct consumption will not affect the price of dairy products materially, if at all. This, of course, means taking the country as a whole. We have a butter shortage of nearly 60,000,000 lbs. which will require nearly 1,500,000,000 lbs. milk, or 33 per cent of all the milk used last year in the manufacture of powdered and condensed milk. The shortage of cheese for the first nine months of last year was 21,500,000 lbs. and this would require approximately 215,000,000 lbs. milk. In other words, if we have at the end of the year as much butter as we had in 1919, it will require all of the milk that is used by the condenseries to produce it.

Butter is selling in New York for 59c per pound and this will return to the patron 66c to 70c per pound for butterfat, depending upon the volume of the business his creamery is doing. If butterfat is worth 66c per pound, it means the farmer will receive a return of $2.50 per 100 lbs. of milk testing 3.8 per cent. Calculating 100 lbs. of skimmilk to be worth one-half bushel of corn, this will make it worth at least 50c per 100 lbs. and 80 lbs. of skimmilk will be worth 40c. This added to $2.50 makes the return for 100 lbs. of milk testing 3.8%, taken to the creamery, worth at least $2.90.

The farmer who makes it a practice to rear his calves and raise hogs will not sustain the loss or find the difficulty in utilizing his skimmilk as the one who depends entirely upon his cows for his income. Diversified dairy farming, taking it by and large, is the safest to follow.

THE CALF INDUSTRY

In dairy states and in localities where the pure-bred bull predominates and milk is sold for direct consumption or to cheese factories, the calf industry has become important. This industry has been both satisfactory and unsatisfactory, for it gives opportunity for the unscrupulous dealers to misrepresent and often sell calves carrying but a small per cent of pure blood as being 15-16 or 31-32 pure blood. In some instances, calves inferior in development and growth have been shipped because this business, of necessity, must be carried on by mail.

In southern Wisconsin a number of men ship calves to all parts of the United States. Many of these calves are gathered in the vicinity of the shipper, but a larger number are purchased at stock yards and, therefore, a buyer has no way of determining whether a calf is one-half pure blood or fifteen-sixteenths. He knows the calf is a grade of a certain breed by its color. These calves are shipped to sections where dairy cattle are of poor breeding and are superior to the native stock. A very large majority of these heifer calves should be saved, for they are capable of giving larger returns than their dams or the average cow. In other words, these calf shippers have been rendering a service to the lairy industry nothwithstanding that some of the calves saved should be slaughtered and, in a few instances, there have been misrepresentations.

Shipping calves, only a few weeks old, long distances, is rather a trying ordeal and when they arrive at their destination the purchaser is sometimes disappointed in their appearance. They may have been without feed for two or three days; they may be gaunt, dirty, and do not measure up to what the purchaser expected. As a rule, if these calves are fed but little milk at a time for a few days, they come out of the ordeal in good shape. Some of the purchasers to satisfy the hunger of the calves have overfed them and the results have been bad. Overfeeding of young, hungry calves invariably produces scours, which is not always easy to check and sometimes proves fatal. Any calf that has been shipped by express should be fed sparingly. Give two or three pounds of milk at a feeding, not exceeding three times a day, gradually increasing the allowance as the calf's condition will permit.

While there have been misrepresentations of calves by the sellers and improper handling by the purchasers, both of which have caused disappointment and contention, yet the shipping of grade

calves from dairy sections to various parts of the United States has been beneficial to the dairy industry.

On the third page of this issue will be found an article entitled "The Whitewater Calf Industry", discussing the subject of selling calves by mail.

Silage and Cheese

We have a cheese factory operator who is absolutely opposed to feeding silage to dairy cows where the product is used for the manufacture of cheese. The writer believes there is some other cause for the objection which he cites and blames it upon silage and believes it to be due to bacteria.

He calls our attention to conditions which he claims exist in Green County, Wisconsin, where he says the cheese maintained its quality to a certain point and then broke down; that when silage was discarded as a feed the trouble corrected itself. We would like to know all the facts regarding conditions in Green County.

Portland, Ore. W. I. S.

The claim that good cheese cannot be made from milk produced by cows fed on silage is without foundation in fact. We can readily recognize that if the silage is of poor quality, that it may taint the milk and so render it unfit for making cheese or any other dairy product. However, this condition does not ordinarily exist. Where it does, it can be provided against by proper cleanliness in the barn and the feeding of strong smelling silage after milking rather than before.

Green County, Wisconsin, is still making a good quality of cheese and the poor cheese that is made cannot be laid to the feeding of silage. There are many causes for poor quality cheese, but the primary occasion is the failure of the cheesemaker to properly make his product or the fact that the producer has not exercised care in producing clean milk.

According to the report of the State Department of Agriculture, there were nearly 1,600 silos in use in Green County last year and some 23,000 acres of corn were placed in these silos. As Green County has 47,000 milch cows, this would indicate one silo for every thirty cows within the county. Indeed, we find that the entire county is credited with something less than 2,400 farms, which would indicate that better than two farms out of three have silos. As cheese is the most important dairy product produced in Green County, the very natural assumption would be that a large majority of the farms producing milk for cheese factories are feeding silage to their cattle. Indeed, we feel quite safe in asserting that there is not a cheese factory in Green County that does not receive milk from a relatively large number of silage fed cows.

In reinforcement of the above we call attention to an article in this issue by J. L. Sammis, entitled, "Cheese from Silage Fed Cows". Professor Sammis is in charge of cheese work for the Wisconsin College of Agriculture and speaks with authority.

Dairying on Eight Acres

HOARD'S DAIRYMAN:—W. B. of Ohio writes that cream is paying him better than whole milk. I have no dispute with him on the subject, but unless he is able and exercises extreme care, he cannot make the use of skimmilk pay at the present prices of whole milk. We do gardening and dairying and until recently we churned and sold the butter, putting it up in pound prints and for which we received 70c a pound. We sold buttermilk at 25c to 30c a gallon and sold our cottage cheese for 25c a pound. We have changed this practice and are now selling our milk at 50c a gallon which we consider will bring us a larger return.

I live on a small farm of only 8½ acres. We keep 4 cows, 2 heifers, a sow, and 8 pigs, and during the course of a year handle from 200 to 600 rabbits, 100 to 200 chickens, and 50 to 60 ducks. In two years and a half we have made the larger share of what our farm cost us and for which we were offered $7,000 last October, since which time we have added $1,000 in improvements. Hard work on the part of my wife and myself has made this possible. We had to practice economy and we sought to do everything that would make an honest dollar, even to huckstering everything raised and made on the place. Quality and a fair price, together with cleanliness, has been our motto.

Delaware, O. L. F.

Oiling Farm Harness

HOARD'S DAIRYMAN:—Every so often I read an article in some farm paper about the proper way to oil a farmer's team harness. Each strap must be taken apart, correctly washed, dried, greased in a certain direction, and then dried some more. As a result I wonder how many farm team harnesses are greased or oiled at all. I know of very few. I also know that mine wouldn't get it very often if I had to make a job out of it like this.

I'll tell you the way I've learned to oil the farm harness and get it done about once a year. Very likely it should be done more often than that but I'll venture to write that not one harness in five gets greasing in two years so far as I observe among my neighbors. In fact, I see harnesses every day that have never been oiled and probably never will be.

So, instead of taking the harness all apart, I take the straps out of the keepers, move the buckles into a new notch, remove the lines and traces, scrape off and brush off all the dirt I can and proceed to give the harness an oil bath. I do this by having the oil in a tin can of about a half pint size—not in a saucer that is slopping over and upset easily. I use a two-inch brush for greasing. It beats an oily rag all to pieces I think, because it will get into the cracks and narrow places where there happens to be a seam of some sort. All harnesses have such places and they ought to be reached. Just as with a farmer's work shoe the wearing out place is between the sole and the upper, the wearing out place of a harness is where oil and grease can't get to it. So I like to give the hard places the most attention. It is easy to oil a trace on the flat sides but getting in the layers of leather on the edges takes a little time. Oil should be there just the same.

Some straps on a farm harness can be reversed when the oiling is done. This makes the wear come in a different place and also prevents cracking as would happen if a strap is always pulled the same way. Belly bands and throat latches are straps of this sort that can be reversed.

Oil will readily soak into some straps and remain on the surface of others for some time. Leave it for a few hours and then wipe it off if it is a collar or any part touching the horse.

If one wants to do a little better looking job, get some black enamel and go over the iron parts of the harness. This enamel soon dries and makes a neat looking job.

Probably no part of a harness goes faster than the traces and lines. One can oil these parts more often than the whole harness. I have oiled the traces of my harness twice in the last six months. It keeps life in them and they stand the hardest strains.

A neighbor has another way of getting some oil on the harnesses he uses. He has a dish of oil near the harness. In it is a cloth soaked with oil. He frequently oils a tug or a line at a time. In the course of time he gets over the whole harness. It is a dirtier job than with a brush but it gets done and that is what counts with most of us. Harness leather is so high now and hard to get—until you have a hide to sell at 10c a pound—that it behooves us to save the $10 traces that we have as much as possible. One can hardly touch a new farm harness for less than $125 if it has any weight and that is a lot of money to save. Even the interest on that investment can be made pretty cheaply with a dish of oil once a year or oftener.

Ohio. EARL ROGERS.

Feed Grain for $3 Milk

I have a herd of fifteen Holstein cows, now freshening, each having an average milking capacity of about forty pounds. I have plenty of corn silage and clover hay, but will have to buy what grain I feed. At present prices do you figure that it will pay me to feed grain? If so, what would you advise buying and in what proportions would you feed? Am receiving $3 per cwt. for milk.

Tent, Ill. A. D. M.

These cows should give fairly satisfactory returns if they receive as much clover hay as they will consume and about 35 or 40 pounds of silage per day. However, with milk at $3 per hundred pounds, we believe it profitable to feed a grain mixture in addition to this. Considering the present unstable grain market, it is very difficult to advise which grains to purchase and when purchases should be made. Present prices on grains, it seems to us, are very favorable when milk can be sold at $3 per hundred pounds.

A very good grain mixture may be made from 300 or 400 pounds of ground corn or ground barley, 200 pounds of ground oats or bran, and 100 pounds of cottonseed meal or oil meal. A choice may be made between corn or barley and between oats or bran, choosing the feeds which can be purchased more cheaply. Choose between oil meal and cottonseed meal on a basis of the effect of these feeds in the ration—the oil meal tending to be rather laxative while cottonseed meal has the opposite effect.

It may be profitable to use other feeds in this mixture, if they can be purchased to advantage. The simple mixture suggested is one which is giving profitable results on a good many dairy farms.

Judging by Length of Tail

Kindly inform me if a cow's tail that reaches about two inches over her hocks is a sign of an extra good cow or not.

Ansonia, Conn. I. G.

Judging the productive capacity of a cow from any one point in her conformation is a very uncertain matter. There is little enough certainty when the whole conformation is considered.

In general, a long bodied cow has greater capacity than a short bodied cow; because of this she is able to handle larger amounts of feed, and, other things being equal, will likely produce more heavily. A long bodied animal has this length because of larger vertebrae, the number of vertebrae being the same in all cows.

Some judges believe that a long tailed cow is one which is apt to produce more, because the size of the vertebrae in the tail, giving it its length, indicates to a degree the size of the vertebrae of the back, which in turn give the body its length.

The Distributor in the Silo

HOARD'S DAIRYMAN:—When I began to use the distributor in filling the silo, I thought it would be all right to carry the pipe around most anywhere and let the ensilage fall out as it would. I had not used it very long, however, before I learned that there is quite a knack in doing even this simple thing as it ought to be done. And this is my way now of using this newly acquired helper.

Beginning at one side of the silo, I let the corn fall to the thickness of several inches. About five or six, as one prefers, is about right. Then drawing the pipe a little nearer to me, I take another layer close up to the first one, following the same direction across the silo. So, back and forth I travel, carrying the pipe slowly so that the ensilage may be as nearly as possible of a uniform depth and degree of compactness. In this way I keep on till I reach the other side of the silo, when I turn back and begin over again.

Two or three things are gained by this systematic use of the distributor. One of them is that we get the ensilage distributed evenly, corn ears, stalks, and leaves lying in an orderly manner, and thus preventing the mass from being lumpy, as is apt to be the case where the ensilage falls hit or miss. And then, while carrying the pipe back and forth, we tramp the ensilage already deposited down considerably, a much desired object. I found that by following this plan while the machine was running, I could get a few moments' time when the engine stopped to do extra tramping, especially around the edges. This is another thing I discovered, too. When you get near the top of the silo, it is difficult to shoot the ensilage out of the distributor clear across to the far side of the silo. By hooking on an extra length to do this part, and taking it off when filling directly under the hood, we can save some work, but even then we may have to use a fork a little while as the top comes nearer. I think the distributor saves one man in the silo.

New York. E. L. VINCENT.

Best Breed of Sheep

Please give me some advice as to which are the best or largest sheep for mutton and which are the best for wool.

Hancock, Mich. F. P.

The largest breeds of sheep are the long wools. In these classes the Lincoln ranks first in weight. The wool of all the long wool breeds is rather coarse and does not sell as high as that of the medium wool breeds. In the medium wool classes, the Oxford and Hampshire are the largest. They are a good mutton sheep as well as a good wool sheep. When wool is considered as a minor point, the Southdown is the best mutton sheep that I know of. However, if one looks for wool and leaves mutton more or less out of consideration, he should choose the fine wool breeds such as the Rambouillet, which is the largest in this class; or the Delaine or American merino. These are the best wool breeds.

The Shropshire is what we term a "dual-purpose" sheep, which shears a good marketable fleece and has also a good mutton form. This breed is the most popular in this country as well as many foreign countries.

Wis. Col. of Agr. FRANK KLEINHEINZ.

Cheese from Silage-fed Cows

J. L. SAMMIS, Wisconsin College of Agriculture

No more striking example of the spread of a new idea and the reversal of former opinions can be found than has occurred with reference to the silo and the use of silage.

What farmer of today cannot remember the first silo put up in his vicinity? How the neighbors laughed and jeered at the "young fool" or the "old fool" who was erecting it. It was sure to blow down, if not to fall or burst when filled. And what cows could eat the sour stuff taken out of it? Why, it would destroy their teeth, corrode their stomachs, make them give sour milk, and probably kill the whole herd in a season or two. And so on, for several years.

Today, it is the man who has no silo who attracts the attention of his neighbors and their derision or pity. He who had one silo two years ago, now wants to build another or has already done so. And the new silos are built of the most enduring materials, solid concrete, concrete staves, concrete blocks, burnt clay tile, stone, etc., as if to last far beyond the builder's lifetime. The widespread and practically unanimous approval which farmers have bestowed upon the silo and on silage as a feed leaves no more room for the old time condemnation which was opened upon it.

In the early days, too, the cheesemakers added their opposition to the use of silage, and declared that good cheese could not be made from silage-fed milk. The issue became particularly sharp in those districts where Swiss cheese was made, since this cheese is known to require the sweetest and best milk supply obtainable. The use of silage by any farmer hauling milk to a factory was held to be sufficient to ruin the factory output of cheese. All sorts of faults in cheese were blamed on the feeding of silage. Whether the cheese was bloated (too open) or blind (not open at all) the silage was held to be the cause. Cheese full of pin holes or gas holes, so as to resemble a sieve or a sponge when cut, as well as cheese that were short, dry, and mealy in texture, faded in color, and acid in flavor were all supposed to be due to silage feeding. The one universal remedy for all or most of the cheesemaker's troubles was supposed by many to be the banishment of silos and silage from the dairy farms.

On the other hand, the farmers supplying milk to the cheese factories were delighted with the way the milk flow could be maintained throughout the hot, dry season by feeding silage, and were pleased with the way the cattle relish the flavor of silage and the freedom with which they eat it. They declared emphatically at the annual convention of the Southern Wisconsin Cheesemakers' and Dairymen's Association that if the cheesemaker could not use silage-fed milk for cheese, then the farmers would have to sell their milk elsewhere, because, as they put it "The silos have come to stay." Faced with this ultimatum, the cheesemakers in comparing notes among themselves found that some of the factories while yet using large amounts of silage-fed milk were yet not having the cheese troubles of which other cheesemakers complained.

A series of Swiss cheese making experiments at the Wisconsin Experiment Station, early in the spring, using milk from a large herd of cows fed large quantities of silage daily, but without pasture, showed that from such milk, handled in a cleanly manner, the cheese were not bloated or gassy in the least. This discredited the popular notion that the regular use of silage was the common cause of gassy cheese throughout Green County and Southern Wisconsin.

Investigations at certain factories where the troubles from bloated cheese and other faults were at the worst, so that the factory would soon be obliged to close, showed that the cause of this trouble lay in a filthy whey tank or other local conditions, and that as soon as the whey tank was cleaned daily, and the whey in the tank scalded daily by running in steam, the troubles ceased, although the patrons continued to feed silage as they previously had done. Several such cases went far to dispel doubts in the minds of farmers and makers as to the suitability of silage for feeding cows furnishing milk to cheese factories.

Throughout the northern and central part of the state of Wisconsin, American cheesemakers by thousands at first took the same stand as their brother makers of Swiss cheese in Green County, but now nothing more is heard in opposition to the use of the silo on the dairy farm except where improper methods of curing or feeding silage were practiced.

There are now 71,000 silos in use in Wisconsin and hundreds more are being erected as fast as the work can be done, testifying to the permanent value of the silo for the dairy farmers and the secure place it has won in their minds as an essential for the most complete success on the dairy farm. No doubt there will be found, here and there, cheesemakers and others who are yet prejudiced against the use of silage-fed milk for cheesemaking purposes, just as there are yet some remaining who would rather drive a horse to town than an automobile or pump water for stock by hand on a hot day rather than use a gasoline engine. Yet, a few such individuals should not blind the intelligent young farmer to the general opinion of thousands, based on years of successful use of silage and the silo.

Passing through similar stages of slow advancement toward the position of universal acceptance is the "milking machine" idea, the "cow testing" idea, and other less generally understood propositions.

THE FARMER IN POLITICS

A Brief Outline of Pending Legislation of Special Interest to the Farmer

Compiled by GRAY SILVER, Washington Representative of the American Farm Bureau Federation

THE Capper-Volstead Bill, designed to remove all doubt as to the legal right of agricultural producers to market their products co-operatively, authorizes the organization and operation of co-operative buying and selling groups and leaves the question of possible combinations in undue restraint of trade and enhancement of prices to the secretary of agriculture to consider in each specific case. Upon complaint by the secretary of agriculture in any particular case the question may be brought before the courts for final adjustment.

⚜

The Kenyon-Anderson Bill provides for the creation of a commission which shall regulate the operations of meat packers through a system of licensing. Under this arrangement the handling of stock yards, refrigerator cars, market reports, and all other features of the packing business would be under constant supervision and inspection by employees of the commission and all unfair practices readily discovered. The rulings of the commission could be enforced under penalty of loss of license to operate.

⚜

The French Truth-in-Fabric Bill would require manufacturers of woolen fabrics to honestly label their products in such a way as to show the final consumer the percentage of wool and the percentage of shoddy used. This could be accomplished by weaving or stamping the figures upon the selvage.

At present most of our so-called "all wool" is from 30 to 70 per cent shoddy or "used" wool recovered from the rag bag and the dump. The consumer can not tell the difference between cloth of this kind and cloth made from virgin wool; that is, he can not tell until the inferior wearing qualities show up, and then it is too late.

The saving in cost of materials due to utilization of shoddy is almost never reflected in the price of the finished garment and with a supply of virgin wool sufficient to meet all needs extensive use of shoddy is extremely poor economy. Under the labeling system provided, however, those who desired to sell or purchase shoddy garments could do so with full knowledge of their transaction.

⚜

Standard Containers (Vestal Bill) is a bill to standardize baskets, hampers, and other containers of fruits and vegetables so as to require them to conform to well known and easily recognized sizes and shapes, thereby eliminating confusion and fraud.

⚜

The Kahn-Wadsworth Bill authorizes the government to operate the air fixation nitrate plant at Muscle Shoals, Alabama, for the production of nitrate for fertilizer. This plant, erected at tremendous expense, is capable of producing large quantities of a very high grade fertilizer and on a cost basis which should materially lower commercial fertilizer costs.

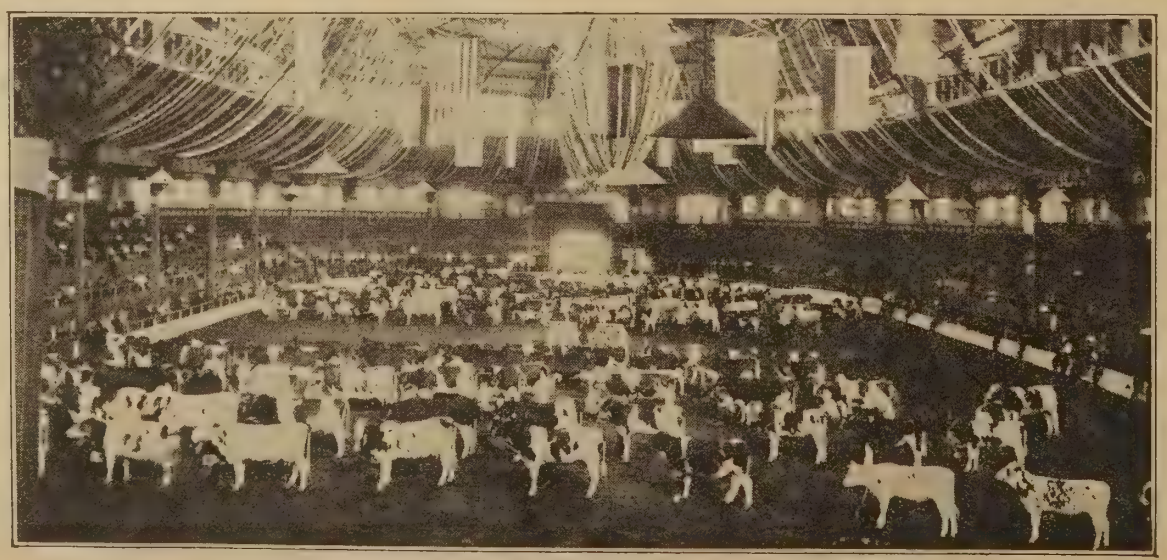
Proper operation of this plant should prove a very effective means of decreasing the cost of production of our important food crops.

There is no good excuse for the continued idleness of this plant, and congress should authorize its operation and extension without further costly delay.

⚜

The Nolan Bill is drafted and backed by labor and manufacturing interests and designed to shift a much larger share of the tax burden on the shoulders of the farmer. The bill provides a flat tax of one per cent (in addition to all other taxes) upon all land values in excess of $10,000, excluding, however, the value of all buildings thereon.

Usually but a very small proportion of the production capital of a manufacturing plant or business establishment is in land. Consequently, the manufacturer and the business man would be largely exempted. The farmer, on the other hand, has the major portion of his business capital in land and would be taxed heavily. This bill proposes to tax the farmer on his principal tool of production —the very thing which



MINNESOTA COUNTY HERDS EXHIBITED AT MINNESOTA STATE FAIR

the factory owner and the merchant ask be exempted in their case. This bill must be defeated.

⚜

A German Credit Bill. (Smith Bill). Congress will be asked to grant a credit to Germany approximately equal in amount to the funds now held in this country as the proceeds, less certain claims, of the sales of the Alien Property Custodian. This fund, amounting to upwards of a billion dollars, must eventually be turned over to Germany. Now is the time that Germany needs raw materials with which to operate her mills and supply her population with clothing and other necessities. With large surpluses of such agricultural products as coarse wool, cotton, and hides on hand in this country, the natural and usual market for these commodities in Central Europe should be opened without further delay. Arranging the credit outlined would furnish a much needed market for the surplus products mentioned and would not increase our foreign loans.

⚜

The Townsend Highway Bill. Farmers favor a national road policy which will provide farm-to-market roads rather than "through" roads designed principally for long distance hauling and touring. The present Federal Aid System, involving the 50-50 principle whereby the government stimulates road building by matching state and local funds, is believed to be better suited to meet the road building needs of the country as a whole than is the "through" road plan proposed in the Townsend Bill. Due provision must be made, however, for "through" roads in undeveloped sections.

Coast-to-coast and city-to-city roads are well enough, but our road building efforts should not be concentrated on these to the exclusion or reduction of farm-to-market roads.

⚜

Farm Financing Measures. The Federal Farm Loan Act must be strengthened and extended. All question of the constitutionality of the tax exemption feature must be removed. Municipal bonds to the extent of some eighteen billions of dollars have been and are being issued for the purpose of bringing labor saving devices and comfort making equipment to the city home; the same principle must stand unquestioned when applied to the rural home.

⚜

The Federal Reserve Act must be amended so as to permit of freer and more direct access to the benefits of the Act by producers of agricultural products. It must be rendered as practicable and as easy for a farmer to secure a loan on a granary full of wheat as it now is for the miller to get money on a warehouse full of flour.

A Rural Credits Bill embodying the necessary features to provide operating funds to worthy farmer borrowers not having ordinary commercial banking credit must be provided.

⚜

Taxation of Profits vs. Taxation of Capital. In anticipated tax revision measures the farmer demands that the principle of taxation of profits and income rather than the taxation and consequent reduction of production capital be observed. Any attempts to eliminate the excess profits tax and place the burden on weaker shoulders must be opposed.

⚜

Tariff Policies. The farmer demands compensatory privileges, either through tariffs or basic trade provisions, as a protection against the agricultural competition of countries having a standard of living not on par with our own, and as an equalizing offset to the greatest benefits constantly enjoyed by the industrial world by reason of extensive tariff protection.

⚜

Support of U. S. Department of Agriculture. Believing the U. S. Department of Agriculture to be a highly essential factor in the development of American agriculture and that the products and benefits of its labors will be shared by all, the farmer insists that adequate financial support be provided for this, the only important producing department of the government. Any attempt to curtail appropriations which result in reduced efficiency of the department are especially decried.





Kelly Caterpillars Save Repair Bills

A truck in the repair shop is a double expense. Not only does it fail to bring in an income but it causes an outlay for repairs.

Probably the one thing that more than anything else makes truck repairs necessary is road shock.

Eliminate road shock and your repair bills would almost vanish.

Caterpillars cannot entirely eliminate road shock but they CAN and DO minimize its effect on the truck because of their greater volume of rubber and patented construction.

Fleet after fleet has been equipped with Caterpillars after the owner has tested them out on one truck.

Doesn't that suggest something to you?

Kelly-Springfield Tire Co.
General Sales Department
1710 Broadway New York

Home-made Loose Leaf Scrap Books

HOARD'S DAIRYMAN:—Every dairyman comes across many useful bits of information pertaining to his business that he would like to preserve for future reference. It may be a formula for a balanced ration, the production record of some famous cow, the directions for making an improved feed chute, or any one of a thousand other useful things. However, but few do keep such information because of the labor and cumbersomeness of old methods.

The writer has found a very cheap and efficient method of filing information of this character by the use of loose leaf books. The chief value of loose leaf books is that the leaves may be shifted from one place to another easily and rapidly.

When loose leaf books are bought from the stationer, the covers are expensive and the fillers, being made of high-grade paper, also cost considerable. By the writer's method, a loose-leaf book of a hundred leaves can be made for a quarter. Buy 500 sheets of cheap yellow paper—the kind used for making carbon copies. This will cost from 40 to 80 cents. At the stationers' or ten-cent store paper clips can be bought for five cents each. I do not mean the little wire clips that are used by stenographers to fasten an enclosure to a letter. These clips I use for loose-leaf scrap books snap together with a spring; two little projecting metal pieces at the back when pressed together open the mouth of the clip and allow the leaves to be inserted. The leaves in this book can be shifted more quickly than in the purchased article.

Get some good library paste, and paste your clippings to the yellow sheets. It is not necessary to daub the clippings all over with paste; spread the paste thinly down the center of the clipping. If the clipping is longer than the yellow sheet, double it back on itself with a double fold, leaving the title showing plainly.

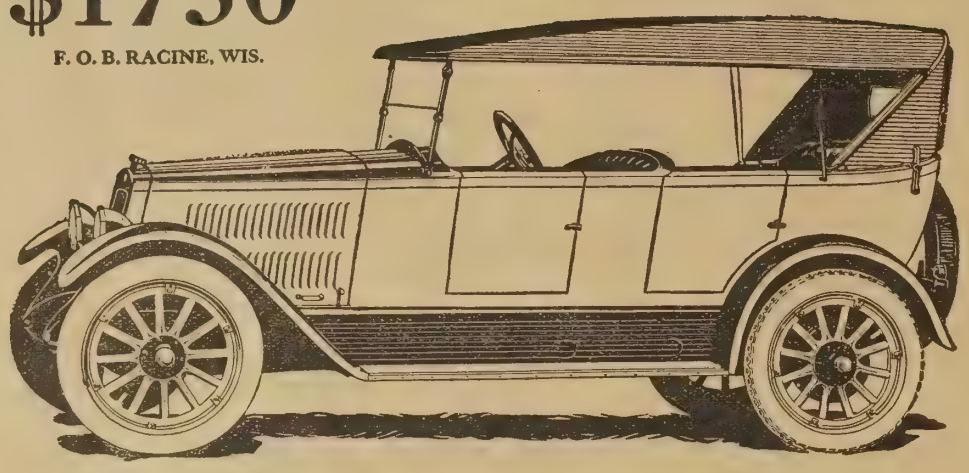
Put clippings relating to the same subject on the same sheets and keep all sheets of one subject together. Then, when you are in a hurry to find certain information, no time need be wasted as you will know just where to look. If one book becomes full, separate the subjects by making two books. Keep on doing this and in the end you will have a whole book on each subject. It is surprising how much information one will find that he wishes to preserve when once he has learned how easy it is by this method.

Michigan. HARRY L. SPOONER.

Worry is the mental rat in the corncrib of life.

$1750

F. O. B. RACINE, WIS.



Mitchell

Seats Six Comfortably

A roomier, easier riding car

Here is a much roomier touring car at a five-passenger price. A car that defies comparison. A car that you can count its advantages. A car that shows you instantly a generous policy.

Every New Mitchell model brings the utmost for your money. There are countless examples of added values.

Designed for personal enjoyment

Take roominess and comfort, for instance. It is an item where there is much skimping. But examine the New Mitchell. Ride in one—note the easy riding—the easy steering.

The Roadster seats *three* instead of two, the Sedan seats *six* instead of five, the Coupe seats *four* instead of three. And so it goes, throughout the cars. Each offers extras.

Completely Mitchell built

The same generosity that distinguishes the bodies is to be found in the chassis. We build these cars complete—so we save the profits that would otherwise go to outside builders. That accounts for the extras.

Examine the offerings at the Mitchell prices: *Six* passenger Touring Car, $1750; *six* passenger Sedan, $2900; *four* passenger Coupe, $2800; *three* passenger Roadster, $1750. F. o. b. Racine Wis.

You can't find a car that offers so much. So visit a Mitchell dealer at once.

MITCHELL MOTORS COMPANY, INC., RACINE, WISCONSIN



PAT. 7-2-07
ANTI-COW-KICKER
Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it today, when you need it you won't have time.
DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.



Dickey Glazed Tile Silos
Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.
The Fruit Jar of the Field
Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

Ohio Holstein Breeders go Visiting

HOARD'S DAIRYMAN:—On Thursday, September 16th, a party of Ottawa County, Ohio, Holstein breeders made a tour of Lucas County for the purpose of visiting some of their fellow Holstein breeders. The first stop was made at the farm of W. B. Woods & Son where Mr. Norton Woods emphasized to the visitors the importance of testing and showed that the returns were far in excess of the cost. A short time after the party left, Mr. Woods received a check from a New Hampshire man for $400 in payment for a calf that was bought entirely on the record of the dam and the dam's sister. Mr. Woods told the visitors that they did not have a cow over two years of age that did not have a record of better than 10,000 lbs. of milk. One cow in the Woods' herd has a 14,000-lb. milk record made at nearly 14 years of age. This cow has now on the farm three daughters, one granddaughter, and one great granddaughter.

The next farm visited was Monclova Stock Farm owned by Mr. R. E. Ansted. At this farm, as also that of Mr. George Kiefer, the visitors saw several notable animals. At the latter's place, two cows were shown that had seven-day records of 29.8 lbs. and 30 lbs. of butter respectively.

The next stop was for a basket dinner at Indian Knoll Farm owned by Harroun Bros. After looking over the herd and talking with the owners, the party listened to an excellent address by State Secretary H. C. Barker. Mr. Barker spoke of the necessity of advertising Ohio Holsteins. While the public is quite likely to think of Minnesota when Holsteins are mentioned, he said that three Ohio counties have more and better Holsteins than the entire state of Minnesota. He announced the state sale for April 19 and 20, 1921.

When stop was made at Hazeldell Farm, the owner, Mr. Keith Hoover, was just milking one of his cows that has a record of 122 lbs. milk per day and 735 lbs. in seven days. The visitors were asked to estimate the weight of the mid-day milking. The closest guess was 24½ lbs. as compared with an actual amount of 24.7 lbs. County Agent Jones, the prize winner, presented the metal sign to the Ottawa County Bull Club. This club is composed of sixteen men who own co-operatively a "33-lb." bull. The charges for service by this bull are somewhat unusual. The regular fee is $25, a dollar discount is made to farm bureau members, $4 discount to members of the Holstein-Friesian Association, and $7 discount to any of the 16 owners. There are no exceptions to these charges except in the case of a bull calf from a grade cow when the price is $10. A ten dollar payment is required in every case at time of service.

The day was pretty well gone but a few of the party went on to the farm of George Crabb and W. C. Herman, where they saw some excellent Holsteins.

Ohio. RAY F. DONNAN,
County Agent.



OTTAWA CO. HOLSTEIN BREEDERS ON A TOUR OF LUCAS COUNTY, OHIO. STOP AT WOODSTOCK FARM WHERE NORTON WOODS DISCUSSES THE VALUE OF TESTING RECORDS

Select Seed Corn Now

Good

Special corn curing house.
Kitchen.
Attic.
Heated spare room.
Furnace room.
Tool or wagon shed.
Any dry, well-ventilated building.

Poor

On south side of building.
On windmill or fence.
Under a porch.
In the stable.
Over bins of grain in granary.
Any damp and poorly ventilated place.

R. A. MOORE,
Wisconsin Experiment Station.

Permanent Farm Homes Necessary

(Continued from page 600)

as in other classes of building, it may be used in several ways, each of which accomplishes all that could be required. So far its possibilities have scarcely been touched. This fact is due largely, however, to prejudice of some not thoroughly informed as to the material's possibilities, and also as a result of the abuse to which concrete has been subjected by many who would not fully appreciate that certain requirements or fundamentals should govern in its use.

The greatest fault of the inexperienced in using concrete is failure to recognize the distinctiveness of the material and avoid attempts at imitation. Architects everywhere are beginning to realize that concrete when rightly used is worthy of their best efforts and whereas but a few years ago the examples of concrete houses included many monstrosities, they now include some of the handsomest and most tasteful pieces of architecture in the country.

From the standpoint of economy, the most important thing in the use of concrete as monolithic construction is standardization of forms. Only recently has this been fully recognized, and that recognition of the requirement is with us as evidenced in the many so-called "form systems" or "systems of construction", of which the forms themselves are a particular feature that have been placed on the market or promoted within the past two or three years. Not all of these have been tried out and won either the distinction or oblivion that may be waiting for them. As a matter of fact, however, form construction for any building is not necessarily difficult or elaborate work. For example, form units in the shape of standard panels in a variety of sizes such as 2 by 4 feet, 2 by 6 feet, 1 by 4 feet, and 2 by 2 feet, may readily be set up, not only for building a monolithic concrete house, but for building any other monolithic concrete structure. And these or similar standardized sections represent about all of the standardization of forms that is necessary except when the construction involves a large project of some kind, where economy in form work demands repeated use of forms until their original cost has been practically wiped out.

Experienced builders know that simplicity of forms depends upon simplicity of the structural design itself; so that in designing the building, one of the thoughts that should be kept foremost in mind is simplicity of surfaces so that forms will not have to be intricate nor wasteful of lumber. Simplicity does not necessarily mean monotony because, in the competent designer's hands, a simple structure with such surface variety as depressed or raised panels may in the end really be most attractive.

Many notions prevailed a few years ago as to the lack of adaptability possessed by concrete for house construction. The general impression was that concrete buildings were damp, that concrete floors were cold, that concrete surfaces were monotonous, etc. All of these have been dispelled in the minds of persons who would permit themselves to become correctly informed.

Whether concrete be used in the form of monolithic construction, concrete block, or one of the several unit types of construction, it produces warm, dry, sanitary, fireproof homes. Monotony of surface need not be an objection if any one of several methods of securing attractive surface finish is employed during construction or after forms have been removed. Perhaps the simplest type of concrete house to build is that secured by using rough cast concrete block for walls and finishing the exterior with Portland cement stucco. Stucco itself permits of a variety of surface effects. By the use of concrete block of several standard types, it is very simple to secure hollow wall construction, which is most desirable from the standpoint of attaining insulation against extremes of outside temperature.

CITY COMFORTS FOR YOUR FARM HOME

WITH one small, simple Kewanee Plant you can have running water and electric light. The barn, the yard, the porch, the cellar can be instantly flooded with strong, steady light. The same plant at the same time will operate cream separator, churn, grindstone, vacuum cleaner, electric iron and washing machine — supply running water in your barns and in the milk house, at the garage and in the yard.



You pride yourself on your modern farming! Modernize your home with running water and electricity. Provide fire, burglar and health protection for your property and your family! The same plant does it all.



All From One Plant

No matter where you live or how old your house may be, a Kewanee System can be installed which will supply all the electric light and running water that you can use. Not a big, complicated piece of machinery. Easy to install, simple of operation, requiring very little attention.

There's a Kewanee System Built for You

Years of time and the knowledge of many skilled engineers were used to perfect these plants for modern farm conveniences. Each plant is assured satisfactory in operation because of our long experience in the building of Public Utilities.

You can get a Kewanee Lighting Plant or Water Supply System separate, or you can get the Combination Light and Water System. There are over a hundred styles to choose from. The Combination System costs only a little more than ordinary lighting systems alone, and the operating cost is low.

Kewanee Plants are built for the inexperienced man or woman to operate in out-of-the-way places, and to give a lifetime of uninterrupted service.

There is also a Kewanee Sewage Disposal System, built on the same simple plan, which gives perfect service and completes modernization of the farm home.

KEWANEE PRIVATE UTILITIES COMPANY
422 South Franklin Street, Kewanee, Illinois

KEWANEE

Running Water Electric Light Sewage Disposal
Combination Electric Light and Running Water

50 Church St. NEW YORK CITY
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All Information Supplied Free

Our Booklet tells about modernizing farms and describes over a hundred Kewanee Systems. Send and get this valuable book. It is free. Mail the coupon today.

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Gentlemen:—
Please send me, without obligation, a free copy of your booklet on modernizing the farm home. I am interested in
Lighting Plant — Water Supply System
Combination System — Sewage Disposal System

Name.....

Address.....

Swat the Scrub

(Continued from first page.)

farm, and the labor incomes of those farms averaged $430 higher than those farms where grade dairy sires were used. Evidently it pays to swat the grade dairy sire.

A survey of 300 farms in Ontario, Canada, was recently completed. Grade sires were used on 131 of these farms, pure-bred sires had been used for five years or less on 49 farms, pure-bred sires had been used from 5 to 10 years on 46 farms, and pure-bred sires had been used more than 10 years on 74 farms. For these four classes of farms in the order given, the labor incomes were as follows: $961, $1,248, $1,473, and $1,710. In the same order the average receipts per cow were $94, $117, $115, $137; and the average income over cost of feed was $18, $36, $34, and $51. Other surveys made on farms in Ontario gave similar results. So far as I know there has never been a farm survey anywhere that contradicted these figures.

Undoubtedly the dairymen who own good pure-bred dairy sires are better farmers in other ways than those that own scrub and grade sires, but that does not take from the force of the conclusion that the greater receipts per cow and the larger labor incomes are largely due to the use of better sires in the dairy herd. The use of good sires is one of the ways by which the intelligent farmer makes his farm yield returns above the average.

Every farmer should join the "Better Sires—Better Stock" campaign and help to swat all the scrub and grade sires in this country. He should do it to help his country, he should do it to help his neighborhood, he should do it to help himself. The "Better Sires—Better Stock" campaign is fully as important as any political campaign that is likely to be conducted in the next twenty years. We are all on the same side in the campaign for better live stock, but I am afraid some of us are not very active workers in the campaign.

If every owner of live stock will wake up, swat the scrub sire on his farm, and substitute a good pure-bred for the scrub; farming will become more profitable and much more interesting. The movement is started, it will grow. That day is close at hand when some county, somewhere, will eliminate every scrub sire within its boundaries and thus become a scrub-free area. When that is done other counties will follow fast and eventually whole states will become scrub-free areas. Too long has the live stock business carried the burden of the scrub sire. Which of all the live stock countries in the United States will be the first to drive the last scrub sire forever from within its boundaries?

More milk and cheese on the family bill of fare means less meat to buy and more money saved, as well as better health.

Criticism That Unites Producers

HOARD'S DAIRYMAN:—Agents of the dealers are spreading much propaganda against pooling milk. They accuse the League officers and ridicule the project. They pose as the friends of the farmers to protect them from their enemies (?) who ask them to pool and thus place all their property at the disposal of these "crafty" League leaders. They accuse them of incompetence and make untruthful statements as well as those that are half-truths—the most dangerous of lies. I heard the president of one of the manufacturing concerns say that the conference board of dealers is mad. They "have their coats off and sleeves rolled up." Then he further stated that by November first there will be no League price. That is a very strong intimation that the dealers are out for exactly what we have been saying, that is, to break up the League. It looks as though we may have only about 30,000 contracts signed and we must have 50,000. The work has now gone on only about two weeks and two more may get us the other 20,000, but it will mean hard work if we get them. November first is viewed with concern, but we are hopeful.

It is developing that the dealers in milk are out for the biggest propaganda work that has been noticed in many years, if ever. They are circuralizing their patrons and carrying advertising in local papers that must cost in the aggregate enormous sums. They are advertising in city papers in a way that is almost criminal in wastefulness to say nothing of the false understanding that they are trying to create. So far as farmers are concerned it looks to me that it is a waste of powder since it seems to be uniting them more strongly than ever. At this moment it appears to be the best way to get the pooling across that has been tried. In towns and cities we do not yet know what the result will be. If a sentiment can be created against dairymen in the cities it will tend to injure the League. Just what can be accomplished by these methods is yet a problem. New York city officials have taken at times the same position that the dealers are taking.

In one case a meeting has been held to ask the farmers to lower the price of milk for October independently of the League. They claim that they are losing money and may have to go into bankruptcy unless the price is lowered. At the same time they are spending for advertising as above mentioned. The postage on the useless circulars is something of an item for they come daily some of the time. We have been saying softly for a while that the dealers are out for a fight to break the League. It is almost time to say it with energy and then put up the right fight to get at them from our side.

I did not intend to say much about the pooling contracts now, but these are attacked in such a way that it is hard to give the right answer. I will say that there is no use in making a contract unless it contracts something. It must bind the parties. That is what the contract does and the dealers are trying to make the farmers think that these real contracts take away every man's rights to his property. The plan is called socialistic and for the purpose of defrauding dairymen in order that League officers may draw enormous salaries at the expense of dairymen. One can hardly imagine the stuff that is coming out. It is pretty shrewdly put in some cases, but that which slanders the League and farmers does not convince dairymen that its authors are of use to them in getting fair prices. No dairy farmer with any memory will admit that milk dealers are anxious to save him from disaster. It is hard to make dairymen think that dealers love the farmer, but they may induce him to think of times when they did show contempt for him.

New York. H. H. LYON.

Cheese Prices Cut

Southern Jobbers Ask Dealers to Dispose of Holdings—Trading of Hand-to-Mouth Order

[Report by U. S. Bureau of Markets]

Cheese markets seem to have taken a further downward trend during the week ending October 9. The unsettled feeling which was noted last week with reference to Wisconsin primary markets became more general and at primary markets especially the tone was close to what might be termed weak. Basic prices on practically all styles were lower when trading for the week opened, and what actual business took place was at a wider range of prices than usual. It was apparent by the middle of the week that the usual amount of orders was not forthcoming and there was a general rush to shade prices, many dealers reducing prices almost to cost, but without success.

While distributing markets did not share fully in the unsettled tone which characterized trading at country points, the fact that dealers exerted themselves to keep stocks cleared was evidence of a slight uneasiness. Business was mostly of a jobbing nature and on the whole was quiet, being mostly to regular trade for current needs. No new business or expert orders of any consequence developed; even orders from the southern trade, which has opened up within the last few weeks, were comparatively small. About the only trading which continued on a firm basis was in fancy New York State cheese, which has been in light supply.

Dealers not Optimistic

Dealers generally do not view with any degree of optimism a break occurring in October. However, various conditions have worked to bring about such a situation. The continued talk as to condenseries closing has had its influence and, although not many have actually shut down, it is reported that a number which produce the advertised brands are diverting their milk into other products. Cheese dealers do not appear to be concerned about the possibility of condenseries making cheese, for they think that such cheese would not be of finest quality, and accordingly would have but little effect on the sale of fine goods.

One of the matters of perhaps greatest concern to Wisconsin dealers is the fact that a number of southern jobbers who bought early and stored their cheese in Wisconsin are now asking dealers to take it off their hands or sell it for their account. Should this become more general, it may be the means of cutting down the consumption of cheese in those sections. There is still a difference of opinion as to what the market of the next few weeks will show, although a feeling that prices will have to come down in order to stimulate trading is prevalent. Holders of heavy stocks, however, in order to protect their own interests, do not generally view such a development favorably.

The average wholesale prices on American cheese, style Twins, for the week ending October 9, were as follows: New York, 28 cents; Chicago, 26.2 cents; Boston, 29.8 cents; San Francisco, 30.9 cents; and the Wisconsin primary market, 26.3 cents. For the corresponding week last year the average prices at these markets were: 30.3c, 28c, 31.5c, 31.8c, and 27.5c, respectively. The total receipts of American cheese at these markets were 3,188,187 lbs., as compared with 3,983,114 lbs. for the corresponding week last year and 3,008,890 lbs. for last week.

Upward Trend on Butter

[Report by U. S. Bureau of Markets]

The butter market showed further advancement in terms of price as generally expressed in the quotation for 92 score butter, during the week ending October 9, but unfortunately numerous factors both bearish and bullish combined to give it also a decidedly unsettled appearance. The bearish arguments were stronger and toward the close of the week they were helped out materially by a very unsatisfactory movement of butter. The net result was a weak undertone accompanied by considerable nervousness.

The average wholesale prices on 92-score butter at five of the principal markets, for the week ending October 9, were as follows: New York, 62.9 cents; Chicago, 59.7 cents; Philadelphia, 62.1; Boston, 61.8 cents; and San Francisco, 63.7 cents. For the corresponding week last year the average prices were: 60.9c, 58.5c, 60.8c, 60.6c, and 63c respectively. The receipts of butter at these five markets were 8,243,341 lbs. as compared with 8,453,250 lbs. for the corresponding week last year and 9,012,825 lbs. for last week.

Month's Storage Report Shows Reduction

Reports issued by the Bureau of Markets, covering the October 1 holdings for the entire country, show 113,333,000 lbs. of creamery butter in storage as compared with 121,816,000 lbs. in storage last year and 87,883,000 lbs. in 1918. Last month the storage holdings were 115,546,000 lbs. According to the American Warehousemen's Association Report, which covers 56 warehouses, 80,723,000 lbs. were held in storage, as compared with 85,576,000 lbs. last year.

Current Feed and Hay Prices

Prices Decline With Large Supplies and Dull Demand

[From Reports by U. S. Bureau of Markets]

There was no change in the downward trend of the market during the week ending October 9 and practically all feeds registered lower quotations. Contrary to the policy pursued the past few years during the period of continued price advances when feeds were generally sold on a basis of replacement values, reports indicate that now dealers who are stocked up with high priced feeds are endeavoring to work off fair quantities to retail buyers at purchase prices and that others are holding them at cost values awaiting a more favorable turn of the market. Still others are closely following offerings in making their quotations.

In spite of liberal concessions the demand is described as extremely dull and trading as light and of smaller volume than during the last few weeks. Stocks of feeds at Lake ports are increasing.

While bran is offered at Minneapolis and Kansas City at $28.50 and $27, respectively, bids in the latter market are said to be $1 to $3 per ton less for that commodity. Middlings have declined to a more reasonable level, being quoted now at a small premium over bran. Offerings continue liberal, but with oats selling at 40 cents per bushel in certain sections, the country trade does not seem interested in feed that costs more. Flour middlings and other heavy wheat feeds are following the general decline, and are quoted at around $42 f. o. b. Minneapolis. Seattle and the Northwest are receiving offerings from Montana and the Dakotas and eastern bran is selling at about $42 in that market.

At Texas common points 43 per cent cottonseed meal sold at $43, while 36 per cent is quoted at $42 in Memphis. Other prices on 41 per cent meal are $50 at Kansas City, $56 at Chicago, and $58 at Boston.

Linseed meal holds close to $60, with offerings in northern territory at $52 f. o. b. mill. Quotations are: $61 at Minneapolis, $63 at Kansas City, $64 at Chicago, $57.50 at Buffalo, $59 at Boston, and $57.50 at New York.

Demand for gluten feed continues light, with another decline of $5 per ton during the week. Stocks are not heavy at the mills, although the country trade is well supplied. Quotations are: $48.75 at Chicago, $52 at Cincinnati, $53 at Pittsburg, and $57 at Boston.

Alfalfa meal holds at $30 to $36. Mixed feed manufacturers are buying little, because their business has received a serious setback within the last month and sales are difficult to make. Supplies of hominy feed are large, with offerings at $40 by wholesalers. Beet pulp declined to $43 in Los Angeles, with New York dealers quoting $50. Supplies are large and demand light. Cocoanut cake and meal are offered at $30 and $32 in San Francisco.

Light receipts of hay are noted, with prices remaining firm. No. 1 timothy is quoted at $32 in Seattle, $27 in Minneapolis, $34 in Chicago, $40 in Boston, and $39 in New York. Mixed clover and timothy ranges from $22.50 in Minneapolis to $33 in New York, with straight clover at approximately one dollar less.

No. 1 alfalfa is quoted at $23 in Kansas City, Omaha, and Seattle, at $28.50 in Minneapolis, $31 in Memphis, $37 in Atlanta, and $30 in Cincinnati.

Wisconsin State Guernsey Sale

A more than usual representative gathering attended the Second State Sale of Wisconsin Guernseys. Wisconsin breeders were successful in retaining the larger number of animals, but they had to meet competition from Connecticut, Virginia, Minnesota, and Iowa, twenty-five animals going outside the state. A total of $33,840 was received for the eighty animals sold, making an average of $423 each. While this is $150 less than a year ago, it is accounted for by present conditions that make for a buyer's market and the range in quality of the animals sold. There were only six animals sold for over $750.

A nine-year-old bull, Bell Buoy of Linda Vista, brought the high price of the sale at $1,775. He has 15 A. R. daughters, is a splendid representative of the Guernsey breed, and is of excellent pedigree. He is out of Easton Belle with 500 lbs. fat and two A. R. daughters and is by Jethro's May King of Linda Vista. His sire is a double grandson of Imp. King of the May and a grandson of Dolly Bloom, while his dam is a granddaughter of Imp. King of the May and of Dolly Bloom of Langwater. It is a good omen when an aged sire with producing daughters will top a sale. He was consigned by O. R. Schwalen and was struck off to a trio of Wisconsin breeders consisting of G. W. Sankey, W. W. Pace, and Matt Brunner, with the University of Wisconsin and Harry Lewis as final contending bidders. Fruit Brothers two-year-old bull was second in price, go-

ing to Geo. M. Hendee of Connecticut for $1,100.

The third animal in price was Damsel of Linwood, a senior yearling heifer out of Imp. Fanny of Linwood with 752 lbs. fat in class AA and by a son of Imp. Clara's Sequel with 32 A. R. daughters. She was exceptionally well grown and in every way a good representative of the large, vigorous Guernsey without coarseness. She was consigned by Dale Rundell and was purchased by Chas. Brooks of Minnesota with Harry Lewis of Wisconsin as runner-up.

Following is a list of the animals sold, together with their prices and names of persons by whom purchased:

University of Wisconsin	
Elsir of Glenburine	$600
Lady Hambro of Alfalfa	490
L. A. Yaeger, Minnesota	
Allenwood Elsie 2nd	$575
McKerrow's Ultra Queen	425
A. F. Drackley, Wisconsin	
Raymonds Princess	$460
Fern's Rilma	410
W. D. James, Wisconsin	
Esther's Lassie	$410
Hayes Rosie's May Queen	700
Marquinetta of Breezy Hill	575
H. J. Schmidt, Iowa	
Dairymaid's Cream Cup of Fox Valley	$410
Theresa's Maid of Oakland	500
L. A. Page, Minnesota	
Lassie of Hawthorne Farm	$460
Wm. L. Breitrick, Wisconsin	
Primrose's Fantine	$510
St. Croix Olive	420
Geo. E. Richardson, Minnesota	
Belle of Forest Lodge	$660
Geo. M. Hendee, Connecticut	
Lady's Rex of Maple Hill	$1,100
McKerrow's Ultra Jane	500
Ada's Alfreda of Snow White	400
Belle of Waldwic	600
R. W. Ross, Wisconsin	
Lamont of Maple Hill	$700
Belle Corbin of Lake View	455
Dr. F. L. Wade, Wisconsin	
Queen Bess of Grahamdale	$430
D. F. Clark, Wisconsin	
Maiden of Homestead	$450
Harry Lewis, Wisconsin	
Craigmoor's Galaxy's Daisy Moon	$460
Miriam's Marcella of City View	925
Miriam's Rosella of City View	750
Geo. D. Lawson, Wisconsin	
Verandess of Ulao Dale	$425
Fox & Kingston, Wisconsin	
Aviator of Edgemoor	$800
Rudisell Bros., Wisconsin	
Della of Excelsior Farm	$435
T. C. Norman, Minnesota	
Oakland Lass	$450
Chas. Brooks, Minnesota	
Damsel of Linwood	$1,025
Sankey, Pace, & Brunner, Wisconsin	
Bell Buoy of Linda Vista	$1775
John Stallman, Wisconsin	
Lucy of Loberg Glen	$450
Chas. E. Wirt, Minnesota	
Peacock's Princess of Denton Farm	$460
McKerrow Farms, Wisconsin	
Sir Rosewood's Beauty	$400

New York Dairy Notes

HOARD'S DAIRYMAN:—At a recent meeting of representative members of the Dairymen's league at Frankfort, it was voted to purchase the Borden condensery plant at that place.

Holstein breeders from 11 counties held a conference in Syracuse, Oct. 6, to awaken interest in the annual sale of the New York Holstein-Freisian Association which will be held in Rochester, January 11 and 12. Farm bureau officials of the various counties have also been invited to attend. Many such meetings are being held throughout the state to arouse interest in the coming sale and promote the Holstein club formations.

The club offers a prize of $350 to the best Holstein exhibit at the sale by a county organization. It is believed that this prize will furnish an incentive for showing some high grade county groups.

Patrons delivering milk to the local plant of the Mohawk Condensed Milk Company at St. Johnsville on the butter making proposition through which it is understood the dairymen receive the proceeds of the sales less 10 per cent for manufacture, seem to be very well satisfied with the plan. The second day one company operated its new machinery the production from approximately 4,000 quarts of milk was 356 pounds of butter.

Figured at the present market price of creamery butter this gives producers a good price for their milk and they received the resultant skimmilk. With hogs to feed, it is easily worth, farmers say, $1.25 per hundred to them. The skimmed milk is all taken from the plants, some of the farmers feeding it to their cows and poultry. It has been demonstrated by experts in feeding, that its use in this manner is attended by excellent results greatly increasing the milk rate when fed to cows, and increasing egg production when given to the hens. Nearly every New York dairyman has from one hundred to several hundred hens. With eggs now selling for 84 to 95 cents a dozen, it is a paying proposition to increase the egg production.

New York. E. M. L. BLANCHER.

GOOD WILL TRIUMPHANT UNDER TEST

As this message is being written, Dodge Brothers' daily, weekly and monthly production, is at the highest point in its history.

The most casual sort of inquiry will satisfy you that this production is being absorbed as it is delivered.

Within sight and sound as we write, a great addition to Dodge Brothers' immense works, is being rushed to completion.

The interesting thing about this situation is, that it is not likely that a half a hundred people have ever bought Dodge Brothers Motor Car just because they wanted a motor car.

Of the more than half a million who have bought it—the overwhelming majority did so because of the name it bore.

It has always been treated, by the American people in particular, as an exception — always set apart, and singled out, and never judged by ordinary standards.

It has always been thought of, and is still thought of, first, and foremost, and all the time, only in terms of its goodness, and the results it gives.

All of this is wonderful, in one way, and quite natural and logical in another.

It all dates back to the day when John and Horace Dodge conceived and designed and finally built the car —after warning each other, and their associates, not even to think of it in any other terms than the best obtainable value.

They began with a few almost absurdly simple principles, bluntly expressed and rigidly executed, about decency and honor and integrity—such as most of us wrote in our copy books at school.

They reduced these old copy book maxims to a splendid and scientific system, pouring more, and more, and still more value into the car, and then marshalling all the resources of modern massed manufacture to get their product into the hands of the people at an honorable and an honest cost.

These policies and principles have never been changed, and never will be changed, by so much as a hair's breadth; and they have come to be recognized and accepted as Dodge Brothers principles wherever motor cars are driven.

It has all happened as John and Horace Dodge planned it—quite simply, naturally, and automatically, all over America, and all over the world.

People *do* discriminate, as Dodge Brothers contended they would; people *will* find out when a motor car is well built and gives good service and great good value.

Dodge Brothers market today is where they planned to locate and establish it—in the mind and the heart of every man and woman who admires good work, well done.

It will last, and it will keep on growing, as it has kept on growing for five years (faster than Dodge Brothers works could keep pace with it), as long as the number of those who believe that a manufacturer should build to serve and not merely to sell, continues to increase.

All is well with Dodge Brothers today, because John and Horace Dodge builded well in the beginning, and because their business will continue to build well until the end.

DODGE BROTHERS, DETROIT

Potato Date Changed

For important and unusual reasons the date of the Wisconsin Potato Exposition has been changed to November 30—December 4, 1920.

J. G. MILWARD, Sec.

A Progressive Community

Thirty-four per cent of all the cattle in the town of Promfret, Windsor County, Vermont, are registered, and 95% of the registered cattle belong to the Jersey breed. These interesting facts wre brought out in a survey taken by the Windsor County Farm Bureau. They found that there was, on April 1st, 1920, a total of 1,527 head of cattle of all kinds owned within the town, and 519 of these are registered. This total of 519 registered cattle, of which 46 are bulls, are found on 46 of the 89 dairy farms in the town.

This is some record surely, especially when one reflects that less than 2% of all the cattle in these United States belong in the registered class. The total figures for Windsor County show that 7% of all the cattle in the county are registered, which is also a good showing. The county farm bureau, under the leadership of the county agent, is held largely responsible for this healthy state of affairs and it affords a splendid example of dairy improvement carried out in a practical and persevering manner.—F. ABBOTTS, Windsor County Farm Bureau.



One Year Proves Its Better Qualities

In a little more than a year, the Cleveland Six has established the truth of its better qualities by its daily service to nearly twenty thousand owners. Today it is recognized everywhere for what it really is—an exceptional car, offering character and quality not found in other cars of similar size and price. It has made good in a big way.

The Cleveland, built in a great modern factory and built by an organization skilled in the building of fine cars, is featured by the performance of its exclusive motor, most highly refined of the overhead-valve type, quiet, powerful, pliant and economical.

A motor that starts instantly in even the coldest weather. The chassis construction is sturdy throughout, with long underslung springs, positive brakes and unusual ease of control.

Four attractive styles of body are mounted on the Cleveland chassis.

Touring Car (Five Passengers) $1435 Roadster (Three Passengers) $1435
Sedan (Five Passengers) $2445 Coupe (Four Passengers) $2345
(Prices F. O. B. Cleveland)

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Adventures in Community Team Work

(Continued from page 599)

of eight dollars per ton. This was the problem that confronted the farm bureau.

The committeeman who was placed on this project said he was glad to be selected for this work, which he believed was causing one of the greatest losses to the farmers there. Here is the result of his work to date: He met with the board of directors of the successful co-operative store there and put up his proposition to them. They were farmers and they caught a glimpse of the light. They are seriously investigating the matter of their co-operative store building a warehouse, equipped with a feed mill and poultry feed mixer. They have been to their banker and he will back them. They are all in favor of it and we are looking for some real results from this branch of farm bureau work that will make the work a great asset in the community.

Fruit Man Busy

The man who has also a big job is the horticultural leader. He is pooling the fruit on the island this summer and he has received some attractive offers for cherries, prunes, and pears. He is signing up the cherry crop in the following manner:

Agreement: I agree to market entire crop of cherries of the varieties listed below through the Horticultural Project Leader of the Orcas Island Farm Bureau; such fruit prepared for market in accordance with the directions of the project leader.

I expect to harvest cherries as follows:

Royal Anne ———lbs.
Napoleon Biggareau ——— "
Black Republican ——— "

I expect to harvest other varieties as follows:

——————— ——— "
——————— ——— "

Signed: ———————

The canners are paying more for the fruit in large quantities than where they have to pick it up in small lots. The fruit will be delivered at two different points on the island in boxes furnished by the cannery, weighed and inspected by a cannery agent.

The fertilizer demonstration was used not only on the pears but on sweet corn and potatoes. Combinations of nitrate of soda, superphosphate, and beet char potash were made up and measured out with extreme exactness. Definite account of all fertilizers used and crops harvested are being kept through the project leader.

Game Becoming Pests

In most sections of the country we have game commissions fighting hard to protect our game birds by laws and watchful alertness, but the farmers on Orcas Island have a different viewpoint on the matter. During one of their interesting meetings the matter of having the season opened on deer and extended on Chinese pheasants was brought up. It seems that they both have become pests, and in fact one of the men present said he saw ten deer in one group when coming to the meeting. The matter was taken up through the bureau to the State Game Commissioner.

The women have a more important part in farm bureau work than just providing a community dinner at each meeting. They have a clothing and a millinery school scheduled for the fall under the supervision of a home demonstration agent.

Drainage Work

After the drainage project leader was appointed he immediately busied himself with arrangements for two drainage demonstrations and he asked the county agent to secure the services of the drainage specialist. Already the two demonstrations have been held with a large attendance and several drainage ditches were surveyed out at the request of certain individuals to the project leader. The farmers liked the work and felt free to ask questions.

As usual a part of this year's pear crop will be boxed at the trees and shipped to New York. The farm bureau will do its share in getting the rest of the pears put up in tins and some of these may also find their way to the Atlantic Coast.

Brita of Beaver Ridge

Brita of Beaver Ridge 72382, a Guernsey cow bred by Beaver Ridge Farm, New York, and recently purchased by R. M. Lewis, Connecticut, has completed a record of 9,710.7 pounds of milk and 548.48 pounds of butterfat in class FF. She carried a calf 275 days of her testing period, and thereby qualified for fifth place in the two and one-half-year-old division.

Brita of Beaver Ridge 72382 was sired by Florham Golden Lad 18119, a son of Golden Lassie of Paxtang 24696, a cow that has records of 507.31, 675.45, and 715.38 pounds of butterfat in classes D, A, and A, respectively. The dam of Brita of Beaver Ridge 72382 is Brita of the Glen 41667, a daughter of Missy of the Glen 18390.—American Guernsey Cattle Club.

Firestone

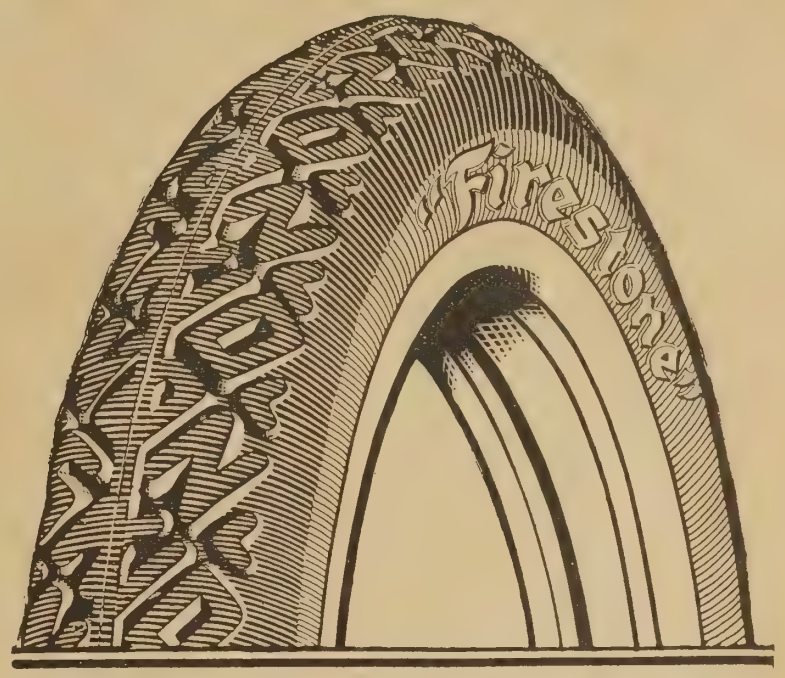
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The Firestone thrifty 3½ is leading the small-tire field today. Because it is built on real thrift methods from start to finish.

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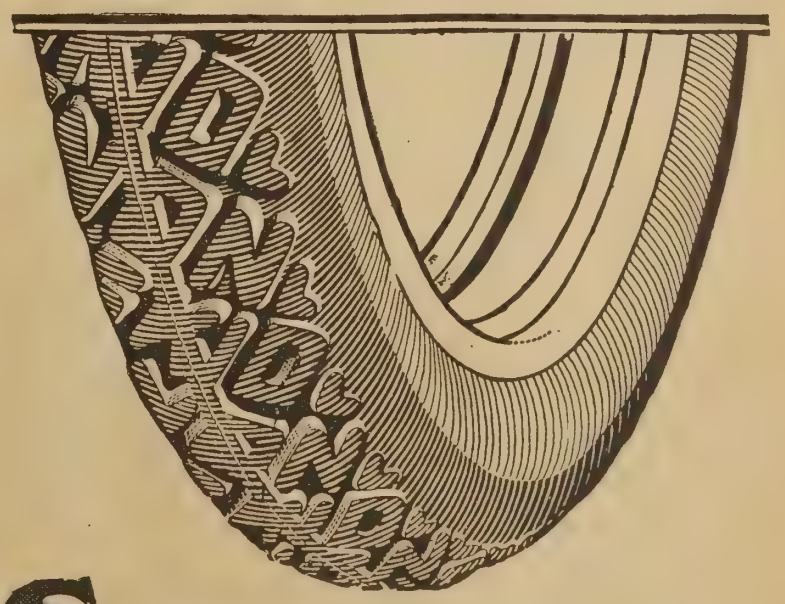


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THE HOG MARKET

SANDERS SOSLAND, MISSOURI

WHILE corn and hogs have reversed their relative positions on the markets of the United States, dairymen should not become too eager to expand their hog raising operations. Market conditions do not justify over-enthusiasm, but favor conservative breeding and feeding of hogs in connection with dairying.

As a result of the recent sensational slump in grains, corn is now cheap in comparison with hogs. Feeders are therefore more favorably inclined toward feeding, and some dairymen who liquidated their holdings of porkers are seeking to restock their farms.

To jump from one extreme to another is not, however, profitable in the business of hog raising. During the past year, the tendency among hog raisers was to liquidate. According to the annual stock hog estimate of the Department of Agriculture, the number on farms in September was 56,534,000 head, a decrease of 5,539,000, or 8.9 per cent as compared with the fall of 1919. These figures do not warrant extreme bullishness, but furnish the basis for some encouragement. It is interesting to note in connection with the reduced supply of stock hogs that the production of corn this year is the largest in history, 3,216,000,000 bushels, an increase of 299,000,000.

"Housewives are buying meat, principally pork, in baskets, costing $8 to $10 at a time," a provision trade expert commented recently in reviewing the purchasing power of consumers at industrial centers. Abundant employment and high wages made such buying possible. It proved a powerful sustaining influence on hog markets. Changing industrial conditions are now reducing the purchasing power of labor engaged in many lines of employment. Still, a precipitous decline in the ability of labor to pay for pork and other meats is improbable. It should be remembered, however, that current conditions point to some declines. Mines, steel mills, and automobiles and textile plants are not paying out in wages as much money as a few months ago. This will tell in the retail distribution of fresh pork, ham, bacon, lard, and other hog products.

What of Europe? Next to the domestic trade, the situation in Europe in respect to purchases of pork and lard is the most vital factor in determining the influence of demand on hog markets. Europe is short of lard and pork. Germany and Austria in particular need larger supplies. In Germany distribution of lard and pork is under the control of the government, this being the result of the scantiness of supplies. Americans returning from visits to Europe confirm the reports of the scarcity of lard and pork. Europe's needs and Europe's ability to buy differ seriously, however, which is unfortunate for the American hog grower. The foreign lands of the Old World are already so burdened with war debts that their credit is low on American markets. This applies particularly to the Central powers. In addition, money has been and is still so tight in this country that it is difficult to raise the loans which Europe desires to enable her to purchase lard and pork.

Statistics of foreign business indicate that the exports of hog products from the United States for 1920 will hardly equal 50 per cent of the movement of last year. The 1919 exports were 2,600,000,000 pounds. For the first eight months of this year, according to the Department of Commerce, the exports of provisions were only 985,000,000 pounds, against 2,130,000,000 the same time in 1919. This is a decrease of about 1,145,000,000 pounds. It is equal to the product of fully 7,000,000 live hogs. If the export business the remainder of the year falls off in the same proportion as indicated by the official statistics, the outgo will be reduced by more than 7,000,000 hogs for all of 1920. Another interesting fact in connection with the export business is that the 1920 outgo promises to show a moderate increase over the pre-war average.

Before analyzing the significance of the export and the domestic markets in determining the course of hog prices, some attention must be given to the fact that the South will this year produce a larger crop of cotton seed. Crushers make cottonseed oil from that by-product of the cotton plant. This oil is used in making compound lard and is also converted into products used extensively as a substitute for lard. Cottonseed oil is worth only around 14 cents a pound today, compared with 20 cents a year ago. Offerings of other vegetable oils from Asiatic countries are reported of larger volume.

If the figures of the Department of Agriculture on stock hogs are accurate, the country will enter the winter packing season with a decrease in holdings of live hogs almost sufficient to offset the decrease in export trade in provisions this year. Besides the smaller stock hog supply, it is generally believed that there is also a decrease in the number of breeding sows on farms. In view of the reduced supply of hogs, it would appear on the surface that the outlook is brighter for producers. If export trade improves, for example, the aggregate demand in the next year will more closely approach the prospective supply on markets. Allowance must be made here, however, for the probability of reduced domestic consumption. The degree of the decrease is an unknown factor. It depends partly on the supplies of other meats, notably beef. Some allowance must also be made for the tendency of farmers to make hogs heavier in weight. Difficulty in obtaining cars to move corn resulted in the fattening of hogs to unusually heavy weights this year, but in the coming year the decreased holdings of stock hogs and the harvest of the greatest crop of corn on record will stimulate feeding.

With corn approximately 50 cents a bushel cheaper than a year ago, with deflation in money exercising a bearish influence on prices in general and with continued uncertainty over European buying, the hog feeders and breeders who are conservative in their business will prepare for lower hogs than the average of 1920. Hogs recently sold up to $18.25 at Chicago, the highest point of the year, but they have since reacted sharply from that level. Last January hogs averaged as low as $14.25 per hundredweight in Chicago. Even with the reduced supply of stock hogs, trade interests on the leading yards anticipate an even lower level between now and the close of 1920. The sharpest breaks will come when the new crop of matured spring pigs begins moving in liberal volume. This movement probably will be a little late owing to the fact that feed was so high early this year that the pigs were not fed generously.

A comparison of the yearly top prices of hogs at Chicago since 1910 emphasizes the probability of declines to a level below the recent quotations. In 1910 the top price on hogs at Chicago was $11.20. In 1911 the top was $8.30; in 1912, $9.42; 1913, $9.70; 1914, $10.20; 1915, $8.95; 1916, $11.60; 1917, $20; 1918, $20.95; 1919, $23.60; and 1920 to date, $18.25. To a large degree the shrinkage in European business in provisions has been discounted. Readjustments in American industrial conditions and the next turn in European buying are the factors making for uncertainty in hogs today. Lower, yet quite profitable, hog prices on the basis of the cost of corn may therefore be reasonably expected.

League Co-operative Association Moves to Utica

Dealers Fighting Pooling Plan

At a meeting of the directors of the Dairymen's League Co-operative Association held on Thursday, October 7th, it was voted to move the main office of the association from New York City to the city of Utica, N. Y. The executive committee of the Dairymen's League was instructed by the directors to make arrangements for the rental of sufficient office space and for enough equipment to carry on the co-operative work when the new pooling plan is operative. The directors did not vote to move the office of the Dairymen's League itself but there is little doubt that these offices will be moved in a short time, also. The main reason for the change of office of the League is the saving that can be made in conducting the business upstate instead of in New York City.

It is almost a certainty now that the pooling of proceeds of the members' milk into a common fund will soon be in operation. This will make necessary more office room than the League now has. Both the clerks and floor space in New York City are much more expensive than in the smaller up-state cities. Office rent in New York City is fast becoming almost prohibitive.

Another reason why the League headquarters is to be moved is that there have been a large number of the members who have felt for some time that the main office should be located near the center of the milk production territory instead of at the sales end in New York City. This question has been argued at some length and there are many good arguments on both sides but up to the present time a majority have believed that the best interests of the League were served by having the main office located where the largest sales were made.

The larger amount of clerical help and office room needed to carry on the increased work of the Co-operative Association business puts a different aspect on the problem, making the arguments for an up-state location overbalance those for New York City. A small sales office will still be operated in New York City as well as in some of the other larger cities in League territory.

Nothing that the League has ever done has met with more opposition from the dealers and the other opponents of the farmers than the campaign to get the members to sign the co-operative contract and the order for pooling of the proceeds. A special writer of one New York City newspaper has written several bitter attacks on the League and its policies. These attacks have been reprinted by some of the large manufacturing dealers and circulated among farmers. The dealers are also sending out an anonymous circular statement throughout League territory, bitterly condemning the co-operative plan and the policy of pooling the proceeds.

It is evident in this as on other occasions that dealers have little understanding of farmers and credit them with little intelligence, or they would realize that their bitter attacks upon the League have just the opposite effect from that which they intend.

The directors coming from all parts of League territory on October seventh estimated that there are approximately 35,000 members who had already on that date signed the co-operative contract and the order for pooling. In other words, in the few days since the beginning of the campaign the great organization was nearly 50% signed on the new basis. This is the League's answer to the milk dealers. It is well understood by the farmers that what the dealer opposes is the very thing that the farmer needs. The buyers of milk well know that with the Dairymen's League once established on its new basis the milk dealer will have lost forever his grip upon both the producers and the consumers of milk.—E. R. EASTMAN, Editor Dairymen's League News.



AYRSHIRES FOR HAWAII

One of the largest consignments for export in recent months has been shipped from Morris Plains, New Jersey. This exportation consisted of forty-four head of Ayrshire cows between the ages of two and six years. Forty head were to the order of the American Factors Limited for the Lihue Sugar Plantation, Lihue, Kauai, Hawaii, and and the other four head were for the Kileau Sugar Plantation Co. of San Francisco for their Hawaiin Plantation.

This consignment was selected and assembled by L. E. Ortiz, Superintendent of Wendover Farm. It contained individuals from Barclay Farms, Delcher Farms, James Deubler's Sons, Penshurst Farms, Strathglass Farms, Wendover Farms, and Duncraggan Farms. The shipment was billed by express to San Francisco for shipment to Honolulu. This is the second shipment of Ayrshires to Hawaii since June, the previous order consisted of fifteen head from James Deubler's Sons consigned to the Pioneer Milling Co. Ltd., Lahania, Maui.—J. G. WATSON, Secretary Ayrshire Breeders' Association.

Uncle Sam's Hired Men Who Serve You

(Continued from page 607)

destroyed by dust explosions! In the following 20 months, from October, 1917, to May, 1919, no factory or elevator, using the devices recommended by Alsberg's specialists, has had a single fire or explosion!

The Bureau of Chemistry has a little plant down on the experimental farm of the United States Department of Agriculture at Arlington, Va., that makes gas from wheat staw, cornstalks and other vegetable rubbish. This gas will heat and light a house or run a stationary gas engine. They have very little money to work with but they are hopeful that they may develop a small inexpensive gas plant which the farmer can buy and set up on his farm. If they can do this it will be possible for the farmer to use the waste vegetation from his farm to supply his house with another great city convenience—light and heat at a turn of the wrist.

I asked someone, who knows Doctor Alsberg well, just what the subject's salient characteristics were, and he said: "His love for his mother; his love for ordinary people, and his love for his work."

Washington, D. C. Weekly News

[Special to Hoard's Dairyman]

WASHINGTON, OCT. 12—The general decline in market prices of farm crops had its reaction in the butter and cheese market the past ten days. Reports to the U. S. Bureau of Markets show the loss of last week's increase in butter prices, with absolutely no reason for this loss as far as receipts or general movement is concerned. Cheese closed "barely steady" although firm and strong at the opening of the week.

The whole marketing situation is showing the influence of world movements in all commodities, which evidently mark the beginning of results from the long pressed demand from the non-producers of the world that "The High Cost of Living" must come down. Just what this ultimately means in American markets can only be guessed at. Its present results are far from satisfactory to agricultural interests in general, and are beginning to indicate similar although less serious results in the dairy industries.

Study of all available data as to world food conditions seems to indicate that the season now at its close in the northern hemisphere was an unusually favorable one. The wheat crop in sight is 19 per cent above last year, according to the best figures of the International Institute of Agriculture. Forage crops are heavier than usual. The American corn crop is one of the largest on record, and is now at maturity without having suffered a setback.

Wool and cotton figures are less certain, owing to holdover stocks, but the weight of evidence is that the supply is above the normal consumptive demand. This is not the worst of it, the world demand is far below normal because of the inability of Central Europe to buy, the turmoil in Italy and Southeastern Europe, and the Russian situation. This is a brief outline of the situation as seen by close students here.

Under these conditions, it is pointed out by experts here, dairy interests can feel well satisfied that they remain in as good a market condition as they do. This is due to two things: the lack of heavy production in dairy products, thoroughly proven by Bureau of Market figures, and the strength of the dairy organizations, especially of the milk producers. Market milk is the first line of both defense and attack in the dairy business, and the milk producers' associations are bearing the brunt of the fighting and succeeding with admirable success.

There is some reason to look for a halt in the general decline at an early date by reason of the fact that business interests, especially manufacturing and banking, are waking up to the reaction on general business sure to come from the great slump in values of farm products. This slump has already reached into the four or five billion dollar figure, taking the chief farm crops of the entire nation as the basis for figuring. This means a decline in spending power of six or eight hundred dollars per family, and this means that automobiles, pianos, furniture, farm implements, etc., will not be bought, which would have been bought if price levels had remained at the high level or shown only a gradual decline. When industry fully realizes this there may be looked for such support of the market as can be influenced through banking and speculative channels. Of course, this can not affect actual sales or actual consumption, but it will be a palliating feature, very surely.

⚜

Agricultural organizations in Washington are uniting in the farm credits conference this week. The sessions include representatives especially of cotton growers and of the southern states, where the slump in cotton prices has hit hard, and a few representatives of most of the other agricultural interests. The call was the result of a protest meeting two weeks ago in Atlanta, Ga. Dairy interests will not be represented here this week, owing to the various meetings at the Dairy Show.

⚜

Professor George L. McKay, secretary of the Creamery Butter Manufacturers' Association, was called to Washington the past week by the unusual situation which has arisen here by the effort of Health Officer Dr. W. C. Fowler to enforce an ancient butter law, fixing the standard of butter here at not over 12 per cent moisture and not under 83 per cent butterfat. The law was passed in 1898. Professor McKay had a conference with Dr. Fowler, and later with other officials of the District Government and with the Department of Agriculture. No announcement was made as to what adjustment was reached as to the butterfat standards. Professor McKay stated that it would be impossible to comply with the requirements, and that a serious effort to enforce the same would leave Washington without a supply of butter.

⚜

Mention was made last week of the visit here of Dr. Swaving and Professor Van der Burg, representing Holland dairy interests. The distinguished visitors inspected the Beltsville experimental dairy farm, and then left for Grove City to inspect the government creamery and cheese making plant there. From Grove City they were to go to Chicago. Dr. Swaving gave an address to the heads of departments at the Department of Agriculture. explaining the methods of manufacture of both butter and cheese in Holland, and explaining in still more detail the system of government inspection and marketing which places Holland dairy products in the markets of the world under the official approval of the Dutch government. It was evident that the real purpose of the visit here is to popularize and open the way for imports of Holland butter and cheese.

⚜

It is understood here that the Illinois Agricultural Association is planning a dairy division, and will enter the dairy marketing field for its members. Professor Larsen of South Dakota is said to be the choice of the committee in charge to head this enterprise. This will make the third cooperative marketing project of this association.

Southern Wisconsin Guernsey Sale

The first sale of the recently organized Southern Wisconsin Guernsey Breeders' Association was held at Janesville on October 14. A goodly number of both out-of-state and local buyers were in attendance and, taking all things into consideration, the sale was a large success. At a get-together meeting following the sale both buyers and sellers had only words of appreciation for each other.

The top price was $1,400 for Roselle of Fox Valley, with 508 lbs. fat in Class AA and on retest making 413 lbs. fat in 228 days, while her dam, Yeksa Dimple of Fox Valley, has 578 lbs. fat to her credit in Class EE. She was consigned by W. J. Dougan who had put her into sale condition and she was easily the typiest animal in the sale. Geo. M. Hendee of Connecticut was the successful bidder, winning out over Mr. Lewis and Mr. James of Wisconsin who sought to hold her in that state. Mr. Hendee took three other of the best animals. Besides these four that went to Connecticut, Minnesota took five, Iowa took three, Illinois and Montana took one each, and 42 remained in Wisconsin with buyers widely scattered.

The total sale amounted to $20,070, the 63 animals averaging $319 each. The following lists the prices of those selling for over $400, together with the name of the purchaser:

Geo. M. Hendee, Connecticut	
Roselle of Fox Valley	$1,400
Princess Hambro	400
Edgemoor Beauty Annabelle	420
L. A. Yaeger, Minnesota	
Rena of Lecbrook	$710
C. Nelson, Wisconsin	
Governor Shamrock's Little Beauty	$400
Geo. W. Hull, Wisconsin	
Imp. Wheaty II of Les Quarters	$410
Wm. Barber, Wisconsin	
Ladysmith of Grafton	$710
Ephriam Hette, Wisconsin	
Creamcup of Pleasant Point	$450
Art Halverson, Wisconsin	
Celena of Pecks	$490
C. Kiesling, Wisconsin	
Rosy of the Douvre	$400
W. D. James, Wisconsin	
Standard's Derina	$430
Geo. E. Richardson, Minnesota	
Bob's Melrose	$500

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

For Sale or Rent

Maple Grove Dairy Farm
Smithville - Ohio

Is for sale or rent. If not sold by Dec. 20, will be for rent. 212 acres, 50 head of registered Jersey cattle. Fertile soil and very fine buildings. No better location.

Address: Mrs. L. I. Buchanan, 904 Beall Ave., Wooster, Ohio.

The Improved Humane Stanchion

is the handiest, strongest, and most practical Stanchion on the market. Write to Humane stanchion Works, Baraboo, Wis., for literature on a complete line of barn equipment.



For bedding most convenient, serviceable and sanitary. Write for prices.

Defnet & Jagerson Supply Co., Neenah, Wis

MORE and BETTER MILK

In Return for Peace and Comfort

Convenience, cleanliness and comfort in the dairy barn save feed, time and labor and make the milk checks bigger. Give your cows safety and quiet, with pasture ease standing or lying, by installing Clay Sanitary Steel Stalls and Clay One-Hand 2-Way Stanchions. Better for the herd, for you and for your bank account.

CLAY Dairy Barn Equipment



makes dairying pleasant and more profitable. **Permanent construction** cuts up-keep costs. Strong, simple steel tubing—no dangerous corners. Easily cleaned. Stanchion closed or opened **both ways by one hand.** Fits any size animal. Hangs in center of stall—no sure-stops needed. Lock warranted cow-proof. All **CLAY** Equipment fully guaranteed.

FREE Barn Plans Our architects will plan your alterations or new buildings FREE. Let us help you make more money. Send name today—postal will do—for big catalog and Free Barn Plan Blank.



IOWA GATE CO., 201 Clay St., Cedar Falls, Iowa.

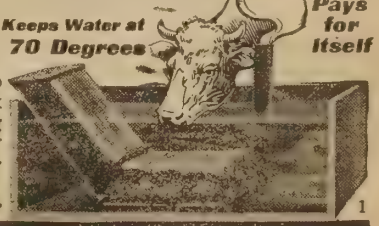
Don't Let Ice Water Freeze Out Your STOCK PROFITS

Your stock can't do well on ice water. Chilled stomachs retard gains and reduce milk yields. The NELSON Tank Heater burns wood, coal, cobs or straw.

NELSON Tank Heater

Soon Pays for Itself

Keeps Water at 70 Degrees



Heats twice as fast as any other heater. No welded seams to leak or rust, End of fire box and smoke pipe cast in one piece, extending above water line. Won't rust out. Clearance space for water to circulate under heater—ashes easily removed.

Write for Free Circular NOW.

HUDSON MFG. COMPANY, Dept. 31, Minneapolis, Minn.

Lowe's



Are you going to look on while he tears it down?

Are you going to let old man "Wear and Tear" have his way, destroying your buildings this Winter—or are you going to shut him off with a paint brush this Fall?

When you think what buildings cost these days; the cost of paint is nothing compared to the wonderful way it saves your buildings.

You know that the trouble with most of your neighbors is: that they don't paint until they *have to*. When you *have to* paint, your painting costs a lot more than it ought to. Costs more, because you *have to* use more paint and *have to do* more painting.

The time to paint your buildings is *before* they actually need painting. One coat will then do the work of two. So if you can't paint now, at least buy your paint. Send for circular on—"Figure Your Painting Costs with a Brush—Not a Pencil." Lowe Brothers' Paint is sold by the one best dealer in each town.

The Lowe Brothers Company
491 EAST THIRD STREET, DAYTON, OHIO
Boston New York Jersey City Chicago Atlanta Kansas City Minneapolis Toronto

Paints



Stock Raising in WESTERN CANADA

Is as profitable as grain growing. Successes as wonderful as those from growing wheat, oats, barley, and flax have been made in **raising Horses, Cattle, Sheep and Hogs.** Bright, sunny climate, nutritious grasses, good water, enormous fodder crops—these spell success to the farmer and stock raiser. And remember, you can **buy on easy terms**

Farm Land at $15 to $30 An Acre

—land equal to that which through many years has yielded from **20 to 45 bushels of wheat to the acre**—grazing land convenient to good grain farms at proportionately low prices. These lands have every rural convenience; good schools, churches, roads, telephones, etc., close to live towns and good markets.

If you want to get back to the farm, or to farm on a larger scale than is possible under your present conditions, **investigate what Western Canada has to offer you.**

For illustrated literature with maps and particulars regarding reduced railway rates, location of land, etc., apply to Department of Immigration, Ottawa, Canada, or

GEORGE A. HALL
123 Second St., Milwaukee, Wis.
Canadian Government Agent.

WESTERN CANADA
Farm Lands at Low Prices
The Wheat Belt of America

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

Only $2 DOWN ONE YEAR TO PAY



$44 Buys the New Butterfly Jr. No. 2½ Light running, easy cleaning, close skimming, durable.

NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on

30 DAYS' FREE TRIAL

and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (21)

EASY TO CLEAN

ALBAUGH-DOVER CO., 2161 Marshall Bl. Chicago

Whitewater Calf Industry

(Continued from page 599)

inserted a small advertisement in an agricultural paper. Replies were so numerous that he could have sold each calf a half dozen times. It was simply that the advertisement reached out beyond the local field where practically every farm produced more than enough calves to meet its own replacement needs. As there seemed to be a dearth of calves in certain less developed parts of the country, this individual began buying his neighbor's surplus calves and selling them by mail. Naturally, he advertised under the name of his farm. Seeing that he was building up a prosperous business, others began, after a few years, to copy his methods. At present there are perhaps fifteen or more individuals in this vicinity who are engaged in buying calves wherever they can get them and shipping them to mail order customers all over the country. A portion of them advertise under a farm name; others do not. But the business has long since expanded to the point where calves must be brought in from greater and greater distances. Large numbers of them come from the Milwaukee stock yards where they are picked by experienced men who judge them wholly on the basis of their appearance and promise of developing into likely animals.

Perhaps the only thing that introduces a suspicion of misrepresentation into the Whitewater calf industry is the fact that so many of these shippers continue to use a farm name in their advertising. This, of course, leaves them open to criticism but it appears to be a fact that in such instances the men own and operate farms bearing the names in question. Competition, moreover, is keen and this, perhaps, as much as anything else is responsible for the inclination to cling to the advantage which the use of a farm name lends in an advertising way. As in other lines of business, selling calves by mail—especially the offspring of grade cows—offers a field in which unscrupulous individuals may fatten. While such have not been unknown in Whitewater the business, for the most part, appears to have been in the hands of men who occupy positions of standing in the community. However, certain substantial citizens are frank to express regret that much of the advertising involved should carry the impression—while not actually affirming—that the calves offered are bred on Whitewater farms. Breeders of pure-bred stock in the vicinity naturally, also, feel that they have cause for complaint—especially since the calf industry, which at first was confined to grade animals, is now branching out into the handling of pure-breds.

Turning, now, to the other angle of this industry it will be seen, it is believed, that there is something to be said in favor even of selling veal calves from this section at double their stockyard prices to dairymen in other parts of the country. Naturally, thousands of calves from Wisconsin farms find their way to the Milwaukee stock yards. These calves represent the surplus by-product, so to speak, of an industry which has made Wisconsin famous as a producer of milk and milk products. Into the vicinity of Whitewater, for instance, one Septer Wintermute, an early breeder, brought a splendid bull as much as 30 or more years ago. He paid $1,000 for him—a top-notch price for that time. To this day the blood of Septer Wintermute's wonderful bull mingles in the blood of many of the grade cows to be found upon the farms of Walworth County. Similar conditions exist elsewhere. In a way, even the grade herds of Wisconsin are the result of years upon years of constructive dairy work no less than are the herds that have been built upon definite blood lines. It is undoubtedly true that many a calf in this region has been turned into veal that would have developed, under proper care and handling, into a splendid producing dairy animal. The chief misfortune of many calves that get to the Milwaukee stock yards is simply a lack of pedigree. Like many orphans of the human kind they are permitted no opportunity to show what they can do. When the condition of the dairy industry in certain parts of the South and West is considered, it must be evident that these calves—orphans though they be so far as antecedents go—can far better serve human needs in the form of producing cows than as veal.

It is interesting to note that hundreds of these grade calves have been distributed among the farmers of the South by bankers, big lumber companies, and other concerns that come in touch with rural life. One southern buyer recently sent in an order to a Whitewater calf shipper for fifty head. In his letter he stated, "The first calves you sent me a few years ago are now producing milk on farms in this vicinity and giving a splendid account of themselves. They are a marvel to the farmers of this community." So, even the calf which is without honor in her own country may find it thrust upon her when she begins to produce milk in a region where almost anything with hoofs, horns, and milk veins is looked upon as a cow. It is but another illustration of the fact that a comparatively valueless product in one region may become a valuable one in another.

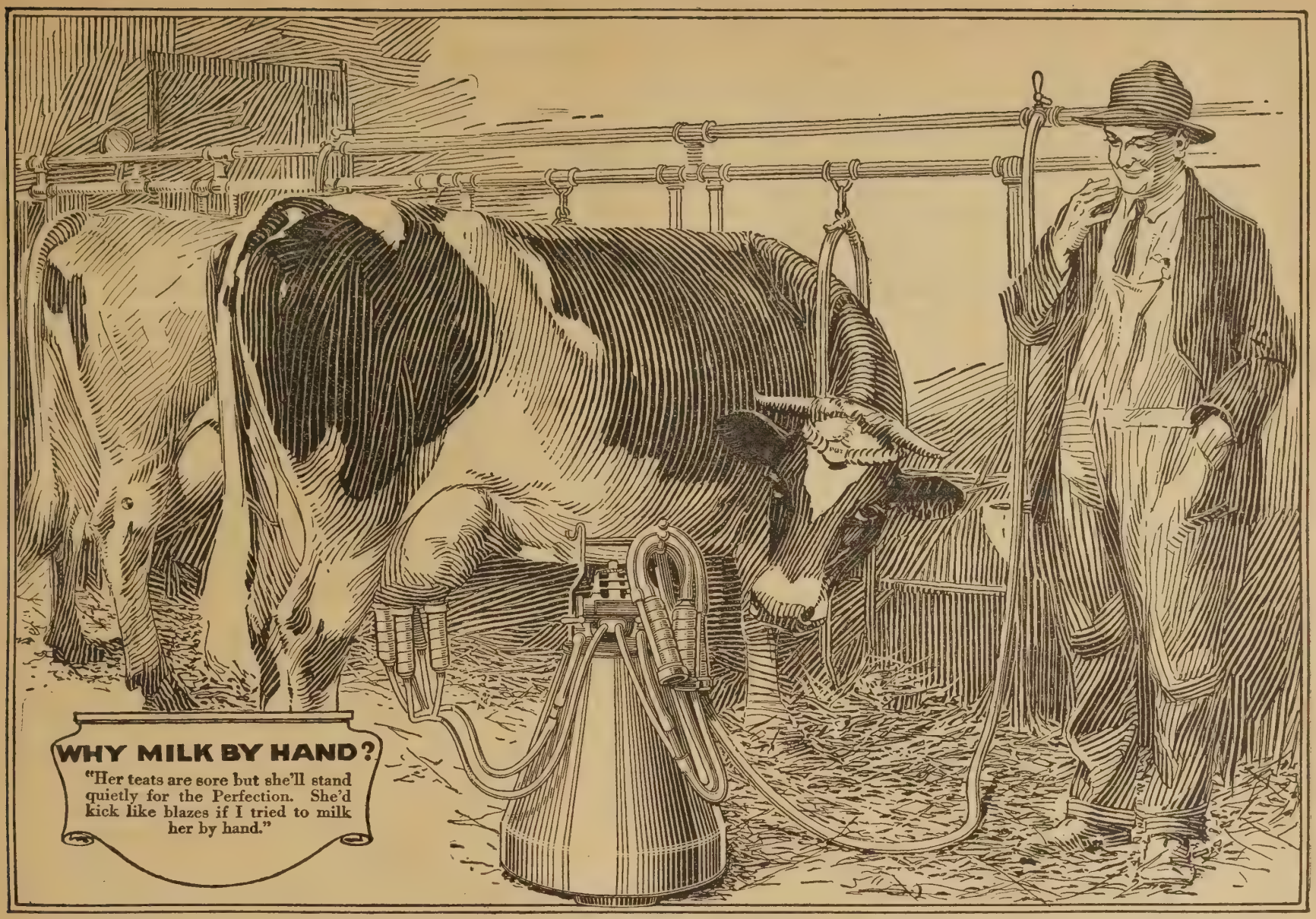
A leading shipper stated that while he would not be positive in his assertion he believed that he had shipped calves to every state in the Union. "Most of them," he said, "go to the states where dairying is far from being as developed as it is in Wisconsin. We have some complaints, of course. One man wrote me recently that his cows were not producing as he expected. We told him this was a thing we could not guarantee as so much depends upon care and feed. I've chuckled several times over his reply to my letter. He said, 'He guessed he didn't have much cause for complaint, but that he thought he ought to kick a little on general principles.'"

To this statement the same shipper added these words which it is well to to record: "Even those who ship calves C. O. D. meet with few refusals to accept the animals after they have inspected them. *A calf never looks larger or finer than it does in a crate.*" Perhaps this last information is worth filing away in the back of one's head for future reference.

Flax Straw Useful

Don't waste the flax straw because there is a good market for it right now," says A. H. Wright of the Wisconsin College of Agriculture. "Wisconsin's flax straw is superior to that of the states farther west and commands a higher price because of its greater length."

Various uses are found for flax, but the chief are those using the so-called "green-tow" in the manufacture of rugs, upholstery, and carpets. According to Mr. Wright many inquiries are being made for sources of flax straw and the College of Agriculture, Madison, is offering to assist anyone in the sale of his straw by referring his name to manufacturers.



"On the fourth day of the test the teats of my Junior Three Year Old got so sore I could no longer milk her by hand. So I finished the test with the Perfection which she liked far better and was surprised to see a big increase in the milk flow. No more hand milking of test cows for me." —D. N. GEYER.

Cows Prefer Perfection To Hand Milking

UNDOUBTEDLY you have had cows with sore teats. Remember how hard they were to milk and how they kicked when you milked them by hand? If you were to see those same cows stand quietly while being milked with a Perfection and increase their milk flow, you would be convinced that cows prefer the Perfection to hand milking.

Hundreds of Perfection owners tell us that their cows prefer the Perfection to hand milking. They stand for it quietly and give more milk. Cows prefer Perfection's action because it is just like the calf's, a gentle suction followed by a downward squeeze, followed by a period of rest. And the Perfection can be adjusted to either hard or easy milkers.

You too will prefer the Perfection. It does the work of three men. It soon pays for itself in saving of wages. Get a Perfection for your cows and see how much better they like it than hand milking.

Find Out More About The Perfection

Send for a copy of our book "What the Dairyman Wants to Know." It's free. We shall also be glad to give you the names and addresses of Perfection owners near you. Why milk by hand? Cows prefer Perfection.

Perfection Manufacturing Company

2100 East Hennepin Avenue Minneapolis, Minnesota

PERFECTION MILKER

MARKETS

MILWAUKEE, Wis., Oct. 14—Butter—Creamery, tubs, 55c; prints, 56c; extra firsts, 54c; firsts, 52@53c; No. 1 packing stock, 34@35c; No. 2 do, 20@30c.

Eggs—Fresh firsts, recandled for city trade, 60@61c; current receipts, country candled, 55@56c; checks, 37@41c; dirties, 41@44c.

Cheese—Twins, 23⅝c; Daisies, 26½c; Longhorns, 25½c; fancy Brick, 25c; Limburger, new, 1 lb., 22c; Limburger, new, 2 lbs., 22c.

CHICAGO, Oct. 14—Butter—Creamery, extras, 54½c; standards, 52¾c; dairy, firsts, 45@53c; seconds, 40@43c.

Eggs—Ordinary, 45@55c; firsts, 57½@58½c.

Cheese—Twins, 25⅛c; Young Americas, 26c.

NEW YORK, Oct. 14—Cheese—Weak; state milk, common to specials, 20@29c; skims, common to specials, 10@20c.

Butter—Weaker; receipts, 8,263 pkgs.; creamery, extras, 59@59½c; state dairy, tubs, 43@59c.

Tecktonius Silos

at Wholesale Prices

1 Piece Fir Staves

12 x 20 — $262.75
12 x 24 — 305.85
12 x 26 — 332.65
12 x 28 — 359.45
12 x 30 — 386.00
14 x 30 — 440.50

Including fixtures and staves

F. O. B. your Station

Write for circulars

McDonald Yards, Appleton, Wis,

Complete Dispersion

C. E. Ward's Holstein Herd

Palmyra, Wis., Nov. 1st

Having leased my farm, I am disposing of my entire herd of registered Holsteins. It includes 27 head, rich in Ormsby and Johanna breeding. Among them are 2 daughters of a 20.7-lb. cow, a daughter of a 22.5-lb. cow and a daughter of a 17-lb. 4-year-old.

There are several daughters of Sir Korndyke Bess Pietertje and Sir Johanna Coronna, both of them grandsons of S. P. O. M. All the females of breeding age are bred to Sir Johanna Coronna. He will also be sold.

Sale will be at the farm 4 miles north of Palmyra and 5 miles south of Sullivan. It begins at 1:00 p. m.

Everything tuberculin tested and guaranteed

For catalogs write

C. E. Ward, Palmyra, Wisconsin

Auctioneer: J. E. Mack. Pedigrees: J. G. Voss.

Registered and Grade Guernseys at Public Auction

C.D.Curtis and J.D. Bolton

New Lisbon, Wisconsin, November 5th, 1920

Herd Sire Offered — King May Secret of Homestead No. 52964

He is sired by Pencoyd's Golden May Secret No. 39626, that sold for $10,000.00, and is out of Nella Jay IV, A. R., 3rd highest producer of the breed; milk 20,709.9 lbs., butterfat 1,019.2 lbs. Dam is Raymond's Tidy, A. R., milk 8,419.0 lbs., butterfat 435.6 lbs. at 2 yrs.

A number of the progeny of this sire are offered in the sale, and all females listed as bred, are bred to him. Animals sold subject to sixty-day retest.

Several cows with Advanced Registry records will be listed, also a number of cows now on official test. The best breed families are represented in the pedigrees, such as May Rose, Yeksa, Masher Sequel, etc.

Write for catalogue to

F. E. Fox, Sales Manager, Waukesha, Wis.

A 35-lb. Bull Had 3 Sons — Buy One

The bull, Triumph Concordia De Kol, has 8 A. R. O. daughters. His dam was Lady Concordia De Kol, 35.08 lbs. in seven days and has three A. R. O. daughters. He weighed 2,700 lbs. and was a great individual. His get is remarkably sized, straight and strong.

Son No. 1—Prince Concordia Triumph 295965. Eighteen months old. His dam made 65 lbs. fat in one month, was a daughter of Segis Lyons with 18 A. R. O. daughters. This is a bull of great individuality ready for heavy service. He will make a great herd sire.

Son No. 2—Concordia De Kol Triumph 299880. Fit in every way to carry his sire's name. Sixteen months old, out of a dam now on yearly test and running strong.

Son No. 3—Eleven months old. His dam is a granddaughter of Sir Ormsby Skylark, sire of world's champion butter cow. He should make a sire of eminent perfection of type and production.

I've been breeding good Holsteins for 14 years and can recommend any of these. The price will strike you as very reasonable.

Can't tell you all about these in an ad. But I can send you a good fair description of each one if you'll ask for it.

Orville L. Hamer - Waterloo, Iowa

My Herd is Accredited.

When Writing to Advertisers, Mention Hoard's Dairyman

Buy Lake County, Indiana, Holsteins

At Lake County Holstein Breeders' 2nd Annual Consignment Sale

Crown Point, Indiana, Fair Grounds

Monday, October 25th, 1920

65 HEAD — Consisting of 24 A. R. O. Cows
27 Daughters of A. R. O. Cows. 5 Young Bulls

This Offering has been Carefully Selected from the Best Herds of Indiana's Leading Holstein County

Send wire collect for Catalog to

C. Harry Newton, Secretary Crown Point, Indiana



Has put the proof Right in the pail

You don't have to "try" Purina Cow Chow. It has been tried and proven, over and over. For every 5c extra spent for Purina Cow Chow, average users get back about 12c extra. This is the way it figures out.

Spend $10.00 more—get $25.00 More

Suppose Cow Chow costs you $10.00 per ton more than what you are now feeding. That's 50c per bag—½c per pound. Each cow will eat 8 to 10 lbs. of Cow Chow per day, costing only 4c to 5c more.

Get 3 pints More Milk Per Day

Cow Chow will make you about three pints more milk per day per cow. These three pints, that you are not getting now, should sell for 12c to 15c wholesale—maybe more. These figures are really low, because many users report much larger gains.

Order at least two sacks for each cow in your herd, and you will never go back to the old way of feeding. The cows like Cow Chow and it keeps them in fine condition.

See your dealer. Write for "The Purina Cow," free.

RALSTON PURINA CO., St. Louis, Mo.
Fort Worth, Tex. Nashville, Tenn. Buffalo, N. Y.

Sold
In Checkerboard Bags Only

Purina Cow Chow

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Selection and Care of Poultry Breeding Stock

One of the essentials for success in poultry-club work is good stock. This means standardbred stock, for this stock has been bred and developed for specific purposes and therefore best meets the needs of the boy or girl. A flock of standardbred fowls possesses a uniformity of appearance which the mongrel flock never has, and will arouse the club member's pride and lead to better care.

Moreover, standardbred fowls produce eggs and table carcasses which



A STANDARD BRED PLYMOUTH ROCK MALE

are much more nearly uniform in size, shape, and color, and which therefore bring better prices. It costs no more to feed and care for standardbred fowls than for mongrels, and there is often an added income possible from them, which may amount to a handsome profit from the sale of breeding stock or eggs for hatching.

Health and Vigor

Only by continuous selection for health and vigor is it possible to build up a flock which will produce fertile eggs, strong chicks capable of making quick growth, and pullets with sufficient stamina to withstand the strain of heavy egg production. The appearance of a bird is not always a sure indication of its vigor, but appearance and action taken together are a fairly reliable guide for picking out vigorous birds.

The comb, face, and wattles should have a good, bright color; the eyes should be bright and fairly prominent, and the head should be comparatively broad and short, having a fairly short, well-curved beak and showing no tendency to be long, "snaky", or "crow-headed". The bird should be alert and have a strong, vigorous carriage; the legs should be set well apart and strongly support the body, giving no indication of weakness or a knock-kneed condition. The bone, as seen in the shank, should be strong and not too fine for the breed, while the toes should be strong, straight, and not too long. The plumage should be clean and smooth, as a lack of condition often accompanies soiled, roughened plumage. The condition of flesh should be good, as a very thin bird is usually in poor health. Sick fowls or fowls which have apparently recovered from sickness should never be used by the club members for breeding if it can be avoided.

Object of Breeding

In selecting stock for mating, the club member must keep clearly in mind the purpose of the breeding. If it is the purpose to produce exhibition stock, it is necessary to select birds that are nearest the standard in color, type, and markings, or which when mated will combine their qualities so as to produce offspring most nearly conforming to the standard.

If the desire is to produce table fowls, a breed that has a standard type or a body shape suitable for carrying an abundance of meat should be selected. They should be broad and deep of body, have good length of back and keel, and especially a broad breast well covered with meat. If the desire is to breed for eggs, birds should be chosen, so far as possible, that are good egg producers or are the offspring of good egg producers and conform to the standard requirements for the breed. If hens are trapnested, it is easy to make the selection on the basis of good egg production. If trap nests are not used, it will be necessary to make observations of the stock several times during the fall, from August to November, in order to note which are the best layers as indicated by the time of molt and lateness of laying. For information how to make such a selection, see Farmers' Bulletin 1112.

Whatever the purpose of the breeding, progress will be made most quickly by picking out the best individuals in the flock and using them as breeders rather than by breeding from the flock as a whole. The selection of a male for the mating will be influenced largely by the character of the females used. If there is a general weakness in the females in any respect, this should be offset so far as possible by strength in that particular in the male used.

Time of Mating

Matings should be made at least two weeks before beginning to save the eggs for hatching. If less time is allowed, the maximum fertility is not likely to be obtained. It is often desirable to mate even further ahead than two weeks so that a few eggs can be incubated for 5 or 6 days to see whether they are fertile. If these eggs are not fertile, there is still time to change the male bird and thus be sure of fertile eggs for the earlier hatches.

Size of Mating

The breed influences the size of the matings. If the fowls are confined to a yard it is usually desirable to run from 12 to 15 females of the smaller breeds, such as the Leghorn; from 10 to 12 females of the general-purpose breeds, such as the Plymouth Rock; and from 8 to 10 females of the heaviest breeds, such as the Brahma, with 1 male. Where the fowls have free range and the male is strong and vigorous, it is often possible to obtain fertile eggs with a considerably larger number of females to each male. A vigorous Plymouth Rock cockerel on free range should give good fertility when mated to 20 females, while a Leghorn male under similar conditions can be mated to 25 or 30 females, with good results. If eggs for hatching are desired from a flock too large for a single male to fertilize, two or more males can be run with it, either at the same time or preferably by alternating the males on successive days. It is best, however, to use a mating small enough so that a single male can be used.

Age of Breeding Stock

Either pullets or hens and either cockerels or cocks can be used in the breeding flock. If cockerels or pullets are used, they must be well matured. Hens are better than pullets, as they lay larger eggs and give better fertility and stronger chicks. Yearling and 2-year-old hens are better than older hens. If pullets are used as breeders they should be mated with a cock rather than with a cockerel, while if a cockerel is used he should be mated with hens rather than with pullets. As a rule, well-matured cockerels will give better fertility than cocks.

Free Range for the Breeding Pen

When possible, free range should be provided for the breeding stock. It



POOR SPECIMEN FOR BREEDING STOCK—KNOCK KNEED

is better to provide it during the entire fall and winter before the breeding season, but, if this is not possible, free range just preceding and during the breeding season will be of great value. Birds on free range will get more exercise and therefore will be in better health and will give higher fertility, better hatches, and stronger chicks.

Maintaining Flock Fertility

Watch the breeding flock carefully and see that the fowls keep in good breeding condition. The birds and the houses should be examined to see that they are not infested with lice or mites. Either of these pests in any numbers will seriously affect or totally destroy fertility. Care must also be exercised to see that the male does not frost his comb or wattles. If these are frosted his ability to fertilize eggs will be impaired and may not be recovered for several weeks. On very cold nights when there is danger of the combs being frosted the males to be used as breeders must be placed where their combs will not freeze. This can be done by placing them in a box or a crate of suitable size partly covered by a bag or cloth. The breeding male should be examined occasionally after feeding to see that his crop is full and that he is not growing thin. Some males will allow the hens to eat all the feed, with the result that they get out of condition. If this happens the male must be fed separately from the hens at least once a day.

Housing Breeding Stock

The breeding stock must be provided with comfortable quarters. This means that the house must be draft proof yet well ventilated and dry. Room enough must be allowed so that the birds will not be crowded. If the birds are yarded, 4 square feet of floor space per bird should be allowed, but on free range from 3 to 3½ square feet per bird will be enough.

Feeding Breeding Stock

The breeders must be fed so as to keep them in good condition and so that they will produce eggs. Any good laying ration is suitable for this purpose, but it should not be extremely forcing, or, in other words, should not have an extremely large proportion of beef scrap, not more than from 10 to 15 per cent of the total ration. The birds should be kept in



HIGHEST SCORING TEAM IN DAIRY CATTLE LIVE STOCK JUDGING CONTEST AT INDIANA STATE FAIR

Left to right: Ralph McCardle, Robert Young, Clarence Libbert, Wayne Huff (alternate). Represent Indiana at National Dairy Show.

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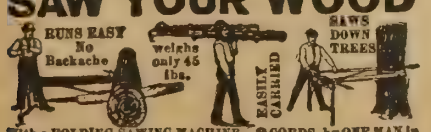
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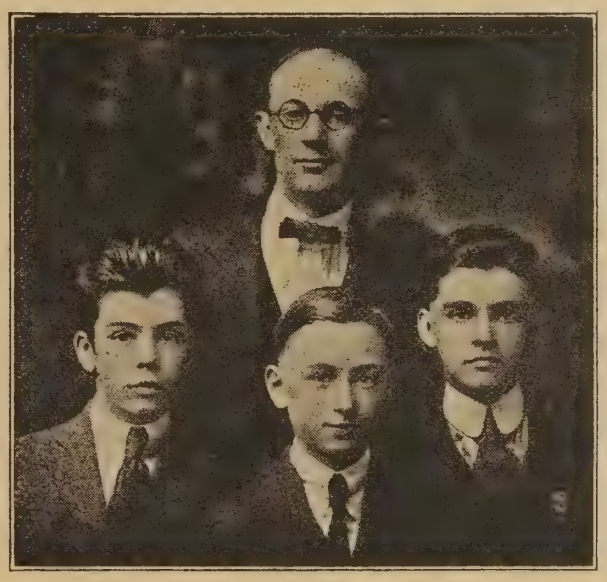
good flesh but should not be allowed to become excessively fat. All whole or cracked grain should be fed in the litter so as to force the fowls to exercise by scratching for it. As a supply of green feed is usually lacking late in the winter or early in the spring, sprouted oats, cabbage, mangels, or cut clover or alfalfa should be fed to the fowls.—ROB R. SLOCUM in Farmers' Bulletin 1116.

Juniors in Dairyland

The Harford County team went home from the state-wide dairy cattle judging contest for agricultural boy club members at the Maryland State Fair, Timonium, September 3, with first place honors, $150 in cash prizes, and a pure-bred Jersey bull calf.

As a result of this contest, the first of its kind ever held in the state, Maryland was represented in the junior judging contest for dairy cattle at the National Dairy Show in Chicago, October 8.

The Timonium contest was exceptionally noteworthy because of the interest aroused throughout the state in the dairy industry and because of the generous prizes and liberal support which the fair officials contributed to make it a success. Despite the fact that a limited period of little more than a month was given to prepare for the contest and that calf club work in Maryland has not been generally developed, sixteen of the twenty three counties of the state were represented in the contest and competed so closely for honors that prizes were distributed among thirteen teams.



THE HARFORD COUNTY JUDGING TEAM
From left to right: Edger Palmer, Joseph Hoopes, and Chas. R. Davis. They are backed up by Assistant County Agent, W. C. Snarr.

The contest was staged through the efforts of the University of Maryland Extension Service in co-operation with the fair management and only bona fide sons of farmers who were actual boy club members were admitted. It was superintended by G. E. Wolcott, specialist in dairy husbandry for the University of Maryland Extension Service, ably assisted by E. G. Jenkins, State Boys' Club Agent, P. W. Chichester, Assistant Boys' Club Agent, and all the county agents.

So far as premiums were concerned, the contest was rich with opportunities. Five team prizes, ranging from $100 to $150 were offered by the fair association. Individual prizes, ranging from $25 to $50, were offered to the boys making the best standing in judging each of the four dairy breeds—Jerseys, Holsteins, Guernseys, and Ayrshires—represented in the rings. As a sweepstakes prize, a pure-bred bull calf from each breed was awarded. And in addition to this the fair association bears all expenses of the team finally selected to represent the state at the National Dairy Show at Chicago and pays all expenses of the county teams to and from Timonium and during their stay on the grounds.

Junior Letters

Hoard's Dairyman Juniors:—I have four guinea pigs. My old one had three little ones. They are two or three days old. My two little chickens died.

There is a pig club here this year but I am too young to join.

We have five horses and three colts. One of the colts is pretty tame. I am going to buy a pure-bred Holstein heifer calf. We also have four cows and one heifer that we milk and another heifer which will be fresh soon, one yearling, five calves, four heifer calves and one bull calf. One of the heifer calves is a high grade.

Well, I will close, wishing some of the juniors would write to me. My address is R. F. D. No. 2, Union, Ia. Addie Curless.

Hoard's Dairyman Juniors:—This is my first letter to the juniors' page. We have 8 cows. Five are registered Holsteins and the rest are grades. We have a registered Holstein bull. His name is Aaggie Colantha Pontiac Rag Apple. I am 11 years old and in the 6th grade. I wish some of the juniors would write to me. My address is Route 3, Hillsboro, Ore.
Edward Spiering.

Hoard's Dairyman Juniors:—I have been reading the junior letters for some time and thought I would join. I am 14 years old. I have been plowing this last week. I have two sheep. One of them is an old one; the other one is young. I paid $10 for the old one last year and $6 for the young one about 2 weeks ago. If some junior would like to write to me my address is Janesville, Minn.
Theodore Winter.

Hoard's Dairyman Juniors:—I'm a little delicate boy 12 years old who has never been to school. I can read, though, and have read lots of good books. I have three brothers and three sisters. My father is dead. My brothers, 18 and 15 years old, and I run a dairy. We milk 12 cows and sell whole milk. I have two nice cows. Gave my baby sister one. Mamma lets all of us have cows and ponies. We have two good saddle ponies that we drive to the milk wagon. We have three good work horses and we boys run our 80-acre farm. We raise cotton, barley, kaffir and Sudan for hay and pasture.

Guess I've writen enough. Would be glad to have letters from some of the juniors.
Oklahoma. Martin Rutherford.

Hoard's Dairyman Juniors:—I have 13 ducks, but I had 18 and I lost 5 of them. They are growing fast. We have 8 cows and 5 calves. We have 18 hogs but the most of them are just little pigs. We have about 35 rabbits around here; about 30 of them are little ones.
Ohio. Eli Bontragh.

Hoard's Dairyman Juniors:—My father takes Hoard's Dairyman. I like to read the junior letters and the stories about Bob Ramsay and Jimmy Greene.

I am 13 years old, and in the first year at high school.

My mother and I have 22 rabbits in partnership. They are Belgian hares.

We have 9 cows. Three of them are pasturing on another farm. We are only milking three of them. Their names are Laurie, Katy, Dora, Black Beauty, Mollie, Lassie, Queen, Maude, and Nancy. We have two calves, too, and one yearling.

We have three horses. Their names are Judge, Desire, and Gipsy.

Our farm is about 55 acres of which 5 acres are not tillable. They are woods.

We have about 100 White Leghorn hens.

My address is Route 5, Bath, N. Y.
Ethel Perry.

Hoard's Dairyman Juniors:—I received the watch fob, button, and creed and thought them very nice. I am twelve years old and in the 7th grade. I walk three miles to school every day. We have seven Holstein cows and twenty-five three-week-old pure-bred O. I. C. pigs.

It has been very seasonable here and plenty of rain. The corn crops are good.

I wish some of the juniors would write to me. I enjoy reading their letters. My address is Lovettsville, Virginia. Best wishes to all the juniors. Wilford H. Spring.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

Registered Holstein Bulls sired by sons of King Segis Pontiac and Juliana King of Rock. Nearly ready for service. W. R. GATES, Fort Atkinson, Wisconsin. 8*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

High grade Holsteins. 40 head springers, $140.00. JNO. H. WALL, Elkhorn, Wisconsin. 12-3

Holstein pure-bred and high grade heifer calves well marked from 27- to 30-lb. sires. $30.00 to $50.00 C. O. D. crated. PLAIN VIEW FARM, Neponset, Illinois. 13-2

Pure-bred Holsteins—three heifers, five and nine months old, one from 20-lb. dam, 31-lb. sires, $125.00 each. Three weeks old heifer calves, best of breeding, $80.00 each. Several bull calves, three weeks old, $37.00. Shipped C. O. D. subject to inspection. YOHN STOCK FARM, Watertown, Wis. 13-2

Extra well bred, yearling, pure-bred, Holstein bull for sale cheap. W. D. HOSTROP, Fonda, Ia. 13-2

For Sale—30 choice, high grade, Holstein cows, springing and fresh. Also 6 well marked heifer calves, $30.00 each, express paid to your station. CRAWFORD STOCK FARM, Mukwonago, Wis. 13*

For Sale—Carload choice bred and heavy springing Holstein heifers, mostly sired by 31-pound bull. CHARLIE DEARTH, Mineral Point, Wis. 13-4

Seven young registered Holstein cows, 2 just fresh, 5 due soon. Also 9 yearlings. All choice individuals. Herd on accredited list. Liberty Bonds taken. O. E. MULLEN, Watertown, Wisconsin. 13-3

72 head—Stephenson Farm—72 head. We are selling our entire herd. There are a few of the original pure-breds and also some very high grade cows, heifers and yearlings. For particulars write CHARLES A. PHILLIPS, Kenosha, Wis. 13-2

For Sale—Canary Homestead Oak De Kol No. 89469. This sire has 33 A. R. O. daughters. His dam has a record of 29.55 and his sire's dam 34.96. Gentle and a sure breeder. Will consider trade for a bull of equal breeding or an A. R. O. cow. PETERSON BROS., R. 1, Blair, Wisconsin. 13-2

Don't pay for my calves until you see them. Beautifully marked, high grade Holstein heifer calves, $25. Registered bull calves, $40. I ship C. O. D. and guarantee safe delivery and satisfaction. J. M. McFARLAND, Watertown, Wisconsin. 14-2

Holstein bull calves from 1 to 6 months. From A. R. O. dams or daughters of A. R. O. cows, 28-lb. sire. Price, $35 to $75. W. E. RAY, Kewanee, Ill.

Yearling Holstein bull from dam that made 15.1 lbs. as a two-year-old. Sire: 28-lb. grandson of King Segis. Straight as a line, large for age and guaranteed. $150. Also two young cows, nearly white, fresh Oct. 25, $550 for both. W. E. RAY, Kewanee, Illinois.

Five registered Holstein cows, from tested dams and bred to 31-lb. bull. Also two calves, a bull and heifer by 35-lb. sire. MERRIMAN BROS., Deckerville, Michigan.

Registered Holstein heifers for sale. Priced for quick sale. E. A. FOTH, Sparta, Wisconsin. 14-3

For Sale—30 head of large, heavy producing Holstein cows. Also two registered sires. H. F. McNUTT & SON, Oxford, Wisconsin.

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

STOCK FOR SALE

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

For Sale—Cows, bulls. Registered Guernsey cows and bull calves. OTIS A. MARKEN, Valders, Wisconsin. 10-5

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

Guernsey bulls—Two weeks to two years old. Grandson of Langwater Cavalier, 18 months, $150. EDWIN B. MAULE, Coatesville, Pa. 13-2

Several very nice May Rose Guernsey bull calves from high producing ancestry. Prices reasonable. SHORELAND FARM, Hartland, Wisconsin. 14-3

For Sale—Entire herd of Guernseys. Three registered females, one bull. Seven high grade cows, eight heifers and calves. WALTER E. SATTERLEE, Irving, Illinois. 14-3

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Guernsey herd bull for sale—Five years old. Rich in Governor of the Chene breeding. Also two sons, 13 months and 7 months. Tuberculin tested herd. DUCKETT BROS., Burlington, Wisconsin.

For Sale—Four registered Guernsey bulls ranging in age from 4 months to one year. Nicely marked. King of May and Sequel breeding. One pure-bred heifer calf three weeks old. Must be sold. CHAS. A. HOLM, Tigerton, Wisconsin.

For Sale—A few choice Guernsey bulls of serviceable age. Excellent breeding. Prices very reasonable. TARBELL FARMS, Smithville Flats, N. Y. 14-4

For Sale—4 serviceable grandsons of Itchen May King, Grand Champion 1920 National Dairy Show. From A. R. dams with records up to 546 lbs. fat. Prices, $150 to $500. Federal Accredited herd. ROY BURTON, Eagle, Wisconsin. 14*

Three registered Guernsey bulls, nine to twelve months old, from good producing dams. B. L. SNYDER, Bloomer, Wis. 14-spl.

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-8

We have a few young registered Jersey cows and heifers for sale. Write for particulars. SHARON HILL FARM, Coraopolis, Pa. 10-5

For Sale—Pure-bred Jersey bull. Grandson of Hood Farm Torono, 71 daughters in Register of Merit. Lass 66 of Hood Farm with 1,047 pounds butter. Age 3 years. Fine individual. Write P. S. McLURG, Phillips, Wis. 14-2

For Sale—Noble Oxford's Majesty, a large Jersey bull of very high breeding. PIERCY SINCLAIR, Cloverdale, Ind.

For Sale—Six registered Jersey heifers from one to two years old. M. C. VOSBURG, Fort Atkinson, Wisconsin. 13-2

For Sale—14 head pure-bred Canadian Ayrshire females, two to six years old, mostly springers; good individuals, tuberculin tested. Also one two-year-old bull. Price for quick sale, $3,500. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-4

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

For Sale—Two registered Cheviot rams. Glimmeiglen breeding. $30.00 each. ROY B. FREEMAN, 107 South Barnard Street, State College, Pa.

For Sale—Pure-bred Shropshire ram lambs and yearlings. F. S. HALLADAY, Green Bay, Wis. 13*

RABBITS AND GUINEA PIGS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

Guinea Pigs—Pet stock. $.75 each. N. SANDERS, Fisk, Wisconsin.

SWINE

Duroc Jerseys—Both sex, all ages, registered and unregistered. ROUND TOP FARMS, Damariscotta, Maine. 13-4

Hampshires. Growthy, good type boars from State Fair winners. Also females. EDGAR BUZZELL, Delavan, Wisconsin. 14-4

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS, De Graff, Ohio. 14-8

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

Mammoth Pekin drakes, $5.00 and $6.00. W. R. LUETH, Walworth, Wisconsin. 13-2

Single Comb Black Minorca Cockerels, $3.00. JOHN ZEH, Jefferson, Wisconsin.

EXCHANGE

For Exchange—Good five passenger touring car for registered Holstein heifers, aged from 6 to 12 months. J. E. PETERSON, Donnelly, Minn.

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testmonials. Catalogue. KASKASKOA KENNELS, Herrick, Illinois. 12-4

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

MACHINERY

For Sale—No. 60 Typhon, combination ensilage cutter and silo filler with self feeding table. Only slightly used. Complete except feed pipe. Price on request. THE NUTRITIA COMPANY, Lawrenceburg, Indiana. 13-2

For Sale—Double Unit Empire Milker. Complete in good condition. ROY NYCUM, Mt. Carroll, Ill.

For Sale—Two unit Sharples Milker; 160 Ampere Delco lighting plant. Both as good as new. D. OFFRINGA, Ames, Iowa. 14-2

For Sale—Milking machine, Victor churn and butter worker, 20 steel stanchions and stall partitions, 2 H. P. gas engine used short time. Priced for quick sale. R. PENICK, Chariton, Iowa.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

TOBACCO

Tobacco—Kentucky's Best Leaf, chewing or smoking, all tobacco, no dope. Direct from farmers. Trial offer, 2 lbs. $1.00 postpaid; 10 lbs. $4.50. KY. TOBACCO ASSN., Dept. L, Hawesville, Ky. 11-4

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

Farmers, Stockman—Samples of printed envelopes and letterheads for your business, postpaid, free. HOWIE PRINTING CONCERN, Beebeplain, Vt. 13-3

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

BUTTERMAKERS

Buttermaker wanted—In answering this advertisement, state age, experience and salary wanted. FARMERS' WAUKON CREAMERY CO., Waukon, Iowa. 12-4

MOLASSES

Molasses—Kentucky Country Sorghum, made the good "old fashioned way". Pure cane molasses, no adulterants. Sample and price list mailed for 10c. S. ROSENBLATT, Hawesville, Ky. 12-4

BEETS FOR SALE

Beets for Sale—Crosby Egyptian table beet by the ton or carload. WALTER DAVENPORT, Accord, N. Y. 13-2

CREAMERIES

For Sale—A well located creamery in a growing agricultural locality. Building is of stone construction and large enough to permit of the installing of cheese making equipment, if desired. All the creamery equipment is of the best. Reason for selling, all those interested have other business. If you are looking for an opening, investigate. Address BOX 417, care Hoard's Dairyman. 14-2

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

Wanted—Man to buy half interest in my Ice Cream business. One who can take full charge. Address BOX 418, care Hoard's Dairyman.

DAIRIES

Dairy for Sale—Select dairy retailing 600 quarts of milk at 20 cents and large amount of cream, butter, eggs and vegetables, within a mile of dairy house. Location 8 miles from New York. Finest opportunity. For full particulars address ROBERT ALLEN, 10 Ames Ave., Rutherford, N. J. 14-2

FARMS FOR RENT

For Rent—Half section dairy farm near Buffalo, N. Y., on live stock basis. Excellent buildings. Can use tractor as well as in Illinois. Will buy half interest in your pure-bred Holstein herd. Grades on farm now. Address BOX 301, care Hoard's Dairyman. 4*

For Rent—One of the best equipped dairy farms in the State of Michigan, consisting of 360 acres. Gross sales of milk and cattle run from $21,000 to $22,000 per year. You can retail milk at 14 cents per quart, or sell it at the farm for $4.00 per hundred the year around. All equipment modern and up-to-date. L. J. BYERS, Coldwater, Mich. 7*

Wanted—Experienced farmer for dairy farm near Elgin, Illinois. Must have own horses and implements. Possession at once or March 1. M. J. McNEIL, 251 E. Grand Avenue, Chicago, Illinois. 11-4

For Rent—A 900-acre farm equipped for grain, stock or dairy farming, with 3 dwellings, 3 barns, silo, etc. Renter must have good references. Write MICHAEL GOLDEN, Marshall, Illinois.

FARMS WANTED

Farms of 80 to 160 acres with fair improvements and stocked, wanted. Have over 100 on my list who want such. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

FARMS FOR SALE

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

Farms—Well improved farms on hard roads, close to good markets. All sizes and prices. PONTIUS & HAMMOND, 602 W. Reserve Bldg., Warren, Ohio. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

If you wish a farm in the best grass section of the south where alfalfa and all the clovers, including Red White, Alsike, Sweet, Burr, Crimson and Japan grow to perfection, also soy beans, cowpeas, peanuts, velvet beans, corn, oats, wheat, rye, and barley, where we have a creamery making fine butter and paying Elgin for butterfat, and where there is no bovine tuberculosis nor cattle ticks; in a community of northern farmers, write to H. B. GURLER, Macon, Miss. 25*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres, 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Fifty-eight acre farm complete with house, barn, silo, windmill, etc., near Lake La Belle, within ten minutes ride from Oconomowoc. Apply C. E. DINGWALL CO., 536 First Wisconsin National Bank Bldg., Milwaukee, Wisconsin. 12-4

Illinois farms for sale—Several choice grain, stock and dairy farms, located convenient to St. Louis, at bargain prices. Free descriptive matter. IRVING M. CLARK, Brighton, Illinois. 12-4

Land that is real land in St. Louis County. "The County of real farms". Now is your chance to get one of our reasonably priced farms at little cost. We need good farmers to supply our markets. We are offering our lands on a small down payment and give you a long time to pay balance. Remember a great railroad stands back of this offer. Send for free information today. L. B. ARNOLD, Land Commissioner, 154 Wolvin Bldg., Duluth, Minn. 12-4

Oklahoma farms. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla. 13-2

For Sale by Owner—420-acre farm in Lake County, Illinois. Best of soil. Good set of buildings including house, two barns and silo. Two miles from town. Price for quick sale $120 an acre. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-6

300-acre dairy farm with thirty-three head of Holsteins, including pure-bred sires. Modern dairy barn, all new buildings, two silos, two houses, located 1½ miles from creamery and cheese factory and on the condensery route; five horses and complete all new farm equipment. 100 acres under cultivation; 50 acres of pasture, balance marsh and trapping lands. GREENLAW & THOMAS, Oshkosh, Wis. 13-4

New York Farm Agency, Westfield, New York, sells farms. Old folks die at about 100. Have to quit. Opportunity for young men. Come East! 10-spl

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

South Dakota—Never again will there be such opportunities for purchasing cheap lands as are now offered in South Dakota. Every acre that is now selling for $25 up per acre will soon sell for $100 or more. Write to IMMIGRATION DEPARTMENT, Capitol F15, Pierre, South Dakota.

For Sale—720 acres. Seven miles from Gulfport. Hard road. 85 bearing pecan trees. 150 orange trees, 50 non-blight pear, etc. Five-room residence, barn, garage, etc. Can be made a splendid fruit, truck, dairy or stock farm. $30.00 per acre. H. E. BLAKESLEE, Gulfport, Miss.

For Sale—Superb Washington Co., N. Y. home and farm, 86 acres. With dairy, stock and implements, $16,000. Address BOX 407, care Hoard's Dairyman. 14-4

Farm for Sale—Our modern, 200-acre farm, 1½ miles from Marinette, on macadam road, with Green Bay Shore frontage. All under cultivation, and well fenced. No stumps, stones, low land, quack, or thistles. All buildings built last four years and newly painted. A real farm and opportunity. Easy terms. HOTEL MARINETTE, Marinette, Wis. 14-4

Let us help you choose a farm in Price county, the center of the Clover, Dairy and Potato Belt of Upper Wisconsin. Write for official soil map and booklet to the COUNTY AGRICULTURAL AGENT, Phillips, Wisconsin. 14-2

Small dairy and farm.—Act quick. 62 acres, good house, barns, other buildings. 7 head stock, team, tools, machinery. Write for description. $3,200. Cash, $1,300. 5% interest. HARRY H. ROSS, Route 2, Otsego County, Worcester, New York.

We have a farm for you in the Ozarks that you will like. DURNELL LAND CO., Cabool, Mo. 14-4

215 acres, $5,000 with 12 cattle, horses, tools. Owner left alone, insists immediate sale; some lucky man gets magnificent, completely equipped farm near big R. R. town at ridiculously low price; 140 acres machine-worked loam fields, 30-cow spring-watered pasture, estimated 3,000 cords wood, 100 apple trees, 3,000 sugar maples 2-story 12-room house, immense basement barn, horse hay fork, silo, running water; quick buyer gets pair horses, 12 cattle, poultry, harness, machinery, tools, feed for stock, only $5,000, part cash, balance easy terms. Details page 23 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free. STROUT FARM AGENCY, 150 D L Naussau St., New York City.

For Sale—172-acre farm. In suburbs of Gulfport. Twelve-room house heated with hot air and lighted with acetylene. 80 acres in cultivation. 500 percan trees in bearing. Overflowing artesian well piped to all parts of home and place. 100 orange and grape fruit trees. Farm implements, live stock, chickens, etc. Full description on application. A model home, truck and dairy farm. Price, $20,000. H. E. BLAKESLEE, Gulfport, Miss.

Where dairy farming is profitable—There are localities in the South where, on account of the rapid development of industrial cities and towns, supplies of dairy products are short and prices are high. In these same localities long grazing seasons and winter cover crops cut down feeding costs and all conditions are exceptionally favorable for profitable dairy farming. Good improved farms can be bought at prices much lower than are asked for similar lands in other parts of the United States. Buy a Southern dairy farm now while prices are still low, make money and build up a valuable property. Forr full infromation write to J. C. WILLIAMS, Manager, Southern Railway Development Service, 1302 Pennsylvania Avenue, Washington, D. C. 14-spl.

Farm for Sale—One of the very best and best improved corn and alfalfa dairy farms in Northern Illinois. 36 miles N. W. from Chicago, on the State cement road. 185 acres. ARTHUR L. STANFORD, Owner, Round Lake, Ill.

For Sale—116-acre dairy farm in sunny Tennessee. High state of cultivation, good improvements, fine water, near good college. R. F. REGISTER, Greeneville, Tenn. 14-2

For Sale—Fine equipped, 264½-acre, 50-cow farm. $7,000 value, personal property. Price, $14,500. For particulars write WILLIAM B. SMITH, South Kortright, Delaware County, New York. 14-2

"Let the world know."—Homeseekers! Tobacco Growers! Hog and cattle raisers! Farmers! Investors! South Georgia land, at from $30.00 to $150.00—about $75.00 average—will pay for itself with a crop or two. Write the MACON TELEGRAPH EXTENSION BUREAU, Macon, Ga., and be listed for its free supplement telling the story in word and picture.



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Guernseys. Work to begin at once. Write inclosing salary desired and credentials to NORTHLAND COLLEGE, Ashland, Wis. 10*

Wanted—Single man to milk and take care of small private dairy herd, pure-breds. Live with superintendent on farm. W. F. STANTON, Lake Geneva, Wisconsin. 12*

Wanted—Two four-time milkers for Official Test work. Swiss or Danish preferred. P. FROST SPAULDING FARM CO., Warren, Minn. 12-3

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

Experienced man for general dairy farm work. $60,-00 to start. LEE P. GRANT, Bloomville, N. Y. 12*

Firemen, Brakemen, $350-$300 monthly, all railroads, everywhere, experience unnecessary. RAILWAY ASSOCIATION, Desk W5, Brooklyn, N. Y. 13-3

Wanted—Married man to operate 120-acre dairy farm in Southern Wisconsin on salary. Position open March 1. Address BOX 400, care Hoard's Dairyman. 13-2

Testers Wanted—Single men for cow testing associations, good wages paid men experienced in feeding and operating Babcock test. Give age, school training, dairy or farm experience, name and address, previous employer. Write A. J. CRAMER, Agricultural Hall, Madison, Wisconsin. 14-2

Wanted—Men for official testing of pure-bred dairy cattle in Illinois. Have several openings now and will have more later. Opportunity for men who can leave farm during winter to gain experience. Only men with two or more years of high school training, one or more years farm experience and clean habits need apply. Write M. H. CAMPBELL, University of Illinois, Urbana, Illinois. 14-2

Wanted—Single herdsman for about 20 cows. Must have some experience in A. R. O. work. State wages expected. Position open at once. MORTON FRIEND, Orland, Indiana. 14*

Shovel Coal—Non-union mine, West Virginia. Good wages, houses, boarding inexpensive. BOX 1151, Harrisburg, Pa.

Wanted—At County Asylum, experienced herdsman who understands fitting for show and A. R. O. work. Either married or single. If married could give wife employment. In either case we furnish room, board and laundry free. Please give age, reference and nationality in first letter, also wages expected. Please don't answer unless you mean business and want a permanent position. Address R. H. POSTON, Route 3, Box 130, New Richmond, Wisconsin. 14-2

Wanted—Herdsman to take full charge of registered Jersey herd. 30 cows on test. Must be experienced. Married man with no children preferred. Best of terms, is a fine opportunity for the right man. SOUTH PARK FARM, Box 386, Fargo, North Dakota. 14-4

Wanted—Single white man for general farm work, must milk three cows, state age and wages expected. S. P. POULTRY FARM, Silver Hill, Md., Station H., Washington, D. C. 14-2

Wanted—Good, reliable, steady herdsman at once. One who understands feeding and capable of taking full charge of Holstein herd of fifty cows. Must be experienced in A. R. O. work. State experience and salary in first letter. Good opportunity for right man. IDEAL SQUAB COMPANY, INC., Box 448, Butler, Pa.

Wanted dairyman—Herd of Jerseys. Must be capable, enterprising and a good disciplinarian. A man who has technical as well as practical training. No married man need apply. Good wages. PENNSYLVANIA TRAINING SCHOOL, Morganza, Pa. 14-2

A single man would like to hire man and wife on farm where general farming is carried on. JAS. S. HAIGHT, Poynette, Wisconsin. 14-2

Wanted—Reliable single man for general farm work. State wages and experience. Address BOX 414, care Hoard's Dairyman.

Wanted—Single man to help in small dairy and general farm work. $80 per month, board and washing. CLAUDE NEWMAN, Culver, Ind.

Wanted—Single men for agents in New York State Cow Testing Associations. Good wages and expenses to competent men. Experience in feeding and in operating Babcock test desirable. Give age, school training, farm experience, names and addresses of former employers. Write G. W. TAILBY, JR., Animal Husbandry Department, Cornell University, Ithaca, N. Y. 14-3

Wanted at once—Competent married man as test cow milker and assistant to experienced herdsman in pure-bred Holstein herd on yearly test. Modern conveniences, electric lights, etc. Must furnish references. State wages expected. Steady work for dependable man. H. O. NIEMANN, Avoca, Iowa. 14*

Berkshire Pigs—Eight weeks old and ready for immediate shipment, thrifty, vigorous and well bred. Priced very reasonable. Registered. LOUIS FAWCETT, Stanley, Wis.

Wanted—Married man for general farm work. Wife to assist with the house work in modern home. Good place. State wages and particulars. H. W. COIT, Galesville, Wisconsin. 14*

Wanted—A real herdsman, married, without children. One with experience as feeder and general care of a R. of M. herd of Jerseys. SAM E. CRABBE, Fargo, N. D. 14-2

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Farm Manager—Married, will be available after November 1st to handle dairy farm that can pay about $3,500 and perquisites. Address 3RD FLOOR, 2307 Maryland Ave., Baltimore, Md. 13-2

Wanted—Position as manager in a pure-bred herd where Advanced Registry is important. Have produced several class leaders and state champions. Married, age 36, 2 children, college trained, no vices, life experience in all kinds of farming and construction work. Salary, $3,000 per year and perquisite. Prefer location in the east. Address BOX 282, care Hoard's Dairyman. 2-spl

Farm and garden manager, with energy, push and proven ability, desires position on large modern farm, institution or private estate, where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and vegetable garden. Married, two children. Excellent references. Address FARMER AND GARDENER, 4463 North Uber Street, Philadelphia, Pennsylvania. 10-spl.

Position as manager on general or stock farm by thoroughly experienced middle aged, married man. Fully competent in all lines. Address THOMAS, Room 53, 1st National Bank Bldg., Colorado Springs, Colorado.

Working manager of 200-acre grain and stock farm wants to connect with larger farm proposition. Ten years' experience, four years with present proposition. Agricultural graduate, age 34, active, on the job, responsible; familiar with farm operations, can get the work done on time, understand farm machinery, tractors, gas engines, trucks. Want share proposition, have best of references. Will locate anywhere. Address BOX 409, care Hoard's Dairyman.

Farm manager with energy push and proven ability, desires position on a modern farm, where results will be appreciated. Agricultural graduate. Experienced in soils, crops, A. R. O. work, care, feeding and judging of dairy cattle, poultry, handling men. County agent three years. Excellent references. Address BOX 401, care Hoard's Dairyman. 13-2

Position wanted—November 1st or 15th by a first-class manager experienced in all branches of farming and the handling of pure-bred cattle. Holsteins preferred. Married, two sons and daughter, all good milkers. Can handle Gas Tractors and all kinds of farm machinery. Would accept a share proposition for one-third where the owner furnished all cattle. Can furnish best of references. Address BOX 408, care Hoard's Dairyman.

Management of large farm or estate by experienced farm manager of proven ability. Have successfully managed several thousand acres. References will prove to you my value to former employers. Will demonstrate efficiency. Address BOX 406, care Hoard's Dairyman.

Waned at once—Position as manager of up-to-date dairy herd, Holsteins preferred. Single, 25 years old, plenty of experience, graduate agricultural college, strong, ambitious, plenty of initiative and a good hard willing worker. Highly recommended. Address BOX 412, care Hoard's Dairyman. 14-2

Wanted—Position as herdsman. Six years' experience. Understand balanced rations, A. R. work, Babcock test, etc. Good references. Married, no children. Address BOX 411, care Hoard's Dairyman.

Wanted—Position on dairy farm as superintendent, herd-manager or herdsman-foreman where registered stock is kept. Practical experience in feeds and feeding for A. R. O. test, line breeding, certified milk, raising calves. 15 years special study on dairying and cattle management. Born and raised on the farm. Age 45. Also two grown sons. Must be modern and up-to-date, near church and school. Prefer East of Alleghany Mountains. References of the best. Address BOX 410, care Hoard's Dairyman.

Position Wanted—By young man on Guernsey dairy farm, inside work preferred. Life experience on farm and handling live stock, good dry hand milker. State wages in first letter. Central States preferred. P. F. SCHAEFER, Jonesboro, Ill.

Wanted—Position as manager or herdsman on large dairy farm. Experienced in general farming. A. R. work, stock raising, tractors, etc. Married, Scotch. References. Address JAMES JOHNSTONE, Route 3, Redford, Michigan. 14-3

Situation wanted by mother and son, to take care of a herd where milking machines are used or hand milking done. Will take full charge. Wages $100 per month for both, with house, wood, etc. furnished. Best of references. Address BOX 415, care Hoard's Dairyman.

Wanted at once—Position in dairy on a large stock farm by single man, twenty-five years of age. Can assume herdsman's or manager's responsibilities when necessary. Wish to co-operate with owner to build a fine herd. No tobacco. Able to do common veterinary work. Good milker, feeder and calf raiser. Salary, $125.00 per month with advancement when ability is assured. If interested write BOX 416, care Hoard's Dairyman. 14-2

Leadsman and Fitter—Consignment and dispersal sales a specialty. Save time and money by employing an experienced man to fit and show your sale cattle. References. JACK ROBINSON, care Ohio Holstein Asssociation, Tiffin, Ohio. 14-3

Position wanted as hog herdsman. Single. Have handled hogs eight years. Can fit for shows and sale. A good care taker. Give all details and wages in first letter. Address BOX 413, care Hoard's Dairyman.

Position wanted as farm manager or superintendent by college graduate with thorough knowledge of general farming. Especially qualified to handle dairy cattle, poultry and orchard work. References given and required. Address BOX 419, care Hoard's Dairyman.



$250 Buys This Bull

Born Dec. 19, 1919.

Dam — A. R. O. 18.10, milk 406 lbs., age 23 months. Sire — A 32.74-lb. son of King Korndyke Sadie Vale. This bull is from a Federal Accredited herd. If interested apply for pedigree to

Michael Seberger - Schererville, Ind.

For Sale

Minnesota bred Ormsbys; Fresh Cows, Heifers and Young Bulls, by two of the best bred, year record Sires in Service. From A. R. O. dams.

M. L. Enright, East Grand Forks, Minn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Holsteins For Sale

12 registered yearlings coming 2 yrs. old, not bred, some from 20-lb. dams. $125 tested.

6 registered heifers coming 3 yrs. old, due to freshen early fall and winter. $190 tested.

1 yearling bull from 24-lb. dam and 33-lb. sire. $175 tested.

F. L. Jones, Maple View, N. Y.

Pabst Stock Farm's First Sale a Success

The Pabst Stock Farm is Wisconsin's largest Holstein breeding establishment and one of the largest in the country. Mr. Fred Pabst, the owner, has been years in building up his present herd, which numbers approximately 400 head. He has, heretofore, disposed of his surplus young bulls both at public sale and private treaty, keeping practically all desirable females in his herd. During these years, however, it has been one of his aims to build up a herd that would warrant a semi-annual sale as the outlet for all surplus—nothing to be offered at private sale.

That ambition was finally realized on October 9, the date of the Pabst Stock Farm's first semi-annual sale. This was entirely a bull sale, but at future sales a gradually increasing number of females will undoutedly be offered.

A sale of this character is a new departure in Holstein circles. It is in fact something new to dairy cattle breeders generally, and is by no means something to be lightly undertaken. There were many who prophesied an unsuccessful sale, but the fact remains that the Pabst Stock Farm put it across. They sold 36 young bulls—the surplus for practically a 6-month period—for an average price of $671, perhaps not as much as they would have brought at private sale, but a fair price, nevertheless. Furthermore, they sold them to one of the best sale crowds we have ever seen at any sale short of a state or national event.

Approximately 700 people representative of seven or eight different states were present and they filled the sale ring, a well arranged pavilion in one of the main barns, to overflowing.

Six bulls sold for four figure prices, bringing a total of $13,050 with the top at $3,000. Pabst Ivy Pontiac, a son of King Pontiac Champion from Pabst Maplecrest Ivy (32-lb. 3-year-old), brought this figure, going to the Mills Estate, Inc., of California on a wired bid. P. E. Ansted of Ohio was the last contending bidder.

Ten sons of Creator, the junior herd sire, brought a total of $8,715, outselling any ten others of similar quality and breeding.

Haeger and Mack did the selling with S. T. Wood in the box.

Following is a list of all animals bringing $350 or more and buyers of same:

Jefferson Co. Farm, Wisconsin	
Pabst Korndyke Clover King	$2,100
W. H. Rhoda, Wisconsin	
Pabst King Pontiac Lad 26th	$370
Louis Hoppe, Wisconsin	
Pabst Champion Hercules	$380
Fred Strobel, Wisconsin	
Pabst Geranium Clyde	$350
S. R. Dobberton, Wisconsin	
Pabst Clyde Mechthilde	$400
Andrew Frank, Wisconsin	
Pabst Korndyke Ormsby Hengerveld	$700
John Edwards, Wisconsin	
Pabst Woodcrest Pontiac	$1,850
John Meyers, Illinois	
Pabst Woodcrest Clyde Champion	$425
West Zeller, Minnesota	
Pabst Creator Mutual De Kol	$2,200
John Rufe, Wisconsin	
Pabst King Pontiac Lad 33d	$1,650
Marks Bros., Wisconsin	
Pabst Creator Von Houtter	$800
T. E. Manning, Wisconsin	
Pabst King Pontiac Lad 34th	$375
Lacey Bros., Wisconsin	
Pabst Lake Valley Creator	$375
Mills Estate, Inc., California	
Pabst Ivy Pontiac	$3,000
Herbert Lepien, Wisconsin	
Pabst Kol Creator	$725
Geo. Craig, Wisconsin	
Pabst Creator Schley	$575
L. Sorenson, Wisconsin	
Pabst Creator Clyde De Kol	$460
Schumacher Bros., Wisconsin	
Pabst Sentinel	$350
Elmer Buttles and Lewis Bros., Wisconsin	
Pabst Creator Shadeland	$700
W. L. Huson, Wisconsin	
Pabst King Pontiac Lad 38th	$350
Ray C. Judd, Wisconsin	
Pabst Creator Ormsby	$2,250

New York Butter Market

NEW YORK CITY, OCTOBER 11:—Developments in butter markets throughout the country have been very unsatisfactory during the past week. The fact that the consumer will purchase nothing but fancy butter is the one thing that is demoralizing butter markets. As one well known butter dealer stated recently: "The condition of the market at the present time so far as demand for butter of high and low quality is concerned, is due largely to a peculiar mental attitude of the consumer. When seconds were quoted at three and four cents under the prevailing prices of extras and higher scoring butter, as they were in years past, the consumer did not feel that he was purchasing a low grade product as there was very little difference between the retail price of fancy and low grade butter. However, today there is a different story. Fancy butter is retailing at prices from eight to fourteen cents above the selling price of medium to undergrade butter. The consumer feels in purchasing the cheaper butter that he is getting an undesirable product, simply because of the price difference. If he but realized it he would know that much of the so-called undergrade butter is highly edible and the average consumer could not tell the difference between it and fancy butter if it were served to him at the table."

Chain stores which formerly sold practically no fancy butter over their counters in former years, now find that their customers are not satisfied with the grade of butter which they formerly sold. This has resulted in chain store organizations becoming purchasers of enormous quantities of fancy butter while they have ceased buying undergrades, which is one of the reasons why there are great accumulations of butter of medium and inferior quality. The arrival of large quantities of Argentine butter, which is uniformly poor, has served to cause greater accumulations of poor butter than if only our domestic supply were available. As the bulk of the Argentine butter is selling at 46@49c, it can be readily seen that similar grades of our domestic make must sell at similar prices. The situation as regards undergrade butter becomes more serious each day. Receivers are due to lose large sums of money as many have taken large quantities of such butter to account and must bear the loss in case there is a marked decline in the price of such butter.

At the outset last week, high quality butter was in very active demand. This resulted in an advance in price of 1c on Monday and a similar advance on Tuesday. From the latter day until Saturday there was no change in the price of fancy butter but it became more and more noticeable toward the close of the week that there was a sharp curtailment of trading. On Saturday, that condition resulted in a price decline of 2½c. Today, there was no change in quotations but the market has been far from active. In view of the fact that tomorrow is a holiday, being Columbus Day, it is surprising that there is no greater activity in the market. Established quotations at the close today are: Extras (92 score), 61c; higher scoring than extras (93 score or higher), 61½@62c; firsts (90—91 score), 55@60c; firsts (88—89 score), 50@53½c; and seconds (83—87 score), 47@49c.

W. B. LIVERANCE.

Coming Events

Louisiana State Fair, Shreveport, La., October 28 to November 7. W. R. Hirsch, Secretary.

Nov. 9—11, 1920, Wisconsin Buttermakers' Association meets in Madison. Secretary, H. C. Larson, Wisconsin.

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

A Snap of the Button and— *let there be Cream!*



That's all the work there is to separating with the *motor-drive Primrose* once the supply can is filled with milk. Electricity takes the place of human energy. The willing motor shoulders this task and turns the separator at the same uniform speed from beginning of the run to the end.

The *motor-drive Primrose* is a self-contained power unit and cream separator. Securely mounted on a substantial base which is an extension of the shelf at the top of the separator stool, the economical, tireless motor is ever ready for instant service. A snap of the electric switch button and the separator is put in motion. The motor is completely enclosed to exclude dirt and water.

If electric power is available on your dairy farm, the *motor-drive Primrose* should prove of more than passing interest to you. *Primrose* skimming efficiency plus electric operating efficiency makes an unbeatable combination.

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OF AMERICA (INCORPORATED)
CHICAGO U S A
92 Branch Houses in the United States

Another 10,000-lb Herd

Eight years ago Richard G. Bishop of Ohio returned from an eight weeks' short course at Ohio State University, converted from a keeper of milking Shorthorns to a desire to breed Holstein cattle and get into the dairy business right. Being a partner with his father in the farming of the 146-acre farm, it was necessary first to convert the senior member of the firm to Holstein thinking. This took place in due time, the Shorthorns were dispersed, and the Bishops started in the Holstein business in March, 1912, with three grade cows. A few months later they added 8 more cows and two heifers. For five years they worked with grade milking machines until in 1917 the junior partner launched into pure-breds with a cow and a heifer calf. Eighteen months later two more pure-bred heifers were added to the herd. A pure-bred bull was used from the start and the heifer calves have been kept until now 25 head are in the herd, eight of which are pure-breds.

The Bishop herd is evidence that their owners are good breeders and care takers, and strong believers in regularity with the cows. Young Bishop said, "We believe that this work must be done regularly and our cows are always milked at the same hour twice a day if nothing else gets done." The reward for such work is that for the year ending June 1, 1920, this herd in the Union County Cow Testing Association finished with an average of 10,053 lbs. milk and 355.3 lbs. fat. Of the 12 cows there were only two full aged. It cost an average of $129.11 to feed these cows and the income above the cost of feed amounted to $189.25 per cow.

It is the practice on this farm to make home grown feeds the basis of the ration. These cows received alfalfa, silage, corn fodder, ground oats, and corn which was supplemented with a little oil meal and bran. Father and son take care of the herd and do all the work on this 146-acre farm. The high cow for milk in this herd was Sissy, a two-year-old grade that produced 10,964 lbs. milk, 360.8 lbs. fat and the high cow for fat was Betsy, another grade with 10,927.5 lbs. milk, 364.40 lbs. fat.

These men are growing into the pure-bred business instead of going into it and by successful care and management and wise breeding methods will some day have a real herd of pure-bred Holsteins.

H. C. BARKER.



BETSY, A GRADE, WAS SECOND HIGH COW IN THE BISHOP HERD



SISSY, A GRADE 2-YEAR-OLD HOLSTEIN, IN 1919 WAS HIGH COW IN THE BISHOP HERD



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The more clean, fresh water a cow consumes the more milk she gives. Make it easy for her to get fresh water.
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Best and Greatest Stock Food ever discovered. Equal to corn and cheaper. Barrels weigh 575 pounds, over 50 gallons. Big feeders using 90-barrel car lots cheaper. Can be mixed with roughage to replace grains. Will ship night draft to bill of lading payable on arrival at your station. Sample and book free
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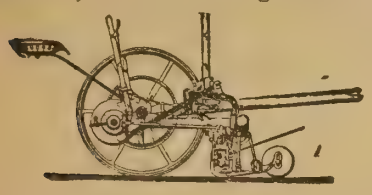
Sale Announcements

Oct. 25—Holsteins. The Lake County, Ind., Holstein Breeders' Consignment Sale. Secretary, C. Harry Newton.
Oct. 25-26—Holsteins. Wellington District Guarantee Sale, Wellington, Ohio.
Oct. 26—Ayrshires. Consignment Sale Vermont Ayrshire Club, Rutland, Vt.
Oct. 26—Holsteins. Consignment Sale at Mauston, Wis. F. H. Everson, Lake Mills, Wis., Mgr.
Oct. 26—Guernseys. Jones & McKerrow Quality Sale at Waukesha, Wis.
Oct. 27—Guernseys. E. J. Himmelberger's complete dispersal sale of registered Guernseys at Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Mgr.
Oct. 27—Holsteins. Brazelton Murdock Co. Dispersal Sale at Enos, Ind.
Oct. 27—Holsteins. Lake Mills Breeders' Consignment Sale at Lake Mills, Wis. F. H. Everson, Manager.
Oct. 27—Holsteins. H. C. and C. E. Burgess Consignment Sale, Huntington, Indiana.
Oct. 28—Holsteins. Virginia Holstein-Friesian Club Sale at Richmond, Va. R. V. Martindale, Sec'y.
Oct. 28—Holsteins. Dispersal of herd owned by Thompson Estate at Barneveld, Wis. F. H. Everson, Manager.
October 28—Guernseys. F. G. Eberhardt complete dispersal sale of registered and grade Guernseys at Mishawaka, Ind. F. E. Fox, Sales Mgr., Waukesha, Wis.
Oct. 30—Holsteins. The Porter County Holstein-Friesian Ass'n., Valparaiso, Ind.
Oct. 28—Guernseys. Chapin, Ill. The Farmers' State Bank & Trust Co., Jacksonville, Ill.
Oct. 28-29—Holsteins. Green County Holstein-Friesian Breeders' Club Sale at Monroe, Wis. L. L. Hare, Monroe, Wis., Sec'y.
October 28-29—Holsteins. Holstein-Friesian Breeders' Consignment Sale at Minnesoto State Fair Grounds. Minnesota Holstein Breeders' Association, Sale Managers.
Oct. 30—Holsteins. Daniel S. Johnson's Holstein Sale at Rockdale, N. Y.
Nov. 1—Holstein Dispersal. C. E. Ward, Palmyra, Wis.
Nov. 3—Guernseys. Lakeville Guernsey Breeders' Sale at Libertyville, Ill.
Nov. 3—Guernseys—The Lake County Guernsey Breeders' Ass'n., Libertyville, Ill. W. E. Watkins, Secretary.
Nov. 3—Holsteins. Washington County Holstein Sale at West Bend, Wis.
Nov. 4—Holsteins. Wachsmuth Bros.' Dispersion Sale at Owen, Wis.
Nov. 4—Holsteins. John Vanderploeg's Dispersal Sale at La Crosse, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 5—Guernseys. C. D. Curtis and J. D. Bolton, New Lisbon, Wis. F. E. Fox, Sale Mgr., Waukesha, Wis.
Nov. 6—Holsteins. Richland County Holsteins Breeders' Sale at Richland Center, Wis. A. A. Thompson, Secretary, Richland Center, Wis.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
Nov. 10—Holsteins. Consignment Sale at Viroqua, Wis. F. H. Everson, Sale Mgr., Lake
Nov. 12—Holsteins. L. H. Field's Dispersion at Osseo, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 13—Holsteins. Richard Boehlke's Dispersion at Little Rapids, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 15—Holsteins. Walworth County Holstein Breeders' Sale at Elkhorn, Wis. Ben Bachhuber, Mgr.
Nov. 16—Holsteins. W. W. Brundedge & Sons Dispersion at Zanesfield, Ohio. F. G. Johnston, Columbus, O., Sale Mgr.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 19—Holsteins. Jefferson County Holstein Breeders' Consignment Sale at Lake Mills, Wis. A. F. Gafke, Jefferson, Wis., Sec'y.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 23-24—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Dec. 7—Holsteins. D. V. Whiteleather Dispersion at Columbia City, Ind. F. G. Johnston, Columbus, O., Sale Mgr.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Inventions and Appliances of Interest to Agriculture

Mowing Machine

The new feature of this machine is a foot lever which enables the operator to raise the cutter bar a short distance, to avoid irregularities in

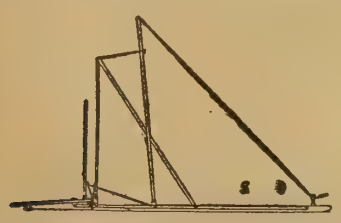


the surface of the ground, without stopping the action of the cutter.

(Moline Plow Co., Moline, Ill., U. S. Patent, 1,318,418.)

Hay Stacker

One objection to stackers of the "over-shot" type is that the hay is all delivered at one spot; to overcome this objection, the tines of the stacker shown here are made so that they can be shifted to the right or left to de-



liver the hay in either direction as required.

(Superior Hay Stacker Co., Linneus, Mo., U. S. Patent, 1,305,420.)

Hay Loader

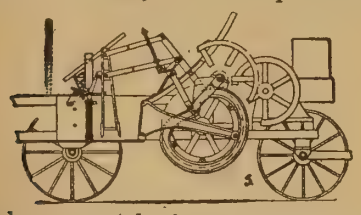
The elevator on this loader is so jointed that the end can be raised or lowered without altering the tension of the conveyor belt. It is lowered

when the wagon load is low and is raised as the load becomes higher.

(Rock Island Plow Co., Rock Island, Ill., U. S. Patent, 1,309,861.)

Baling Press

This press is simple, compact, and efficient. The improvement lies in the block guide, which is so arranged that the block, used to separate two

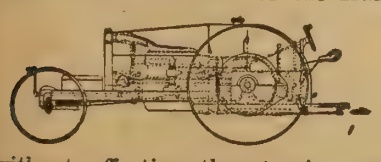


bales, cannot be improperly inserted, and thus cannot cause breakage.

(Emerson-Brantingham Co., Rockford, Ill., U. S. Patent, 1,308,397.)

Tractor

The improvements claimed for this tractor are: first, the draw bar can be shifted sidewise to overcome the torque of the machine; second, the steering mechanism has an extra long pinion which permits the wheels to follow the vibrations of the frame



without affecting the steering; and third, the power pulley is extra large and can be run slowly.

(Evans Mfg. Co, Hudson, Ohio. U. S. Patent 1,318,440.)

Canada. C. J. LYNDE.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

What is a Corpus Luteum

Some of our readers are puzzled to know just what is meant by a "persistent corpus luteum" referred to in recent answers relative to barrenness in cows, so a word of explanation will be of interest.

"Yellow body" is the more common term for the object in question. It is found in the ovary of the female and results from clotting of blood following rupture of a Graafian follicle and escape of an egg or ovum at time of coming in heat or estrum. Bursting of the ripe follicle causes a wound which bleeds; then the clot of fibrin forms and a scar is preceded by formation of the yellow body which owes its color to deposits of coloring matter or pigment. Similar pigment or pigmentation is commonly seen on various parts of the cow's body, as every dairyman knows. Ordinarily the corpus luteum disappears shortly after the period of heat subsides, probably in from 18 to 20 days; but if the cow is bred and conceives, the yellow body is not reabsorbed and persists or remains throughout pregnancy, and even after that occurrence.

When a cow fails to come in heat, or when her periods of heat are constant or irregular, expert examination of the ovaries by way of the rectum may show that cysts are present or that a corpus luteum has persisted. The cyst is a collection of fluid in a large bleb or blister which rises well above the surface of the ovary or possibly involves the body of the ovary. It is the evidence of disease or degeneration and the abortion disease germ (Bacillus abortus, of Bang) is the common cause. That infection is also the probable cause of a persistent corpus luteum. Rupture of the cysts, by manipulation with the fingers through the wall of the rectum or through the vaginal wall, in certain cases which may also require the assistance of the knife, often is followed by the recurrence of normal periods of heat and that also may be the result when a persistent corpus luteum has been dislodged by similar rectal manipulation.

Such work can only be done effectively and correctly by a specially trained veterinarian. The bungler may do far more harm than good. For example, he may be unable to determine pregnancy and by dislodging a yellow body, the corpus luteum of pregnancy, will be likely to induce abortion.

Manipulation of the ovaries for rupture of cysts or dislodgment of yellow bodies is, however, only one part of the treatment of sterility. The womb in almost all instances is the true seat of disease and must therefore be skillfully treated by the veterinarian. That subject will be discussed in a subsequent article.

Obstructed Teat

We have a very good cow that came fresh about a week ago for the second time. Last year we noticed a small lump in the center of the teat where it joins the udder. This year it has enlarged so that we can get only a little milk every few minutes. What is the best thing we can do for this?

Lynden, Wash. C. B.

In such a case it is best to let a calf suck or dry off the milk secretion in the affected teat until the cow goes dry. Then an operation may be performed by a trained surgeon. It consists in cutting through the wall of the teat and dissecting out the growth. Great care has to be taken to prevent infection or the quarter may be lost. We have never found it safe practice to puncture such growths through the duct of the teat or to attempt removing them by pulling downward with a cutting cone-shaped instrument.

Mammitis

I have been troubled with a peculiar condition among my cows. The milk flow diminishes almost entirely for a few days and what does come has dark blotches in it. This has happened to four cows and two of them ate and chewed their cud as usual, while the other two were off feed for a day or so. This has not happened to all four at the same time but at intervals during the past year. When they come back to their milk flow they never milk as heavy as before. They seem to become gaunt. At present one of my best cows is troubled this way.

Winfield, Ia. C. M. L.

The disease is mammitis (garget) which may be due to one of many different causes. It is often a difficult matter to determine the cause so that it may be removed; but an investigation is necessary to that end, as prevention is far more important than cure. Some of the more common causes are: Infection by germs which causes the most serious attacks; coming in heat; chill; bruise; irregular, rough, or incomplete milking; lying upon cold, wet ground or upon bare concrete floors; prolonged, heavy feeding of protein-rich feed. Remove any cause of these that is found present. Keep cows from standing in water when hot from running and do not have them run home by dog or cow pony when their udders are distended with milk. Isolate and milk last all affected cows. Milk them three or four times daily at times of attack. Treat as often suggested here. If a graduate veterinarian can be employed it would be well for him to try the effects of treatment with mastitis bacterin.

For Barrenness in Cows, Mares and Sows, Use Hood Farm Breeding Powder

Astonishing Success in Making Barren Animals Breed — Indispensable After Abortion — Invaluable Where Cows do not Clean — Profitable to use on Every Cow After Calving.

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Hood Farm Breeding Powder is great and has been a God-send to me. I cannot be without it.

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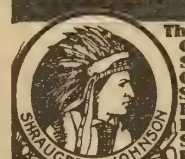
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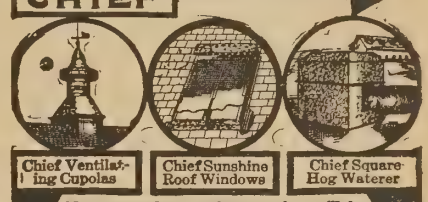
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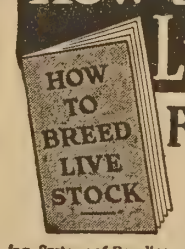
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A scrub bull is mighty near all of it"
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
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The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
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A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals. Choice Bull Calves always on hand.

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Middlesex Meadows Ayrshires

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A. Henry Higginson SOUTH LINCOLN, MASS.



We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager. ROSEMONT, PENNSYLVANIA

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Addington's Champion

No. 19561

Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk

FOR SALE—Sons and Daughters from high milking dams.

Tuberculin Free Herd

BLACKBURN FARM Sewickly, Pa.



Milking Cows

Fresh and Bred Heifers
and Sons of
Ringmaster's B. B. Diplomat
For Sale

DUNCRAGGAN, WESTFORD, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL, Wellington, Ohio

For Sale

8 head of two-year-old Ayrshire heifers. Some of them will freshen in two months. They are all nicely marked and of the large type and from heavy milking cows. Priced to sell.

E. N. MANLEY & SONS, Lyons, Nebr.

Seattle Milk Fight

HOARD'S DAIRYMAN:—Seattle's "Milk Fight" continues to be the center of interest to the Puget Sound dairymen of Washington State. The matter was further complicated when, on October first, one of the larger condensery concerns operating seven plants in the state announced the closing of two of their plants and a reduction from $2.90 per hundred for milk testing 3.8% to $2.50 per hundred for the same test. Seattle distributors are at present paying $3.65 per hundred for milk testing 3.6%, thereby recognizing a differential of $1.25 per hundred. Condenseries allow five cents per point over milk testing 3.6%.

In the face of this sharp decline producers are asking distributors to pay $4.17 per hundred for 3.6% milk, claiming that one market should have no effect on another. Distributors maintain that the differential is already too great, adding that eighty-five per cent of the milk produced in the Seattle shed goes into other than market milk channels.

In a letter sent to The Retail Milk Dealers' Association the mayor threatened to establish a central milk distributing station if the dispute between milk producers and distributors should interrupt the supply of the city. "The city is already engaged in undertakings which, in my opinion, are less justifiable than this would be under circumstances which will exist if the dispute between the producers and distributors is not settled without interrupting the milk supply of the city. This is not merely a temporary matter but it should be placed upon a permanent basis and accordingly prices must be stabilized. At the same time they must be fixed at such a figure as not to discourage production and shipment into Seattle," said Mayor Caldwell.

On Friday, October first, meetings with the producers and with the distributors by the mayor resulted in each side agreeing to abide by the decision of a milk commission for a period of one year, the commission to formulate a method for fixing the price to conform with market conditions prevailing at different periods of the year.

Each side expressed a desire to be represented on the commission. As now constituted it consists of Dr. F. E. Smith, Chief Dairy, Food, and Meat Inspector, representing the city; A. R. Priest, director of the Civic Affairs Bureau of the Chamber of Commerce and Commercial Club, representing the public; Joseph Passoneau, director of the Farm Markets Bureau of the State College, named by the mayor to act as advisor to the commission on the general problem of milk production and distribution which he has been studying in Seattle for several months; Thomas J. Owens, a dairy farmer residing at Kirkland and operating a producer-distributor business, representing the producers; and Glen O. Wallace, a milk dealer of Everett representing the distributors.

On Monday, October 4th, the commission began the collection of data. They will render a decision as soon as possible.

Little Extra Feed Makes Big Return

Further evidence that it is the well fed cow that makes the profit could be furnished, if necessary, by Elwin D. Myers, tester for the Sherburne County Cow Testing Association of Elk River, Minnesota. In his report for August to L. V. Wilson of University Farm, Minnesota, U. S. dairy representative, Mr. Myers says that as production had been very low, owing to the drying up of pastures, seven farmers out of 31 supplemented pasture grazing with additional feed. Mr. Myers vouches for the fact that the herds of the seven showed an average gain for the month per cow in butterfat of 5 per cent, while the cows of the other 24 herds which were not given any extra feed showed a decrease of 20 per cent.

"In most cases," says Mr. Myers, "the additional feed was small, two only of the seven farmers actually feeding grain, the other five feeding green fodder or running the cows on hay meadow. I feel positive that the seven herds would have shown a decrease similar to that of the 24 had they not been fed a little extra ration. On an average, the farmers who fed grain more than doubled their money in August on the additional feed that was used, besides putting their stock in better shape for late fall and winter months."

A demonstration plot of sunflowers near Carson, Grant Co., N. D., yielded 13 tons of fodder to the acre, while an adjoining field of corn yielded only three tons, according to R. C. Newcomer, agricultural agent in that county. Growing of sunflowers for fodder has been generally encouraged in the state by the Extension Division at the Agricultural College, and many good reports of yields are coming in from various parts of the state.

Lake County Guernsey Breeders' Ass'n

SECOND ANNUAL CONSIGNMENT SALE

at the Fair Grounds

Libertyville, Illinois

35 Miles North of Chicago

Wednesday, Nov. 3, 1920

at 12 o'clock Sharp

60 Females and 10 Bulls

Including a 5-year-old son of Don Diavolo of Linda Vista, whose dam has 612 lbs. fat at 3 years, and whose three nearest dams average 692 lbs. fat.

Several of his daughters and a large number of cows in calf to him.

A Daughter of Selma's Glenwood.

Lady Ellen Bush (40136) with three records 441G, 511B, 591A. A.

A 400-lb. two-year-old, daughter of Marina of Bound Brook.

A daughter of Golden Chilmark.

60-Day Retest ***Guaranteed Breeders***

Consignors:

Reuben H. Donnelley, Folly Farm, Libertyville, Ill.; E. E. Lehmann, Lindenhurst Farm, Lake Villa, Ill.; D. W. Williams, Lake Forest, Ill.; Paul Gilbert, Pine Oak Farm, Waltonville, Illinois; Wm. C. Dillon, Lawndale Farm, Round Lake, Illinois; L. D. Kellogg, Grove Farm, Deerfield, Illinois; Joseph Noertker, Spring Grove, Illinois.

Auctioneers: Love, Benjamin and Grabbe **F. E. Fox in the Box**

For Catalogues Address

W. E. Watkins, Sec'y, Libertyville, Illinois



Economy in Production ← **GUERNSEYS** → Quality of Products



Did you see the October 1 issue of the Guernsey Breeders' Journal? If not send for a sample copy. We know you will like it.
THE AMERICAN GUERNSEY CATTLE CLUB, Box H 92, Peterboro, N. H.

Dispersal Sale

40 Registered Guernseys

21 cows, 10 heifers, 9 males

Chapin, Illinois

Thursday, October 28, 1920

Property of the estate of Arthur L. French, deceased.

This herd was bought or bred by Arthur L. French, late President of The Farmers' State Bank and Trust Company, since January, 1917, and every animal owned by him at his death will be sold.

Chapin has the Wabash & C. B. & Q. railroads and is 10 miles west of Jacksonville which has the C. & A. Wabash, C. B. & Q. and C. P. & St. L. railroads.

Guernseys will be tuberculin tested before sale.
Catalogues sent by executor on request.
Sealed bids may be sent executor.
Sale under tent. Lunch served.

The Farmers' State Bank and Trust Company
Executor
Jacksonville, Illinois.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.
C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection
OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right and animals guaranteed to suit. **W. A. Cloues, Mgr.**

Guernseys for Sale

Twenty females, cows and heifers, a number of May Roses. Mostly bred to Laverna's Ultra May King 24660 and Gerar Pearl's Royal 58411, who is full brother to three class leaders. Also several sons of Langwater Royal, Langwater Raritan and Laverna's Ultra May King from A. R. cows or cows on test, several ready for service. All are priced to sell.

M. T. Phillips, - Pomeroy, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

For Sale

Green Meadow Warrior (58910), a yearling son of Langwater Renown (39636), who was first prize and Grand Champion Bull at Eastern States Exposition and just sold for $8,000. The Dam of Green Meadow Warrior is Imp. Viola of the Isle (35247), A. R., 16,519 lbs. milk and 717.79 lbs. fat. He is large and well grown, is fawn and white, clear nose, and a fine individual.

We also have younger bulls by Renown and out of Daughters of Pencoyd's Golden Secret (16550). For price and all particulars address

Walter Jauncey, Manager, Green Meadow Farm, Williamstown, Mass
Herd on Federal Accredited List

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by
RADISSON FARM, ANOKA, MINN.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Registered Guernseys

Lansing, Mich.

Last and Final Call ! ! !

Wednesday
Oct. 27, 1920

E. J. Himmelberger, Owner

This is an ABSOLUTE DISPERSAL SALE, every animal to be sold is worth your consideration. Entire herd of Mr. Himmelberger is under FEDERAL SUPERVISION, and has just passed SECOND CLEAN TEST.

Sixteen Daughters and Two Sons of Golden Nassau of Pencoyd No. 29103

will be offered in this sale. He is a fine May Rose bull, being sired by Langwater Pencoyd A. R. (who is a double grandson of Imp. King of the May A. R.).

Practically all females that are bred, are bred to UPLAND'S MONARCH OF THE MAY NO. 32430, who is by Florham Monarch No. 20771 (AR), a son of Ne Plus Ultra A. R. His dam is Ellen May Queen of Glenmore A. R., milk 16,139.5 lbs., butterfat. 816.24 lbs.

Auctioneers: Love and Benjamin

Write at once for catalogue to

F. E. Fox, Sales Manager, Waukesha, Wis.

OAKS FARM GUERNSEYS

COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. **(Address) W. S. KERR, Manager.**

FOR SALE

A registered Guernsey bull 18 months old, a sure breeder. Also an 18-month-old heifer bred June 5, 1920. Their grandams were imported. Price for the two $350.00.

John Walls, Mystic, Iowa.

Raemelton Farm

Offers for Sale

Four Guernsey bull calves from four to eighteen months old. All are sired by Florham Squire, No. 33996, and are out of Advanced Registry dams.

The herd is Federal Accredited.

Raemelton Farm, Mansfield, Ohio.

A YEAR OLD THIS MONTH



ANTON'S PASHA OF PROSPECT (61884)
Dropped October 31, 1919

SIRE — Anton's King Confidence (43517). DAM — Buttermaker of Prospect (68769)
Anton's Pasha is one of the "big type" bulls. His picture gives a good idea of his length and the rest of his body is in good proportion.
He is sired by Anton's King Confidence, who has six May Rose crosses. The dam of A. K. C. made 764.65 lbs. of fat as a junior 4-year-old.
The dam of Anton's Pasha is now on test and has made 295.87 lbs. of fat in 243 days, while running with the herd, receiving the regular herd rations and being milked but twice a day.
This bull will go mighty soon so if you want him write immediately.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

Young Bulls 6-10 Months Old

From tested dams or dams now on test making from 450 to 750 lbs. fat. They are sired by excellent bulls of May Rose, Clara Sequel, and other breeding as good. Price $100 to $500. Write for more complete information.

CORIUM FARM, F. J. Rueping, Owner, Fond du Lac, Wisconsin

Homestead Farm

Offers some

Choice Bulls For Sale

To avoid inbreeding, will dispose of a son of "Pencoyd's Golden May Secret" (39626) also five grandsons of Pencoyd.

Eight sons of Pine Blossom's Cherub (44600).

A grandson of Imp. King of the May, out of a daughter of Pencoyd's Golden May Secret.

Also seven cows that are all safe in calf to good bulls.

Five of these cows have A. R. records. Prices on all this stock reasonable considering quality.

Herd under Federal supervision for tuberculosis.

Write for sale list.

W. G. Jamison & Sons
R. 2, Appleton, Wisconsin

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

REGISTERED GUERNSEYS

to be offered at

Public Auction Thursday, Oct. 28th

Mishawaka, Indiana

F. G. Eberhardt, — Owner
Entire Herd on Federal Accredited List

Below are listed some of the choice offerings:

St. Austell Souvenir's Dandy Laddie No. 39720
Sire: St. Austell Souvenir (28050), by Jethro's May King of Linda Vista A. R., double grandson of Imp. King of the May (A.R.) and out of Imp. Christine of St. Sampsons A. R. butterfat 608.0 lbs.
Dam: Sunshine May of Ohio City No. 29680, sired by Glen Rose of Beechwood No. 12772 (A. R.).

Twenty Daughters and Sons of above Bull in Sale

Seven Daughters of Imp. Dairyman of Sarnia No. 38931
Sire: Governor of the Chene (1297 P. S.) A. R. sire of 100 A. R. daughters.
Dam: Violet of Corbinez, dam of Violet IV of Corbinez A. R., 756.62 lbs. fat.

Imp. Danceaway of South Bend Sunnyside Farm No. 71741
Sire: Raymond of Blaye Farm (191 P. S.) 1st prize R. A. A. S. 1914, by Alderney Raymond A. R.
Dam: Imp. Danceaway of Sarnia No. 65362, granddaughter of Prince of Sarnia (A. R.).

Imp. Ellalee of South Bend Sunnyside Farm No. 71740
Sire: Douglas (95 P. S.) 1st prize R. A. A. S. 1915, 1916.
Dam: Imp. Ellalee of Sarnia No. 65372, by Nelson of the Cacheliere A. R.

Imp. Dusty of Sarnia No. 65359
Sire: Duke of Portland 143 P. S., by Chieftain II (A. R.).
Dam: Princess Patricia, by Prince Albany (A. R.).

Imp. Coralass of Sarnia No. 63534
Sire: Raymond of Carriere Viron 98 P. S. (A. R.).
Dam: Daisy of the Brayes II (1149 P. S.) 1st prize R. A. A. S. 1910, 1912.
Many other fine individuals offered. Be at the sale.

Auctioneers: Love and Benjamin

For Sale Catalogue Write

F. E. Fox, Sales Mgr., Waukesha, Wis.

During the month of July 200 co-operative creameries reported to A. J. McGuire of the Minnesota College of Agriculture. These creameries handled an average of 17,218 lbs. butterfat during the month and paid their patrons 61.62 cents per pound fat. The highest price paid producers, 69 cents, was by creameries handling 40,837 lbs. fat. The price of butterfat ranged from five to twelve cents over the price received for butter.

When writing advertisers please mention Hoard's Dairyman.

SWINE

Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of

Epochal Berkshires

Get a Foundation Trio or Bred Sow

From the herd that has won more first prizes and more championships at the biggest shows this year than all its competitors put together.

Some statement, but it's true!

The Epochal Herd won 62 firsts out of a possible 106 and 23 championships out of a possible 42 at the 1920 Missouri, Illinois, Iowa, Indiana, and New York State Fairs, the Eastern States Exposition at Springfield, Mass., and the National Swine Show.

Bred Sows $250 Each and Up

Trios of six months old pigs carefully and properly mated—a real foundation—$800 to $2,500.

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Epochal Berkshires are the deepest and smoothest big-type hogs.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

Berkshires for Sale

First class fall and spring Boars. At prices from $50.00 and up.

Write for particulars.

Cedar Crest Farms

J. K. Dering, Owner, Lake Villa, Ill.

GUERNSEYS

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

A Great Sire

IS

FALCON'S PROUD WARRIOR

considered by many to be

The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

Guernsey Bull For Sale

Woodlands Senegal (42282)—official records of dam and sire's dam average 15,459 lbs. milk and 773 lbs. fat. Also a few *Registered Females* of equally good breeding. Pedigrees and particulars on request.

F. H. Farrington, Brandon, Vermont

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

BROWN SWISS

JUBILEE FARM

Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Two Registered Brown Swiss

Bull Calves, 2 and 5 months old. Dehorned. Price very reasonable.

H. A. Jones, New Ulm, Minn.



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JERSEYS

$500—$500

Delivered at Your Station

We offer two very choice registered Jersey heifers, two and one-half years old, lately fresh. We will pay express to any station.

H. E. ANDERSON, Whitewater, Wis.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale.

O. Green & Son, Albion, Wis.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY, BLACK EARTH, WIS.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.

J. Q. EMERY & SON. - Edgerton, Wisconsin

Jersey Bulls

If you want to breed size, type, large production and improve the breeding on and up qualities of your herd, write us for prices and descriptions of some herd improving bulls we have for sale.

HOOD FARM, INC.

Lowell, Mass.

N. B. Price list of Forty females on request.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM

LIBERTYVILLE, ILLINOIS

W. A. BREWERTON, Owner L. A. BENT, Mgr.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son

Whose Son sold at auction $7,500

Owl's-Over-the-Top and Golden Maid's Victors Jolly

100 head—no reactors

ULSTERDORP FARMS Highland, N. Y.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

JEREY

The Queen of Dairy Cows

THE Jersey has been called the Queen of Dairy Cows. A better name would be the Queen of Dairy Profits. 200 years of scientific breeding has made her a butterfat producer without an equal in point of quantity and low cost. Never in the history of dairying have the advantages of the Jersey been so important to the farmer as they are today.

Year after year, records prove Jerseys to be the profit breed. The facts are worth a small fortune to any working farmer wise enough to be guided by them. Let us send them free.

The American Jersey Cattle Club
324-E W. 23d St.
New York



An Institution for the Benefit of Every Jersey Owner

Duroc-Jerseys Are Prolific and Profitable



They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Durco-Jerseys.

WRITE FOR BOOKLET—"DUROC-JERSEY HOGS ARE PROFITABLE"

published and mailed free by the largest swine record association in the world (over 10,000 members) for the benefit of hog raisers everywhere.

THE NATIONAL DUROC-JERSEY RECORD ASSOCIATION

Dept. 300—PEORIA, ILLINOIS



Yearling Bull for Sale

Dropped June 21, 1919, solid fawn color, well grown, well bred toppy bull. Sired by a grandson of Mabel's Raleigh and Noble of Oakland. Dam is of Eminent breeding, R. of M. class AA—485 lbs. 15 oz. butter, adv. test 5.97%. This bull's pedigree is full of records and blue ribbons. For further particulars write,

W. M. KNIGHT, OAK GROVE JERSEY FARM

U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

Registered Bulls — $100 and Up

West View Farm offers registered Jersey bull calf, born April 15th, 1920 solid color and a good one. Dam now on test and making a good record. Double grandam made 609 lbs. butter in one year. Price $100.00 f. o. b. here. Also other bulls one to nineteen months old. Good ones priced right.

Registered Berkshire pigs eight to ten weeks old, $15.00 either sex. Also yearling sows. For size, type, and prolificacy you can't do better.

W. C. BROOKOVER, Route No. 1, Chandlersville, Ohio.

Dry Cool Storage Prevents Fruit Decay

That much improvement may be made in the home storing of fruits and vegetables by giving attention to the storage cellar or basement is pointed out by J. B. Keil, garden assistant at the Ohio Experiment Station.

The storage should be dry, cool, and well ventilated, he states. Spraying the walls with whitewash, to which an ounce of copper sulphate to one gallon of spray has been added, helps to destroy decay germs.

Cooling of the storage may be carried out in most cases by ventilation, windows being kept open during cool nights and closed in the daytime.

Fruit keeps in storage much better under uniform conditions of temperature, particularly apples. It is often possible to keep apples from three to four weeks longer than their regular maturing season by careful storing.—Weekly Press Bulletin, Ohio Experiment Station.

HOLSTEINS

We Are Now Offering

5 YOUNG BULLS, Pure-bred Holsteins, ready for light service, all nicely marked. Sire: Harkland Prilly Pontiac (171277), who is a 30-lb. son of Hark Prilly Colantha (192558). His sire, Tell Nudine Pontiac (110522). He carries 37½% same blood as K. P. Pontiac Lass (4418). These bulls are all out of A. R. O. dams with records from 15 to 27 lbs. We also offer a 4-YEAR-OLD BULL who is sired by a 26-lb. bull and out of a 26-lb. dam, average 4.82%. We guarantee this bull to be a sure breeder, gentle, nice to handle.

If you need a bull of this age you can't beat him and reason for selling him, we have 2 other aged bulls.

MAPLE LAWN FARM
C. A. Parks, Manager, Assumption, Ill.

My Consignment to the

Lake Mills Holstein Breeders Sale

October 27th

A Two-Year-Old Sire — Pine Row Pietertje Ormsby, No. 285761. Gentle and a sure breeder.

Sire of this bull is a son of Sir Pietertje Ormsby Mercedes from a 31-lb. granddaughter of Homestead Junior De Kol. The dam is now owned by John Irwin, has a 26.43-lb. record, is on yearly test, and is expected to finish with over 900 lbs. butter and 26,000 lbs. milk. Is a half sister to Pietertje Maid Ormsby.

This bull will make a fine sire for a good herd.

Two Females

Both of Show Quality and both winners at the Tri State Fair at Superior, 1920.

One a 4-year-old, and bred to Sir Ormsby Skylark Banostine, a double grandson of Sir Ormsby Skylark.

The other a heifer, sired by Sir Ormsby Skylark Banostine, her dam was picked by R. C. Pollock to be one of our foundation cows, so you know she is a good one.

The heifer is bred to the above bull to be sold — Pine Row Pietertje Ormsby — and will make a valuable addition to any herd.

Melvin C. Larson

Port Wing Wisconsin

Richland County Holstein Sale

Richland Center, Wisconsin

Saturday, November 6, 1920

A Quality Sale of 75 Registered Holsteins

The reference sires are leaders. Five of them have 30-lb. dams, one is a son and one a grandson of S. P. O. M.

Pabst Korndyke Arnold will be sold. His two nearest dams average 34.54 and all the dams in his pedigree average over 31 lbs. He is a son of Korndyke Segis Johanna, sire of Pabst Korndyke Cornflower, the world record heifer that sold for $30,000 in the national sale.

Other valuable consignments are: A number of large, fine looking cows due to freshen this fall from the noted reference sires.

Choice heifers from record dams.

Heifer calves such as you read about.

About fifteen bulls that are top notchers.

All cattle over six months of age have been tuberculin tested.

Auctioneers: Mack, Marshall and Miller

A. A. Thomson, Secretary

Richland Center - - Wisconsin

Lake Mills Breeders'

22nd Semi-Annual Consignment Sale

Wednesday, October 27th, 1920, Lake Mills, Wis.

Will be a Genuine Good Sale. We have Some Dandy Cattle. They are Choice, are Selected and Approved, and Guaranteed as Represented

We have the Dispersal of the Fred Alt Herd, Watertown, Wis. An accredited herd, of excellent type, and of the noted "Jones Breeding". ¶ A 26.08-lb. 4-year-old and her two daughters. ¶ A Yearling Daughter of a 20-lb. 3-year-old, sired by a 29-lb. bull. ¶ Two heifers sired by a Son of Canary Paul Fobes Homestead and Jessie Fobes 2d Maud Homestead, who is a twice 31-lb. daughter of Homestead Junior De Kol. ¶ A grand 22.36-lb. cow and her 10-month-old son. ¶ All the cows in calf to Sir Homestead Rose, a 30.18-lb. son of Homestead Junior De Kol.

Other Entries Include:

A dandy cow with 18.04 lbs. as a Junior 2-year-old, and who is a daughter of a 29.36-lb. cow.

Two sons of King Canary Oak De Kol, one from a 25.71-lb. dam, the other from a 28.92-lb. dam.

Daughters of a 31-lb. sire, King Korndyke Veeman Wayne, due right after the sale to a 32.68-lb. sire.

A 24.09-lb. son of King Pontiac of Brothertown.

A 23.65-lb. cow, two of her daughters and her sister.

A beautiful daughter of a 31-lb. cow, sired by a 35-lb. bull.

A Show cow, granddaughter of King of the Pontiacs.

Sons and daughters of the Show bull, King Segis Pontiac Isaac. A son of a 36-lb. sire. A dandy daughter of Sir Fan of Rock and bred to the 33-lb. Show bull, Woodcrest Clyde. A 19.25-lb. cow bred to "The Mighty Monarch", a 47.35-lb. son of King of the Pontiacs.

Some heifers from good record dams, sired by Senator Johanna White, one of Wisconsin's greatest Blue Ribbon Winners, and both bred to Johanna Kayewood Korndyke, a son of the 39-lb. cow, Kayewood Joyce Johanna.

You'll want them all.

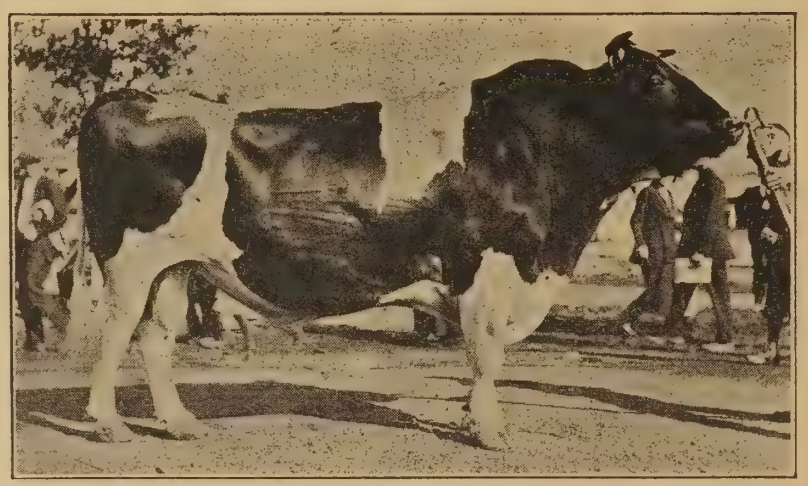
Sales Manager, F. H. Everson

Auctioneers: Mack, Kelley, Krause

Catalogs ready at Sale Time

Washington County
HOLSTEIN SALE

Fair Grounds, West Bend. Wisconsin
Wednesday, November 3rd
60 Registered Holsteins



Senior and Grand Champion Holstein bull, 1920, Wisconsin State Fair.
He was raised and developed in Washington County.

Individuality

This bull is a sample of Washington County Holsteins and of the ones to be sold in this Sale. Particular emphasis has been placed upon individuality in selecting these sixty head of Cattle.

Breeding and Production

A large per cent of the females of milking age either have good A. R. O. records or are from ancestors having creditable records. There are, too, quite a number of cows having splendid cow testing association records. Practically all the females of breeding age are in calf to such bulls as *King Veeman Pontiac Korndyke*, a 29.40-lb. bull whose dam also has 973.20 lbs. butter in a year. *Cedar Lawn Canary Paul 15th,* a 26-lb. son of this year's senior and grand champion bull at the Wisconsin State Fair. *Superba Prince Fayne Rag Apple,* a 31.54-lb. son of Rag Apple Korndyke 8th. *Sir Bess Ormsby Lass*, a 26-lb. son of Sir Pietertje Ormsby Mercedes 37th, Wisconsin's $100,000 bull and a bull who has 75% the same breeding as the $25,000 Sir Bess Ormsby Fobes, and a splendid son of *King Korndyke Colantha Ormsby.*

Entries of Special Merit

Two handsome heifers sired by Cedar Lawn Canary Paul, this year's senior and grand champion bull.

A son of a 25-lb. daughter of Cedar Lawn Canary Paul and sired by Harvest King Douglas, a 30-lb. bull.

Daughter of a 720-lb. cow and bred to a 31.52-lb. son of Rag Apple Korndyke 8th.

Son of Superba Prince Fayne Rag Apple, out of a 737.83-lb. cow.

Guarantees

All animals are to be exactly as represented by consignors and sold on a sixty-day retest guarantee.

Washington County Holstein Breeders' Ass'n
J. W. Gehl, Secretary

DISPERSAL

Registered Holsteins

Owned by Henry Thompson & Son Estate

Barneveld, Wisconsin

Thursday, Oct. 28

40 pure-bred Holsteins, a good working herd, well conditioned and guaranteed free from disease of any kind. Over 20 cows and bred heifers in the bunch, most of them in calf to the herd sire, a fine son of Canary Fobes Bessie Homestead.

50 high grade Holsteins. A nice lot to select from.

General farm sale in forenoon. 300-acre farm will be sold, machinery, feed, Duroc hogs, horses, etc.

Cattle sale at 1 p. m. sharp. On farm 3 mi. from Barneveld, 4 mi. from Ridgeway on the State Road. Conveyance to and from trains.

Catalogs ready sale day

Auctioneers: Bishop and Finnegan

Sale Manager, F. H. Everson

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Waupaca County Holstein Breeders' Association

1. Where the largest breeders can secure their choicest herd sires.
2. Where the average breeder can buy those animals of high class breeding that will build up his herd.
3. Where the beginner can obtain that good foundation stock with most excellent type and good records at moderate prices.

Buy that carload in Waupaca Co., the county noted for its large number of Federal Accredited Herds.

Stock for sale at all times. Write to

A. B. Rowe, Sec'y, Waupaca, Wisconsin

For Sale

Holstein bull calves from 1 to 8 months old, sired by a grandson of Colantha Johanna Champion and out of A. R. O. dams up to 21 lbs. $50.00 and up.

MRS. MAY DOOHER, Itasca, Wis.

Polled Holsteins

registered in the Herd Books of the Holstein-Friesian Association of America. Herd sire out of world's record senior four-year-old, KEYSTONE BEAUTY PLUM JOHANNA NO. 161646.

At 4-10-20, 365 days—*25,787.5 milk; (4.02%) 1,294.7 butter.*

At 3- 3-23, 365 days—*22,496.6 milk; (3.94%) 1,108.9 butter.*

2 years under full age—*48,284.1 milk; 2,403.6 butter.*

The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year. Bull calves $100 and up.

GEORGE E. STEVENSON & SONS
CLARKS SUMMIT, PA.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL

Wachsmuth Bros. Dispersion Sale

Nov. 4 - Owen, Wis.

30 Registered Holsteins

A sale of young, healthy, well bred, productive Holsteins. Nothing in the herd is over 6 years old and but one animal has reached that age.

The sale includes:

A 25-lb. cow—a 25.30-lb. 4-year-old, her 2-year-old daughter that made 17.57 lbs. at 24 months and her daughter. A 22.5-lb. 4-year-old and her yearling daughter—A daughter of a 27-lb. cow with 732 lbs. in a year and her yearling daughter—a 21-lb. 3-year-old and her 11-month-old daughter—a 14.7-lb. 2-year-old daughter of a 706-lb. 2-year-old.—A 21.32-lb. junior 2-year-old.—2 daughters of a 16-lb. 3-year-old—3 untested cows—several heifers and heifer calves and a few bull calves, all backed by A. R. O. breeding.

The females are in calf to a son of Colantha Johanna Champion or to a year record sire whose dam has 1150 lbs. in a year.

The above records were made by a beginner.

Every animal sold subject to a 60-90-day retest.

Sale will be at the farm. Buss will meet all trains at Owen on sale day.

For catalogs write

Hugo Wachsmuth - Owen, Wis.

Auctioneers: Mack and Krause

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct lescendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

DISPERSAL

of the Well Known Registered Holstein Herd Owned by

John Vanderploeg, La Crosse, Wis.

50 Head - November 5 - 50 Head

A Tuberculin Tested, Productive Herd, Worthy of Your Attention

84 Ribbons have been won on this herd in the last five years, also Two Silver Cups.

All these Prize Winners are to be sold, Thirteen Fresh Cows, and a Number of Springers.

The Sr. Herd Sire, head of this herd for 5 years, and a 29.72-lb. Grandson of King of the Pontiacs, will be sold. Most of the young animals are sired by this bull, and a number of the cows are in calf to him.

A dozen of the Cows are in calf to the Jr. Herd Sire, King Koningen Pietertje De Kol, a 986-lb. Grandson of King Segis Pontiac Koningen and Beecher Wythe 2d, the great Ind. cow.

There will be a Granddaughter of Finderne Holingen Fayne; a Granddaughter of Caroline Princess Pontiac, 1113.72 lbs. in 365 days, and due in November to a Grandson of Sir Piet., who sold for $6,000 at the last Wisconsin State Sale; also a Granddaughter of King Pontiac Champion and in calf to the Sr. Herd Sire.

Sale at the Farm 5½ mi. from La Crosse on Trunk Line, 4 mi. from end of Mormon Cooley St. car line. Conveyance to and from car line.

Auctioneer: J. E. Mack Sale Mgr.: F. H. Everson

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) **KIRKPATRICK BROS., Reedsburg, Wis.**

Yearly Record



Accredited Herd

Zehringhurst Farm

Offers

A few splendid young bulls that have show ring type that are backed by short and long time records and by the best productive breeding Ohio has produced.

They are guaranteed right and are priced to sell.

Oscar O. Zehring, Prop., Germantown, Ohio

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

Lord Netherland Rag Apple

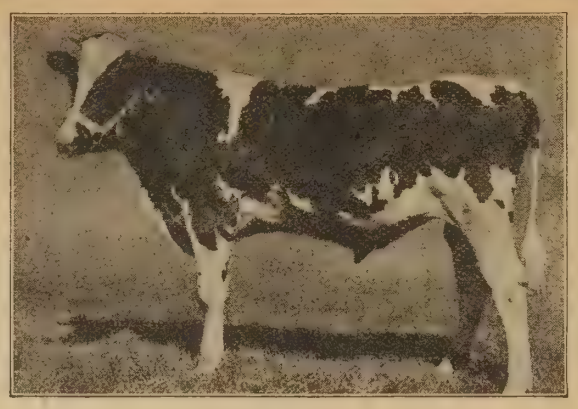
Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

LOOK



LOOK

Ear Tag 1073

Holstein Bull Ready For Service

His Grandsire
King Segis 10th
10 daughters averaging
28.04 lbs. butter in 7 days

His Grandam
Matador Twisk Minnette
Butter 7 days — 33.54 lbs.
Milk 7 days — 617.90 lbs.

His Sire
Matador Segis Walker
28 A. R. O. daughters
his dam made
128.66 lbs. butter
2780.2 lbs. milk in
30 days

His Dam
Lady May Colantha Aaggie
Butter 7 days — 29.26
as a four-year-old
Granddaughter of
Sir Skylark Ormsby Heng.
5 daughters — 30 to 35 lbs.

Guaranteed Satisfactory — Guaranteed Free From Disease

Eastern Office:
1011 Consumers Bldg.,
Chicago, Ill.
Western Office:
1011 Stuart Bldg.,
Seattle, Wash.

Carnation Stock Farms
Home of Contented Cows

FARMS
Washington Farm,
Near Seattle, Wash.
Eastern Farm,
Oconomowoc, Wis.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.
We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.
Come and look us over.
DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.
S. T. JONES, - R. 8, Watertown, Wis.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.
150 head in the herd—tested annually.
HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 862 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.
OTTO F. BRANDT, - HORICON, WIS.

JOHANNA BOY TWISK
heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. Nothing for sale at present.
T. W. LUCK, R. 1, HORICON, Wis.

LEVEL-LAY FARM HERD
headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.
E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

$100 Bull Bargain
4 week-old bull calf. Light in color. Fine individuality. Sire's dam has three records over 900 lbs. butter. Dam is a daughter of a 37-lb. sire. Clean herd. Check or bond takes him.
CHIC DAIRY FARM Juneau, Wis.

Registered Heifer and Bull Calves
I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. **Chris. Indermuehle, R. 1, Juneau, Wis.**

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.
S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

Her Son Is For Sale



OAK LODGE COLANTHA LADY

This 8 months old calf is a dandy, as he should be from such a sire and dam. He is priced to sell.

His *Dam*, Oak Lodge Colantha Lady, made her record of 17.76 lbs. butter from 405 lbs. milk as a senior yearling and we think she is one of the best prospects we have.

His *Sire*: King Pontiac Artis Sadie Vale, the 34-lb. son of the great K. K. S. V., formerly head of our herd and his daughters are now doing nicely on test.

Write us today about this bull.

Hollyhock Farms, Dousman, Wis.
GUSTAVE PABST, Owner **F. J. SOUTHCOTT, Manager**

Waukesha County Holsteins

Send for information relative to:—

10 carloads of pure-bred bulls of serviceable age and younger at prices ranging from $100 up. Will ship satisfaction.

18 carloads of grade Holstein cows fresh and springing at prices ranging from $140 to $250.

Several herds of choice pure-breds at farmers' prices. If you want foundation stock of any kind, write for information or come and see Waukesha County. (32,000 head of tuberculin tested cattle.)

WAUKESHA COUNTY HOLSTEINS

Waukesha County Holstein-Friesian Breeders' Association
Office 254 Broadway - Waukesha, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ady for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.
J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.
JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average butter 7 days over 37 lbs. butter in 7 days. Come and see them or write to
WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.
Nicely marked and straight as a line. Priced to sell.
Halsey J. Sedgwick, Limeridge, Wis.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.
These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.
Write today.
John Alexander, Baraboo, Wis.

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.
F. H. HEMBROOK Chetek, Wisconsin.

Wayside Lawn Farms

offer
Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 3 to 9 months old. Herd under federal supervision.
Walter Sorge, Reedsburg, Wis.

1000---HERD---1000
Quality Holsteins

GRADES AND PURE-BREDS
Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.
Jefferson County Holstein-Friesian Breeders' Association.
A. F. Gafke, Secretary, Jefferson, Wis.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.
Write us at once if you want one.
RANDALL BROS. Lakeland, Minn.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.
EZRA BLUMER, MONROE, WISCONSIN

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address
C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

Juneau County Holstein Breeders' Ass'n Sale

At Mauston, Wisconsin
Tuesday, Oct. 26

Tuberculin Tested and Approved by a Committee appointed by the Association, and N. J. Rogan, County Agent

50 Head Real Classy Holsteins

A dandy 29.31-lb. cow, daughter of Korndyke Abbekerk Johanna Lad and bred to King Korndyke Pontiac Alcartra.

A Junior Show Heifer, winner of many prizes this Fall, from a 19-lb. 3-year-old dam, sired by Senator Johanna White, a 30-lb. Show bull who has won more blue ribbons than most any other bull in the State, and in calf to a son of the 39-lb. Penn. State Champion.

A number of nice cows and heifers in calf to the two good bulls, Senator Johanna White and Johanna Kayewood Korndyke.

A 14.68-lb. Senior 2-year-old and a 16.58-lb. Junior 2-year-old bred to King Korndyke Pontiac Alcartra. Also some heifers sired by this bull.

Two heifers that will be worth a lot of money. They are both on yearly test, and are both in calf to a son of Pabst Korndyke Cornflower, the wonderful 38-lb. heifer, that lately sold for $30,000. One of these heifers has made 300 lbs. butter in 6 months, 10 days. Her dam is also on yearly test, and has made 13,379 lbs. milk and 531.25 lbs. butter in 8 months, 10 days. The other heifer has made 353 lbs. butter in 5 months, 22 days.

A fine, straight daughter of an 880-lb. cow, and in calf to a 30.45-lb. bull.

Fine heifers, straight as a string, one bred to a son of Sir Ormsby Johanna De Kol, some sired by Sir Pontiac Steijn Ormsby.

Show calves, and good ones too.

Sale at 1 P. M.

Fair Grounds, Mauston, Wis.

Catalogs ready at sale time

J. E. Mack, Auctioneer - F. H. Everson, Sale Mgr.

Green County Holstein Breeders' Association

Semi-Annual Consignment Sale

Fair Grounds, Monroe, Wis., Oct. 28 - 29

150 Picked Registered Holsteins

from the best herds in Green County. 120 females of excellent breeding. Good individuality, some with records up to 25 lbs. of butter. 30 bulls all of breeding age, good individuals, sired by 30-lb. bulls and many of them from high record A. R. O. dams.

All the animals in this Sale have been picked by the Sale Manager and if you are in the market for Holsteins of quality and individuality don't forget our dates.

We will sell all cattle on a 60-day retest.

The Green County Calf Club will sell 22 calves, among which are the 1st and 4th prize heifers and the 3rd prize bull at the Wisconsin State Fair.

Monroe is on the lines of the Illinois Central R. R. and the C. M. and St. Paul R. R. which gives us good shipping facilities.

Come out to the Fair Grounds Oct. 28 and 29 and we will meet you on the level and sell to you on the square.

Auctioneers:
Col. Robt. Haeger, Col. Edgar Eells, Col. R. E. Hellen
S. T. Wood in the Box

For information and catalogs write

H. D. Schindel, Field Sec'y, Box 132, Monroe, Wis.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals; nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Wayside Stock Farm
OFFERS
4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.
TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac
THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.
FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

ORMSBY BULL - Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Two Ormsby Bulls
Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

Both tuberculin tested and guaranteed right.
Pinehurst Farms Co., Sheboygan Falls, Wis.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

Sir Pietertje Ormsby Mercedes 41st

One of Our Herd Sires



The only son of Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. His sire has more 1,000-lb. daughters than any other sire in the world and his dam is the only 1,000-lb. cow having three 1,000-lb. daughters.

Twenty daughters of "41st" have been sold at public sale during the past year at an average of over $2,000. They were all out of either low record or untested dams.

We have for sale several young sons of "41st" from yearly record daughters and granddaughters of Sir Pietertje Ormsby Mercedes at prices that you can afford to pay. Write us for pedigrees.

E. C. SCHROEDER FARMS

Moorhead - - - Minnesota

(Federal Accredited Herd)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

FOR SALE

A SON OF THE $65,000 SIRE

Sir Pietertje Ormsby Mercedes 41st from a 26-lb. dam. An extra good individual, ready for service. Guaranteed to please purchaser. The Grand Champion female, the 1st prize yearling, and the Blue Ribbon *Get of Sire* at the N. D. State Fair were all sisters of this young bull. Our herd is on the accredited list. For chart, pedigree and price address

M. L. ENRIGHT, - - - - - - - - E. GRAND FORKS, MINN.

Serviceable Sons of "Piebe"

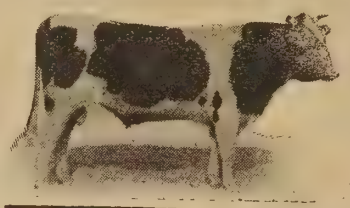
are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.



$200 — Buys this ten months old Bull

If you like deep middles, straight rumps, square udders with well placed, easy milking teats, in your herd—**Breed for those points.**

Be sure it is in the dams back of your herd sire. It's all there in this bull, we've bred three generations of his dams, and his dam is a 19-lb. cow. This calf is good all over and nicely marked. Send for his pedigree and photo and see.

Just the bull for a good grade herd.

A. J. LASHBROOK, NORTHFIELD, MINN.
(Federal Accredited Herd)



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

FOR SALE

A Son of "Sir Veeman Hengerveld"

Sir Veeman Hengerveld has 110 A. R. O. daughters, 17 over 30 lbs.

Write for price, picture and pedigree of this great 4-year-old show bull.

A Federal Accredited Herd.

Empire Stock Farm
William Schmidt, Prop. St. Peter, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.
(*A Federal Accredited Herd*)

TYPE

King Segis Pontiac Fayne Star is "The best individual King Segis Pontiac Count ever sired." His sons are like him. They are listed in our bull circular. Yours, with no obligations. But you will have to send for it.

Flecks Farms, Faribault, Minn.

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.

Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

Wright Co. Holstein Breeders' Sale

65 head, bulls, cows and heifers with excellent type, guaranteed absolutely right in every way. Don't forget the date, October 5th, 1920. Howard Lake, Minn. Sale in New Sale Pavilion, at Fair grounds. Send for Catalogue.

Chas. Oby, Maple Lake, Minn.

Ormsby Bulls

One splendid bull carrying four crosses of the blood of Sir Pietertje Ormsby Mercedes. Also two bulls carrying two crosses. All light in color and from dams to be tested.

One bull nearly ready for service from a 15-lb two-year-old dam that goes on year test this year. Blood lines represented are Champion Dora Korndyke, Canary Paul and Sir Johanna Fayne. This bull was a second prize winner this fall. Prices: $200 to 350.

CANNON FALLS HOLSTEIN FARM
CANNON FALLS MINNESOTA

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

Work

HOARD'S DAIRYMAN:—Having been a "hired man" or farm hand a large fraction of my life before becoming a farmer, I read with interest any articles on the farm help problem.

There is no doubt but that the average hired man is more "particular" than he used to be twenty or thirty years ago, but so are other laborers. The standard of living has changed and none of us are satisfied with the comforts or conveniences of twenty years ago. Thirty-five years ago I began my apprenticeship as herder of cows at one dollar a week. Five weeks' work earned a suit of clothes made of shoddy material. Today a boy of that age could earn that amount of money in a day and a half, or in one or two weeks earn a better suit of clothes. At the age of sixteen I worked for twelve dollars a month. We were up before the sun and finished "chores" by the light of the lantern. Besides wages and board the hired men had their washing done, the latter to include not more than two pairs of socks and a work shirt per week. And yet farm hands at twenty and twenty-five dollars a month saved money and later bought land.

But that species seems to have disappeared from our little valley, and when baling or threshing time comes we do the only thing there is to be done—exchange work, and get the "women folks" to help some. Yes, on some of the largest ranches in our valley the older girls helped shock grain and bunch seed clover.

There seems to be little help for this problem until the people of the city realize that we ranchers, as employers, can not grant short hours that prevail in other lines of work, nor can we in any appreciable way lessen much of the hard, dirty work incident to farming. A berry grower has no trouble getting pickers for his berries. Pickers come with tents and autos and have a splendid vacation from the city, but the wheat growers' and the potato raisers' calls for help go unheeded.

Hugh Wiley, in the Saturday Evening Post, in his article, "Sweat or Die", sums up the case in these words: "Work is the cure. It is the only cure." Work, mind you, even such drudgery as cleaning stables or feeding cows (yes, even carrying silage from Dan to Beersheba) and not thinking of the "good light to read by" is the cure.

Oregon. SUBSCRIBER.

Bulletins of the Week

Home Laundering, by Lydia R. Balderston. Farmers' Bulletin 1099, U. S. Dept. of Agriculture, Washington, D. C.

Value of a Full Ration for the Dairy Cow, by Stanley Combs. Extension Circular 107, N. Carolina Experiment Station, Raleigh, N. C.

Control of Aphids Injurious to Orchard Fruits, Currants, Gooseberry, and Grape, by A. L. Quaintance and A. C. Baker. Farmers' Bulletin 1128, U. S. Dept. of Agriculture, Washington, D. C.

Off-year Apple Bearing, by R. H. Roberts. Bulletin 317, Wisconsin Experiment Station, Madison, Wis.

Corn Judging, by R. A. Moore. Circular 8, Wisconsin Experiment Station, Madison, Wis.

The Shrinkage of Market Hay, by H. B. McClure. Bulletin 873, U. S. Dept. of Agr., Washington, D. C.

Hairy Vetch Seed Production in the United States, by L. W. Kephart and R. McKee. Bulletin 876, U. S. Dept. of Agr., Washington, D. C.

Cropping Systems for North Dakota, by E. I. Olson. Circular 39, Agricultural College, N. D.

LAST CALL



LAST CALL

2nd Foundation Breeders' Holstein Sale

Minn. State Fair Grounds, St. Paul

October 28 and 29

90 Day Tuberculosis Retest Guarantee

This is Your Opportunity to obtain foundation animals or a herd sire from the herds of such well known breeders as E. C. Schroeder, J. M. Hackney, John B. Irwin, W. S. Moscrip and others.

Daughters of such sires as King Segis Pontiac Count, Sir Pietertje Ormsby Mercedes 41st, Sir Ormsby Hengerveld Korndyke, Piebe Laura Ollie Homestead King, King Korndyke Colantha Ormsby, King Korndyke Pontiac Lass and others will be sold. Many are from daughters of Minnesota's greatest sires including Sir Pietertje Ormsby Mercedes. The majority are bred to equally great bulls including Sir Pietertje Ormsby Mercedes 37th, "Count", "Piebe", Duke Pietertje Korndyke Ormsby, Sir Ormsby Banostine Champion, etc.

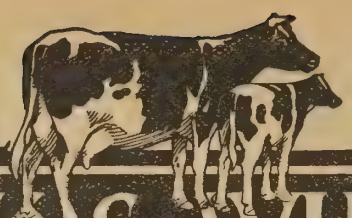
Some of the greatest bulls Minnesota has ever offered at public sale are included. A son of Sir P. O. M. 41st from a World's Champion cow; a son of Piebe Laura Ollie Homestead King from a 943-lb. daughter of Sir Johanna Fayne; another son of "Piebe" from a 29.95-lb. daughter of Sir Veeman Hengerveld; a son of the 39-lb. bull, Sir Ormsby Akkrummer Hengerveld, from a 30-lb. daughter of the full brother to Pietertje Maid Ormsby; a son of King Korndyke Pontiac Lass from one of the greatest daughters of King Segis Pontiac Count — and others of the same sort.

Read This and Don't Let "Tight Money" Bother You!

The consignors to this sale, realizing the unfavorable money situation, will give liberal terms to any man who brings a bank reference and arranges for credit BEFORE THE SALE. See the consignors or write them and make your arrangements NOW; then come to St. Paul prepared to buy top MINNESOTA HOLSTEINS under conditions more favorable than you may hope to see again. It's YOUR opportunity — send for that catalog now!

The Minnesota Holstein-Friesian Breeders' Ass'n

406 Market Bank Building **Minneapolis, Minn.**


Facts in BLACK & WHITE

Purebred Holstein Cows Lead

After a 6-year study of dairy operations on over 20 farms in three different parts of Minnesota, Professor Cooper of the State Experiment Station finds that dairying is most profitable in the "Holstein Section" of the state.

In 1905 the average profit per cow was only $10.10. In 1909, it had increased to $38.45 per cow, or 43 per ct. on capital invested. Increase was due to improved herds, purebred Holsteins having been substituted for grade beef breeds. As soon as dairying is put on a systematic basis, the Holstein cow comes to the front. If facts and figures mean anything to you, send for our illustrated literature.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.
ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Very Select Small Herd of Holsteins For Sale

3 head of 4-year-olds, five 2-year-olds. All sired by King Colantha Clothilde and out of daughters and granddaughters of King Segis. All with A. R. O. records.
Free from tuberculosis.
H. L. ORR, Rock Stream, N. Y.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.
W. D. ROBENS, Poland, New York.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.
ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.
We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.
Write for prices and pedigrees.
G. BURLINGAME, - - CAZENOVIA, N. Y.

Grandsons and Granddaughters of Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

THE TRAVERSE HERD

We have what you want in
BULL CALVES
the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

Watch for Them at the National

Sons and Daughters of King Pietertje Ormsby Piebe

— one of the greatest of long distance sires living.

They won in both the open and group classes at the Dairy Cattle Congress and will be very strong contenders at the National.

We hope you will look them up and notice particularly the strong and very similar dairy type they all possess.

King Pietertje Ormsby Piebe is a real transmitting sire and one of his sons at the head of your herd will transmit those same excellent qualities to his offspring.

Let us tell you about the one or two we have for sale.

Hargrove & Arnold, Norwalk, Iowa

Do You Want



A 30-lb.—1000-lb. Ormsby Bull?

If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.
MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21, 465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

A Son of Woodcrest Sir Clyde

born March 1920, three-fourths white and straight as a line.
His sire is a son of the great 33-lb. and 970-lb. cow, Alma Clyde. His dam has 26.43 lbs. in 7 days, 105.6 lbs. in 30 days, 98.8 lbs. milk in a day. She has 3 records averaging 25 lbs. and 3 daughters with 2-year-old records of 20.2 lbs. 18.38 and 18.2 lbs. in 7 days.
Write for photo, price and pedigree.
W. B. BARNEY & SONS - - - - - Chapin, Iowa

Holstein-Friesian Bulls

sired by
"SIR ORMSBY WISCONSIN BANOSTINE"
A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich.

Major Olive S. Johnson

The Dairy Auctioneer
TIPTON, - - - IOWA

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.
BLUEBELL FARM, RICEVILLE, IOWA.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Burgess Consignment Sale

October 27, Huntington, Ind.

50 Registered Holsteins

From the Herds of H. C. and C. E. Burgess, Ray Muker, I. F. Keisling & Sons, and Geo. P. Sneider

The Sale will Include:

Daughters of Col. Korndyke De Kol, a son of Pontiac Korndyke, whose first 17 daughters to be tested averaged 24.19 lbs. butter in 7 days as senior 3-year-old, with an average fat test of 4.26%.

That wonderful cow, Lenawee Calamity Pet will be sold. She has 5 seven-day milk records that average 765 lbs., the highest being 818 lbs.

There will be 8 cows bred to King Echo Sylvia Korndyke, a 40-lb. brother to the $106,000 bull.

King Quality Korndyke Fobes, the H. C. and C. E. Burgess herd sire, will be sold. His dam produced 32.5 lbs. butter, 717 lbs. milk in 7 days.

10 bulls ready for service are included, all of them from good record dams.

This is a wonderfully good opportunity to buy some real foundation stock at your own price. It is an opportunitv to get started with pure-breds that are heavy milkers and test high.

Every animal over 6 months of age tuberculin tested and sold subject to a 60-90 retest guarantee.

Sale held in the Huntington Co. Live Stock and Sale Pavilion

For catalogs address

H. C. Burgess, La Fontaine, Indiana

Auctioneer: W. F. Andrews, Beech City, O. S. T. Wood in the Box Lunch will be served.

Third Annual Sale

Porter County, Indiana, Holstein-Friesian Breeders' Association

50 Registered Holstein-Friesian Cattle

Consignment includes heifers and cows bred to or from sires of National note, such as:

Winterthur Ormsby

Seven nearest dams average:

Butter	7 days	35.84
Milk	7 days	630.23
Butter	365 days	1064.37
Milk	365 days	22491.54

Unaland Korndyke Hengerveld

Three nearest dams average:

Butter	7 days	29.03
Butter	1 year	1146.34
Milk	1 year	24151.80

Took second prize at Ind. State Fair 1918-19.

Creamelle Perfection

Grand Champion Indiana State Fair 1919. Breeding of the best blood lines.

King Korndyke Isabelle Veeman

His six nearest dams average: Butter 7 days, 32.77. Grand Champion Indiana State Fair 1918 and other fairs. A sire whose daughters are proving to be high producers.

Winterthur Sadie Vale Dosegis

His dam as a 2-year-old had a record of:

Butter	7 days	25.20
Butter	1 year	826.19
Milk	1 year	19116.00

Is a Grandson of King Segis Pontiac Alcartra and King Korndyke Sadie Vale.

Come to Porter County to get foundation cattle, where the Indiana State Champion cow is, where we have had 8 out of 10 best cows in the Cow Test Association in the State. Had the highest cow 8 months out of 12 in 1919.

Valparaiso, Indiana, October 30, 1920

Sale will begin at 12:30 o'clock sharp

Col. J. E. Mack, Auctioneer R. Austin Backus, Pedigree Man Chas. Ohlfest, Sales Mgr.

On Pennsylvania, Nickel Plate and Grand Trunk R. R. Auto Bus from Kouts and Wheatfield. For catalog write

A. C. MOHNSSEN, VALPARAISO, INDIANA

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

12 BULLS FOR SALE

Seven are ready to use. All are good individuals and nicely marked. Sires: King Segis De Kol Fayne 8th, a 25.63-lb. grandson of King Fayne Segis and Peidora De Kol Pontiac Pietertje, a 29.52-lb. grandson of King of the Pontiacs. Some have A. R. O. records. For pedigrees and prices write **C. I. Reamer, North Liberty, Ind.**

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Sexauer Stock Farm

For Sale: A bull born Oct. 22, 1919. Outstanding individual, evenly marked in color. From a 27-lb. cow, 624 lbs. milk. He is sired by Woodcrest Pietje Clyde (33 lbs.) whose daughters, so far tested, averaged 19.25 lbs. as junior 2-year-olds. Write for other information and price.

John Sexauer & Sons, Belvidere, Ill.

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅛ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

150 Head — 150 Head

Dispersal Sale of

High Grade Holstein Cattle

One Mile North of Enos, Ind., on the Brazelton Murdock Farm

October 27th

We will sell 150 head of Fresh Cows, Springer Cows, Springer Heifers and a nice bunch of 6-month- to 18-month-old heifers and 4 Registered Bulls—good ones —two of them come from Purdue University herd.

Enos, Ind. is 60 miles south of Chicago on N. Y. Central R. R. and 15 miles north of Kentland, County Seat of Newton County. For further information address

Brazelton Murdock Co. - Morocco, Ind.



How Does This One Suit You?

He was born Feb. 27th, is the kind of an individual that will suit you and we offer him for $450.

His dam has a 24-lb. 7-day record. She is now on semi-official test and in 147 days has produced 8,425 lbs. milk and 340 lbs. butter.

His sire is Sir Johanna Fayne Segis Pontiac, a son of King Segis Pontiac Count from one of the best daughters of Oak De Kol Ollie Homestead.

Write or wire us about him today.

ROCK RIVER FARMS H. W. Allyn, Supt., Byron, Ill.

"The home of Sir Johanna Fayne Segis Pontiac"



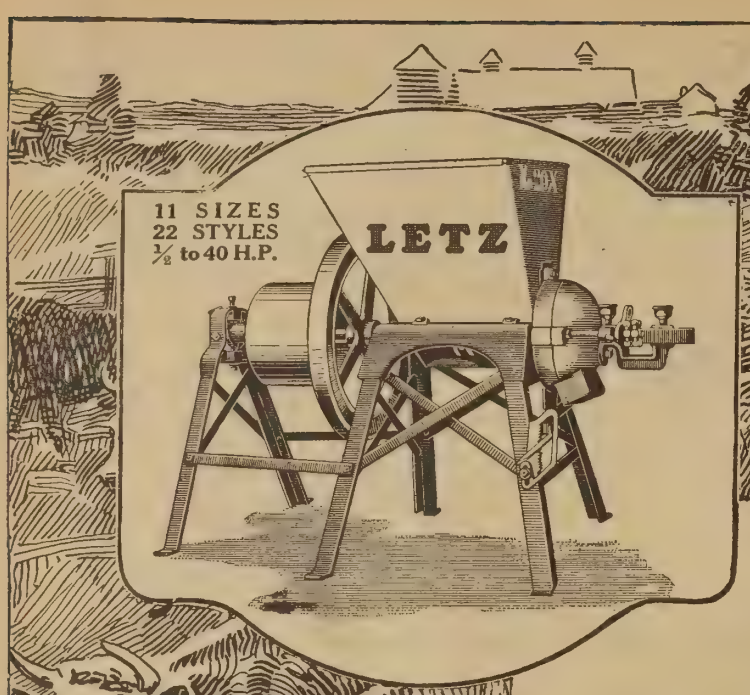
Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. **LISLE FARMS CO., LISLE, ILL.**



20 out of every 100 rationed *without cost*

ACCORDING to Government Experimental Stations, 20% of all grain fed *whole* to cattle is wasted. This is due to the fact that 20% of it is not digested.

But *ground* feed is entirely digested. Its use saves that 20% waste. The saving is equal to feeding 20 out of every 100 animals free. Also it means stock fattened several weeks earlier. Because it is more appetizing, the animals like it better, and digest all of it.

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HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



SCENES FROM THE 1920 NATIONAL DAIRY SHOW

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
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Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Full Cheese Weights

Enjoining dealers in American cheese from refusing to pay cheese factories for quarter and half pounds, the Wisconsin Division of Markets Monday issued an order, effective at once, directing every cheese buyer in Wisconsin to pay for not less than the full amount which the cheese weighs at the time of weighing at the buyer's warehouse.

The practice existing for years in Wisconsin, under which approximately one million dollars are estimated to have been absorbed annually, was for the cheese buyers at producing centers, such as Plymouth and Marshfield, to pay for only even pounds and to either take the fractions of pounds without payment or make a flat deduction of 5/8 pound or 7/8 pound upon every box.

The cheese dealers maintained at the public hearing that the justification for failing to pay for fractions is the fact that cheese factories are marketing cheese which, because it is shipped too soon after making, shrinks in weight while in the hands of the dealer. The position of the Division of Markets, however, is that this loss should be offset by the payment of a lower price for such "green" cheese and that it is unfair to take fractions from every producer of cheese without regard to whether or not his cheese is in green condition.

The order, as issued, applies to all persons buying American cheese from the producers and to all selling agents of American cheese for the producers.

Violation of the order, unless it is set aside by the courts, is punishable by fine or imprisonment and—in addition—gives the party suffering loss from such violation the right to lay his case before the Division of Markets and recover twice the amount of his loss.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

A Message to the Cows

I'm thankful for the work you've done,
The summer record that you've made.
Hard work has mixed with dairy fun;
The milk has been of highest grade.
Our place has prospered—fortune smiled,
Our bank account is mighty fine.
And all your records have been filed,
Your work and mine!

I only know that through the year,
We two together, herd and me,
Have met each season, minus fear;
And faced the fights that were to be.
Each day the train has sped our wares,
Each hour the butter and the cream
Have won us wealth—have scaled those stairs
Which spell success of which men dream.

And now snow falls, the winter comes,
The meadows will not give you cheer;
Gone is the clover bee that hums—
The singing stream no longer here.
Snug in your barn I'd have you know,
I realize the part you play.
And while the fields are white with snow,
I give the herd its due, today.

The Dairyman's Philosophy

Don't think it's lonely in the country. The loneliest man on earth is the city man when things go wrong for a day.

Some folks must always get milk from a bottle that is left at their doorstep each morning. But milk is a blessing, no matter how you get it, or where.

"Brown has a wonderful baby."
"What makes you think so?"
"Well, the first word it ever said was 'Moo, Moo.' It's a true dairyman's daughter."

When it comes to paying wages, if you will only stop to think, the average farmer pays a higher rate and makes it more pleasant for the employee than any other employer on earth. And on top of all that, the man gets all the pure milk he wants to drink.

The New Cream Separator

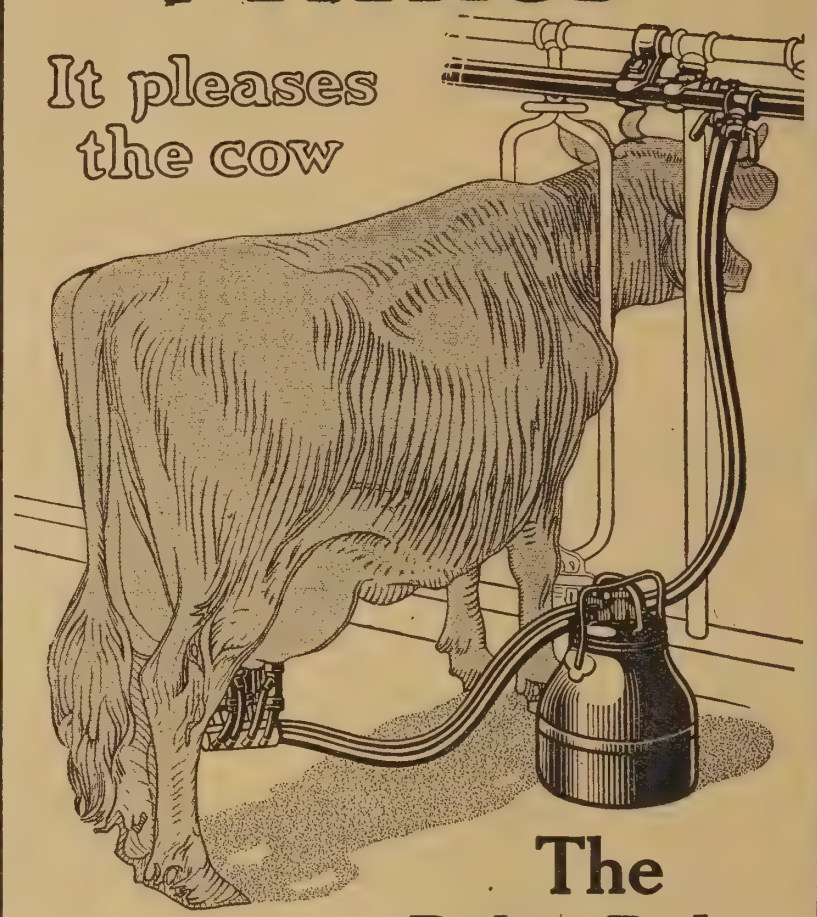
The nervous waiting for it to arrive.
The wondering if it will really work.
The day the truck arrives.
The setting of it up in the dairy house.
The proud spirit of ownership.
The talk with the local agent.
The thoughts of next spring.
The unwillingness to wait.
The bringing in of five buckets of steaming milk.
The desire to have a try.
The super-knowledge of butterfat.
The sudden pang of past waste.
The profits that show in the pail.
The view of the cream.
The operation of the separator.
The willingness to admit that science knows.
The increased profits.

The arguments fly back and forth about milk. The prices are raised and raised again, and then lowered, and the newspapers are filled with stories. It is a most interesting topic. The only thing we know is that health and milk and growing children and sick people are inseparably connected with dairy farms.

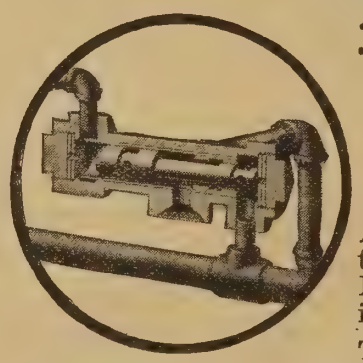
Every cloud has its silver lining but some folks are so impatient they just can't wait for that side to turn out.

The De Laval Milker

It pleases the cow



The Pulso-Relay



(The Pulso-Relay is not shown in the part of the Milker installation pictured above. It is placed at regular intervals on the vacuum pipe)

Absolute regularity of action throughout a large Milker installation is very important and necessary.

The De Laval Milker is successfully used in large barns, and in several separate barns, only one power unit (the De Laval Pulso-Pump) being used. This is made possible by the invention of the Pulso-Relay; a small, simple device which is installed at regular intervals on the vacuum pipe.

This relaying of pulsations, maintaining absolute regularity, is made possible by the double pipe-line system. There is no interference anywhere between the continuous flow in the vacuum pipe, which draws the milk, and the pulsating movement in the pulsation pipe, which operates the Udder Pulsators. In this way, every cow throughout the installation is milked in the same regular, efficient way every day.

The De Laval Milker is a distinctly different type of milking machine. It is alternating, positive, uniform in action, and requires no adjusting of any kind. It is faster, more reliable and more sanitary than any other method of milking.

The De Laval Milker is sold with full knowledge of the fact that more is expected of it than of any other milker—due to the Company's reputation for service and satisfaction to users of De Laval machinery.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway, New York
29 East Madison Street, Chicago
61 Beale Street, San Francisco

AN ICE CROP IS NO FROST

The Winter Harvest Can Be Made to Yield Abundant Returns

C. A. LE CLAIR, WISCONSIN

FARMERS everywhere in that half of the United States north of a line cutting the southern boundary of Virginia and Missouri can harvest natural ice. It is a crop which does not take any fertility from the land and returns more to the acre than anything else a farmer harvests. The cutting of ice furthermore comes at a time of the year when other work is not pressing. Hence the cost of putting up the crop rests solely in the labor of gathering and storing it. In fact, in some instances, according to the women on the farm, no heavy charge against the ice crop can be placed for labor of gathering it. As one of them expressed it: "After the men folks have gathered up the year's supply of firewood I look forward to the ice harvest to keep them out of my way around the house."

Years ago quite a number of farmers looked upon the use of ice as more or less of a luxury. Today nearly all who have tasted of the joy of living concede it is a necessary commodity. Those who live in the country are beginning to see that, whereas city folks can buy perishable foods as needed, farmers must provide means of keeping a store of these things on hand. Thus the use of ice is actually more essential in rural communities than in cities. Nevertheless, although rivers, creeks, lakes, and ponds are everywhere to be found in the zone where natural ice grows within reasonable hauling distance of farms, there are still far too many who fail to harvest a profitable ice crop. In the New England states where dairymen ship milk and cream as much as five hundred miles to the city, few farmers are without ice harvesting equipment. In other sections of the country, farmers who will not dispense with ice in the summer haul it from town. Those who do this do not appreciate that the practice of carting materials from town does not as a rule tend to pay off a mortgage or help to make it possible to lay something by for a rainy day. To harvest an ice crop on the farm is just another way of cheaply bringing modern conveniences to add to the income and joy of living.

Once ice is used on the farm it can never be dispensed with. Whether dairy farmers sell whole milk or cream, the use of ice offers them a great advantage. Mr. J. B. Irwin of Wood Lake and Clover Farms, Minnesota, who sells bottled whole milk and cream of particular quality from his famous Holstein herd to the retail trade of the Twin Cities, employs plenty of ice to keep the product fresh for delivery. Immediately after the fresh milk is bottled, it is placed in crates holding a dozen bottles and the space between these is packed with crushed ice taken from a storage house just back of the milk house. The ice is renewed whenever necessary until the bottles reach the distributing station. As this dairyman says: "We have to credit a good share of the premium price that Wood Lake Farm milk brings to a generous use of ice. Our system of delivery would be impossible without it."

A farmer of Iowa County, Wisconsin, who produces some fifteen thousand pounds of thirty per cent cream a year, gets three and a half cents more a pound for his product by shipping it to Milwaukee than his local creamery offers. The use of ice makes possible this premium price for high grade cream. Aside from the advantage of having a supply for home use and other purposes on the farm, this winter crop offers a return of at least $450 a year.

In an eastern town, the superintendent of a milk and cream receiving station said of the value of ice on the farm: "From my experience here I can say that those of our patrons who do not use ice to cool their product and jacketed cans to haul it to the station lose as much as a dollar a day because of the discount we are obliged to make for sour goods. Other farmers who properly cool their goods sometimes bring in milk forty-eight hours old which is perfectly sweet."

The use of the old well as a refrigerator has passed. At best, well water seldom cools below fifty degrees Fahrenheit in summer, when most of the things we want cool should be kept at forty degrees. It is easiest and most economical to cool milk in the insulated tank which is held at about forty degrees by the use of ice. In using a well as a refrigerator, there is always the chance of spilling the beans, thus not only losing valuable produce, but also contaminating the water. Worst of all, the well is really not cool enough to give good results.

Amount to Store

The cost of securing a home supply of ice after the place of storage has been built amounts to simply the expenditure of labor necessary in putting up the ice, and breaking it out when it is needed. For the benefit of those who have or are making plans for putting up ice this winter, I wish to emphasize that it is far better to arrange for putting up more than enough rather than an insufficient supply of ice. In the northern half of the United States, the season for the daily use of ice extends from the first of May to about the first of October. For home use alone, from fifty to a hundred pounds a day will be needed on the average. To supply this, requires from five to ten tons of ice. On farms where cows are kept, it is well to figure on about one to two tons of ice per head additional, depending on whether cream or whole milk, respectively, is to be cooled. In addition, there should be made an allowance for shrinkage of the ice in storage of from one-fourth to one-half the ice stored.

Where twenty milk cows are kept and the cream only cooled, the total amount of ice that should be stored to meet all needs ought to be between forty and fifty tons. This would represent a block of ice approximately fourteen feet wide, sixteen feet long, ten feet high. To put up this amount would cost from twelve dollars to a probable maximum of fifty, depending upon the method of getting and storing the ice. In the South, where the farmers find it profitable to store artificial ice during the winter months when it can be manufactured cheaply, the cost of packing the summer supply frequently amounts to considerably more. The storage during the winter months of artificial ice for summer use is really economy of fuel in that it takes coal to make artificial ice. Hence, even beyond the zone where natural ice can be obtained, this practice is growing in popularity.



LIKE A VETERAN ICEMAN THIS FARMER IS USING A WOODEN PADDLE TO "CALK" THE PLOWED FURROWS WITH SNOW

This prevents water from the channel running down the furrows where its freezing would spoil many hours' work.

Ice House Construction

More than anything else, no doubt, a prevalence of wrong ideas as to the expense of erecting storage houses and the procuring of harvesting equipment has kept farmers from more generally putting up ice. Those who have had experience understand the simplicity of the equipment necessary. A serviceable storage place in the form of a structure having four firm walls and a good roof carrying a ventilator, and a few simple tools are all that is required for the successful putting up and storage of a good ice supply.

Fully ninety per cent of all who put up ice use insulating materials, such as sawdust, straw, and the like, to keep it. For this reason, a great deal that has been said and written about the details of constructing ice houses, having dead air space, cork, and other wall insulation, tends to prevent, rather than encourage, the storage of ice on the farm. Such structures are so costly that in localities where ice can be had for the making they are impractical.

After twenty years' experience in storing and handling ice under Wisconsin conditions, I have no hesitancy in saying that the most economical type of storage house for the average farmer is one built with a frame work of roughly hewn posts, such as in many cases can be secured from the woodlot. Two by fours spiked to these posts will form the plates and sills. The walls can be made by nailing a layer of rough boards to the inside of the studding and the outside can be finished with a layer of ship lath or siding. A door extending from the base to near the gable of the roof should be provided for facilitating the storage and removal of the ice. The roof should be built to provide a sweep of air beneath the eaves or through a ventilator so as to prevent an accumulation of moisture and an excessive radiation of heat within the house. If the roof is covered with a light colored type of roofing which will reflect the rays of the sun, radia-

(Continued on page 666)



IF AN ICE FIELD IS LAID OFF ON THE SQUARE AT THE OUTSET, PLOWING IS SIMPLIFIED AND THE CAKES BREAK OUT UNIFORMLY



ORDINARILY FARMERS CAN BUY ICE FROM CONCERNS HARVESTING BY POWER MACHINERY CHEAPER THAN THEY CAN CUT IT THEMSELVES

THE 1920 NATIONAL DAIRY SHOW

THE 1920 National Dairy Show held in Chicago October 7—16 was a great exhibition, well staged and effectively presented. In some respects it surpassed the thirteen which have preceded it. The dairy cattle in numbers and in quality worthily represented the five breeds; the record space of 100,000 square feet was occupied by dairy machinery with every improvement known to the world's leading manufacturers; the strictly educational exhibits excelled those of any previous year.

Yet the 1920 Dairy Show fell short of its mark—it failed to reach the dairy farmer. The show had everything but a crowd. It was like a great theater—well-rehearsed, with head liners aplenty—with no audience, a handful of people in the front rows and the galleries empty. The vacant seats unintentionally reproduced on the cover page of this issue bear mute testimony of the "small house" the important groups of cattle drew.

The big problem of the management of the Dairy Show is to get the dairy farmer to attend. Green County, Wisconsin, sent one hundred fifteen delegates by special train, an action all too conspicuous. Such delegations should be more common. When the Show was held at Springfield, Mass., farmers came in large numbers and the Dairy Show for the first time had an attendance to which it is entitled. It is generally agreed that Chicago is the logical place to hold this great national dairy event, but it is disheartening, at the end of fourteen years, to find so few farmers visiting this important and well presented dairy exhibition. We appreciate that dairy farming is a confining occupation and the lack of help makes it doubly hard for the dairy farmer to leave home. The educational exhibits, the display of dairy equipment, the well bred dairy cattle, the numerous meetings of national associations, the opportunities to meet men engaged in dairy farming and leaders in every branch of dairying, offered an occasion for the dairy farmer to gather useful information not excelled in any agricultural show in the world.

Something must be done to take the educational force of the show to the farm.

Since the inception of the National Dairy Show we have presented its meaning and its purpose to the dairy public. The following quotation taken from an editorial in the Chicago Tribune clearly indicates that the show has a real message. We quote:

"Go to the Dairy Show and see what applied science can accomplish in the perfecting of animal life and its products. It will help you to know what America is and what the West is. Chicago is the center of one of the greatest dairying regions of the world, one of the most progressive and useful of human industries, producing some of the most essential and valuable factors of civilized diet. You will see the competition of public and private agencies of the federal and state governments, the state universities, the great associations of breeders and dairymen, in the advancement of the industry. You will learn what the dairy means to agriculture and what it means to you and your children. You will learn a lot that will surprise and interest you and you will see in many beautiful examples what science has done for the perfection of dairy cattle."

Foreign Exhibits

Two foreign governments took space for the advertisement of their dairy products. Argentina gave chief emphasis to its cheese and Denmark to its sweet, unsalted butter. The importance of foreign dairy products to the dairy industry of this country is apparent from the fact that during the past eight months 25,591,969 lbs. of butter have been imported, 13,775,434 lbs. coming from Denmark alone.

Judging Contests

Collegiate Judging of Cattle:—Teams of three students each from twenty-one agricultural colleges competed in the thirteenth national contest in judging dairy cattle. The states represented were: Connecticut, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Washington, and Wisconsin. The coaches served as a judging committee and were assisted by three breed judges for each breed. Three classes of four animals for each breed were judged, bulls, cows, and heifers.

The Kansas team led the contest with Iowa second and Kentucky third. Maryland won on Ayrshires, Nebraska on Guernseys, and Kansas on Holsteins and Jerseys. C. H. Young of Kansas was high man of the contest; D. C. Badger, Indiana, second; and W. H. Davis, Pennsylvania, third. R. W. Smith, Jr., of Massachusetts was high on Ayrshires; W. T. Gray, Nebraska, on Guernseys; E. J. Haslerud, Minnesota, on Holsteins; and G. M. Drumm, Kansas, on Jerseys.

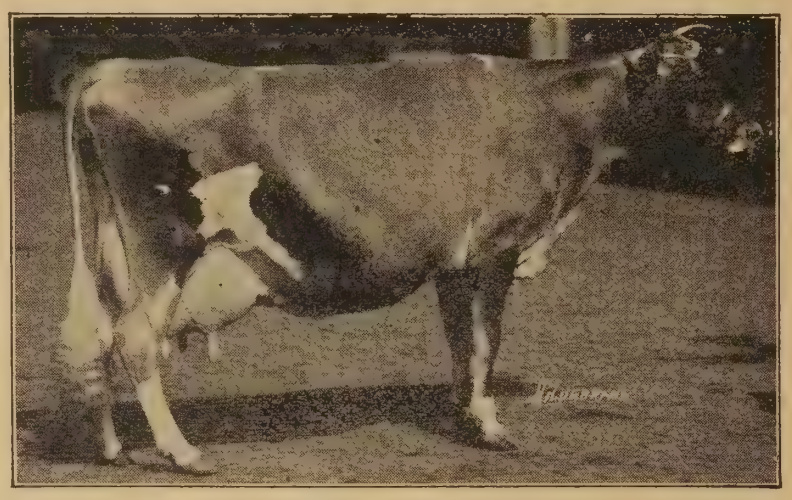
The contest was conducted by the Dairy Division, Helmer Rabild acting as superintendent.

Collegiate judging of Products:—Five teams from as many states engaged in the products judging contest, winning in the following order: Ohio, Maryland, Iowa, South Dakota, and Indiana. Ohio won five of the seven awards, leading as a team on cheese and milk as well as in total score. South Dakota had the leading team on butter. A. H. Neu of Ohio made the highest rating in the contest; C. Farr of Iowa was second; and T. V. Armstrong of Ohio was third. J. H. Snyder of Maryland led in the judging of butter; Chas. Reynolds of Maryland in judging cheese; and C. Farr of Iowa in judging milk.

Boys' and girls' judging of cattle:—Fifteen states were represented in the contest in judging cattle by boys' and girls' club members. The contestants were selected for the various teams through competitions in their respective states. Two were girls. The states represented were: Delaware, Illinois, Iowa, Indiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin. A class of bulls and a class of cows from the Ayrshire, Guernsey, Jersey, and Holstein breeds were judged. The placings and the written reasons were graded by a committee of two judges for each breed.

Missouri won the contest; Illinois was second; Texas, third; Maryland, fourth; and Indiana, fifth. Arthur Gwin of Missouri had the high score for the contest; Arthur Bennett of the same state was second; Clarence Doran of Illinois was third; and Jack Turner and Gilbert Wieting of Texas were fourth and fifth. Ralph McCardle of Indiana made the highest score on Ayrshires; Lowell Forbes of Missouri on Guernseys; Clarence Doran of Illinois on Holsteins; and Helen Greenlee of Ohio on Jerseys.

The contest was conducted by the Dairy Division.



SLY PUSS P, SENIOR AND GRAND CHAMPION JERSEY COW AT THE NATIONAL DAIRY SHOW
OWNED BY LONGVIEW FARM, MISSOURI

The Dairy Products Exhibit

The Dairy Products Exhibit was more successful than at any previous show, in that there were a larger number of entries in all products except American cheese and that the quality of the butter and cheese, particularly the Swiss and cottage cheese, was far above the average. This is the report of R. B. Stolty, superintendent of the exhibit.

There were fifteen entries from six states for whole milk storage butter, Carle Bergquist of Minnesota winning the gold medal with a score of 95. The hand separated storage butter had 48 entries from sixteen states. The gold medal was won by Julius Ramsey of Minnesota with a score of 95. The storage butter was shipped to Chicago on June 5th and held in storage until October 5th. It scored within one-half point of the fresh butter. The whole milk butter had 34 entries from ten states. John Jorgenson of Wisconsin won the gold medal with a score of 95½. There were 141 entries in the hand separated butter class from sixteen states, Carl N. Hansen of Illinois winning the gold medal with a score of 95½.

There were nine entries of dairy farm butter from eight states. The gold medal went to Sanitary Farm, Texas, with a score of 93½.

The honors for American Swiss cheese again went to Charles Knicker of Wisconsin with a score of 98. There were 18 entries from three states. There were nine entries of Brick cheese from four states, Wisconsin receiving the gold medal on the product of Jacob Disler with a score of 95½.

The American Cheddar cheese class was small, there being only 44 entries. Kielsmeier Co. of Wisconsin won the gold medal with cheese scoring 97½ and Hugh Barber of Oregon, second, on cheese scoring 97. There were ten entries of cottage cheese from five different states. The gold medal went to Carl W. Mork of Minnesota on cheese scoring 97.

Two judges were chosen, one from the East and one from the West. The butter judges were O. A. Storvick of Minnesota and C. W. Fryhofer of New York City; the American cheese was judged by E. L. Aderhold, Wisconsin, and Professor



HOLSTEIN CHAMPIONS AT NATIONAL, DOETJE NELLIE CONCORDIA, OWNED BY AITKEN BROS., WISCONSIN, AND CEDAR LAWN CANARY PAUL, OWNED BY BAIRD BROS., WISCONSIN

W. W. Fisk, New York; Fred Marty of Wisconsin judged the foreign cheese.

Two Educational Exhibits

Two educational exhibits of commendable merit were those from the University of Illinois and the boys' and girls' calf club of Winnebago County, Wisconsin.

In the former, cows were exhibited to show "what a good bull did". They were the daughters of the Holstein sire, Emblagaard Tritomia Homestead, owned and kept in service until his death by the University. The daughters exhibited are all very heavy producers and have exceeded their dams' records. The get of this bull averages to produce 3,907.7 lbs. milk, 160.65 lbs. fat more than their dams. This gratifying instance of a good bull being retained in service rather than slaughtered, as too often happens, was well worth while in an educational way.

The youngsters from Winnebago County, representing a membership of 100, showed their calves and explained the club work to inquiring visitors. The quality of the calves is attested by the red ribbon won in the open classes by Arthur Haese on his Brown Swiss heifer.

Department of Agriculture Exhibit

The Department of Agriculture rang the bell on exhibits this year. It put up the best educational display on dairy farming and manufacturing practices the writer has ever seen. A dairy farmer's week was well spent if he put in his entire time there. A dairy industry fully awakened to its opportunities would so quickly avail itself of the services proffered by the Department that its present facilities would at once prove wholly inadequate.

The recommendations made are practical and to the point. To illustrate their workings the Grove City community of Pennsylvania was reproduced in miniature and the actual results obtained there were shown. The Dairy Division holds that in the development of a dairy community "a profitable market is the first essential". A few years ago practically no dairy products were shipped out of Grove City. The creamery development there under the Division's assistance has built an industry which sent out $508,810 of dairy products in the year ending June 30, 1920. The market made by the creamery includes butter, condensed milk, casein, and five types of cheese. Where there was no community dairy organization there are now three breed associations, 387 tuberculin tested herds, two bull associations, 440 cows in testing associations, a cattle sales association, and boys' and girls' calf clubs.

The activity of the Grove City National Bank has so greatly benefited dairying that a bank booth was established at Chicago that Mr. E. B. Harshaw, cashier, might explain how other banks may help their communities.

Cow testing association charts gave explanation of this movement which has proved so profitable in record keeping. It was stated that 468 of these associations were in operation July 1 of this year. Statistics from 110 show the average production of cows within associations to be 246 lbs.; that for cows outside was said to be below 160 lbs.

A chart presented the wide differences in production in herds. Two herds in the same association the same year illustrated this. One averaged a production of 306 lbs. fat, the other, 155 lbs.; the average cost of feed for the first was $67.56, for the second, $61.72; the average income over cost of feed for the first was $74.92, for the second, $.62.

To further show the relation between production and profit, that the heavy milking cow is the money maker, figures from 100 testing associations with 16,416 cows were presented as follows:

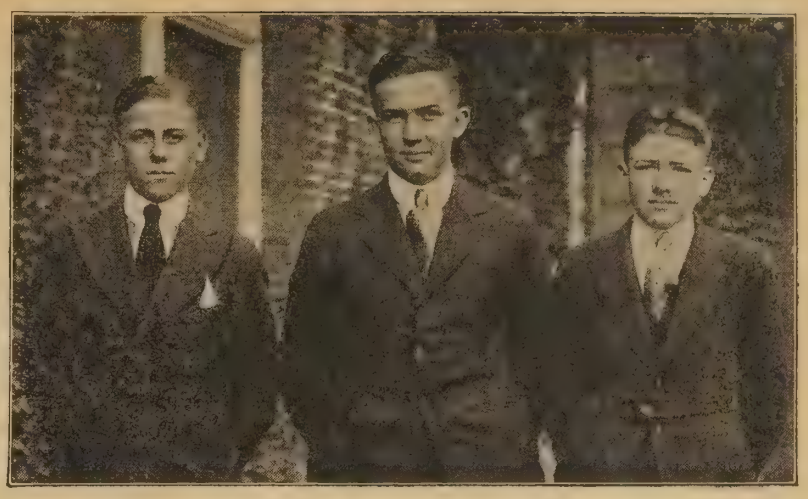
Ave. butterfat production, lbs.	Ave. income above feed cost
100	$ 9
150	25
200	39.50
250	**54**
300	70
350	84
400	98
450	115
500	**126**
550	136
600	157

The following figures from 16,416 12-month records illustrated the fact that with the dairy cow, "the more she eats, the more she gives, and the more she gives the greater the profit."

Ave. cost of feed	Ave. income over feed cost
$40	$ 30
50	55
60	94
70	127
80	136
90	156

A summary of 11,130 twelve-month records indicates pretty clearly that the cow which freshens in the fall is the heaviest milker. The table below shows how much she out-produces cows calving in other seasons.

Season	Ave. lbs. fat produced	Ave. lbs. milk produced
Spring	236	5,775
Summer	234	5,863
Autumn	267	6,591
Winter	254	6,338



WINNING TEAM IN THE JUNIOR DAIRY CATTLE JUDGING CONTEST
Left to right: Arthur Bennett, Arthur Gwin, and Lowell Forbes, the Missouri team.



MORTON MAINS LORD BARRYLYNDON, SENIOR AND GRAND CHAMPION AYRSHIRE BULL AT THE NATIONAL DAIRY SHOW
Owned by Alta Crest Farm, Massachusetts

Information was given concerning the organization and operation of bull associations. On July 1, of this year, there were 120 of these organizations in use.

An old fashioned guessing contest was run—the same one which cuts the profits on farms where no records are kept. Twelve cows were shown whose yearly production is known and visitors were asked to choose which they would keep and which they would cull on appearance. The writer turned down a cow which it was shown has produced 15,000 lbs. of milk in a year. The readers of Hoard's Dairyman who did not guess at Chicago will have opportunity to find whether they can do better, for the pictures of the twelve cows will be reproduced in a forthcoming issue.

Catchy, attractive exhibits put across the "Use more milk" idea and told "why" and "how". The statistics on dairy products consumption in the United States as compared with that in other countries gave evidence of the need of increasing the use of butter and cheese in this country. The data below offers a chance for interesting comparisons on per capita consumption per year:

Country	Lbs. butter	Lbs. cheese
United States	17.5	3.8
United Kingdom	17.0	11.2
New Zealand	21.7	3.0
Australia	25.6	4.8
Argentina	1.7	2.9
Italy	2.5	4.8
Switzerland	12.1	26.4
Norway	14.0	7.1
Canada	16.3	3.0
Sweden	16.5	
Netherlands	16.8	13.2

Breed Associations Represented

Four of the national breed associations maintained headquarters at the show; the Ayrshire and Jersey organizations in attractive booths, and the Holstein and Guernsey in exhibits of their extension work.

With the Holstein-Friesian Association of America were six state association spaces, for New York, Illinois, Ohio, Minnesota, Michigan, and Wisconsin. The slogans of these states, as shown in their exhibits, are worth recording: New York, "the nursery of the breed"; Illinois Holsteins, "the safest investment for foundation stock"; Ohio advertised, "Two big eye-opener sales"; Minnesota Holsteins, "type—health—production"; Michigan Holsteins have "health, quality, production, and breeding"; Wisconsin, "the cradle of the breed".

The most striking association exhibit was that of the American Guernsey Cattle Club. Instead of the usual booth, the work of the Boone County Guernsey Calf Club of Indiana was presented. Fifteen Guernseys owned by fourteen club members were on exhibit as a suggestion of a means by which the breed may be introduced in a community and by which it may be used in building the community itself. Four of the first importation to Boone County were shown with six calves from



FIRST PRIZE GUERNSEY EXHIBITOR'S HERD, INCLUDING THE GRAND CHAMPION COW, IMP. MILDRED II OF LES GODAINES, OWNED BY JONES & McKERROW OF WISCONSIN

that importation and five calves of the second importation. In the open classes those shown won a third, a fourth, and a fifth prize.

The members themselves were present to explain the club work and tell how other clubs can be organized. They stated that scrub bulls are being supplanted by pure-breds from the club heifers and that there is a waiting list for these bulls. The exhibit was effective, being valuable to visitors to the show, to the Guernsey breed, and, perhaps most of all, to the club members themselves.

The Cattle Show

Six hundred eighty-two cattle were on exhibit at the 1920 National. The success of the cattle show in no small degree resulted from the state herd idea which induced a host of small breeders of Holsteins and Guernseys to bring in an animal or two. Not only did this greatly increase the numbers vitally interested in the awards but it virtually made the show by greatly adding to the entries.

When breeders declared when they finally got their cattle out of the stock yards in 1914—15 that they would never exhibit there again, experience with foot and mouth disease surely gave them good excuse. Another health condition which is in the long run quite as important has brought forth individual complaint but no united action. That is the lack of ventilation of the cattle barns. On such years as this, no animal is safe in the close, humid air of the barns. At least five head died, a number more were sick and taken to the hospital, while the general health of many more was not good. The judging arena and the barns should be ventilated. The expense would not be excessive. Breeders cannot afford the chances of cattle pneumonia in such quarters; for its future, the show should be where its surroundings are healthful.

Ayrshires

Ayrshires drew their full share of attention. No breed makes a better display in the show ring than the red and whites. Six herds contributed ninety-five head of well fitted representatives of the breed and made a showing which compared favorably with that of former Nationals. Wendover Farm of New Jersey made the heaviest winnings, being not only premier exhibitor but also premier breeder, an honor which had gone to the Adam Seitz herd of Wisconsin for the nine preceding shows. The championships went to three herds: Alta Crest Farms of Massachusetts taking senior and grand for males; Scitz, senior and grand for cows; and Wendover Farm, both juniors.

When the executive committee of the Ayrshire Breeders' Association met to select a judge for the 1920 windup show of the circuit they failed to agree upon a choice. Thereupon they elected to discover whether Scottish judges and those in America agree in their choice of type. When Hugh W. B. Crawford, a successful dairy farmer and breeder of Scotland, selected for the task of placing the ribbons, had finished his work, it was pretty clear that there is some disagreement.

There was no disputing the ranking given the aged bulls. Foulton Ambassador, Wendover's herd sire, excelled Auchenbrain Toreador, Middlesex Meadows Farm entry, more clearly than at the Eastern States Exposition in masculinity, depth of chest and middle, and at the walk. Auchenbrain Toreador is straight lined, stylish, and in excellent condition but is too much off the ground and too shallow in body to win. Cavalier's Lord Roseberry lacks virility and masculinity and is not strong enough in his top line to be a close contendor. Mr. Crawford credited Alta Crest Farms' two-year-old, Lessnessock Searchlight, an easy winner in his class, with being the "finest shouldered bull of the day", but saved his chief praise for Morton Main's Lord Barrylyndon Imp., from the same herd, a three-year-old which he placed over Foulton Embassador in the senior championship struggle, the most closely contended placing of the day. This bull he credited with a neater shoulder and the likelihood of his making a larger bull at maturity than Wendover's Springfield grand champion. A choice was wholly a matter of type, the winner being a little more American in his form, while Foulton Embassador is more like Scotch show ring winners. Wendover Ambassador had no competition in the senior yearlings but has the form to meet lots of it successfully. He won easily from Seitz's Cavalier's Sherry Redman, junior champion at Waterloo, but lost in the finals to the three-year-old. Mr. Crawford's choice in the junior yearlings left the excellent young bull, Southcraig Imperial, Middlesex Meadows' Springfield junior champion, in second place, a judgment in which few agreed.

The aged cows, nine in number, were a difficult lot, falling short of the average usually set by the breed. Ardyne of Hill Top, Wendover's Springfield grand champion, led the class not so much on her excellencies as because she lacked the faults of the others. For example, her stablemate, Westburn Royal Rose, said by the judge to be the "most handsome in the class" was deficient in udder and went to fifth place. Chapmanton Nell 3d, from the Seitz herd, the choice of part of the ringside, showed too much weakness in her pasterns, loin, and udder attachment to lead. She went to sixth place. Middlesex Meadows took second and third on White Heather of Highland and Maple Leaf Jean. Alta Crest won the four-year-olds, Seitz the three-year-olds, and Wendover the two-year-olds. Mr. Crawford seemed to place chief emphasis on teats in the choice for senior and grand champion female, selecting Seitz's three-year-old, Barclay's Nightingale. She has the least Ayrshire quality of any National champion of the breed in many years. Wendover furnished all four first prize junior females, the senior calf, Ambassador's White Heather of Wendover Farm, being chosen for junior champion.

The detailed winnings follow:

Bull 4 years or over—1, Wendover Farm on Foulton Ambassador; 2, Middlesex Meadows Farm on Auchenbrain Toreador; 3, Seitz on Cavalier's Lord Roseberry. Bull 3 years or over—1 and 2, Alta Crest Farms on Morton Main's Lord Barrylyndon and Howie's Topnotcher; 3, Aldebaran Farms on Friendlesshead Victor; 4, Simmons on Cavalier's Goldfinder. Bull 2 years and under 3—1, Alta Crest on Lessnessock Searchlight; 2, Seitz on Cavalier Silver Mint. Bull 18 mos. and under 2 years—1, Wendover on Wendover Ambassador. Bull 1 year and under 18 mos.—1, Wendover on Wendover Circulation; 2, Middlesex Meadows on Southcraig Imperial; 3, Seitz on Lady Geneva's Wonder Boy. Bull calf 6 mos. and under 12—1 and 4, Seitz on Cavalier's Sherry Redman and Cavalier's Cupbearer; 2, Alta Crest on Alta Crest Footlight; 3, Wendover on Ambassador's Circulation of Wendover. Bull calf under 6 mos.—1, Seitz on Cavalier's Ping Pong; 2 and 4, Wendover on Foulton Ambassador 2d and Wendover Ambassador 2d; 3, Aldebaran on Aldebaran Hugh; 5 and 6, Middlesex Meadows on Nona's Middlesex Chancellor and Middlesex Royal Champ.

Cow 5 years or over—1 and 5, Wendover on Ardyne of Hill Top and Westburn Royal Rose; 2 and 3, Middlesex Meadows on White Heather of Highland and Maple Leaf Jean; 4, Alta Crest on Barbeigh White Legs 5th; 6, Seitz on Chapmanton Nell 3d. Cow 4 years and under 5—1, 3, 4, Alta Crest on Douglas Hall Dandy 2d, Craigley Blue Bell, and Craigley Ann 11th; 2, Wendover on Nethercraig Buttercup; 5, Aldebaran on Craigley Ada. Cow 3 years, under 4—1 and 6, Seitz on Barclay's Nightingale and Howie's Glen of Valley View; 2, Alta Crest on Craigley Lilly 4th; 3 and 5, Wendover on Barclay's White Flora 3d and Nethercraig Snowflower; 4, Middlesex Meadows on Evamere's Bertha. Heifer 2 years and under 3—1, Wendover on Wendover Brown Canary; 2 and 6, Middlesex Meadows on Ringmaster's Britta of Brae Burn and Bargenoch Dewdrop 2d; 3 and 4, Alta Crest on Garlaff 2d and Inhytewollen Flower 2d; 5, Seitz on Cavalier's Silver Queen. Heifer 18 mos. and under 2 years—1, Wendover on Wendover Gay Lass; 2 and 5, Alta Crest on Tower Brown Lady 6th and Netherton Primrose; 3, Seitz on Cavalier's Creampot of S. C. 2d; 4, Middlesex Meadows on Middlesex Maid; 6, Aldebaran on Violet Finlayston 2d. Heifer not in milk, 1 year and under 18 mos.—1 and 6, Wendover on Wendover Crusader's Princess and Wendover Farm Spicy Lady 2d; 2 and 5, Alta Crest on Whitehill Lady Rose and Alta Crest Heather Bell; 3, Seitz on Netherhall Kathleen 2d; 4, Aldebaran on Aldebaran Blossom Again. Heifer calf 6 mos., under 12—1 and 4, Wendover on Ambassador's White Heather of W. F. and Ambassador's Yellow Kate of W. F.; 2 and 5, Alta Crest on Alta Crest Cheer and Alta Crest Fi Fi; 3, Middlesex Meadows on Alta Crest Mist; 6, Seitz on Cavalier's Lila Lee. Heifer calf under 6 mos.—1, 4, 6, Wendover on Nethercraig Purple Heather, Wendover's Ambassador Gay Lass, and Wendover White Lady; 2, Seitz on Cavalier's Ella; 3, Middlesex Meadows; 5, Aldebaran on Aldebaran Victoria. Cow having official yearly record begun at 5 years or over—1, Middlesex Meadows on Maple Leaf Jean; 2, Wendover on White Heather of Torr; 3, Seitz on Chapmanton Nell 3d. Cow having official yearly record begun under age of 5 years—1, Seitz on Barclay's Nightingale; 2, 5, 6, Wendover on Barclay's White Flora 3d, Netherton Brown Canary 5th, and Douglass Monarch's Princess; 3 and 4, Middlesex Meadows on White Heather of Highland and Thistledown Hobsland 2d.

Advanced registry cow with two of her progeny—1, Wendover on produce of Netherton Brown Canary 5th; 2, Seitz on produce of Beuchan Lady Lofty. Get of sire—1, Wendover; 2, Alta Crest; 3, Middlesex Meadows; 4 and 5, Seitz. Produce of cow—1, 3, and 5, Wendover; 2, Seitz; 4, Alta Crest; 6, Middlesex Meadows. Exhibitor's herd—1, Wendover; 2, Alta Crest; 3 and 5, Seitz; 4, Middlesex Meadows. Young herd—1, Wendover; 2, Alta Crest; 3, Seitz. Breeder's calf herd—1, Seitz; 2, Wendover; 3, Alta Crest. Dairy herd—1, Wendover; 2, Middlesex Meadows; 3, Alta Crest; 4, Seitz.

Senior and grand champion bull—Morton Main's Lord Barrylyndon. Junior champion bull—Wendover Ambassador.

Senior and grand champion cow—Barclay's Nightingale. Junior Champion Cow—Ambassador's White Heather of W. F.



KANSAS COLLEGIATE DAIRY CATTLE JUDGING TEAM, WINNERS IN 1920 CONTEST
From left to right: Coach H. W. Cave, R. H. Lush, G. M. Drumm, C. H. Young.

Guernseys

One hundred seventy-seven Guernseys—approximately 55 exhibitors from 9 different states—most of the entries up to the standard of what National Dairy Show entries should be, and with Wisconsin and Iowa the heaviest winners. That in brief describes the 1920 Guernsey exhibit.

The showing this year was a good one, including as it did representatives of some of the best herds in Minnesota, Iowa, Wisconsin, Illinois, Indiana, Michigan, Ohio, New York, and Vermont. It was a particularly good showing for the middle west states and if only the state herd idea would be pushed harder in the eastern states another year the Guernsey showing at the 1921 National could be made second to none.

This is the first time in the history of the show that there has been a class for state show herds and its effect on the entire show was marked. It brought out the small exhibitor with one, two, or three entries, just the man who should be encouraged to show his good ones. Five state herds were needed in order to insure the class, and the entries from Iowa, Wisconsin, Minnesota, Illinois, and Ohio just made it possible. When they were finally lined up the herds were placed in the order named, this in spite of the fact that both grand champions were from Wisconsin. Mildred II of Les Godaines, Jones & McKerrow's grand champion cow, as well as a few other good ones, were left out of the state herd because of a ruling which prevented any exhibitors from showing more than two animals in class.

Some of the ringside dope was upset in the very first class, the aged bulls,

and that upset in turn led to a second in the championship decision.

Among the six aged bulls the real fight was between Imp. Itchen May King, owned by F. E. Fox and Goodhand Kingston & Son, and Ladysmith's Cherub owned by D. D. Tenney of Minnesota. These two have been pitted against each other several times at previous Nationals and each time the latter has been the victor. This time the tables were turned and the Wisconsin entry took the blue by virtue of his better top, and the fact that he showed just a little better finish, this in spite of a slight lameness. The Minnesota entry's head did not please the judges as well, he showed a little low over the loins and poor at the hocks.

Cherub's Prince, owned by W. W. Marsh, Iowa, and F. J. Rueping and Chas. L. Hill, Wisconsin, was an easy winner among the three-year-olds. When it came to senior champions the battle royal was between the last named and the aged winner. Grace's Memento, Jos. Golinvaux's winning two-year-old, although a good one, did not have an outside chance with the older entries. The final decision was in favor of the aged bull, Cherub's Prince going down to defeat for the first time, and because of his rather plain head, throatiness, and his poorer back.

W. W. Marsh's Golden Laddie of the Prairie, a junior yearling, was junior champion but not good enough to beat the aged bull for final honors.

Both first and second places in the aged cow class went to Wisconsin entries and it so happens that both were formerly owned by Edgemoor Farm of California. Imp. Mildred II of Les Godaines, Jones & McKerrow's cow, stood first with Imp. Donnington Goldie 5th, Mr. Rueping's entry, pushing her hard for the place. The latter is a longer bodied cow and carries a much better udder, but she did not possess the same splendid type of body or the veining of the first, nor is she quite so good about the head.

"Mildred" was senior champion, winning over Engleside Pretoria Vrangue, Mountain Bros.' four-year-old; Adell of Burnham Beach, L. E. Hagemon & Sons' winning three-year-old; and Century Girl of Edgemoor, first prize two-year-old owned by Jones & McKerrow.

Honey Bloom of the Prairie, Marsh's wonderful senior yearling, undefeated in her class or for junior championship this year, lived up to past performances and was an easy junior champion. There were those, too, who would, perhaps, have made her grand champion, but her excellence was not enough to counterbalance the maturity and finished quality of the aged cow which was made grand champion for the seventh consecutive time this year.

Some splendid groups were out, chief among them thirteen gets of sire, and it is noteworthy that first, second, and third in this class went to the get of Cherub's Prince owned by Marsh, Ladysmith's Cherub owned by Tenney, and Imp. Kitchener's Express owned by Mountain Bros.—three sons of Imp Hayes Cherub 2d. Mountain Bros. of Iowa won three of the four cups offered, on best two-year-old bred by exhibitor, best produce bred by exhibitor, and best get bred by exhibitor.

H. H. Kildee of Iowa did the judging with James Robertson of Maryland acting as advisory judge.

Following is a complete list of awards:

Bull 4 years or over—1, Fox and Kingston on Imp. Itchin May King; 2, Tenney on Ladysmith's Cherub; 3, Jones and McKerrow on Bonnie Boy of Riverdale; 4, Mountain Bros. on Kitchener's Express; 5, Kingston on Hopeful of Edgemoor; 6, White on Starlight's Excelsior of Jean Duluth. Bull 3 years and under 4—1, Marsh, Hill, and Rueping on Cherub's Prince; 2, Jones and McKerrow on McKerrow's Chene King; 3, Woodbury on Pencoyd's Secret Marose. Bull 2 years and under 3—1, Golinvaux on Grace's Memento; 2, Woodbury on Rose's Golden Cherub of the Prairie; 3, Hughes on Betty's Prince of Prospect Hill; 4, Ebels on Starlight of Bon Ayre. Bull 18 mos. and under 2 years—1, Dairyland Farm on Lalla's Prince; 2, Wick on Daphne's Crusader; 3, Emmadine Farms on Emmadine's May King; 4, Donnelly on Folly Noble; 5, Mountain on Simplicity's Winer of Iowanola. Bull 1 year and under 18 mos.—1, Marsh on Golden Laddie of the Prairie; 2 and 4, Tenney on Cherub's Pearl Royal of Shorewood and Dots Cherub of Shorewood; 3, Sass on Pergue's King Ultra; 5, Fisher on Victor's Duke of Thorne Hill; 6, Jones and McKerrow on Dora's King. Bull calf 6 mos. and under 12—1, Golinvaux on C. C. Memento; 2 and 6, Marsh on Prince Charming of the Prairie and Blossom's Prince of the Prairie; 3, Sass on Pergue's Ultra King; 4, Kingston on Hopeful's Steadford of Muskego; 5, Van Huss on Dividend's Kitchener; 7, Mountain on Lilly's Express of Iowanola. Bull calf, under 6 mos.—1, Woodbury on Deanie's Marose of Appletree Point; 2 and 4, Kingston on Warrior of Muskego and Aristocrat of Muskego; 3, Marsh on Excelsior of the Prairie; 5, Hagemon on Floridale Gen. Washington; 6, Mountain on Lydia's Express of Iowanola.

Cow 5 years and over—1, Jones and McKerrow on Mildred II of Les Godaines; 2, Rueping on Donnington Goldie 5th; 3, Babson on Colongue of Ellerslie; 4, Kingston on Sonack of Hillstead; 5, Conklin on Cifs; 6, Jones and McKerrow on Bordeaux of Courtil Bree. Cow 4 years and under 5—1, Mountain on Engleside Pretoria Vrangue; 2, Frissell on Susie of Skillet Creek; 3, Dairyland Farm on Velma of Mapledell; 4, Sass on Pergue's Coltie Lass. Cow 3 years and under 4—1, Hagemon on Adell of Burnham Beach; 2 and 3, Mountain Bros. on Ingleside Pretoria Queen and Simplicity's Glenwood of Iowanola; 4 and 6, Woodbury on Fisherman's Ellerslie and Duchess of Prospect; 5, Jones and McKerrow on Kate of Aurelian Farms. Heifer 2 years and under 3—1, Jones and McKerrow on Century Girl of Edgemoor; 2, Mountain on Lady Ruth of Iowanola; 3, Nelson on Boone's Daisy; 4, Tenney on Cherub's Ultra May Rose of Shorewood; 5, Mountain on Imogene of Iowanola; 6, Kingston on Itchen Queen of Edgemoor; 7, Jones on Boone's Bright Rose. Heifer 18 mos. and under 2 years—1 and 2, Marsh on Honey Bloom of the Prairie and Golden Locks of the Prairie; 3, Jones and McKerrow on Eidelweiss of Edgemoor; 4, Mountain Bros. on Frolinda's Lavetta of Iowanola; 5, Gilbert on Imogene of Sarnia; 6, Kingston on Lillian of Edgemoor. Heifer not in milk, 1 year and under 18 mos.—1, Marsh on Princess Pretoria of the Prairie; 2, Kingston on Wonder Girl of Muskego; 3 and 4, Jones and McKerrow on Spring Maid of Edgemoor and Dancing Girl of Edgemoor; 5, Emmadine on Masher's Gladys of Emmadine; 6, Woodbury on Nancy's Betsey of Belleview. Heifer calf 6 mos. and under 12—1 and 3, Marsh on Sensation of the Prairie and Honeydew of the Prairie; 2 and 4, Jones and McKerrow on Hopeful's Miss of Sunny Slope and Ultra Rosie of Sunny Valley; 5, Steele on Lassie of Maple Wood; 6 and 7, Mountain on Kitchener's Pet of Iowanola and Polly May Betty of Iowanola. Heifer calf under 6 mos.—1, Tenney on Shorewood Lady La Verne; 2, Jones and McKerrow on Chene King Northern Lady; 3, Woodbury on Appletree Point's Dolly Dimple; 4, Morris Crane; 5, Marsh on Mayflower of the Prairie; 6, Kingston on Wonder Dame of Muskego. Cow having official record begun at 5 years or over—1, Jones and McKerrow on Mildred II of Les Godaines; 2 and 3, Kingston on Sonack of Hillstead and Violet of Tal Val. Cow having official record begun under age of 5 years—1, Reuping on Donnington Goldie 5th; 2, Mountain on Ingleside Pretoria Vrangue; 3, 4 and 5, Jones and McKerrow on Bordeaux of Courtil Bree, Kate of Aurelian Farms, and Governor's Ella of McKerrow Farm; 6, Sass on Pergue's Lady Crescent.

Get of sire—1, Marsh; 2, Tenney; 3, Mountain Bros.; 4, Woodbury; 5, Jones and McKerrow; 6, Kingston. Produce of cow—1, Marsh; 2, Woodbury; 3, Jones and McKerrow; 4, Mountain Bros.; 5, Kingston; 6, Sass. Exhibitor's herd—1, Jones and McKerrow; 2, Mountain Bros.; 3, Kingston; 4, Woodbury; 5, Ebels. Young herd—1, Marsh; 2, Woodbury; 3, Mountain Bros.; 4, Emmadine Farms. Calf herd—1, Marsh; 2, Jones and McKerrow; 3, Mountain Bros.; 4, Woodbury; 5, Kingston; 6, Emmadine. Dairy Herd—1, Jones and McKerrow; 2, Mountain; 3, Woodbury. State herd of ten animals entered by State Breeders' Association—1, Iowa; 2, Wisconsin; 3, Minnesota; 4, Illinois; 5, Ohio.

Senior and grand champion bull—Itchen May King. Junior champion bull—Golden Laddie of the Prairie.

Senior and grand champion cow—Mildred II of Les Godaines. Junior champion cow—Honey Bloom of the Prairie.



VOGEL'S COLLEGE BOY, SENIOR AND GRAND CHAMPION BROWN SWISS BULL AT THE NATIONAL DAIRY SHOW
OWNED BY HULL BROS., OHIO

Jerseys

This was not Jersey year at the National. The show at Shreveport drew a number of good herds which would ordinarily have been at Chicago. Also, the breed has not adapted the state herd idea which was so great a factor in the success of two other breeds. A dozen herds furnished one hundred fourteen animals but failed to equal the quality characteristic in previous years. Longview Farms of Missouri, heaviest winner at the Dairy Cattle Congress, met the winning herds from the Eastern States Exposition in many interesting competitions. The Missouri herd took fourteen of twenty firsts and five of the six championships. Belleview Farms, Connecticut, drew three blues and a junior purple; and M. E. and E. F. Pyle of Ohio, J. K. Dering, Illinois, and Inderkill Farms, New York, one blue ribbon each. H. G. Van Pelt of Iowa served as judge with John A. Lee of Kentucky his advisor.

The bull classes were weak; three aged sires starting the judging without a good one in the ring. Either the second or third would have been as popular in first place as the judge's choice, Sans Alois Meces King, a plain, straight bull from the Pyle herd. The three-year-old, Chief Raleigh, won his class for Longview over Gypsy's Gamboge Lad, a longer, smoother, better rumped bull owned by C. F. Sturhahn of Connecticut. The winner has the depth, openness of frame, and the clean dairy type to rate him over the $23,000 Eastern States Exposition champion. Fashionable Fern Lad, Longview's Dairy Cattle Congress champion, easily led his class. He later maintained his Waterloo record but had no clear title over the three-year-old which gave him close competition. For the first time in three shows Longview's yearling, Manora's Fairy Lad, was placed over W. A. Brewerton's Raleigh's King Thornbury, a stronger bull of better lines and more substance, heart, and promise. The ringside would have liked the winner better below second money than above. Longview's senior calf, Wolff's Chieftain 2d, junior champion at the Congress, again successfully claimed that honor.



HELEN GREENLEE OF OHIO
High contestant on Jerseys in boys' and girls' dairy cattle judging. She was high member of the Ohio team.

The real show began with the aged cows. Only seven came in, yet the absence of a large ring was unnoticed. Sly Puss P, Longview's recently imported twelve-year-old, defeated Majesty's Crocus, Belleview Farms' hope for the senior purple; the Eastern States winner, Bagot's Crocus, owned by Sturhahn; and Westfield Girl, A. M. MacClenahan's Colorado cow which won over Sly Puss at Waterloo. The four stood in the order of their mention. Sly Puss P is one of the best show cows seen in many seasons. At twelve years she is straight, strong, and her udder unfaulted. She calved a few hours after the class and even under that handicap was outstanding as champion of the show. The second cow was too low to the ground and too heavily fleshed to win. Her udder has less quality and balance than that of the winner. The third cow was very thin from heavy milking and lacked the rib and strength of the two above her. The Waterloo senior champion lacked the size, the depth, and openness, and the quality of udder to improve her rating. In the four-year-olds Raleigh's Star of Peace, Longview's Congress winner, placed over Belleview's blue ribbon winner at Springfield, Oxford Majesty's Gipsy 2d; in the three-year-olds Rochette's Noble Nina won for Longview; Belleview's two-year-old, Sybil's Gamboge Katherine, lead her class; Sociable Sybil, Inderkill Farms' only entry, was the best senior yearling; and Sybil's Oreolo, junior champion at Springfield for Belleview, took the same honor at Chicago. Longview's calves won the two groups.

The detailed winnings follow:

Bull 4 years or over—1, Pyle on San's Alois Meces King; 2, Belleview Farms on Majesty's Oxford Laddie; 3, Crystal Brook Stock Farm on Brampton Beauty Heir. Bull 3 years and under 4—1, Longview Farm on Chief Raleigh; 2, Sturhahn on Gypsy's Gamboge Lad.

Bull 2 years and under 3—1, Longview on Fashionable Fern Lad; 2, Ravine Farm on Thornbury Peter the Great; 3, Dering on Raleigh's Bright Prince; 4, Sturhahn on Sybil's Gipsy King; 5, MacClenahan on Maj. Feather Lad. Bull 18 mos., and under 2 years—1, Dering on Fairy's Duchess Chief; 2, Pyle on Financial Rose's Sans Aloi. Bull 1 year, under 18 mos.—1, Longview on Manora's Fairy Lad; 2, Brewerton on Raleigh's King Thornbury; 3, Pyle on Sans Aloi Greatness; 4, MacClenahan on Financial Dainty's Prince; 5, Dering on Raleigh's Oxford Chieftain. Bull calf 6 mos., under 12—1 and 2, Longview on Wolff's Chieftain 2d and Blue Feather's Raleigh; 3, Crystal Brook S. F. on Bright Radiator; 4, Sturhahn on Majesty's Broadland Pride; 5, Pyle. Bull calf under 6 mos.—1 and 4, Longview on Star's Fairy Lad and Buttercup's Butter Lad; 2 MacClenahan on Bosnians Raleigh Duke; 3, Dering; 5, Ravene Farm on Jolly Golden Jolly; 6, Pyle.

Cow 5 years or over—1, Longview on Sly Puss P; 2 and 5, Belleview Farms on Majesty's Crocus and Gambonia; Sturhahn on Bagot's Crocus; 4, MacClenahan on Westfield Girl; 6, Crystal Brook S. F. on May Beautiful Fern. Cow 4 years and under 5—1 and 3, Longview on Raleigh's Star of Peace and Fountain's Nema; 2, Belleview on Oxford Majesty's Gipsy 2d; 4, Sturhahn on Majesty's Gamboge Buttercup. Cow 3 years and under 4—1, Longview on Rochette's Noble Nina; 2 and 3, Belleview on Sybil's Oxford Dora and Green Farm Sybil; 4, Sturhahn on Zellina's Sybil; 5, Longview on Raleigh's White Lily; 6, MacClenahan on Western King Flora Dora. Heifer 2 years, under 3—1, Belleview on Sybil's Gamboge Katherine; 2, Sturhahn on Sybil's Finance; 3 and 6, Longview on Raleigh's Red Feather and Raleigh's Queen Manora; 4, MacClenahan on Jubilee Oxie; 5, Dering on Eulinda of Cedar Crest. Heifer 18 mos. and under 2 years—1, Inderkill Farms on Sociable Sybil; 2 and 4, Longview on Raleigh's Blue Feather and Raleigh's Queen of the Night; 3 and 6, Belleview on Green Farm's Sybil's Sister and Sybil's Gamboge Bounce; 5, Crystal Brook S. F. on Larkin Farm Primula. Heifer not in milk, one year and under 18 mos.—1, Belleview on Sybil's Orelo; 2 and 3, Longview on Raleigh's Royal Fairy and Raleigh's Golden Brightness; 4, MacClenahan on Princely's Sweet Rose; 5, Sturhahn on Bagot's Gamboge Sybil. Heifer calf 6 mos. and under 12—1 and 2, Longview on Raleigh's Miriam and Raleigh's Pretty Maiden; 3, MacClenahan on Majesty's Cowslip Feather; 4 and 5, Belleview on Royal Majesty's Blanchette on Sybil's Golden Ceyba; 6, Crystal Brook S. F. on Brampton Bright Beauty. Heifer calf under 6 mos.—1 and 2, Longview on Raleigh's Starling and Raleigh's Royal Maid; 3 and 5, MacClenahan on Majesty's Feather Lad Dora and Majesty's Feather Lad Pet; 4 and 6, Dering.

Get of sire—1 and 3, Longview; 2 and 4, Belleview; 5, Pyle; 6, MacClenahan. Produce of cow—1, Belleview; 2, 3, and 4, Longview; 5, Dering; 6, Pyle. Exhibitor's herd—1 and 2, Longview; 3, Belleview; 4, Sturhahn; 5, MacClenahan; 6, Crystal Brook S. F. Breeder's young herd—1 and 2, Longview; 3, MacClenahan. Breeders' calf herd—1, Longview; 2, MacClenahan; 3, Dering. Dairy herd—1, Longview; 2, Sturhahn.

Senior and grand champion bull—Fashionable Fern Lad. Junior champion bull—Wolff's Chieftain 2d.

Senior and grand champion cow—Sly Puss P. Junior champion cow—Sybil's Oreolo.

Holsteins

Greater uniformity was the outstanding characteristic of this year's showing. There were fewer ill conditioned, poor individuals—tail enders—than at any previous National, this in spite of the fact that there were 81 different exhibitors there,—49 of them with only one entry. This does not mean that winners of other years would have been outclassed had they been present; they would not. Minerva Beets in her prime would have beaten the best aged cow there, but she would have had to win over more topnotch cows than she ever met in a single ring.



MARYLAND DAIRY PRODUCTS JUDGING TEAM, SECOND IN THE CONTEST

Left to right: Clayton Reynolds, high man in cheese judging; J. T. Snyder, high man in judging butter; E. F. Holter (alternate); J. R. Graham; and J. F. Gamble, coach.

This improvement can be traced directly to the state herds and their encouragement of the small exhibitor, which in itself is reason enough for their continuance and increase. Although over 200 Holsteins from nine different states and Canada were shown, but five state herds were entered.

Among the nine aged bulls, the closest competition was between Cedar Lawn Canary Paul, Baird Bros.', Wisconsin, entry, Johanna Bonheur Champion 2d owned by the U. S. D. Barracks of Kansas, and Iowana Mercedes Homestead, the head of the Iowa State College herd. These three met two weeks before at Waterloo, placing in this order—Kansas. Iowa, Wisconsin. This time the order was somewhat reversed with the Wisconsin entry first, the Kansas bull second, and the one from Iowa third.

Baird Bros.' herd sire is very much of a dairy bull—one of the kind that you like better each time you see him. In spite of this scale, he has a world of quality and it was that quality together with his pronounced dairy type that brought him the blue in spite of one or two serious faults of conformation. The Kansas bull, touted by many as a winner, is an excellent individual, but he is too small and compact, nor did he possess quite the quality of number one. Iowa's entry, a splendid, upstanding type of bull, was sore behind and did not show to advantage.

Wisconsin's bull was later senior and grand champion.

The closest competition for junior championship was between Matador Segis Walker Piebe, Carnation Stock Farms' junior yearling, and Sir Inka Superior Segis, the winning senior calf. Both are excellent youngsters, the former to be faulted just a little at the tail setting, the other at the shoulders, and either would have found favor as a junior champion with a part of the ring followers. The judge's decision favored the Minnesota Holstein Co.'s senior calf, largely because of his greater masculinity.

"What a ring!" was the almost universal comment when the judges started work on the aged cows. The 17 entries made what was, undoubtedly, the best Holstein aged cow class ever seen at a National Dairy Show. It was a showing that was a real credit to the breed.

Aitken Bros.' undefeated Doetje Nellie Concordia, and Irene Sarcastic De Kol, the Kansas entry that has shown so well all along the circuit, were both there and it was soon evident that they would be fighting for first place. The former is an extraordinarily good 12-year-old cow with plenty of stretch and real dairy type. Her udder showed a little meaty and heavy in one quarter and she does not have quite the finish of the other, but the judges were less pleased with the Kansas entry's udder, and they criticized her somewhat for a lack of openness of conformation. Princess Concordia Segis 2d, owned by M. Breen & Son of Iowa, that stood fourth in the final line-up, was one of the most striking looking cows of the class. She carried one of the very best shaped udders we have even seen on a Holstein cow anywhere, but Judge Moscrip was not entirely satisfied with its attachment and the cow, within two or three hours of parturition, did not show in form that warranted her going higher.

Doetje Nellie Concordia was afterward grand champion female with Josephine Johanna Oak De Kol, the winning two-year-old owned by J. P. Phillips of California, her strongest competitor. Had the two-year-old been just a little more rugged in conformation and not shown quite so quartered an udder she would have defeated the aged winner. The old cow was later grand champion.

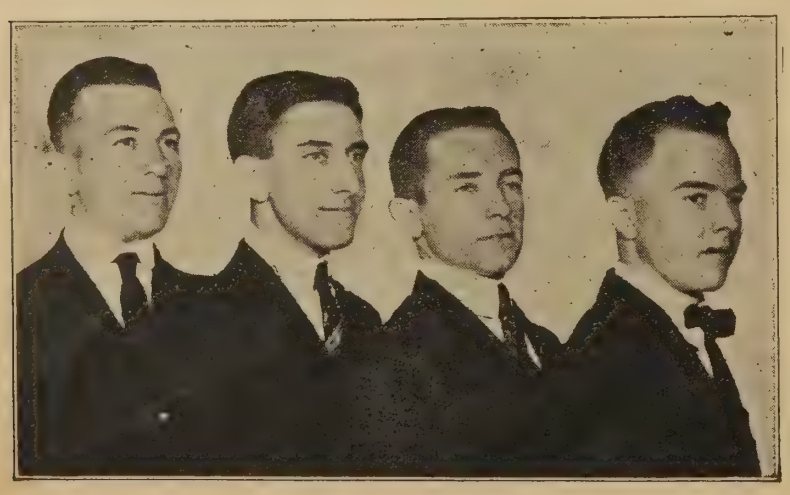
Baird Bros.', Wisconsin, winning senior calf, Nockdair Canary Parthenia, was junior champion with Far Oaks Inka Homestead, the Minnesota Holstein Co.'s senior yearling, a close second.

Five state herds lined up for the last class of the black and white show, Wisconsin, Minnesota, Kansas, Illinois, and Indiana. They were placed in the order mentioned with Minnesota a very good second.

W. S. Moscrip did the judging with Peter Small of Ohio advisory judge.

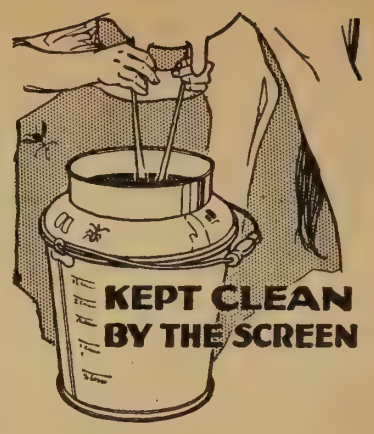
Following is a complete list of awards:

Bull 4 years or over—1, Baird Bros. on Cedar Lawn Canary Paul; 2, U. S. D. Barracks on Johanna Bonheur Champion; 3, Iowa State College on Iowana Mercedes Homestead; 4, Cass Farm Co. on King Aaggie Hengerveld; 5, Bell on Colony Posch Newman; 6, Haley & Lee on Count Plus Inka Sylvia. Bull 3 years, under 4—1, Mayowood Farms on Johanna Glenda Lad; 2, Morgan Bros. on King Korndyke Isabelle Veeman; 3, Wapsimoor Farm on Sir Wapsie Flossmor; 4, Hetts on King Fan Segis. Bull 2 years, under 3—1, Clarinda State Hospital on King Pietertje Fayne Ormsby; 2, Schroeder on Sir Hengerveld Pietertje Ormsby; 3, Mayowood Farms on Ondine Homestead Posie; 4, Hetts on Juliana De Kol Lyons; 5, Lashbrook on Sir Walker Segis Homestead; 6, Stubbs on King Forbes Genista Homestead. Bull 18 mos., under 2 years—1, Loeb Farms on Charlevoix Marbury; 2, O'Leary on East Troy Sir Ollie; 3, McCoy



OHIO DAIRY PRODUCTS JUDGING TEAM—WINNERS OF FIVE OF THE SEVEN AWARDS MADE

Left to right: A. H. Neu, high contestant; H. J. Kline; R. C. Regelsberger (alternate); and T. V. Armstrong, third high man of the contest.



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on U. S. Korndyke Homestead Segis; 4, Iowa State Sanatorium on King Pietertje Ormsby Piebe 6th; 5, Randolph on Beaver Dam Ormsby Artis Lad; 6, Burkley on Rag Apple Posch De Kol. Bull 1 year, 18 mos., 1, Carnation Stock Farm on Metadore Segis Walker Piebe; 2, Lohman on Elmo View Tidy Hengerveld Aaggie; 3, Mankato Holstein Farms on Mankato Pietertje De Kol Ormsby; 4, Wilson & Potter on King Pietertje Ormsby Piebe 10th; 5, Jansen on King Sege's Pontiac Unaland; 6, Barney & Sons on Home Farm Johanna King. Bull calf 6 mos., under 12—1, Minnesota Holstein Co. on Sir Inka Superior Segis; 2, Harriman on King Pontiac Segis Lud De Kol; 3, Iowana Farms on Iowana Johanna Korndyke; 4, Weiffenbach on King Pontiac Parthenea Champion; 5, Buffalo Creek Farm on King Lavera Homestead; 6, Frazier on Merrygold Pontiac Bopeep. Bull calf under 6 mos.—1, Haley and Lee on King Sylvia Pontiac Echo; 2, Bridgeport Holstein Co. on King Korndyke Abbekerk Prilly; 3, Minnesota Holstein Co. on Piebe Inka Homestead; 4, Kelley on King Bess Ormsby De Kol; 5, Buffalo Creek Farm on Prince Korndyke Ormsby; 6, Mast on Sir Tidy Glista 6th.

Cow 5 years or over—1, Aitken Bros. on Doetje Nellie Concordia; 2, Appleman on Irene Sarcastic DeKol; 3, Cass Farm Co. on Lulu Baby Girl; 4, Breen and Son on Princess Concordia Segis 2d; 5, Mineral Spring Stock Farm on Geraldine De Kol Paladin; 6, Haley and Lee on Mildred Colantha. Cow 4 years, under 5—1, Boeckman on Jessie Tritomia De Kol 4th; 2, Miller on Canary Lunde Pontiac Walker. Cow 3 years, under 4—1, Rock River Farms on Pabst Pontiac Madrigal; 2, Carnation Stock Farm on Pioneer Albino Mechthilde; 3, Miller on Canary Lunde Pontiac; 4, Hackney on Canary Ormsby Butter Girl; 5, Randolph on Whitehurst Colantha Homestead; 6, Stubbs on Queen Piebe Pontiac Johanna. Heifer 2 years, under 3—1, Phillips on Josephine Johanna Oak De Kol; 2 and 4, Miller on Zella Rose Ormsby and Miss Canary Lunde Korndyke; 3, Bloomingdale Farms on Jennie Jewel Model; 5, Minnesota Holstein Co. on Far Oaks Miss Homestead Rue; 6, Cass Farms Co. on Aaggie Hengerveld Daisy Homestead. Heifer 18 mos., under 2 years—1 and 3, Minnesota Holstein Co. on Far Oaks Inka Homestead and Far Oaks Fannie Homestead; 2, Bridgeport Holstein Co. on Miss Konigan Pontiac Prilly; 4, U. S. D. Barracks on Johanna Bonheur Segis De Kol; 5, Haley and Lee on Aggie De Kol Sylvia; 6, Trieloff Bros. on Belle Gem Longfield 2d. Heifer not in milk, 1 year and under 18 mos.—1, Grahamholm Farm on Grahomholm Colantha Segis Kaan; 2, Kansas State Agricultural College on Canary Paul Inka; 3 and 5, Jefferson Co. Farm on Inka Coloma Beauty and Princess Beauty Coloma; 4, Minnesota Holstein Co. on Star Segis Pontiac Superior. Heifer calf 6 mos., under 12—1, Baird Bros. on Nockdair Canary Parthenia; 2, Minnesota Holstein Co. on Miss Inka Homestead; 3, Halbach and Sons on Alice Hengerveld Bess Ormsby; 4, Williams Bros. on Bonair Princess Ormsby; 5 and 6, Cass Farms Co. on Fayne Gletka De Kol and Bessie Alcartra Pink. Heifer calf under 6 mos.—1 and 4, Haley and Lee on Mary Ann Sylvia and Sarah Anna Sylvia; 2, Grahamholm Farm on Grahamholm Winana Beets; 3, Halbach and Sons on Esther Bess Pietertje Ormsby; 5, Minnesota Holstein Co. on Miss Ideal Homestead; 6, Spaulding on Queen Segis Piebe Mercedes; 7, Cass Farms Co. on Mirand Grace De Kol. Cow having official yearly record begun at 5 years or over—1, Minnesota Holstein Co. on South Side Inka De Kol; 2, Morgan Bros. on Pietertje Aaggie Grace Beets; 3, Galt and Spencer on Johanna De Kol Fairmont Maid; 4, Bell on Schilling Colantha Langtry; 5, Aitken Bros. on Jenny Wren Pietertje. Cow having official yearly record begun under the age of 5 years—1, Cass Farm Co. on Lulu Baby Girl; 2, Rock River Farms on Pabst Pontiac Madrigal; 3 and 4, Haley and Lee on Ourville Rhetta Colantha and Calamity Snow Mechthilde 2d; 5, Randolph on Whitehurst Colantha Homestead; 6, Aitken Bros. on Johanna Ferncliff McKinley. Advanced Registry cow with two of her progeny—1, Minnesota Holstein Co. on South Side Inka De Kol.

Get of one sire—1, Aitken Bros. on Get of Terracelawn Hengerveld Segis; 2, Haley and Lee on Get of May Silvia Pontiac Cornucopia; 3, Minnesota Holstein Co. on Get of Piebe Laura Ollie Homestead King; 4, Hargrove and Arnold on Get of King Pietertje Ormsby Piebe; 5, Cass Farms Co. on Get of Fayne Bessie Homestead; 6, Bridgeford Holstein Co. on Get of King Segis Alcartra Prilly. Produce of one cow—1, Cass Farm Co. on Produce of Clothilde Hountge Boone; 2, Minnesota Holstein Co. on Produce of South Side Inka De Kol; 3, Aitken Bros. on Produce of Doetje Nellie Concordia; 4, Haley and Lee on Produce of Nettie Abbekerk; 5, Haley and Lee and Miller on Canary Colantha Walker; 6, U. S. D. Barracks on Produce of Buffalo Ella.

Breeders' calf herd—1, Minnesota Holstein Co.; 2, Haley and Lee; 3, Cass Farms Co.; 4, Hargrove and Arnold. Exhibitors' herd—1, Cass Farms Co.; 2, U. S. D. Barracks; 3, Haley and Lee. Young herd—1, Minnesota Holstein Co.; 2, Cass Farms Co.; 3, Haley and Lee; 4, Bridgeford Holstein Co. Dairy herd—1, Aitken Bros.; 2, Haley and Lee. State herd—1, Wisconsin; 2, Minnesota; 3, Kansas; 4, Illinois; 5, Indiana.

Senior and grand champion bull—Cedar Lawn Canary Paul. Junior champion bull—Sir Inka Superior Segis.

Senior and grand champion cow—Doetje Nellie Concordia. Junior champion cow—Nockdair Canary Parthenia.

Brown Swiss

J. P. Allyn of Wisconsin, whose Brown Swiss herd was formerly a consistent ribbon winner, was back in the ring this year, serving as a judge with G. C. Humphrey of the same state. Seventy-seven head from seven herds made up many good classes. Hull Bros. of Ohio took a dozen blues and the bull championships; W. O. Bohart of Montana won two firsts; and five class winnings and the female championships went to E. A. Bower of Ohio. Other exhibitors were M. T. Cottrell and Riley Riedy of Illinois and Frank Stefl and Arthur Haese of Wisconsin. The latter, a member of the boys' and girls' calf club of Winnebago County, entered his junior calf and was awarded second place.

Vogel's College Boy added another grand championship ribbon to the list he has won for Hull Bros. The two-year-old, Ethel B's Miliator, and the junior champion yearling, Prince of Lake View, both from the same herd, made good competition. Bohart won the two calf classes.

Swiss Valley Girl 9th, in a class of nine aged cows, led her sister as she did at Syracuse and Waterloo. Riley Riedy's Fairview Laura 2d was in third money with the two Hull cows easy leaders. Betty of Lake View, Bower's 1919 grand champion, shown as a four-year-old, repeated her last year's winning. She is a bit deeper, better sprung, and is superior to either of the two top aged cows in udder. She was dry. The junior champion was the yearling from Bower's herd, Lou Anna of Lake View. The breed's best showing came in the groups which were large and sufficiently close to give many difficult placings.

The awards by classes were:

Bull 3 years or over—1, Hull Bros. on Vogel's College Boy; 2, Bower on Nick's Prize Master; 3, Bohart on Sunny Hill Bob; 4, Cottrell on Nick's Swiss; 5, Stefl on Flora Dinvire's Gr. Son. Bull 2 years and under 3—1, Hull on Ethel B.'s Miliator; 2 and 3, Bohart on Beauty C.'s N. M. and Zella A. W. Bull 1 year and under 2—1 and 3, Hull on Prince of Lake View and Sarnen; 2, Bohart on Tassa's M.'s Nick; 4, Stefl on Tilleda Boy. Bull calf 6 mos. and under 12—1 and 3, Bohart on D.'s Dick and Beauty 2d's Dick; 2, Bower on General of Sedgeley; 4, Hull on Jerry of Lake View. Bull calf under 6 mos.—1 and 4, Bohart on Master A's Bob and Bozeman Boy; 2, Hull on Gold King; 3, Bower on Dutch Boy; 5, Stefl.

Cow 5 years or over—1 and 2, Hull on Swiss Valley Girl 9th and Swiss Valley Girl 7th; 3, Riedy on Fairview Laura 2d; 4, Stefl on Agnes S.; 5, Bohart on Master's Beauty C. Cow 3 years and under 5—1, 3, 4, 5, Bower on Bettie of Lake View, Fairview Maxine, Elsie of Lake View 3rd, and Ethel of Lake View; 2, Bohart on Master's Bernice. Heifer 2 years and under 3—1, Hull on Forest Girl 7th; 2, Bower on Silver Girl; 3 and 4, Stefl on Snow Bell and April Sunshine. Heifer 18 mos. and under 2 years—1 and 2, Hull on Nettie of Lake View and Sophia of Lake View; 3 and 4, Bohart on Katherine's Heifer and Bob's Mascot. Heifer not in milk, 1 year and under 18 mos.—1, 5, 6, Bower on Lou Anna of Lake View, Magnolia B. 2d, and LaMark; 2, Bohart on Nick's Alice C.; 3 and 4, Hull on Lucile of Lake View and Loretta of Lake View. Heifer calf 6 mos. and under 12—1, 3, and 4, Hull on Dottie of Lake View, Merney of Lake View, and Vogel's Valley Girl 6th; 2, Bohart on Dick's Charm; 5, Stefl on Tracy. Heifer calf under 6 mos.—1 and 4, Bower on Kate of Bower Farm and Kathryn of Bower Farm; 2, Haese on Edelweis Girl; 3 and 5, Hull on Miliator Nan of Lake View and Lottie H. of Lake View; 6, Bohart on Dick's Nellie B. Cow having official yearly record begun at 5 years or over—1 and 2, Hull on Swiss Valley Girl 7th and Nan of Lake View; 3, Riedy on Magnolia D. Cow having official yearly record begun at 2 years and under 5—1 and 4, Bower on Bettie of Lake View and Elsie of Lake View; 2, Hull on Swiss Valley Girl 9th; 3, Bohart on Master's Bernice.

Get of sire—1, Bower; 2, Hull; 3 and 4, Bohart. Produce of cow—1 and 2, Hull; 3, Bower; 4, Bohart. Exhibitor's herd—1, Hull; 2, Bower; 3 and 5, Bohart; 4, Stefl. Young herd—1 and 3, Hull; 2, Bohart; 4, Stefl. Breeder's calf herd—1, Hull; 2, Bohart; 3, Stefl.

Senior and grand champion bull—Vogel's College Boy. Junior champion bull—Prince of Lake View.

Senior and grand champion cow—Bettie of Lake View. Junior champion cow—Lou Anna of Lake View.

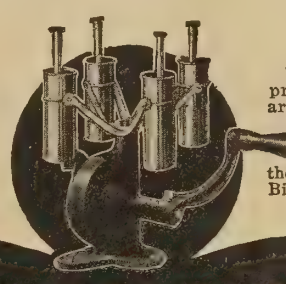
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EDITORIAL COMMENT



THE Illinois Agricultural Association cites in one of its weekly news letters an experience which shows distributors and consumers the necessity of laying plans for stabilizing and for better marketing of farm products. The Illinois Agricultural Association states: "On Monday, September 13, producers received an average of 16 cents a dozen for sweet corn; on Wednesday 8 cents, and on Friday 9½ cents. The same three days the average retail price at 25 stores in the Loop and suburbs was 50 cents on Monday and 45 cents on Wednesday and Friday."

It should be borne in mind that there is a wider variation on vegetables than on other farm products but this experience does point out the opportunity of marketing farm products more efficiently.

GOOD FEEDING PAYS

As a general practice, no matter how high the prices of feedstuffs or how low the price of milk, it pays to supply the dairy cow with an adequate quantity of feed. If we survey the dairy field, we find that the farmer who feeds his cows well is the one who has made the most money.

Now and then we hear men brag that their cows require comparatively little feed and that it does not pay to purchase any mill feeds for balancing the roughages of the farm. This may be true when there is an adequate supply of good clover and alfalfa hay and corn silage and the prices of mill feed high and milk cheap, but taking it by and large it is a mistaken idea that using mill feeds for supplementing home grown roughages is unprofitable.

We appreciate that the prices of feed and milk may be out of proportion. They have been in the past and they are today, but the best way for the dairy farmer to meet this situation is not by scanty feeding. It is better to sell some of the cows, especially the poor ones, and feed the remaining ones so that they will produce profitable flows of milk.

We have never observed the time, not even during the war, when a dairy farmer was justified in keeping poor cows. Some people held that it was patriotic to keep cows that would not return the cost of the feed. We considered it unpatriotic because these poor cows were consuming good feed and yielding low returns.

The supply of milk in this country can be increased or decreased at least 25% simply by the kind of feeding and care given the cows. If this be true, then why not dispose of the poor cows, and they are estimated to be one-third of our total number, and feed the other two-thirds better rations. To do so would be to practice good business methods; to feed all the herd scrimpingly is poor business.

'MPLAINT OR ACTION, WHICH?

Why is it so many dairy farmers appear indifferent toward their own in· stry? Hundreds of persons at the pres··t time are e··rnestly endeavoring to organize and keep in operation milk producers' associations and co-operative marketing companies. All these people so engaged find indifference and, in some cases, opposition to such undertakings among the dairy farmers. If the evil practices of marketing farm produce are to be minimized or eliminated and better ones established, the producers must be willing to unite for the purpose of directing or controlling the marketing of their products.

For the past few years the Milwaukee Milk Producers' Association has been taking care of the so-called surplus milk by manufacturing it into cheese and of late it has been manufacturing the skimmilk into powdered milk. Considerable capital has been required to establish an institution of this character and to place the milk producers in position to get the full market price for their products.

We are informed by Mr. G. R. Rice, secretary of this association, that there are 3,000 shippers and of that number only 612 have purchased stock. On the average, 6,000 cans of milk are shipped to Milwaukee daily, and it has been shown that since the organization of the Milwaukee Milk Producers' Association, the average price for milk has been 10c more per can. This is an income of $600 a day. In the manufacture of the so-called surplus milk, there has been an average daily loss of $54. Many of the shippers see the loss of $54 but can not see the gain of $600 a day and hesitate to take stock because there has been a loss. In other words, these men are not willing to lose $54 a day in order to gain $600 a day. This is indeed difficult to understand.

We dare say that the men who are unwilling to purchase stock are the very ones to complain the most regarding the ill treatment of the farmers. These men have no right to complain about unfair treatment when they are not willing to work with their fellowmen for improving marketing conditions.

When will all the dairy farmers see that if they are to direct their own enterprises it will be necessary for them to put something into their business besides talk and complaint?

RETURNING TO THE FARM

The past year our attention has been called to a number of men engaged in agricultural college and experiment station work who have returned to the farm. These men received what farmers would call an excellent salary. We might say the average salary would probably be in the neighborhood of $3,000 per year. It undoubtedly seems strange to the man who works on a farm and feels that he has about the poorest paying position on earth, and the hardest, why any person receiving a compensation of $3,000 per year would return to the farm because he thought there were better opportunities there for making money.

This, however, is the case. The advance in the cost of living, including rent, food, clothing, and everything the consumer must buy, has made a salary of $3,000 a year look small, and these men see no opportunity of laying aside a portion of it to provide for old age.

In conversation just recently with a person who receives $4,500 a year and lives in Washington, he advises that he just meets his expenses.

We present these facts to our readers so they will see that the farmer is not the only one who is feeling the pinch of high prices, and while positions seem easy and provide attractive salaries in the city, there is another side which the farmer fails to consider. It is human nature for an individual to feel his position or occupation is the least remunerative, the most irritating, and the hardest.

Many of the men who have returned to the farm the past year or two have undoubtedly done so for two reasons. Some prefer farming to educational or investigational work, but the most of them have returned to the farm because they believe it offers better opportunities for making and saving money.

COLLECTIVE BARGAINING

Representatives of co-operative milk producers' associations who have met and fixed prices of milk have been hauled into court under the Sherman Anti-Trust Act. In every instance they have been found not guilty because it was not proven that any of the representatives of these associations violated the Sherman Anti-Trust Law; and further, it is recognized by the best informed men that farmers have a right to sell their products collectively, provided they do not attempt to form a trust for arbitrarily controlling prices. Corporations that manufacture wares set prices. The farmers have the same privilege, but it is not recognized by all classes of citizens.

The raisin growers of California have had a rather interesting experience in marketing their product. The men who purchased their raisin crop until the co-operative organization was formed in 1912 attacked the growers upon four points: first, on the percentage of crop controlled; second, on refusal to sell to raisin packers and speculators; third, on guaranteeing to the grocery trade a stable price to prevail throughout the year; fourth, on fixing prices on raisins through the plan of a "firm-at-offering" price. The raisin growers were sustained on the right to control ninety per cent of the acreage and on the right to refuse to sell to packers or speculators. They lost on the claim to establish a guaranteed price to wholesalers to be effective throughout the year and lost on the "firm-at-opening" price. The Co-operative Raisin Growers' Association is not particularly injured in being unable to guarantee a price to the wholesalers or by abandoning the "firm-at-opening" price plan. The Department of Justice now brings action against the raisin growers for violating the Anti-Trust Law. The whole trouble could have been avoided had the Raisin Growers' Co-operative Marketing Association organized on the non-profit sharing co-operative plan.

In order to put an end to this contention and to permit representatives of dairy organizations from being drawn into court, farmers should urge their congressmen and senators to vote for the Volstead Bill which will be brought before Congress when it convenes. This Bill will make it lawful to practice collective bargaining so long as it does not violate the Sherman Anti-Trust Law. This Bill provides penalties if trust methods are used in fixing prices or attempt is made to corner the market on a particular farm product. It will permit the representatives of co-operative organizations to sell the products of their members collectively and to arrive at a fair market price for them. The Volstead Bill should be enacted into a law, for collective bargaining is essential to successful co-operation.

SWISS CHEESE

Market prices of Swiss cheese vary more than for any other dairy product. This is due to a large extent to the wide variation in the quality of Swiss cheeses. According to the New York Produce Review and the American Creamery, fancy imported drum Swiss cheese recently sold at 75c per pound. An eastern manufacturer of Swiss cheese who is able to produce a quality nearly equal to imported cheese is receiving 65c per pound. The cheese manufacturers of the Middle West are receiving from 50c to 55c for fancy to extra fancy. No. 1 Swiss cheese is selling for 40c to 45c and No. 2 Swiss cheese for 23c or less per pound.

There is a large opportunity for improving the present practices of manufacturing Swiss cheese. It has been and is now a process which is an art more than it is a science. For more than ten years the Dairy Division of the U. S. Department of Agriculture has carried on experimental work with Swiss cheese attempting to perfect the process of its manufacture and it has been successful. The Dairy Division has made the process of Swiss cheese making a science and less of an art.

Those engaged in the manufacture of Swiss cheese and patrons delivering their milk to Swiss cheese factories should interest themselves in the process of manufacturing cheese as is now advocated by the Dairy Division. We are sure they would produce more uniform quality of cheese and that it will place this phase of our dairy industry upon a much more secure basis. This is highly desirable when we consider the wide variety in the present quality of Swiss cheese produced in this country and that prices vary from 23c or less per pound to 75c per pound.

Milk Cooling Station for Alabama

Is it practicable down here to establish a cooling station to cool milk so it could be shipped 200 to 300 miles and then bottled and retailed? Can you supply me with specifications for plant sufficient to handle 1,500 gallons milk daily?

Gallion, Ala. W. C. H.

This inquiry was referred to R. S. Smith of the U. S. Dairy Division, who replies as follows:

"We are taking the liberty of answering inquiry in two ways even though you may desire only the answer pertaining to the shipping, bottling, and retailing of raw milk.

"This office is at present conducting studies on the shipment of milk in the South, and, from the data already secured, we would advise against the shipping of raw milk from 200 to 300 miles, and then bottling it for retail delivery, for the following reasons:

"1. Milk received at the country cooling station would vary in age and condition according to the distance the producers are away and whether deliveries are limited to once a day, thereby necessitating the storing of milk over night on the farm.

"2. Milk held overnight on farms in that climate, unless properly iced, would hardly be in a salable condition after a 200-mile shipment, even though it might be cooled properly at the cooling station before shipping.

"3. The present method of shipping properly pre-cooled milk in baggage or express cars in jacketed or special insulated cans, is not practicable for distances of 200 to 300 miles, because of the rise in temperature and spoilage that might occur especially in hot weather.

"While the preceding reasons have been given as causes for our belief that the shipment and bottling of raw milk is impractical for such a distance we are of the opinion that under changed conditions of shipment and with the pasteurization of the milk as an added safeguard, before or after it is bottled, the establishing of a cooling station would be practicable.

"In order to make such a system practical the following points are suggested:

"1. That the farms producing milk be located within an area that would allow the milk to be collected at the farm or delivered to the cooling station twice a day. This would eliminate improper cooling and storage of milk on the farm, which is a problem that faces so many southern milk producers.

"2. That the cooling station be equipped with facilities for sterilizing the milk cans before they are returned to the producer and that all such cans be thoroughly washed and sterilized after each use.

"3. That the cooling station be equipped with proper milk cooling and storage facilities and that sufficient ice is available at all times for the producers and for use in the cars during shipment.

"4. That some type of insulated refrigerator cars be used for the shipment and that ice be placed in abundance on the cans of milk and in the bunkers. Such refrigerator cars should be properly pre-cooled and then used in rotation when possible, to avoid the expense of totally pre-cooling.

"5. Upon arrival at the city milk plant, the milk should be immediately pasteurized by the holding, or "in the bottle" method, (145° F. for 30 minutes) and immediately thereafter cooled to below 50° F. After the milk is bottled and ready for delivery it should be kept cold by keeping an abundance of cracked ice over the bottles.

"By following out this general outline, we believe that the cooling of milk at a country station and shipping it to a pasteurizing plant 200 to 300 miles away where the milk will be properly pasteurized and subsequently properly handled, that the business will be practicable.

"Another solution might be suggested if it were decided to pasteurize the milk at the country station before shipping. This would necessitate the return shipment of empty bottles and washing them prior to their return as well as sterilizing them prior to filling. Milk could be delivered in the city at wholesale in cans sealed after being filled at the country station and immediate delivery of the bottled milk could be made upon the arrival of the train, thus eliminating the handling at the city plant prior to delivery. The conditions of shipment would, of course, be the same as for the raw milk shipment as previously stated. It would necessitate the delivery of the pasteurized milk in the city within 24 hours after the pasteurizing process, in order to conform with some health department regulations and to insure satisfaction. This would be possible if the pasteurization process at the country station could be so arranged that the shipment would arrive in the city and the delivery be completed, all within the specified time."

Calves on Whole Milk—Bringing Cows to Milk

What is the best system of feeding pure-bred Holstein calves from time of birth until one year old? We can get all kinds of grain but have no skimmilk so will feed whole milk. We have good corn silage and legume hay available.

I would also like to know how you care for and feed heavy milking Holsteins the first three weeks after calving to bring them to a maximum milk flow.

Crompton, R. I. H. Bros.

Even though whole milk makes a very expensive feed for calves, we are sure that, particularly with pure-breds, it pays to be rather liberal with it for the first ten or twelve weeks. It is not necessary to feed heavily of whole milk for this entire period, but it is so difficult to give calves a good start without milk that it is profitable to feed some quantity of it. The feeder can begin to decrease the amount of milk by the time the calves are four to five weeks old, when they should begin to consume hay and a grain mixture.

Give as much hay as the calves will pick over and supply a grain mixture of ground corn and oats with oil meal. Let the calves eat as much of this as they will consume. Gradually decrease the amount of milk until the calves are on the hay and grain alone. There will be some differences among the calves and it will be necessary to continue some of them on milk longer than others. Silage should not be fed to calves until they are six months old or more.

It is a mistake to crowd a cow into full milking in too short a time. When Holsteins freshen in good condition, it is wise to take at least three weeks in getting them onto full feed. At first give them only hay, a little succulent feed, and a limited supply of a light grain mixture such as 200 pounds of ground oats, 200 pounds of bran, and 100 pounds of oil meal. After a few days, some heavier feeds may be included and the amount of feed gradually increased. So long as the cow increases in milk flow, the feeder can add to the amount of grain fed. He should watch this carefully and, as soon as the cow fails to respond to even slight additions to the grain mixture, cut down the grain supply slightly.

The feeder should not be over anxious to get the last pound from his cows. Rather, he should keep them at a safe maximum and depend upon a liberal milk flow throughout the year rather than an extra heavy production during the first few weeks.

Some idea of what may be considered a full feed for heavy milking cows may be gained from the fact that commonly a cow receives as much of a legume hay as she will consume and silage at the rate of 35 or 40 pounds per day. In addition she receives a grain mixture at the rate of about one pound for each three or three and one-half pounds of milk produced.

Cause of Tuberculosis—Drying Up Cow

If it is not too much trouble would like to ask you how tuberculosis originates in dairy cattle. I read that it is caused a great deal by poor ventilation in the barns in winter time, but here in California they are outside all the year around and I hear there is a great deal of it here. Some say it is caused by the cows lying out in wet corrals on the cold winter nights, while others say it is caused by eating dry, dusty hay the year round. Have they found any cure for it? Are there any figures as to what state has the most tuberculosis in its cattle?

In a string of 30 cows, how often does there need to be a fresh cow come in to keep up the regular quantity? A great many dairymen blame the milker when the quantity shrinks.

Venice, Calif. T. H. C.

Tuberculosis is caused by a germ and is not directly due to poor ventilation or the condition under which cows are kept. However, a poorly ventilated barn will put the cows under such a strain that they are less able to resist the disease, while a poorly lighted barn does not permit the sunlight to kill the tubercular germs which may be in the barn. While we recognize tuberculosis as a germ disease, yet we do insist, as a prevention against tuberculosis and other animal diseases, that the barn should be well ventilated, the stable kept clean, and that it has a sufficient number of windows to permit the disinfecting properties of sunlight to enter and to render the barn sanitary and neat appearing. Tuberculosis is not caused by cows lying out in wet corrals on cold, wet nights, or by the feeding of dusty hay. All these things are undesirable, however, and may render less effective the cow's resistance to the infection.

There are no figures available as to what state may have the most tuberculosis. There are certain states in which more testing has been done than in others and sometimes the assumption is made that these states may have the greater amount of tuberculosis. Where the tuberculin test is not used there may be as many, if not more, tubercular cattle than in those regions where it is in general use. There has been no survey made of states to indicate the actual amount of tuberculosis that may be in all the herds. The only data we have is on those herds where the owners have voluntarily applied the tuberculin test.

In a string of 30 cows, assuming that all are of approximately the same production, it will be necessary to have from two to three cows freshen each month. This is not always practical and, indeed, there are seasons of the year when all cows will go down somewhat in production. In our Midwest country, this will occur during the hot months of July and August and possibly extending into September. Ordinarily our cows go to pasture in May and during the latter part of that month and during June they receive excellent pasture which induces a large flow of milk. Indeed, there are so many factors involved, such as the natural productivity of the cow, the weather, feed available, etc., that it is very difficult to more than attempt to approximate an equal production of milk from month to month. Even with the best laid plans, there is quite liable to be a considerable variation from month to month in the expected production.

It is unquestionably true that the milker may dry off a cow faster than she should dry off. This may be due to the fact that he is not naturally good at milking, or it is possible that he may neglect the work, do it inefficiently, and possibly fail to milk out his cows completely at each milking. We are inclined to believe, however, that where the milker is reasonably efficient and reliable that the greatest occasion for failure of milk flow is lack of proper feed and care, combined with the natural and inherent characteristics of the cow herself. There are certain cows that seem to have a short milking period. This is sometimes due to their inheritance and, in other cases, may be due to the fact that they have become accustomed to this through the kind of handling and milking they have had in the past.

The large producing cow is ordinarily a persistent milker and we sometimes fail to recognize her because she may not give a large quantity at first but she will maintain the pace for a full ten to eleven months. Another cow may give a large quantity for a month or two and then drop off rapidly in production.

Disk Tractor Plows

Have you ever had any experience with disc tractor plows? Part of my land has quite a number of solid rocks a few inches below surface and we are having considerable trouble losing plows with tractor plowing. With the type of tractor I have it is almost impossible to put on a clutch release. My tractor is an old style I. H. C. 8-16 with rigid plows and wood break pins.

Lake Mills, Wis. W. P. W.

I did extension work in Alabama from 1915 to 1917, during which time I had considerable experience in fall plowing of the stiff limestone and clay soils of that state. During dry periods after harvest it is almost impossible to use a mold board plow in these soils. However, by the use of the disc plow, we were able to do excellent work. I do not see any reason why the disc plow could not be used with the I. H. C. 8-16 tractor. In fact, I have asked the disc plow manufacturers to all of our tractor demonstrations here in Pennsylvania and they have demonstrated their plows with very excellent results and farmers are beginning to employ these plows.

We have somewhat the same difficulty of encountering solid rock here on the College Farm at Pennsylvania State College and I have recommended the use of disc plows to the farm superintendent. While he has not yet employed these plows, I believe that he will try a couple out next season. R. U. Blasingame.

Pennsylvania College of Agriculture.

PLAY THE GAME

HELEN S. K. WILLCOX, NEW YORK

NEW YORK STATE and neighboring dairymen found themselves facing one more crisis in their eventful history when, on the first of October, manufacturers of their raw product declined to accept further amounts at any price. In other words, the manufacturers, for the steenth time, sought to create an impasse in the dairy world and to break the Dairymen's League once and for all by attending strictly to their own important profits while utterly disregarding the producer's very existence, where that existence depended, as it does in many thousand cases, on the monthly dividends from the herd. The manufacturers proceeded to weep crocodile tears by the billion over the sad situation in which they were obliged to place their dear patrons. They assured us, the tender-hearted Bordens and the so nice and non-native Nestles', that it really hurt them far worse to administer our annual punishment and third degree than it hurt us to receive same—the idea delicately conveyed being that the martyr manufacturers hate like sixty to keep on treating us rough. But under the circumstances, inasmuch as 85,000 of us, rather an awe-inspiring number of brain and brawn as it were, are getting too independent and heady, therefore when half an excuse offers, as in the present instance of too much made-up milk well, all together now! Kill the League!

And the hard part of it is that almost half of our great dairy membership so far has fallen for the adverse propaganda of our long-feared and masterful milk buyers, and at this writing is still holding up the work of the proposed pool, which pool requires 50,000 signatures or contracts out of the 85,000 to make it a fair go.

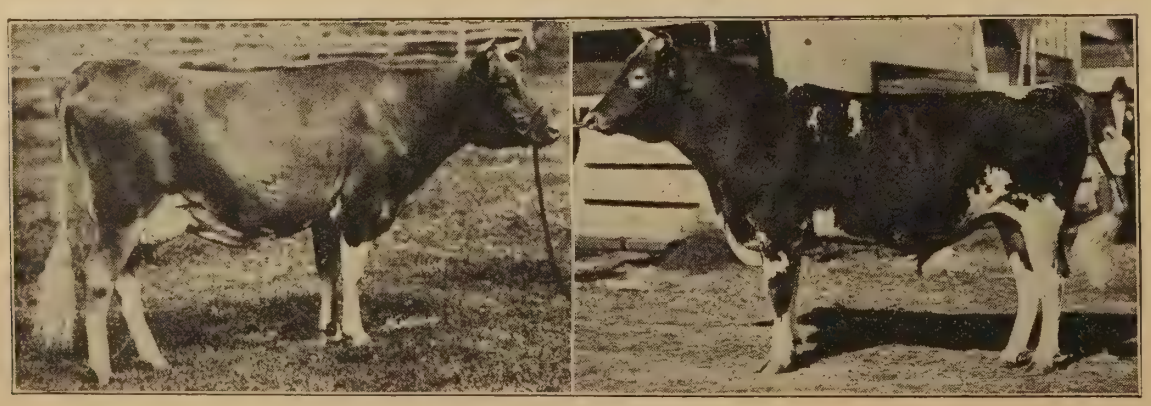
The members of the League who refuse to enter into the agreement give many reasons for their stand, any of them perhaps possible of occuring, but none of them probable. They fear that the handling of so much money will turn the heads of our hired officers in touch with it and there may be an absconding therefore of wealth untold—to come out of the poor dairymen. Then these pessimistic ones argue that pooling will level each man to his neighbor's standards, or lack of them, with a resulting lowering of the quality and eventful price paid for the product. Of course it is true that John Doe over in Delaware County or down in New Jersey or Pennsylvania will get the same amount per hundred pounds for his milk as I will in Chenango County, whereas John perhaps was receiving a bit more at his creamery than I at my shipping station, or vice versa; but the idea is that it might be better for every dairyman, for the space of one year's try-out, to take a lower price in order that in succeeding years he and his mighty band can ask and get a higher price, fair and legitimate and profitable, instead of reducing the League, so far tried and true blue, to nothing again, where each man will be defenseless and alone—the helpless pawn once more of these same Bordens and Nestles and all the rest who pretend, like the wily fox of story fame, to love us dearly—if we will only permit ourselves to drop our powerful club, the League, and meekly be gobbled up.

And as for the lowering of milk standards in regard to purity and cleanliness, the League has never had this part of our job in hand, that being the pet duty of the various boards of health in our distributing centers and overseen by local buyers of milk-fat. But it is conceivable that in time the League would take this necessary part of dairying under its wing, as perhaps it has already where acting as buyer, and would insist upon and maintain a standard high enough to satisfy and please the most fastidious and particular—under our own brand, Dairymen's League products. In that event, every member would be regularly inspected as Bordens have done and as the New York Board of Health has done, in order that our League milk might be advertised and sold as the purest and best produceable anywhere. Such a standard is right and necessary and it goes without saying that we would be well paid for our extra pains and trouble—because we are the League and we, if we aren't to become sausage for the foxes, will be in a position to pretty nearly get what we go after. But we won't get our price or become the leading and most progressive and prosperous dairymen of this or any other country if we choose to pick too many little flaws in the present scheme of saving the pieces, or if we prefer to kid ourselves into the belief that the manufacturers, et al, have our future interests at heart more than the organization formed when we were at bay, of you and me and our next-door neighbor, and which naturally now seeks to solve huge difficulties in the only possible way for fairness and equality to all.

But in the face of such obvious truths, nearly half of us refuse to be convinced of the genuineness of our own motives—for we must keep constantly before us the fact that we are the League—and instead we desire to assume that we are going into new and untried fields where a noose surely awaits the neck of every man who takes a fatal step and signs his John Henry irrevocably—for a year. We refuse to be convinced by the examples in signing set by nine out of ten of the leading and largest dairymen in every community—the very men who have the most to risk and who have rarely been known to take a step which involves probable losses. We refuse to listen to the advice of the great Farm Bureau which as fast as possible is fostering just such co-operative associations and mutual and national organizations to the glory and increased profits of farmers everywhere. We refuse to be influenced by the five years' experience of the California citrus-growers whose prosperity and success were recently chronicled in detail in these very pages and who operate under an ironclad contract of twenty years' duration, which so far has put their product, Sunkist oranges and lemons, into every home in America and has made their growers financially independent. We refuse to be convinced that pooling one's product, where it is a question at present of taking care of an inevitable surplus at a certain time of year, is neither fool-hardy nor risky, and the fact that our chief competitors, the Danes, have put this scheme into practice for several years past and have become rich farmers thereby has no weight with minds accustomed to suspicion and pessimism and who balk at progress in any form which differs with the old and worn-out.

Theodore Roosevelt once advised in time of stress and durance vile to speak softly but carry a big stick. The dairymen of our fathers' time did not always speak softly when the milk buyers had them by the scruff of the neck and each month shook every penny obtainable from each little for-himself-alone patron. But whether they spoke softly or not, cut no ice whatever with the strong and very profit-hungry foxes, for the victims could not call in the aid of neighbors who were in the selfsame boat and none of whom had never heard of carrying a big stick to bring cruel and greedy profit-eaters to terms. But we, the sons and daughters, finally made up our minds that the richly fat corporations buying our milk were foxes in truth, and if anybody saved the new generation from their lust, it would have to be ourselves who did it. So we proceeded to do it without further ado, and, beginning with five years back, we joined in packs, as the dealers had shown us how, to defend ourselves from their wily attacks—and the big stick we carried was and is called the League.

Our big stick has served us pretty thoroughly several times in the past, but heavens! how mad it made our hunters! They fairly foamed at the mouth to see us handle them easily after one or two scrimmages to the death, and they vowed they would break our club, the League, if it took them four generations to do it. And I'll say they are still trying, and trying harder than they ever tried, this fall of 1920. They are writing subtle advertisements in the big New York dailies to poison the minds of our



GUERNSEY CHAMPIONS AT THE MARYLAND STATE FAIR

Gerar Etta, winner of the highest award among the females, is owned by Louis McL. Merryman of Maryland and Audacity of Edgemoor, purple ribbon male, is herd sire at Brooklandwood Farms, Maryland.



How Much Does Milk Cost You?

If you're feeding whole grain, milk production is costing you too much. Vitex is a year round mixed feed that lowers feeding costs, increases the milk yield and keeps the herd healthier. It contains 24% protein, the element milk cows need.

WISCONSIN DAIRY FEED

is made from high quality milk producing ingredients such as cottonseed meal, oil meal, gluten feed, wheat bran, etc. It is mixed by a special process that makes each sack run uniform. You can gauge your feeding exactly—no chance of waste or under nourishment. The even run also makes Vitex a safe feed for mixed herds.

4-ALL A Meat and Strength Builder

For horses, hogs, sheep and beef cattle. As scientifically mixed as Vitex. It keeps horses in condition and fattens meat animals at big saving over grain ration.

Ask your feed dealer or write us.

SMITH MILLING CO.
36th and Lincoln Aves. Milwaukee, Wis.

SUPERIOR

Lime Your Soil and Raise Plenty of Feed

Ten to one, all your soil needs is SUPERIOR LIMESTONE to yield heavy stands of Alfalfa, Clover and Soy Beans. First year increase in production more than pays for Lime used.
Free Truog Soil Test. Mail small sample of soil and we will tell you how much Lime you need.
Write for free booklet, "Just Sense about Agricultural Limestone."

AGRICULTURAL - HORTICULTURAL SUPERIOR LIMESTONE WISCONSIN LIMESTONE CO. WAUKESHA WIS.

Wisconsin LimestoneCo.
Waukesha, Wis.
W. S. Halladay, Mgr. Soils Bureau

AGRICULTURAL & HORTICULTURAL LIMESTONE

Alfalfa-Grain-Fodder Ground In A Hurry

Grind 100 Bushels Shelled Corn An Hour With Small Tractor

W-W all-purpose grinders grind anything you raise for feed. Small grains, ear corn, fodder, alfalfa, straw, etc., ground course or fine at one operation.

W-W GRINDERS

have no burrs to clog — no knives to run dull. Blunt steel hammers at high speed give whirlwind capacity. Simple, strong, durable — rocks or iron in machine won't hurt them.



Write for Full Description
Then you can see why owners are enthusiastic over remarkable capacity and all-purpose features. All sizes — one to fit your needs. Use your tractor. Investigate now. Mail card to .

Wilson-Wetterhold Grinding Machine Co. Wichita, Kans

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

markets as usual, and they are buying up newspaper space in all the dairying sections by the pageful in an endeavor to get under the hide of the ignorant and fearsome farmer who has not yet signed the pooling contract and who welcomes the repetition and then some faults or weaknesses found in the new plan—but the only workable plan nevertheless.

They are fiercely hoping that they can scare enough of these doubters into breaking the League at this critical test, then yum! yum! won't the silly fools make a good breakfast when they have deserted the pack and the pack itself has been scattered to the four winds!

It does seem odd and almost unbelievable that some of us want to insist that we will fail in this great venture, instead of working and boosting and making sure by every possible and practical plan that we won't. In other words, if we refuse to get behind this co-operative method of disposing of our milk, in so many ways we announce to the world that we are quitters—mean little quitters who turn around and knife our rescuer in the back because we think, after saving us, he is going to turn about and play a trick on us after all. So we raise quibbles and questions and find fault with this term and that and intimate that the old way of milk-selling wasn't as bad as it was painted anyway. We guess we aren't going to sell our milk for what Bill Bowers gets, for our milk is cleaner and better and so on, and we are out for the extra penny to be had today through past efforts of the League instead of the extra dollar to be had under the rules of co-operation only—tomorrow.

And we own ourselves to be just naturally a little contrary and ultra-conservative and far from public-spirited when we balk at joining with the rest of the boys in a mighty effort to save the whole pack instead of merely parts of it as has been done in the past; and we acknowledge once and for all that we distrust the other fellow, the remaining 84,000 of us, and that progressive co-operation as it is being put into practice more and more is a step beyond our grasping.

The title to these frankly reproachful words is—Play the Game. It can not be expected that the entire 85,000 milk producers will unanimously join in a 1920 millenium of each thinking in step with the other, but it would seem that we, the League, might muster 50,000 of us to try out the pooling plan which, if we unitedly support it, has the greatest possibilities yet for permitting us to handle our own business at the natural end, and with higher standards and profits than we have ever known. Some day, if we decide to act the parts of sensible and thoughtful men and women instead of being scared at bogey men conjured up by our enemies in sheep's clothing, we will see our League butter and cheese and canned and dried milks demanded by the particular consumer in every little hamlet in the Union and abroad. And why? Because we will produce milk as one man, in the cleanest, most efficient, and profitable ways known to science and common sense, and our milk will be handled by one great middleman—ourselves—instead of by forty different competing ones all of whom must get as much or more out of it today as the maker himself. And we will be so formidable and yet so right and our products so good and so necessary to human welfare by virtue of national advertising patterned after that most effective kind adopted by Sunkist growers, that our public will just naturally increase their consumption, even as with oranges and lemons, and our problem will not be to sell our milk at a loss during the summer surplus, as now, but we will be surely confronted with the pleasurable task of producing yet more and more milk to feed a milk-educated America—as every intelligent friend of the dairyman has preached and preached and preached for, lo, these many years.

And if we pool together and work enthusiastically and with faith in each other and in our cause, the price to the consumer will be lowered instead of boosted, as now follows every raise in our own price, and yet we will receive our own costs and profits into the bargain. Of course all this is a step in advance of our plans for the present, the plan of pooling merely being to sell the milk at the producing end, but the handling of it entirely, from producer to consumer, will logically follow as the day follows the night—and then good-by to constant trouble in the shape of our old fox-like enemies, the middlemen, forever.

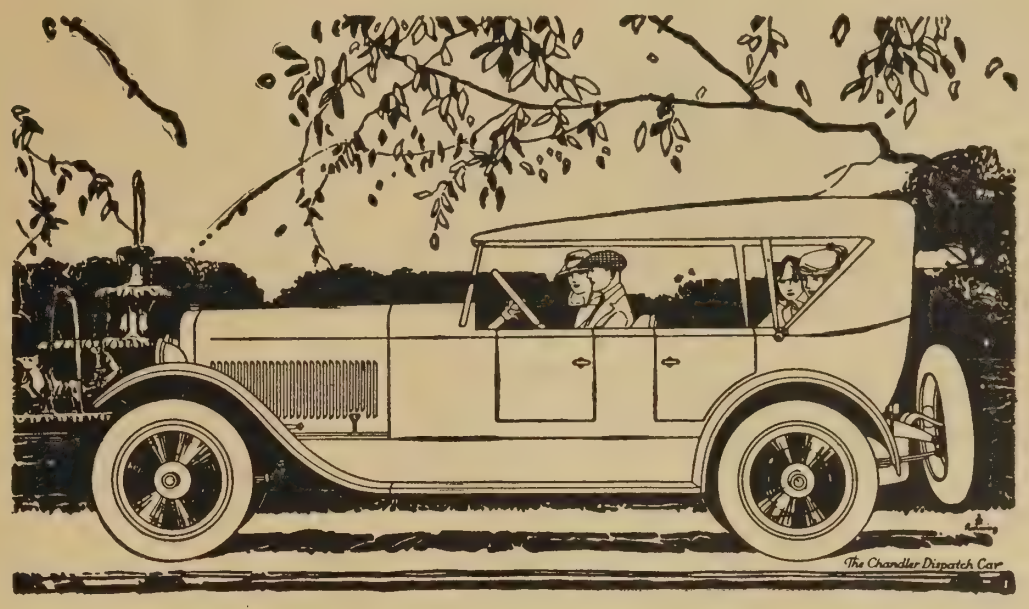
And all this is known and appreciated by our dear and only friends, the buyers, even though we rather blindly fail to quite see our opportunities as they are presented to us this fall. So they are fighting desperately to maintain their old hold on us and are trying by every clever means at their power to keep that vital two-thirds from keeping faith with the nearly victorious pack. The middlemen can see their end clearly if we find our capabilities and strength are yearly growing, and they want us to think that we can't safely handle our own business—can't safely co-operate and stick together, and that others had best have a finger in the pie.

The Morning Sun of Binghampton,

(Continued on page 678)

CHANDLER SIX

Famous For Its Marvelous Motor



Thousands Choose the Chandler For Its Known Superiority

THE thousands who are buying Chandler cars every month do not choose the Chandler just because of the fairness of its price. They choose it for its real worth. They choose it because they know what a good car it is.

More than eighty thousand owners have expressed their preference for the Chandler because of its marvelous motor, the one motor that for seven years has been constantly refined and developed to a state of approximate perfection. They have shown preference for the sturdiness and stability of its entire chassis, and for the comfort and beauty of its bodies.

The Chandler today leads distinctly because of its known superiority.

The Most Fairly Priced Fine Car

If you do not know the nearest Chandler dealer write us for catalog now.

SIX SPLENDID BODY TYPES

Seven-Passenger Touring, $1895 *Four-Passenger Roadster*, $1895

Four-Passenger Dispatch Car, $1975

Seven-Passenger Sedan, $2995 *Four-Passenger Coupe*, $2895 *Limousine*, $3395

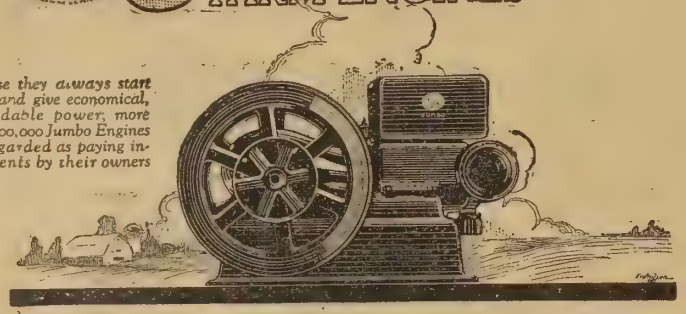
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THE CHANDLER MOTOR CAR COMPANY
CLEVELAND, OHIO

FOR SALE AT BARGAIN
Northern Illinois Stock Farm

Extensively developed dairy cattle and hog farm. Twenty-five miles from Chicago loop. Fully stocked with fine quality, popularly bred cattle and hogs. Completely equipped with new, modern buildings for raising of pure-bred stock. If interested, write E. A. W., Room 804, 111 W. Monroe St., Chicago.

JUMBO FARM ENGINES



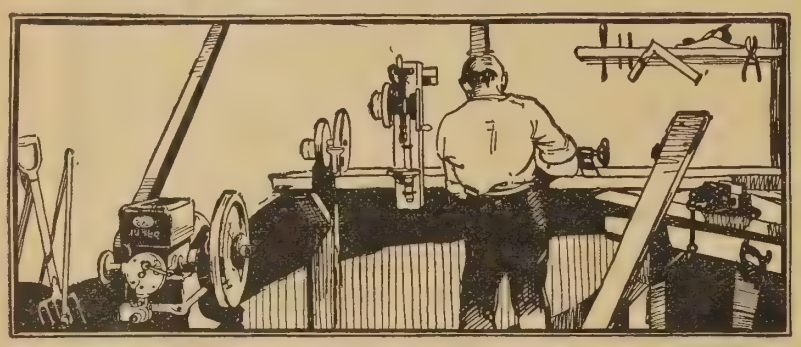
Because they always start easily and give economical, dependable power, more than 100,000 Jumbo Engines are regarded as paying investments by their owners

Save Repair Bills and Valuable Time

Now is a good time to rig up a small power repair shop with a few feet of line shaft and belt, some hangers and pulleys, a small drill press, an emery wheel and a Jumbo Engine to drive them. This simple repair outfit will enable you to make many emergency repairs next season when minutes of delay mean dollars of loss in crop values. Jumbo Engines are built for farmers by men who know farmers' problems. 1¾ to 12 h. p.

Write for full information and name of nearest dealer

NELSON BROTHERS COMPANY, *Saginaw, Mich.*
ENGINES, FEED MILLS AND PUMP JACKS
Also makers of the famous line of Jumbo Motor Trucks



"Let the hair go with the hide"

Specialists in tanning Horse, Cow, Calf or any kind of hide with hair or fur on it. We make robes, coats, caps, gloves, muffs, rugs, etc., to your order. *You save money* and we save your furs. *Free* catalog of stylish fur garments: Free instructions for handling furs. Fur garments and goods of all kinds repaired and *made like new.*

We mount large and small game, birds and fish. Write today.

ROCHESTER FUR DRESSING CO.
655 WEST AVE.
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How You Can Use a Typewriter

"The Typewriter on the Farm," just published, explains how you can systematize your accounts and correspondence, how to save time and trouble. Write for a free copy. With it we send the famous Oliver Plan, showing how we are able to sell a genuine $100 Oliver for $64. Free Trial. Easy Terms. The finest typewriter on earth. Over 800,000 sold.

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3087 Oliver Typewriter Bldg., Chicago, Ill.

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THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
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"Customers, gladly pay more for butter they know is as perfect as when it first comes from the churn.

"That's why I wrap my butter in

Paterson Pioneer Parchment Paper

"Keeps it clean—sweet—pure. Makes my butter *worth* more and *sell* for more. Yet, the small cost of this Parchment Paper isn't worth considering when compared with my extra profit."

Our free booklet, "Better Butter" means better butter prices. Write for it.

THE PATERSON PARCHMENT PAPER CO.
37 Eighth St., Passaic, N. J.



DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.

Organization Work in New York

H. H. LYON, NEW YORK

ORGANIZATION work continues in New York State. The wool pool has seemed to hesitate at times, but is certainly progressing. The reports of it from other states are encouraging. Here we now consider it assured, but hardly likely to include a major portion of the clip of the state. If we get forty per cent this year the situation is not bad. A half million pounds now seems assured with a possibility of more.

The effect of pooling, taking the country over, now appears to be the elimination of the wool speculator, and this is admitted by them every now and then. Moreover, there is said to be practically no storage of wool in either New York or Boston. Big prices are not looked for by farmers but fair returns are.

The Farm Bureau

Omitting for the moment the really big organization movement, the pooling in the Dairymen's League, we come to the farm bureaus and the federation. Has the federation of farm bureaus done anything for New York is a question by some. An answer, not infrequent, is a counter question, what has New York put into it? Perhaps six thousand dollars, they say, but the West has invested largely. They are entitled to more. They have more to put in it is true, but are we getting what we pay for? Evidently our state leaders think that we are. Even on our slender investment we are members of it, and not without influence. We need a national organization. There is none other that can do the same necessary service that the federation can.

Granting this, we must continue to be numbered in the federation even if we are able to pay only a small share. With small payments we get less out, but we may come to the point where we can pay more and then get more. Anyway the federation needs New York. It needs some of our men. Our conditions may be a little adverse in some ways, but adversity is good for folks usually, and we send representatives that are needed in the councils. We need to be a bit patient here at home and a little patience may be exercised elsewhere. Farm bureaus started here and we are going to stay by them I am sure.

Last year our membership fees were advanced from one dollar to two. It is proposed to retain the two dollar fee another year but to increase if possible our membership from about 60,000 to 70,000. There has been some talk of making membership five dollars, and this is undoubtedly the aim by another year after the next. If this can be done and the membership continued we will have money to work with. To us it looks like a big undertaking, but our leaders claim to be optimists. If the thing is what we need, as it looks, then go ahead and get it.

The G. L. F. Exchange

We have often commented on the G. L. F. Exchange, another feature of our organization work. Like all others it has its critics. It is not yet on a complete working basis although it is doing much. Funds have been subscribed and more can be had if proper use can be shown. Local organization under the Exchange is now going on. There is little that can be accomplished for the farmer unless there is some local machinery. Take the feed line, for example, which is the one that farmers first think of when the Exchange is mentioned. It looks as though little can be accomplished unless thorough local arrangements are completed.

As regards seeds, the farm bureau has been instrumental in securing for us better qualities. Now the G. L. F. Exchange is understood to be taking up this work of good seed, indeed has been doing it for some time as the Grange Exchange. No attempt is made to compete in relation to price, but only on quality. It is true that we are much better protected as regards quality by the laws of the state than formerly, but the Exchange will continue in the line of good quality. It is my conviction that we should patronize the Exchange as far as we can in order to support it. I doubt if we will loose very considerably on price, and I feel pretty sure that our seed quality may be worth any variation in price.

In common with others we are holding a county meeting to determine what we shall do locally to distribute seeds, feeds, and other commodities. It was this approaching meeting that set me to thinking along these lines of organization and to writing about them. It now appears that the Exchange is fully manned at headquarters. Mr. Hall, who has so efficiently managed the Grange Exchange, will remain in charge at Syracuse where the office has been and where a large



NASILLA, GRAND CHAMPION BROWN SWISS COW AT THE MINNESOTA STATE FAIR. OWNED BY F. P. MINETTE & SON OF MINNESOTA

Through an error in the report of this fair the issue of Hoard's Dairyman for September 24, page 391, gave credit to Believe, a cow from the same herd, for winning highest honors in her breed.

warehouse has been purchased. There will be a traffic manager, who has already been appointed. He will route the cars and look after the claims, etc. Seeds will be selected by experts in the field, and will be purchased by an experienced commercial man.

Coming now to feeds, an expert of twenty years' experience has been located in Buffalo in the Chamber of Commerce building where he will watch the markets, make purchases, and register sales. Grains are expected to be purchased from farmers' elevators in the west, and several mills are anxious to connect up on the sale of by-products. The Exchange is understood to be in position to compete with any concern in the feed line in a wholesale way. Of course it matters not how expert or how well paid are these men in charge unless sales can be made. Now that farmers are furnishing capital it is up to them to see that the Exchange sales are made.

How the Local Exchange will Operate

To make the situation as clear as possible, I hope to relate what was done at this county meeting. First we had an address by Director Webb of Cortland County explaining the above facts. Questions followed in answering which it developed that a county committee is needed. In this we continued the committee which had charge of raising our $30,000 of capital. These were the farm bureau president, the county league president, and the master of the Pomona Grange. This committee is to select a man or some men who will visit locals as needed, explain to them and help them to organize if they desire. Among the methods locally is that of selecting a committee, perhaps of five men, who may incorporate or not under our membership co-operation law. These men may appoint a purchasing agent or they may employ a man, dealer or otherwise, to handle feeds and other commodities.

These men are to be certified to the Exchange, or their appointee certified, by the county committee. Whoever is certified in this way is expected to enter into a contract with the Exchange. In this contract the Exchange is withheld from giving others the prices given the certified party, although others can secure cars of feed from the Exchange. On the other hand, the local committee is not, under ordinary conditions, permitted to purchase of other wholesalers. It is to be a support of the farmers' organization. In case no warehouse is established locally cars of feeds may be purchased at a price one dollar a ton above that quoted where a warehouse is maintained. If a warehouse is provided others may buy in car lots at a dollar a ton advance, and this dollar goes to the party maintaining the warehouse.

The party or parties conducting the warehouse may buy in as large amounts as they desire, stock up when low prices prevail and charge market advances. On the other hand they will be expected to drop with the market even if they lose money in so doing. It would seem as though the warehouse plan rather than the car door method would have the preference, but that depends upon local conditions. No very costly storage would be needed usually, but if there is storage there should be a switch. It will take some time to get all this arranged, and in many cases the car door plan may have the preference for this fall and winter. I have been told that some railroads will rent space in the freight depot, but I feel a little skeptical of this. There is ample room in many of the old freight depots.

In the contract between the Exchange and the local it is provided for its continuance for ten years, but it may be terminated in any June if a notice has been filed at a certain date considerably in advance of this. Much depends upon the loyalty of the farmers. Dealers are likely to hold prices pretty close while this plan is being worked over, and there may be cases where they will get in lower quotations than the farmers give, simply to put their organization out of business. The Exchange would seem to have one advantage in not being obliged to maintain a selling force traveling on the road. In any new effort of this sort of a co-operative nature there is much to be worked out, but it looks as though there might be good to come out of it. It is to be hoped that farmers will stay by the Exchange until it comes to an assured success.

To go back a little, it is well to state that the county man will be paid by the Exchange, say five dollars for a meeting and ten cents a mile for his auto. He will be employed only for the few days in which his services are needed. When the year comes around it is expected to pay six per cent on the investment, and then obtain a reserve fund of some magnitude. Finally profits are to be returned on the business after expenses, dividends, and reserve are taken care of. These profits go to both stockholders and those not stock-holders who have done business with the Exchange, but such profits are to be distributed in double the amount to the former class over that paid the non-members. The law requires that all may purchase if they wish.

Peat for Fuel

The rise in the price of coal has created interest in the utilization of the large deposits of peat in this country, and this interest has brought out the invention of machinery for the digging of peat and its preparation for use in manufactures. In speaking before the American Peat Society at Madison recently, Mr. Herbert Garnett discussed the possibilities of peat as a fuel and described the new methods of handling it.

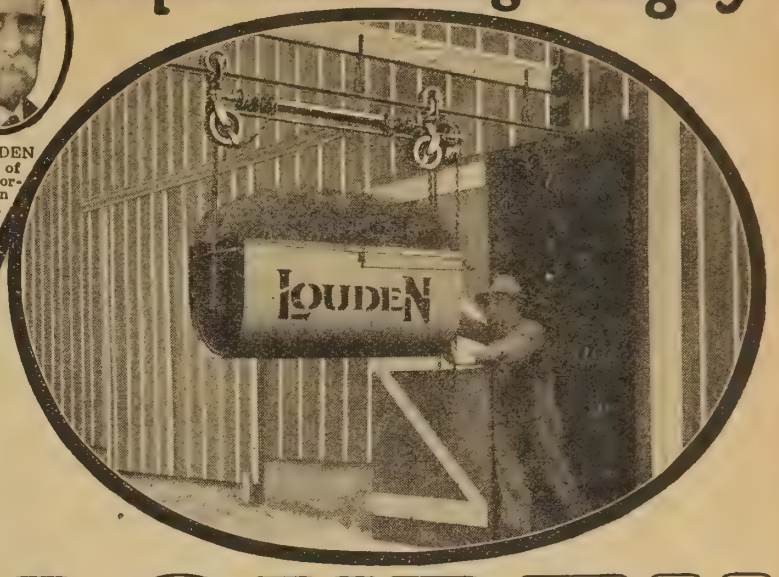
Machines are now available that will dig the peat to a depth of seven feet and spread it out on the field to a depth of four inches. Peat contains 80% water, but this is reduced by open air drying to 20% in 90 days and it can then be burned. The blocks are crushed to the usual coal sizes and the fuel is said to cost about $2.25 per ton at the swamp. It is suitable for use in all classes of stoves and furnaces with the possible exception of coal base burners. It burns with a long flame, is smokeless, does not form cinders or clinkers, and the only residue is a fine, light ash.

Mr. Garnett also discussed the type of new machinery developed to prepare peat for factory use. Plants are nearing completion in Minnesota where the peat is further dried and crushed to a fine dust. The pulverized fuel is said to be very efficient in the production of steam, but needs special machinery for feeding the large boilers.

Adequate records are necessary to the efficient management of any business. The farmer, to be successful, must be a business man as well as a grower of crops and producer of live stock. As a business man he should have suitable business records.

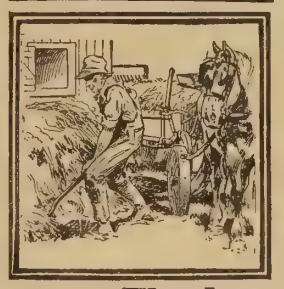

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Originator of modern labor-saving barn equipment.

Stop Barn Cleaning Drudgery



LOUDEN
Litter Carriers





Take all the drudgery out of barn cleaning. There is no other job on the farm that the boy, the hired man, or even the farmer himself hates worse than to clean the barn with the time-wasting, back-breaking, dirty, old-fashioned wheelbarrow. The treacherous, slippery plank keeps you from going hub-deep into the slush—but it's a real job to stay on it.

Cleans Barn in Half the Time

The Louden Litter Carrier removes the manure from behind the animals and dumps it directly into a spreader or some out-of-the-way place. Cleans the barn in half the time. A 12-year old boy can do the work quicker and easier with a Louden Litter Carrier than a husky man could with the old-fashioned method.

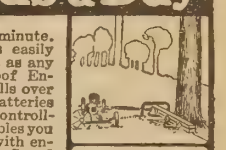
The same labor-saving features and high quality workmanship which have been built into Louden Litter Carriers, are found in Louden Feed Carriers, Sanitary Cow Stalls and Stanchions, Animal Pens, Hay Unloading Tools, Power Hoists, Manger Divisions, Ventilators, Barn and Garage Door Hangers, Water Bowls—"Everything for the Barn." 224-page catalog giving full details, sent on request. No obligation.

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OTTAWA MFG. CO., 1385 Wood St., Ottawa, Kans.

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OVERALLS
OSHKOSH OVERALL CO.
Oshkosh, Wisconsin

Butter Prices Lower

Sluggish Movement of Undergrades Affects Prices of Fancy Grades —Conditions Unsettled

[Report by U. S. Bureau of Markets]

Butter markets broke sharply early in the week ending October 16 and closing prices ranged from 1½c to 5¼c lower in the different markets than at the close of the previous week. The greatest declines occurred at Chicago, where the feeling in centralized butter in carload lots was especially weak. For some time the spread between prices of 92-score and 86-score butter has been growing wider, and with undergrades failing to move at still lower prices fancy butter had to come down.

Holders of Storage Butter Worried

The situation during the week has been very serious. While the stocks of butter in storage are mostly in firm hands, and the majority of holders will be inclined to carry their stocks for some time yet before disposing of them at a loss, the trade feels considerable uneasiness. Dealers generally feel that if prices are lowered at this time, consumption will be improved on the undergrade butter and the market will be cleaned up in such a manner as to permit improvement later. One sign that tends to back this opinion is the continued use of privately owned stocks of butter by jobbers and chain-stores operators, some of whom will soon be in the market for new supplies.

Storage Stocks Heavy

The Bureau of Markets preliminary storage report released the first of the week showed holdings of creamery butter on October 1 to be 113,333,000 lbs., as compared with 121,816,000 lbs. last year on that date. According to this report the 15,000,000 lbs. shortage of September 1 was reduced during September to 8,500,000 lbs.

The American Creamery Butter Manufacturers Association's report for last week shows a decrease of 1.2% in the make under last week, and an increase of 19.1% over last year. This covers the output of 85 factories. Many other factories report output holding up well. Current receipts at the five markets were slightly lighter than the previous week but ran about 10% heavier than the corresponding week a year ago. Some condensery butter is arriving but no great quantity is evident on the open market.

The average wholesale prices on 92-score butter at five of the principal markets, for the week ending October 16, were as follows: New York, 59.8 cents; Chicago, 55.5 cents; Philadelphia, 58.4 cents; Boston, 59.4 cents; and San Francisco, 58.5 cents. For the corresponding week last year the average prices were 68c, 64.1c, 67.5c, 64.4c, and 62.5c, respectively. The receipts of butter at these markets were 7,619,753 lbs. as compared with 6,635,550 lbs. for the corresponding week last year and 8,243,341 lbs. for last week.

Trading Slow on Cheese

Further Drops Anticipated Before Movement of Stocks Approaches Normal—Storage Report

[Report by U. S. Bureau of Markets]

The week ending October 16 closed with cheese markets still weak and unsettled. On Monday at the Plymouth (Wis.) Cheese Exchange all styles except Double Daisies declined, sales of Twins being at 1½c lower than the previous week. There were further reductions in actual selling prices each day, until by Saturday some dealers at primary markets were willing to shade their original prices from 1½c to 3c. In distributing markets the weakness at country points was also felt, and while comparatively little buying was done, prices declined under continued pressure to sell.

To sum up the situation, the general feeling was that further price reductions would be necessary in order to stimulate trading, for many buyers have held out for lower markets, with the result that wholesale business especially has been rather slow. It is plainly a fact that dealers do not care to see any accumulation on the markets under existing conditions, and as no one is eager to store at prevailing prices it seems evident that price reductions must occur in order to keep goods moving.

For the United States as a whole storage holdings on October 1 were approximately 55,006,000 lbs., which represents a reduction of about 5,500,000 lbs. during September. While in 1919 storage holdings were excessive, it is of interest to note that stocks on October 1 were approximately 5,000,000 heavier than on September 1, just the reverse of this year. The high point for holdings during 1920, both for the four distributing markets and the country as a whole, seems to have been reached about September 1.

The average wholesale prices on American cheese, style Twins, for the week ending October 16, were as follows: New York, 27.9 cents; Chicago, 25 cents; Boston, 29.1 cents; San Francisco, 28.3 cents; and Wisconsin primary market, 25.6 cents. For the corresponding week last year the average prices at these markets were: 30.5c, 29c, 31.5c, 30.3c, and 28.6c, respectively. The total receipts of American cheese at these markets were 2,979,752 lbs., as compared with 3,565,855 lbs. for the corresponding week last year and 3,188,187 lbs. for last week.

Current Feed and Hay Prices

Markets Chaotic as Price Declines Continue

[Report by U. S. Bureau of Markets]

One of the worst declines experienced in the feed market took place during the week ending October 16. Gluten feed manufacturers reduced their price $5 per ton, with guaranty extended to December 1. Cottonseed meal was quoted lower practically every day, and new low prices were established for this commodity when 36% meal was offered around $37 Memphis and 43% meal at $38 f. o. b. Texas common points. Middlings, because of an oversupply, were offered $1 per ton less than bran.

Bran was in fair supply and did not follow the price trend of other feeds. Quotations were as follows: Minneapolis, $29.50; Kansas City, $29; Chicago, $33; Atlanta, $38; Philadelphia, $39; New York, $38.50; and Boston, $39.50.

The cottonseed meal market is in a demoralized condition, with 41% meal quoted as follows: Kansas City, $45; Boston, $52; and $50 at New York, Philadelphia, and Minneapolis.

Heavy offerings of linseed oil meal caused a decline of $5, $52 f. o. b. mill being asked in northeastern territory. Quotations were: $60.50 at St. Louis, $64 at Chicago, $59 at Philadelphia, $57 at New York, and $56 at Boston.

Gluten feed was quoted at $44.25 in St. Louis, $52 in Minneapolis, $43.75 in Chicago, $52 in Baltimore, $45 in Philadelphia, and $51.60 in Boston. Prices on hominy feed varied while middle west markets quoted around $38. Omaha quoted at $30 to $32. Yellow hominy was offered in Chicago at $33, with holders showing an inclination to consider lower bids.

Dullness still characterizes the hay market. No. 1 timothy is quoted at $34 in St. Louis, $25 in Minneapolis, $29 in Chicago, $32 in Memphis, $34 in Philadelphia, and $39 in New York. Mixed clover and timothy ranges from $18 in Kansas City and $21 in Minneapolis to $24 in Chicago and $34 in New York. Clover is about the same as mixed hay in markets quoting both.

No. 1 alfalfa is quoted at $21 in Omaha, $25 in Kansas City, $28 in Minneapolis, $30 in Chicago, $31 in Memphis, and $36 in Atlanta.

Fond Du Lac, Wis., Holstein Sale

The Holstein Breeders' Sale Co.'s first fall sale held at Fond du Lac, Wis., October 15, was more of a success than the average would indicate. Eighty-eight animals sold for a total of $19,795, but this included well over 20 bulls of all ages and breeding, several of which sold for less than $100.

Good animals sold for good fair prices. W. H. Wilson topped the sale with a 31-lb., 4-year-old daughter of Rag Apple Korndyke 8th that Adolph Lehner bought for $1,500.

Mack, Pohlman, and Wolff did the selling with F. H. Everson in the box. S. H. Bird managed the sale.

Following is a list of all animals selling for $300 or more and buyers:

J. F. Kasierski, Wisconsin	
Tomah June Hengerveld	$300
Bessie Oak Lodge	525
Alfred Backhaus, Wisconsin	
Tomah Lucy Pietertje De Kol 2d	$350
Mutual Netherland Konigen	390
Edward Missling, Wisconsin	
Tomah Aurora De Kol Johanna	$355
G. H. Scovel, Wisconsin	
Tomah Johanna Sarcastic 2d	$300
F. H. Jones, Wisconsin	
Tomah Bertie Brookside DeKol 3d	$340
T. C. Wilsie, Wisconsin	
Pearl Pauline Johanna	$350
Model Ann Fobes Pontiac	420
Magnet Johanna De Kol	385
Klazerina Pontiac Longfield 2d	300
D. W. Merrill, Wisconsin	
Snowball De Kol Colantha	$380
Robt. Byrnes, Wisconsin	
Piebe Wayne Clover Lawn	$550
H. E. Braatz, Wisconsin	
Snowflake De Kol Piebe Champion	$455
C. L. Finder & Son, Wisconsin	
Cora De Kol Jewel	$310
W. L. Holbrook, Wisconsin	
Canary Segis Johanna De Kol	$330
T. J. Pinkerton, Wisconsin	
Beauty De Kol Butter Boy	$310
Erich Mueller, Wisconsin	
Korndyke Fairview Pabst Pontiac	$500
Adolph Lehner, Wisconsin	
Fairview Milla Korndyke 2d	$1,500
J. B. Cain, Wisconsin	
Knopi Snowflake Piebe	$300
Knopi Olive Homestead	460
Trutchell Bros., Wisconsin	
Lady Champion Johanna	$300

Avoid the Use of old Rye

Many farmers have had the unhappy experience of planting old rye. Unlike wheat the vitality of the rye germ seems to decline after the first year much more rapidly than most other grains. Therefore, rye that is over a year old should not be used for seed.

Coming Events

Nov. 9—11, 1920, Wisconsin Buttermakers' Association meets in Madison. Secretary, H. C. Larson, Wisconsin.

Dec. 9-11, 1920—International Farm Congress meets at Kansas City, Mo.

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

Farmers' National Congress, November 16 to 19, at Columbus, Ohio. A. P. Sandles, Sec., Columbus, Ohio.

Price Reduction
James Barn Equipment

Reductions in prices of James Barn Equipment, averaging 20 per cent, are now effective to and including November 15, 1920, for shipment prior to February 1, 1921. Prices are guaranteed against decline to date of shipment.

Following are the reasons on which this reduction is based:

(1) We are in whole hearted agreement with all those who believe that industry, as well as the general public, will be tremendously benefited if prices in all lines can be brought to a lower level.

(2) There is, however, nothing in the present situation that justifies reduction of prices of James' equipment.

Steel, malleable, fuel, power, all overhead items and labor cost as much as ever before.

Nor can we see any present evidence of reductions in wage rates, nor in cost of raw materials during the coming season.

(3) To reduce James' prices, we must, therefore, find some means of reducing manufacturing and selling costs through increased efficiency. We believe this increased efficiency can be brought about.

To do our part, we have reduced our prices for the period to and including November 15 to that level to which the public believes prices are to come.

It is our hope that on November 15, these reduced prices may be continued.

Whether that will be possible depends on whether increased sales brought about by this reduction will be enough to materially reduce manufacturing and selling costs.

If the increased sales are not sufficient, it will be necessary to restore prices to the previous higher level.

James Manufacturing Company, Fort Atkinson, Wisconsin

The James way

Labor Saving Equipment for the Dairy Barn

First National Jersey Cattle Sale

Shreveport, La., Oct. 28 to Nov. 7, 1920

About a year ago, during the progress of the State Fair of Texas at Dallas and the State Fair of Louisiana at Shreveport, many of the Jersey cattle breeders of the South urged some special demonstration of the breed in their territory. They felt that the entire dairy industry in the South was taking on new life and that some added stimulus at this time was both desirable and likely to be highly beneficial to that whole section.

Some officials of the American Jersey Cattle Club were at Dallas and Shreveport, and were impressed by these considerations as presented by the Jersey breeders of the South. They brought back to club headquarters a keen desire to do something that would meet the wishes of southern Jersey breeders. The board of directors of the American Jersey Cattle Club appropriated $2,000 for Jersey premiums for a National Jersey Show to be held either at Dallas or Shreveport. On account of the dates of the State Fair at Dallas conflicting with those of the National Dairy Show at Chicago, it was thought best to have the National Jersey Show at Shreveport, La., during the state fair.

Louisiana Jersey breeders have added to the club's two thousand dollars, one thousand more raised by subscription, and the State Fair of Louisiana has appropriated three thousand dollars. This makes a total of six thousand dollars for Jersey premiums, the largest amount in premiums ever offered for Jerseys at any fair. The premium money has been distributed over twenty-six classes, and with a few exceptions there are eight premiums in each class. Most of these premiums run from $45 for the first to $5 for the last. In two cases—for Register of Merit cows—they run from $50 for the first to $15 for the last. In the case of exhibitor's herd they run from $100 for the first to $10 for the last. For breeder's young herd and calf herd they run from $170 for the first to $20 for the last. The distribution of the premium money in eight premiums in so many classes gives a great many exhibitors a good chance to get into the money, and should bring about one of the finest Jersey shows ever staged.

The Southern Jersey breeders have expressed themselves as very desirous of having herds come from the North and the East. They said: "Perhaps these herds will take the most premiums, but we do not wish to be selfish in this matter; we want those herds here as an object lesson to all southern breeders of what Jerseys are, and as standards for southern breeders to aspire to."

It has been in the minds of the directors of the American Jersey Cattle Club that this first National Jersey Show may be followed by other National Jersey Shows in the South, as they feel that the South offers a very promising territory for the development of the dairy industry. Whether their ideas along this line will develop or not will depend altogether on the success of the first National Jersey Show. Its success will depend upon the patronage given it by the southern breeders. If they turn out in such numbers as to prove irrefutably that the South is interested, and that it is ready and willing to do its utmost to benefit by the great show that is staged for 1920, it will be the greatest encouragement to the American Jersey Cattle Club; it will not only be gratified by what it is doing this year, but it will be a great incentive for a similar show to be staged at some other point in the South in 1921.

The American Jersey Cattle Club will be represented at Shreveport by its president and others of its official staff. In order to bring about a great get-together of Jersey breeders at Shreveport, a Jersey breeders' banquet will be held under the auspices of the club at the Hotel Youree, Shreveport, on the evening of November 5th. It is intended to provide both instruction and entertainment for the guests attending that banquet.

Now, the State Fair of Louisiana, through its president and secretary, has done its part; the Louisiana Jersey breeders have done their part; the American Jersey Cattle Club has done its part; the rest is up to the breeders of the South, not only those of Louisiana, but those of Texas, Alabama, in fact all the states in the southern section of the country. Using the slogan of the state fair of Louisiana, we say to all the breeders of the South: "It's *Your* Fair, So Be There."

R. M. Gow, Sec.,
The American Jersey Cattle Club.

Write down your garden plans for next summer now before you forget what you learned this year.



SHARPLES MOTO-MILKER

Electric Milker for 8 to 20 Cows

THIS wonderful new milker is ready to use when unboxed. No pipe lines nor engine necessary. It milks 2 cows at a time. One man alone can milk a 15-cow herd in about 45 minutes. Let one man do all your milking. You will save over $300 a year in wages.

Uses compressed air to squeeze the teats and suction to suck out the milk. Gentle and comfortable to the cows and in most cases increases their milk yield. Has the patented Sharples teat cups that are in daily use on over 1,000,000 cows.

Our Famous Pipe-Line Milker

For 8 years our pipe-line milker with the patented compressed air squeeze has stood unquestioned at the head of the milker industry. Mr. Sharples' invention of compressed air to squeeze and massage the teats first made milking machines possible. This use of compressed air is broadly patented, and can be used by no other manufacturer. For this reason, the Sharples

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Sharples prices will *not* decrease. We will give anyone a written guarantee of this on request. Our prices have increased only 9% during the war and a price decrease is therefore out of the question.

Write to nearest office addressing Dept. B *for booklet*

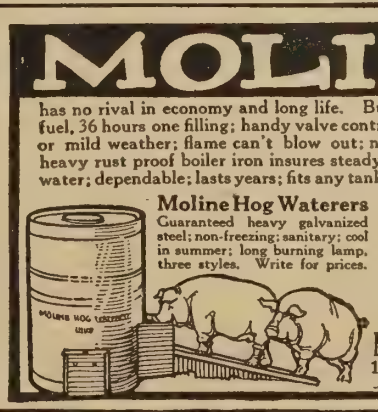
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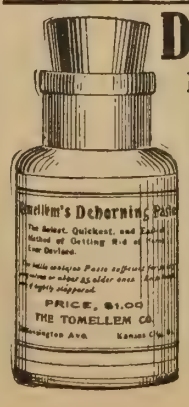
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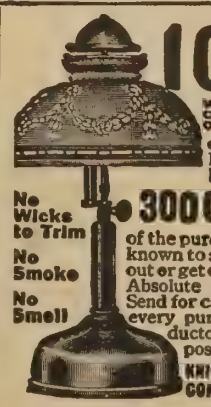


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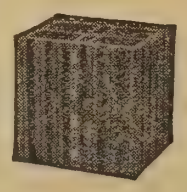
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WITH the winter winds howling and the cold creeping through the thin weather-boards, the family in grandfather's boyhood hugged the stove a little tighter, while someone fetched another armful of wood. But today, firewood is fast disappearing and the cost of coal climbs steadily higher. The remedy is a ***warm*** house—built of



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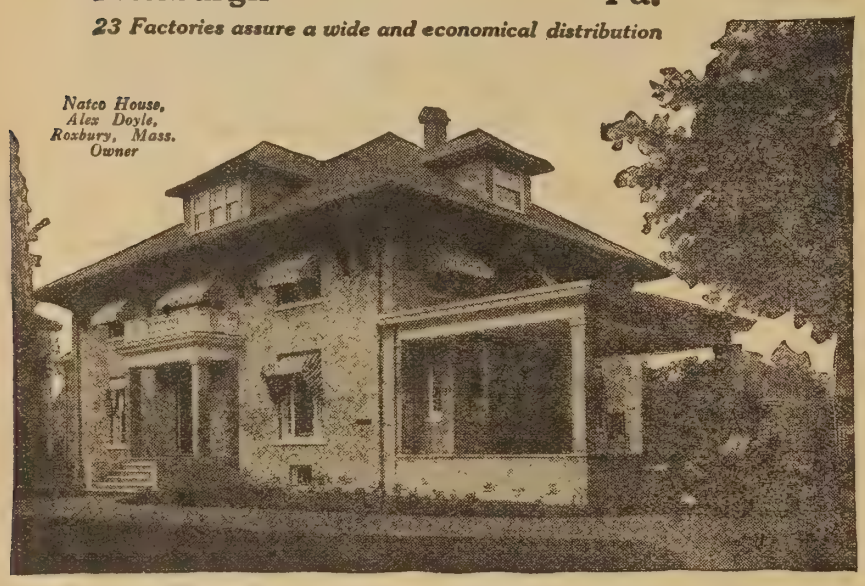
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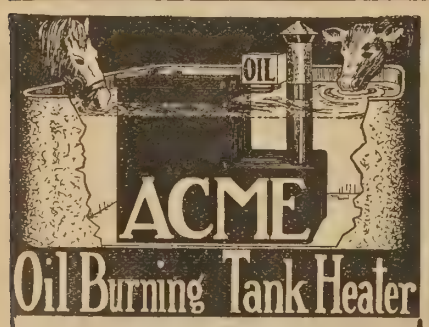
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Oil Burning Tank Heater

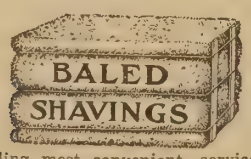
The tank heater with the **Improved Burner.** Different from others. **New Features.** No sparks, no smoke, no ashes, no danger from fire, no heat wasted. All heating space under water. Compact, convenient and easily handled. Keeps water at even temperature in coldest weather. Made of heavy steel. All seams welded. Fits any wood, steel or concrete tank. Pays for itself first year. Don't buy until you get the facts and price of the Acme. **It's Guaranteed.**

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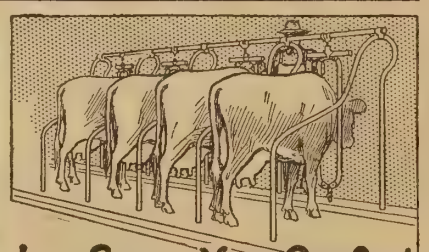


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YOU can handle more cows in less space, less time and with more profit if your dairy barn is CLAY equipped. Bolting only 3 parts together completes a sanitary, ***permanent*** stall of strong, smooth steel tubing—no corners. Fits any space. Clean, convenient, safe. CLAY 2-WAY Swinging Stanchion gives pasture comfort and insures quiet.

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saves feed and labor and eliminates trouble and expense. Stanchion instantly closed or opened ***both ways*** with ***one hand.*** Hangs straight in center of stall—no sure-stops needed. Quickly adjustable—fits either cow or heifer Gives pasture comfort, standing or lying. Cow-proof lock. CLAY equipment is fully guaranteed.

Free Barn Plans Our architects will plan your alterations or barns free. We can help you make more cow money. Send name on postal for catalog and Free Barn Plan Blanks.

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DALY FOOD STOCK FEED **MOLASSES**
$12.50 FOR 50 GALS
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THE D. J. CARVEY COMPANY, DEPT H, NEW ORLEANS, LA.

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ohio	Geauga Co.	C. M. McEwen	Sept.	258	33	59.1	W. A. McLaughlin
"	Barnesville	C. F. Lewis	"	228	33	67.5	L. J. Taber
N. H.	Claremont & Lebanon	A. E. Norman	"	400	12	55.1	H. A. Benson
Pa.	Canton	B. E. Whiting	"	347	22	71.9	M. A. Taylor
"	Avondale—West Grove	Thomas Ford	"	254		47.0	Edgar Haines
Ohio	Butler Road	F. L. Rostocil	"	240	35	55.2	P. J. Fay
N. Y.	Western Broome	J. H. Sherwood	"	427	12	51.1	Deyo Bros.
Ky.	Oldham County	W. E. Brohaugh	"		12	51.4	F. Von Allmen
"	Nelson County	Lloyd E. Cutler	"	207	3	42.3	H. L. Muir
Minn.	Faribault	B. F. Fullerton	July	270	16	67.6	A. Meillier
"	Fairbault	B. F. Fullerton	Aug.	290	5	61.6	Fred Ihlow
Idaho	Canyon County	C. O Miller	Sept.	253	25	64.0	Univ. Exp. Farm
Iowa	Monona—Farmersburg	Ernest Lihn	Sept.	261	15	61.3	Koether & Olmsted
"	Clatsop County	W. J. Kent	Aug.	443	46	68.2	N. A. Kent
Ore.	Nestucca	Helen Miller	"	608	55	55.3	M. N. Bays
"	Smith—Umpqua	Lillian Smith	"	371	83	68.2	Baker Bros.
"	Coquille—Myrtle Pt. No. 1	R. S. Trigg	"	851	68	79.2	A. Guthardt
"	Coquille—Myrtle Pt. No. 2	Evogene Furnish	"	776	99	62.7	E. M. Beckham
"	Coos Bay	Walter Reimann	"	523	31	68.3	A. Gunnell
"	Rogue River	J. B. Bichan	"	275	29	60.7	J. R. McCracken
"	Bandon Co-op.	Geo. M. Rhein	"	852	61	90.6	C. Reichart

Association Notes

Barnesville, Ohio:—September market milk sold for $3.40 to $4 per cwt. Feed prices are as follows: Larro, $3.60 per cwt.; oil meal, $3.50; Armour's Dairy, $3.60; cottonseed meal, $3.50; bran, $2.75; hominy, $3.50; oats, 70c per bushel; corn, $1.25 per bushel.

Claremont and Lebanon, New Hampshire:—Milk testing 3.7% sold for $4 per cwt. in September. The creamery paid 75c per pound for fat. Milk retails for 16c per quart and butter for 75c per pound. Feed prices are: Bran, $60 per ton; cottonseed meal, $76; linseed meal, $76; gluten, $77; corn meal, $71; hominy, $74; ground oats, $64; provender, $68; Stock Feed, $69; mixed feed, $73; middlings, $85; ready mixed rations, $77 to $87.

Canton, Pennsylvania:—The refusal of manufacturers to buy milk threatened a number of the members of this association with the loss of a market; however, efforts are being made to meet the situation. Butterfat prices have remained good and the members who have patronized the creameries have prospered for the past year. September market milk testing 3% sold for $3.55 per cwt. and 4c per point above. The creamery paid 70c per pound for fat. Milk retails for 15c per quart and butter for 70c per pound. Cottonseed meal is rated at $70 per ton; oil meal, $75; gluten, $67; wheat bran, $60; hominy, $75; middlings, $60; corn meal, $65; ground oats, $60; Unicorn Dairy Feed, $79; Curtis Dairy Feed, $75.

Butler—Road, Ohio:—September market milk testing 3.5% sold for $4.14 per cwt. and 5c per point above. The condensery paid 56c per pound for fat. Feed prices are: Oats, $2 per cwt.; corn, $2.25; bran, $56 per ton; oil meal, $70; cottonseed meal, $65.

Western Broome, New York:—Unprofitable cows are continually being disposed of with the result that dairies are improving greatly. Dairymen are now feeding almost as much grain and roughage as during the winter months. Grain prices are quite reasonable, but the farmers in general are expecting to purchase through the G. L. F. just organized with headquarters at Syracuse, New York. Three per cent milk sold for $3.65 in September. Milk retails for 15c per quart, butter for 65c per pound, and cheese for 38c per pound. Feed prices are: corn meal, $67 per ton; gluten, $70; oil meal, $71; cottonseed meal, $71; wheat bran, $55; ground oats, $62; hay, $30; silage, $10.

Oldham County, Kentucky:—During the month of September, six unprofitable cows were culled out. The farmers will co-operate in buying mill feeds and cottonseed meal in carload lots this fall. Market milk testing 3.5% sold for 30c per gallon. The creamery paid 58c to 60c per pound for fat. Cow Chow is sold for $85 per ton; bran, $60; ground corn, $57; oil meal, $85; cottonseed meal, $75 to $80; hominy, $75; oats, 80c per bushel.

Nelson County, Kentucky:—A milk route between Bardstown and Louisville has been organized to take care of the milk produced by dairymen who are conveniently located with respect to the railroad. At present this is somewhat of an experiment but it is expected to be running along smoothly in the near future. Several farmers living along this route have bought quite a few more cows. There is also a movement to form a dairy association for the production of high quality milk for a special market. We expect to have a co-operative bull association before long. September milk testing 4% sold for $3.48 per cwt. Milk retails for 16c per quart and butter for 60c per pound.

Fairbault, Minnesota:—The condensery here has closed its doors until it can dispose of the product already on hand. It has promised to pay the farmers in full as soon as this product has been sold. Market milk testing 3.5% sold for $2.75 per cwt. in August. The creamery paid 63c per pound for fat. Butter retails for 65c per pound. Alfalfa is rated at $30 per ton; bran, $40; oil meal, $67; oats, 60c per bushel.

Clatsop County, Oregon:—Two pure-bred Guernsey bulls and one pure-bred Jersey bull were purchased during August. Milk testing 3.8% sold for $2.90 per cwt. and 5c per point above. Dairymen received 69c for sweet cream and 64c for sour cream. Local feed prices are: Millrun, $62 per ton; barley (rolled), $80; mixed molasses feed, $54.

Nestucca, Oregon:—Dairymen of this section received 65c to 70c for butterfat in milk from the cheese factory. Fisher's Dairy Feed sells for $70 per ton; millrun, $80; ground

oats and peas, $68. Four cows were sold for beef during August.

Coos Bay, Oregon:—Five cows were sold in August for beef. One pure-bred Holstein bull and one pure-bred Jersey bull were purchased. All separators in use in this section have been tested and found satisfactory. Dairymen in this section sold milk in lumber camps for 32c per gallon. Sweet cream sells for 61c. Feed prices are: pasture, $2 for tillable, $1 for untillable; green feed, ½c per pound; cocoanut meal, $70 per ton.

Rogue River, Oregon:—Dairymen here received $3.60 per cwt. for milk during August. Milk retails for 14c per quart. Sweet cream sells for 74c and sour cream for 64c. Local feed prices are: barley, $69 per ton; millrun, $65; hay, $25; S. B. Dairy Feed, $52.

Bandon Co-operative, Oregon:—One separator was tested during August. Five cows were sold for beef. One silo is being erected. Dairymen in this locality received $3.25 for 4% milk. The condensery paid $3.10 to $3.25 per cwt. for milk.

Does It Pay to Feed Well?

Test Association Records Show That It Does

A great many farmers still question the economy of liberal feeding, and especially the feeding of high priced concentrates. These men argue that the liberal feeding of good feeds increases the cost of keeping the cows and that the extra milk and butterfat obtained through such feeding costs more than it is worth.

The record of John Garaghty's herd of the McGregor Cow Testing Association in Iowa furnishes some very definite proof that the liberal feeding of a balanced ration pays large dividends. Mr. Garaghty and his sons who operate the farm together were of the opinion that it did not pay to feed much grain and especially high priced protein feeds, such as cottonseed meal. However, during their first year in the McGregor Cow Test Association the gospel of good, careful feeding was preached to them by the tester so that in the second year some changes were made in the feeding operations.

In the first place the pasture season was cut down from six and a half months to five months. This necessitated the feeding of more silage to make up for the decrease in pasture. This alone doubtless helped considerably to increase the production, for it is by pasturing cattle too early or too late in the season that production is often cut down. And in the state of Iowa five months is a sufficiently long pasture season as a longer season generally means that the cattle are turned on pasture too early, before the grass has grown enough, or it means that the cattle are required to get their feed from frozen stock fields late in the fall, or both. During the winter of the second year the grain for the cows was increased from 495 lbs. of ground oats alone to more than a thousand pounds of ground oats, corn, and bran together for each cow and also more than 200 pounds of cottonseed meal was added to each cow's ration to balance the other feeds.

Briefly, the results of more careful and more liberal feeding in this herd were that all the cows milked both years increased their average production from 304 pounds of butterfat to 418 pounds of butterfat. And that by increasing the feed cost on the average per cow from $53 to $83, the incomes above feed cost for each cow increased from about $129 to about $218 or, in other words, by expending wisely $30 more per cow for feed the income per cow was increased $89.

Iowa. C. L. BLACKMAN.

Supervisors Needed

Owing to the fact that four supervisors returned to college, we are in need of supervisors to carry on the official testing work in the state of Washington. Anyone desiring to become better acquainted with improved dairy methods and especially in the handling of pure-bred dairy cattle will find that a few months' experience as a supervisor will be a very valuable means of education.

In this state, the present salary for supervisors with less than three months' experience is $75 per month and necessary traveling expenses. After satisfactorily carrying on the work for three months the salary is raised to $90 per month and traveling expenses. These expenses include railroad fare, stage hire, car fare, hotel bills, meals, postage, telegrams, and any other expenses necessary to carry on the work. The supervisors are regularly employed, no time being deducted for traveling from place to place.

Anyone desiring further information about the work should write to Fred S. Martin, Supt. of Official Testing, Pullman, Washington.

There are some men who can obey orders; and there are some men who can get things done.

It is well to be obedient, it is better to be resourceful.

When Alexander could not untie the Gordian knot he cut it with his sword.

A resourceful man is one who, when he cannot do a thing one way, does it another.

He keeps trying.

When it is time to quit, he begins.

When he is licked, he begins fighting again.

There are three rules for success. The first is: Go on. The second is: Go on. And the third is: Go on.—Current Opinion.

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Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

Washington, October 20—So great national interest attaches to the conference of farmer representatives held here last week, and the meetings between these men and the heads of the Federal Reserve Board and the secretary of the treasury, that I believe the fact that these conferences were only in small part representative of the milk and dairy interests does not prevent what happened from being of first interest to the readers of Hoard's Dairyman.

The farmers' conference was called to consider financial problems, based on the assumption that the refusal of the banks, and more especially of the Federal Reserve Board, to take special steps to increase loans to farmers was one of the chief factors in the cause of the slump in prices of farm products. The call issued from the center of the cotton territory and was signed by J. S. Wanamaker of the American Cotton Association, Charles S. Barrett of the Farmers' Union, and J. J. Brown, State Marketing Commissioner of Georgia.

It met in Washington on Tuesday, October 12. There were about two hundred persons present during the two days. The cotton states were represented not only by many farmers and cotton growers, but also by Senators Smith of South Carolina, Smith of Georgia, Harris of Alabama, and Overman of North Carolina, Ex-Senator Marion Butler of the latter state, several congressmen, and a number of bankers and business men. Some other states were represented, especially Kansas, Pennsylvania, and New York, several farmer representatives in Washington attended, but as will appear, the conference revolved about cotton. This is not made plain in newspaper reports which were sent out.

A general committee, and committees on cotton, tobacco, wheat, and milk, were appointed and presented reports setting out the marketing situation in these staple crops. I will quote from the general committee signed by the committee of which J. J. Brown of Georgia was chairman and which included representatives from Pennsylvania, Kansas, Texas, Arizona, South Carolina, New Jersey, Louisiana, and West Virginia, and some of the Washington representatives.

"The condition in agriculture," says this report, "is now desperate. The condition of mind of the farm population is now ominous. Producers of all crops come to believe that the hand of the government is against them. This state of mind can only be changed by a frank and fair attitude on the part of those in authority—the test of which can only be their acts." This recital then goes on to say that the present slump in prices has been brought about by restriction of credits, raising the discount rate, discontinuing the War Finance Corporation, and the interpretation placed on statements of the Secretary of the Treasury and the governor of the federal reserve board that "commodity prices, especially prices of farm products, were too high."

Space will not permit a longer quotation but this fairly typifies the general character of this statement. I will quote more at length from the report of the milk committee, although this report is couched in far less drastic language than that of the cotton committee which bitterly assails the government for inducing extra efforts to produce cotton and then permitting the present market slump.

The recommendations of the committee on milk were as follows:

1. Adoption by the federal reserve system of a more liberal policy in the extension of credit to farmers and farmers' organizations on stored dairy products.

2. Furthering the organization of milk producers in order to bring into the National Milk Producers' Federation on a departmental basis all the farmer-owned and co-operative creameries, cheese factories, and condenseries, so that the milk producers may present a solid front in solving the marketing phases of the problem.

3. Extension of co-operative buying of dairy feeds and other supplies.

4. A nation-wide educational campaign among city consumers, particularly among organized labor so that they may better understand the actual conditions surrounding the dairy farmer, and also bring about a wider knowledge of the food value of milk and other dairy products.

5. Enactment by Congress of legislation designed to protect American dairy farmers from the importation of foreign dairy products, and substitutes for dairy products such as oriental vegetable oils.

Respectfully submitted,
FREDERICK SHANGLE, New Jersey,
CHARLES W. HOLMAN, Wisconsin,
J. H. KIMBLE, Maryland,
EUGENE H. PORTER, Albany, N. Y.

It may be said in passing that this milk report was not only the most conservative of all the reports, but also the only one which dealt particularly with constructive suggestions other than financial demands.

On Wednesday, Thursday, and Friday, the conference presented its demands to Governor Harding of the Federal Reserve Board, Secretary Houston of the Treasury Department, and the White House.

An absolute refusal to concede or grant any demand for increased loans, any change in attitude of the Reserve Board, for the resuscitation of the War Finance Corporation, a revolving fund, or any other method of relief asked for by the farmer representatives was the net result of the series of conferences.

⚜

In a statement issued late Saturday afternoon Governor Harding made it plain that there had been an increase of more than a billion dollars in credits in the past year, instead of the restriction charged in the general committee report. He denied explicitly that agricultural products were discriminated against, and in proof pointed out that the bulk of reserve loans were in agricultural territory. Secretary Houston said it was impossible to even consider treasury loans or a revolving fund. The treasury does not have the money and to get it would be compelled to go into the open market and borrow it at high interest rates. The war finance corporation was financed by tax raised funds turned over to it to make it possible to get American goods into foreign markets in the face of war risks, and there can be no possible argument for its rehabilitation now in peace time, he said. If interest rates and speculation have been manipulated to influence speculative prices, then there is a remedy and the president had already instructed the federal trade commission and the attorney general to make a rigid investigation.

This was as far as the conference got. It was a complete deadlock.

Two things should be pointed out in addition. Neither the American Farm Bureau Federation nor the National Grange joined in the call for this conference. The Farm Bureau Federation was not represented in any way, and the Grange only by the presence of its Washington representative who did not officially sign any committee report.

Whether or not this demonstration of the serious state of mind of some of the farmers, especially those hard hit by the cotton price situation, will have any further or later effect is still problematical. In the face of the official statements issued it is difficult to see what government action can or should be taken. The American Bankers' Association is in session here this week, and has announced that the agricultural situation is one of the three big items in this week's deliberations. Perhaps there is relief in sight from this source, if not from government action.

⚜

The action of the dairy interests at Chicago, in agreeing to "go after" the International Dairy Congress to come to the United States in 1922 attracts attention in Washington. B. H. Rawl, assistant chief of the Bureau of Animal Industry, C. W. Larson, acting chief of the Dairy Division of the Department of Agriculture, and A. M. Loomis, secretary of the National Dairy Union, are members of the tentative organization committee for this purpose, and Messrs. Rawl and Larson of the executive committee.

Brockton Fair Dairy Show

Of the nearly one-quarter million persons who patronized the Brockton Fair at Brockton, Massachusetts, October 5 to 8, it is safe to say that more than half spent a good portion of their time looking over the dairy show. Most of the remainder visited the cattle department. As in years past this important department of the greatest fair in the East specialized in four leading dairy breeds—Holsteins, Guernseys, Ayrshires, and Jerseys.

Because of the National Dairy Show opening at Chicago during Brockton Fair week, the Brockton Show lost several important herds, but most of the classes were well filled and in many there was the keenest kind of competition. Offering $6,000 in premium money besides numerous special prizes the Brockton Show always succeeds in filling its barns, and, not only were the dairy breeds well represented, but there was the largest number of entries in the swine classes the fair has ever had.

Junior stock judging and a 24-hour butter test, won by a Holstein, were dairy show features. Alma Korndyke Colantha 2d, Holstein, owned by W. P. Turner, Massachusetts, made 54.85 pounds of milk and 2.31 lbs. of fat. Second went to an Ayrshire, Henderson's Betty, owned by the Weymouth Farms, Massachusetts, which made 42.06 pounds of milk, 2.04 pounds of fat.

In all the four dairy breeds the various breeders' associations made attractive offers of special premiums, the Holstein-Friesian Association giving the most, adding 15 per cent in all classes, while the fair management gave herdsmen's prizes of $50, $25, and $15 for winning the most money in the various classes. There were also prizes of $50, $25, and $15 for Massachusetts exhibitors' herds. Robert E. Haeger of Illinois was the Holstein judge. Exhibitors were C. W. Walker, Harold J. Shaw, and C. E. Waterman & Sons, Mains; Pequitside Stock Farm of New Jersey; W. P. Turner, Varnum P. Curtis, A. E. Blanchard & Son, Henry Bartlet, and James Haggart, all of Massachusetts.

Holsteins

Pequitside Korndyke Sadie Vale, owned by Pequitside Stock Farm, New Jersey, was senior and grand champion Holstein bull, and Isabelle Nubian Colantha, owned by Henry Bartlett, was senior and grand champion cow, with a daughter which was junior champion. A son of Colantha Mercedes Fayne, winner in the junior calf class, was champion bull under two years, while Boon De Kol Mendon, owned by Pequitside Stock Farm, was champion cow under two years.

Competition was especially keen in the aged cow class, while herd classes also brought out many entries.

Guernseys

William K. Hepburn of Massachusetts was the Guernsey judge. Hurley received something of a surprise when his Imp. Cherry's Memento of Iowa, one time highest priced bull, was placed third, with Langwater Croesus, owned by Schlehuber, first. This latter animal was champion and grand champion, but Hurley had much consolation in seeing Memento's Successor, winner in the junior calf class, placed as champion bull under two years. The Oaks Farm Miss Spotswood of A. D. F. was champion and grand champion cow, while Hurley's Princess Bopeep was champion cow under two years. She was winner in the six to twelve months heifer class. The Oaks Farm won in all herd classes; also with progeny of one bull, while Hurley won with progeny of one cow.

Ayrshires

Professor William M. Regan of New Jersey was the Ayrshire judge. This breed was represented by the Weymouth Farms, Gray Rock Farm, and George F. White of Massachusetts, while there were several other smaller exhibitors. The Ayrshires did not have large entries in some of the classes, but all the animals were of high standard.

Ryanogue Gynette Boy, owned by Weymouth Farms, was champion aged bull, but had to give away to Irene King of Weymouth, champion junior bull under two years, for the grand championship. Henderson's Betty, another Weymouth animal, was champion aged cow and grand champion, with the junior championship going to Cavalier's Sunflower, a heifer under 18 months, owned by White.

Jerseys

The Jersey classes would have been better with more entries, but there was the keenest kind of competition between the Prospect Farms of New Jersey and the Inderkill Farms of New York, only $3 being the difference in their prize money.

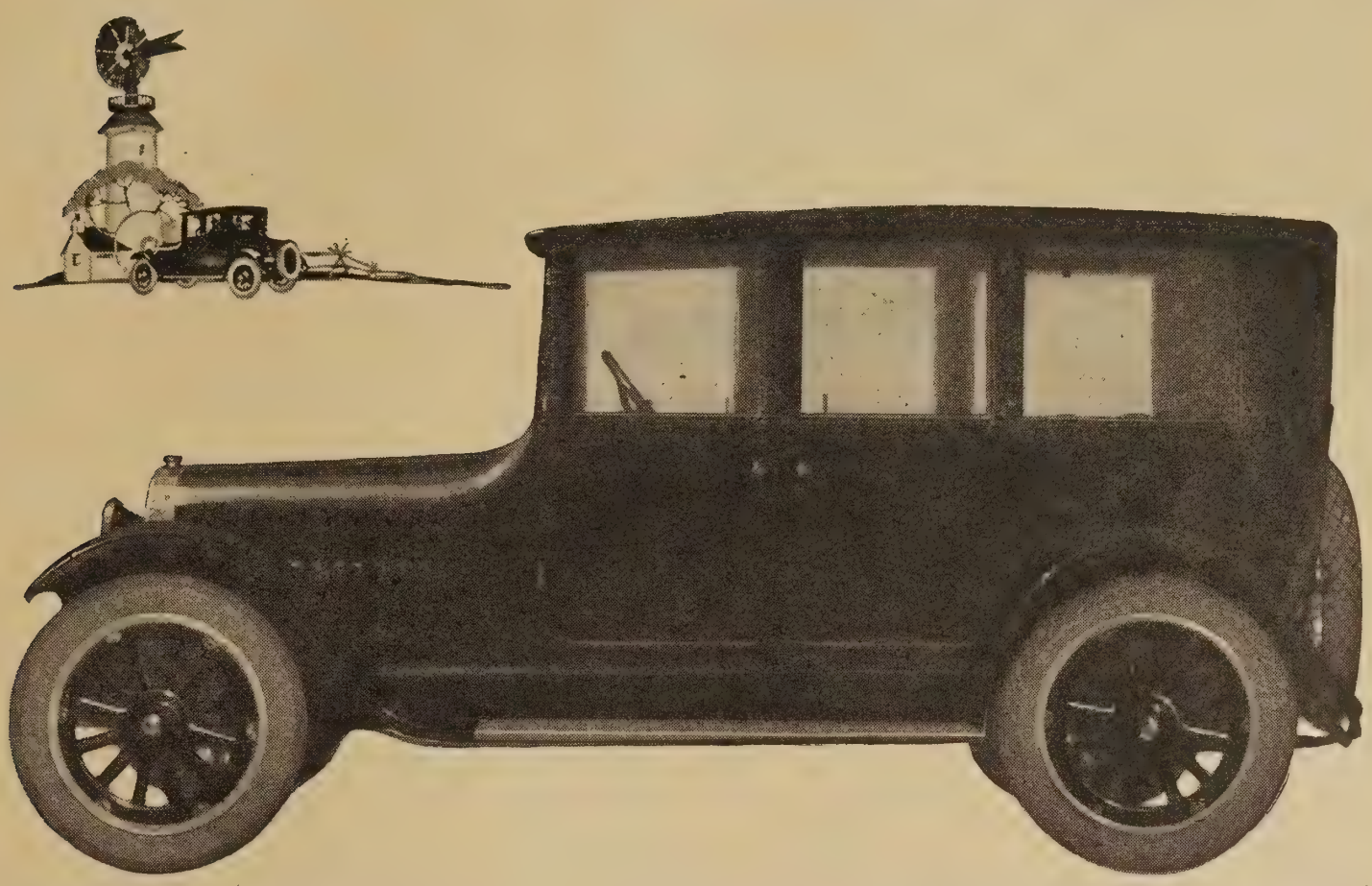
The judge, Fred Huyler of New Jersey, placed Gamboge Royal Majesty, the Inderkill aged bull, as champion and grand champion, the Prospect Farm's Prospect's Fairy Boy as junior champion bull; the Inderkill cow, Oxford Majesty Beauty 2d, as champion and grand champion cow, with the Prospect heifer, Fairy Glen's Cherita, as junior champion.

Everett M. Alger is superintendent of the dairy show, with Earl D. Upton and Herbert L. Tinkham other members of the committee.

New Jersey. E. M. ALGER.

Oakland

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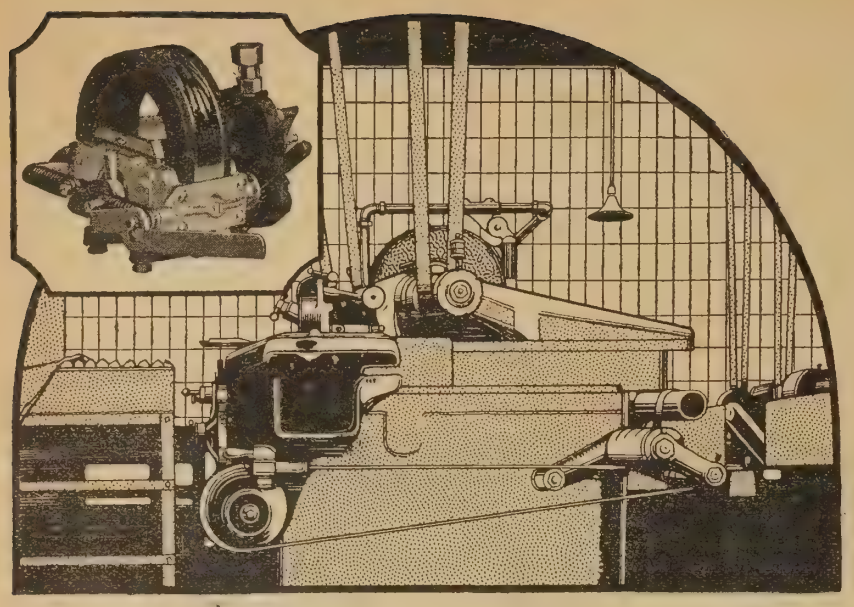
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An Ice Crop Is No Frost

(Continued from page 647)

tion of heat will be further minimized. If a farmer erects a house of this type from old lumber and timber from the wood lot, the cost is not more than from $75 to $100. If the lumber is bought and the labor hired, the cost may be double this amount. Under ordinary circumstances, however, the benefits from the use of ice for a single season more than pay for the labor of putting it up and the cost of the storage house.

If possible, the exterior of an ice house should be made to harmonize with the other farm buildings. The selection of its site should be made with consideration of its convenience when the product is stored or removed. While the building need have no floor, it is important that it rest on a layer of gravel, cinders, or other coarse material, to facilitate drainage. The last layer of ice can be removed from a well drained house almost as easily as the first. Where there is not good drainage, it is almost impossible to dig out the bottom tier.

Preparations for the Harvest

Those who put up ice every year know that it is a good thing to get the sawdust, shavings, or other insulating material out of the ice house early in the fall before freezing weather sets in. Any unused ice should also be taken out unless there is one or more tiers.

During the autumn days when weather does not permit work in the field, the ice tools can be "touched up". If the saws, bar, and plow are given an edge with a file in advance of the time when they are called into use, the harvest is made easier. When skid slides, loading and unloading platforms, and ice racks are used, they, too, must also be looked over and repaired.

It does not take an elaborate equipment to make ice. A couple of regular ice saws, or cross cut saws with the handles removed from one end, some tongs, picks, a breaking bar, and perhaps a plow constitute the usual equipment.

Cost When Bought of "Growers"

About two-thirds of the work of getting the ice supply is entailed in growing and cutting the crop. On this account, whenever commercial dealers are harvesting ice on a large scale, it will pay to buy the supply from them. In 1919, farmers of Dane County, Wisconsin, living near the chain of lakes paid one dollar a load for ice cut in twenty-two-inch bales. This brought the cost of the ice up to forty or fifty cents a ton before adding the expense of hauling and storing. In communities around Lake Winnebago, a lake which probably supplies more farmers than does any other, the price paid per ton to those who grew the crop ranged from twenty to sixty cents.

The vast majority of farmers who wish to enjoy the pleasure and advantage of having a winter crop for summer use must cultivate and harvest their own supply. The term cultivate is used advisedly in this respect, for it is a fact that ice must be grown. Under favorable weather conditions and with the right care a good crop can be made in the course of three or four days. On the other hand, where no attention is given to the field, zero weather extending over several days may fail to produce good ice. The secret of success lies in keeping the field free from snow from the moment the water surface is glazed over until cutting begins. Knowing the average thickness that ice usually freezes in a given locality, it is a simple matter to calculate the size of a field necessary to meet the storage requirements. Below is given a table of ice field areas required to make a fifty-ton crop:

Size of Field Required to Make Fifty Tons of Ice of Varying Thickness

Thickness of ice	Size of field
6 inches	3,500 sq. ft.
10 inches	1,855 sq. ft.
14 inches	1,500 sq. ft.
18 inches	1,117 sq. ft.
22 inches	995 sq. ft.

A field somewhat larger than the estimated tonnage space should be laid off at the outset. This should be kept clean because a blanket of snow even a few inches in depth prevents freezing. In the case of small fields, the snow can be shoveled away before the ice is thick enough to support the weight of horse scrapers. In any case, the banks of snow should be kept far enough away from the edge of the field to permit storage room for snow which may fall later.



LOADS OF ICE FROM LAKE WINGRA, WISCONSIN, ENROUTE TO FARMS IN THE VICINITY

Where the winter permits, it is best to let the ice grow to a thickness of eight to twelve inches before harvesting. Although a house can be filled twice as quickly with ice a foot and a half thick than with stuff not over six inches, there is little advantage in storing ice over eighteen inches deep. On the other hand, along the southern boundary of the natural ice zone, where seldom greater thickness than four to eight inches is attained, farmers should be ready to gather the crop as soon as it is reasonably thick. Even farther north, ice is at its best and can usually be harvested to greatest advantage when it is first frozen rather than if the cutting is delayed with the idea of letting it get thicker. While there are some seasons when ice may be made in the northern states in March, the real ice making month is January. At

this time the ice is new and clean and less apt to be damaged by dirt and cinders imbedded during seasons of thaw.

Efficient Cutting and Loading

Where several farmers group together, ice harvesting can be handled in a most efficient manner. Even when this cannot be done, it is a good plan for neighbors to unite in the purchase of the more expensive harvesting tools, such as scrapers and plows. Ever since ice has been harvested in the United States, bales twenty-two inches square or twenty-two by forty-four inches have been the sizes ordinarily cut. The field can be marked by pushing an ice plow forward along lines at right angles to each other. Ice plows are equipped with a gauge which marks the next line, twenty-two inches away. By running the plow both ways of the field, a checker board effect can be marked off.

After the desired number of cakes have been blocked out, they may be cut down by running the plow a sufficient number of times in each groove. Plows are made to cut from two to twelve inches deep. The deeper the ice is plowed, the more easily it can be sawed out and the cakes detached from each other. Care must be taken, however, not to plow so deeply that the water from the fissures will seep to the surface. If this occurs, it is practically impossible to keep the plow marks from freezing shut. By packing dry snow at intervals in the plow marks with a paddle or tamp, damage from flooding or back water when the field is opened up can be largely forestalled.

The best way to open a field is to chisel a hole through the ice to permit the use of saws. The saws should be made to follow the plow or other marks which outline the cakes. If the initial blocks are to be used, they should be cut on a bevel by slanting the saw slightly toward the centers of the cakes. This permits sinking them below the main body of the ice so that they may be floated up on edge for removal. After a channel has been opened up, large rafts of ice may be detached from the main body by simply sawing the ends of a series of blocks and then with the aid of a breaking bar tapped in the mark along the plowed side, the whole raft can be detached. Whenever ice is split with a bar, it should be remembered that the crystal water has a grain. Gentle blows along the line where the division is desired followed by a series of heavier strikes produce square breaks, rather than ragged edges and ruined cakes. The rafts may be floated to the loading place and the individual squares broken off as desired.

Only a very small percentage of farmers have buildings so located that the ice can be skidded directly into the house. In the majority of cases, the product must be hauled by wagon or sled to the place of storage. There are a number of methods of loading ice. The crudest consists of simply pulling the cakes out of the water with tongs. Farmers in the vicinity of Wonewoc, Wis., make use of a lever device to great advantage in loading. Their method consists of lifting the ice from the water onto sleds by means of a pair of tongs attached to a long beam which operates, like the old fashioned well bucket, from a pivotal post. One man to attach the tongs to the ice and another at the end of the lever to lift the cake out of the water and onto the sleigh make a team that can load several tons a day.

The more common method of loading, however, is to put one end of a skid or water box, built of planks and ironed off, into the water with the other end chained to a wooden horse or cake of ice on a similar height as the conveyance used in hauling. With this equipment, the cakes of ice can either be pushed with picks from the water or one or more of them may be pulled by means of tongs, or a so-called jack, onto the loading platform or directly into the wagon or sled. When a jack is used it is attached to a rope hooked to the whiffle tree of the horse or team employed in loading. Unloading at the house may be accomplished with a block and tackle, using skids and horse power.

Storing the Ice

There is absolutely no use in putting up ice on the farm if it takes as long to dig it out of storage as it would to go to town for it. Nothing contributes more to the ease with which the ice may be removed in the summer than the manner in which it is stored. My experience in removing thousands of tons of ice from various kinds of storage houses leads me to believe that much that has been advised regarding the manner of filling ice houses is what may be called "bunk". It is not uncommon to find men who advise that, in order that the ice keeps well, the spaces between the cakes be filled with crushed ice or snow as the ice is packed. While this practice might tend to keep the ice, it makes its removal from storage most difficult.

For all round efficiency, ice of less than eighteen inches should be stored in the house "on the cant". This means that the cakes should be stood up on their narrow sides. By placing them so that joints are broken and fitting them close to each other, you can make the filled house almost a solid block. Each successive tier of ice should be laid with the long way of the cakes at right angles to the previous one so that they will bind each other and exert no pressure on the walls of the house. As the layers of ice are placed, sawdust, shavings, chaff, or straw should be packed between the ice and the walls of the building. When the last tier is placed, a layer of insulating material should be spread over the top.

While it requires care and extra labor to put up ice on the cant, it pays well in the end. Ice stored in this way, particularly that put up in weather so cold that the cakes do not freeze together, can be removed when needed with comparative ease. Except for the space close to the door, where slush generally accumulates, all that is necessary to break out the bales in summer is to saw the ends and tap them gently at the rear and below with a sharpened crowbar. Each time the ice is removed from storage, the insulating material should be carefully replaced.

Ice retails in the city at from one-fourth to one cent a pound. Considering its far more general utility in the country, especially on the dairy farm, I have no hesitancy in saying that there is not a farmer north of the Ohio and Missouri rivers who can afford to be without a supply. The economic importance of ice on the farm is very great. It enables the farmer to market such products as milk, cream, butter, eggs, and fruit when most convenient, eliminates the necessity of the housewife serving butter with a spoon, and makes possible the preparation of many delicacies.





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ALFALFA
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Sir Pietertje Ormsby Mercedes 41st



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We Are Consigning One of His Best Sons to The Waukesha County Sale Nov. 22

Summit Bonny Pietertje Ormsby
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Sire—Sir Pietertje Ormsby Mercedes 41st. His first eight daughters average over 24 lbs. One has over 30 lbs. as a 4-year-old. Two others have made over 26 lbs. as 2-year-olds. He sired the Grand Champion Female at the 1920 Waterloo Dairy Congress. 41ST has more 1,000-lb. sisters than any other bull in the world.

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Two dams average, butter 32.22; milk 575.85.

Watch the succeeding issues for more information about the bull we are consigning.

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Alfalfa Hay
200 tons car lot, first class quality.
Write for prices.
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MARKETS

CHICAGO, Oct. 21—Butter—Creamery, extras, 54c; standards, 41@54c; dairy, firsts, 41@52c; seconds, 37@39c.
Eggs—Ordinary, 51@54c; firsts, 57½@58½c.
Cheese—Twins, 22¼c; Young Americas, 23c.

MILWAUKEE, Wis., Oct. 21—Butter—Creamery, tubs, 54c; prints, 55c extra firsts, 53c; firsts, 51@52c.
Eggs—Fresh firsts, recandled for city trade, 60@61c; current receipts, country candled, 55@56c; checks, 37@41c; dirties, 41@44c.
Cheese—Twins, 22⅜c; Daisies, 21½c; Longhorns, 22¼c; fancy Brick, 24c.

NEW YORK, Oct. 21—Cheese—Weak; state milk, common to specials, 10@20c.
Butter—Weak; receipts, 4,214 pkgs.; creamery extras, 58c; state dairy, tubs, 39@56; imitation creamery prints, nominal.
Eggs—Quiet; receipts, 9,387 cases; nearby white, fancy, $1.08@1.10; nearby mixed, fancy, 56@84c; fresh firsts, 63@72c.

PHILADELPHIA, Oct. 21—Butter—Lower; western creamery, extra, 59c; nearby prints, fancy, 67@70c.
Cheese—Lower; New York whole milk, fancy flat, 26¾@27c; do common to good, 23@26c; Longhorns, 26¾@27c; little Daisies, 26½@27c.
Eggs—Unchanged.

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

New York Butter Market

NEW YORK CITY, OCT. 19:—The bottom of the butter market seems to have dropped completely except on strictly fancy grades. Buyers of high quality butter have advanced their standards far above their June and July requirements with the result that much of the butter that under ordinary conditions would sell as extras has to be classed in the grade of firsts. Two or three weeks ago, many receivers remitted for butter which they held but which was not sold and today they are meeting with large losses as much of that butter will not meet the requirements of the trade and either is not moving at all or is being sold at prices several cents lower than the price received by the shipper. Many who purchased Danish and Argentine butter are now finding much of that butter a drug on the market. Several of the larger houses which during the winter and early spring months made enormous profits in dealing in Danish butter are now finding those profits largely wiped out.

Ordinarily during the time of a slump in the butter market there are one or more possibilities which may cause a change in general conditions. However, there is nothing at present in sight to cause the least feeling of optimism. It seems that there must necessarily be a marked drop in butter prices before there will be any free movement of butter again. There continues to be a liberal make of butter in this country for the season. Argentine, Denmark, and New Zealand are becoming greater shippers of butter, and accumulations of butter in stores are growing all the time. In addition, the consumption of butter seems to be at the low mark at present. A report that New Zealand is contracting to deliver butter to this this country, delivery at any time during the next six months, at prices considerably below 40c is having a very disquieting effect among butter receivers. If the present stocks are not moved before that low priced butter is received there certainly will be a panic in the butter market.

Until today, in spite of the bearish tendency of the market, there had been no change in quotations on extras and higher scoring butter since last week Monday. Today, because of a limited demand for those grades, the price declined ½c. However, the prices of medium to low grade butter have declined continuously, with the result that the range of prices is the widest ever known. Today, the difference in price between a low second and an extra is fully 20c. As the prewar difference was seldom greater than five cents, it can be readily seen that the condition today is anything but healthful. It is reported that there are occasional sales of seconds at prices even lower than the established quotations. General conditions could not be worse.

The condition of the New York market is practically on a par with that of the other large markets. However, reports from Boston state that the market for undergrades in that city is even worse than is being experienced here. Centralized butter is in no demand. Consignments arrive with shippers stating a minimum price but invariably the offered price is several cents lower than the asking price. Large losses must materialize during the next few weeks. Established quotations today are: Extras (92 score), 58½@59c; higher scoring than extras (93 score or higher), 59½@60c; firsts, (90—91 score), 52@57c; firsts (88—89 score), 46@50c; and seconds (83—87 score), 40@44c.

W. B. LIVERANCE.

National Milk Producers Meet

The National Milk Producers' Association met in Chicago during the Dairy Show. It was a very satisfactory meeting to the representatives of this organization, for the work of the milk producers' associations gave opportunity to discuss what had been done. At early meetings of the association theories occupied the platform, but this year it was held by experiences. In the past five years many new milk producers' associations have been formed and all have taken advanced positions in serving their members. The farmer's side of producing milk has been brought before the consumer and this has been a decided benefit to the dairy industry.

The annual meetings of the representatives of the National Milk Producers' Federation are gradually unfolding the problem of selling market milk and bringing understanding of what course to pursue in order to provide ways and means of caring for so-called surplus milk. We shall in the near future publish liberal extracts of the papers delivered at this meeting and some of the discussions that followed. We present in the following a brief extract of President Milo D. Campbell's address:

A bird's-eye view of the business we represent presents five millions of farmers with 23,000,000 of cows furnishing one-fifth of the food of the nation. These cows supply 90,000,000,000 lbs. of milk each year. Forty-four per cent is used as fresh milk, 36% for butter, 4½% for cheese, 5% for condensed milk, 4% for ice cream, and the balance is absorbed by hogs, calves, and waste.

Farmers' Wives

The government has told us that from a recent survey it finds that 25% of the farmers' wives are working in the fields in addition to house work; that 36% of farm women are helping to milk the cows; that 96% of them do their own washing and sewing and that the average farm woman arises at five o'clock in the morning and works 11.3 hours per day through the year, and 13.1 hours per day during the summer months.

Bears and Bulls

Though meeting today in this great Bear Garden City of America, we need have no fears for personal safety, for the bears are all out on the farms at this season of the year, and the bulls are never loosed until the farmers' crops and other products are well in hand by the speculators.

Supply and Demand

The law of supply and demand is like the law of gravitation, it is always working, though at times obstructed in its operation, as it is today. The farmer is not unwilling to be governed by this law. Condensed milk in its various forms has mostly created one of the chief markets for the farmers' surplus milk. Within the last four years it has grown from less than two billion pounds of whole milk to more than four billion pounds.

Condensed Milk Prices

A glance at market quotations covering the last six months shows that from April 7th to October 6th, the prices at wholesale of condensed products have been as follows:

	April 7, 1920 per case	Oct. 6, 1920 per case
Eagle, Condensed	$11.00	$12,85
Leader, Condensed	8.00	10.65
Carnation, Tall, unsweetened	5.50	7.50
Carnation, Baby, unsweetened	5.00	6.85
Pet, Tall, unsweetened	5.50	6.95
Pet, Baby, unsweetened	3.75	4.60

Notwithstanding the surplus the condensers have on hand, the price they make to the public does not compare with the price they pay for the farmers' milk.

Seemingly, with perfect understanding among themselves, they hunt out the same old goat that has always borne the food losses, and announce that for the month of October the farmer must accept from fifty cents to a dollar per hundred less for milk than he received in September.

The average milk producer cannot change from selling whole milk to a condensery to a creamery over night. There may be no creamery near, no wagon gathering cream passing his door, he has no hogs or calves to consume his skimmilk, no separator and equipment for the buttermaking branch of the business, and like reasons prevent a change to cheesemaking.

Right now, for the month of October calling grain $55 a ton, hay $30, silage $7, roughage $7, and labor 40c per hour, it costs the farmer without a penny profit, $3.26 for every hundred pounds of milk produced. This estimate from experiments unquestioned is based upon cows averaging more than 6,000 pounds of milk per cow annually, a production at least 2,000 pounds above the average in the United States.

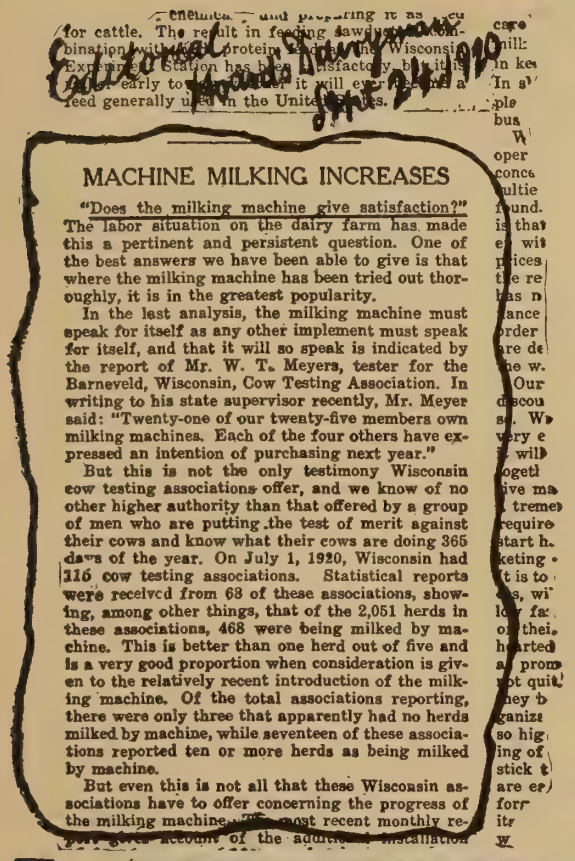
Foodstuffs imported in August were $210,000,000 as against $84,000,000 in August last year.

For the first eight months of the year foodstuffs imported were $1,366,000,000 as against $790,000,000 in the same period last year. Our imports of foodstuffs exceeded our exports.

TRADE MARK

BURRELL B-L-K MILKER

— does give satisfaction



Editorial Hoard's Dairyman Oct 24 1919

for cattle. The result in feeding sawdust in combination with ... protein ... the Wisconsin Experiment Station has been satisfactory, but it is ... early to say whether it will ever be used as a feed generally ... in the United States.

MACHINE MILKING INCREASES

"Does the milking machine give satisfaction?" The labor situation on the dairy farm has made this a pertinent and persistent question. One of the best answers we have been able to give is that where the milking machine has been tried out thoroughly, it is in the greatest popularity.

In the last analysis, the milking machine must speak for itself as any other implement must speak for itself, and that it will so speak is indicated by the report of Mr. W. T. Meyers, tester for the Barneveld, Wisconsin, Cow Testing Association. In writing to his state supervisor recently, Mr. Meyer said: "Twenty-one of our twenty-five members own milking machines. Each of the four others have expressed an intention of purchasing next year."

But this is not the only testimony Wisconsin cow testing associations offer, and we know of no other higher authority than that offered by a group of men who are putting the test of merit against their cows and know what their cows are doing 365 days of the year. On July 1, 1920, Wisconsin had 116 cow testing associations. Statistical reports were received from 68 of these associations, showing, among other things, that of the 2,051 herds in these associations, 468 were being milked by machine. This is better than one herd out of five and is a very good proportion when consideration is given to the relatively recent introduction of the milking machine. Of the total associations reporting, there were only three that apparently had no herds milked by machine, while seventeen of these associations reported ten or more herds as being milked by machine.

But even this is not all that these Wisconsin associations have to offer concerning the progress of the milking machine. The most recent monthly re... gives account of the ... installation

THE Burrell Milker is a positive answer to the question, "Does the milking machine give satisfaction?" asked in the Hoard's Dairyman Editorial of September 24th, which is reproduced on the left. To the evidence given in this editorial can be added the endorsement of thousands of users of Burrell Milkers.

The Burrell Milker *does* give satisfaction.

The Burrell Positive Relief Pulsator alternately creates and relieves the suction in the tubes and teat cups, and draws the milk in the most natural way.

The Burrell Universal Teat Cup supports the teat by an air cushion, as a result of which almost every size of teat can be milked with the regular size teat cup.

The Burrell Automatic Controller is an exclusive feature of the Burrell Milker and has helped to earn for the Burrell the reputation that "*It Milks the Cows Clean.*" This feature alone is sufficient reason for choosing the Burrell Milker.

The Burrell Moisture Trap is essential to the production of clean milk with low bacterial count. It prevents the condensed vapors from running back and contaminating the milk in the pail.

Write today for booklet and complete information about the Burrell Milker. Tell us how many cows you have and why you are not already milking by machine. Use the coupon below.

D. H. BURRELL & CO. INC.

Little Falls **New York**



"It Milks the Cows Clean"

(Clip Coupon Here)

D. H. BURRELL & CO. INC., LITTLE FALLS, N. Y.

Gentlemen: I have_____ (number) milking cows. I am not now milking by machine because_____

I want you to send me your booklet and complete information about the Burrell Milker and tell me why "*It Milks the Cows Clean*".

10

Name _____ P. O. _____ State_____

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Broadening Out

[Continued]

"Well, I guess we're in for it," said Jimmy in disgust. "Here we are ten miles from nowhere and a storm about to break upon us that will probably flood us out of this c-o-o-p. I've been watching those clouds in the Northwest for the last half hour, and I'll bet the South all the niggers they've got there's some rain and wind in those clouds. Yes, and the thunder is getting closer."

"Thought you'd been watching something else besides the road," Bob commented, "at least that's the way it felt to your passenger. We've got plenty of time to make Huntsville before it rains," he added confidently.

"You don't know what you're talking about this time, Bob. You're only guessing, and I'll put up my guess that it's going to rain in less than half an hour from now against yours that it ain't; yes, and I'll cover it with the cost of the hotel accommodations for tonight, that is if we need any other rooms for the night other than this trap we're in. Remember what that big stiff said who put this trip into our heads, about how it rained in the South—just poured buckets, that's all."

"Are you through, old calamity howler?" inquired Bob, calmly. Just then there was a blinding flash of lightning, followed instantly by a clap of thunder.

"There, what'd I tell you! Yes, and it's starting to rain, besides," Jimmy broke in.

"Slack up a little, Jim," said Bob a little nervously. "Listen to that roar. There's wind coming. Better try to get the car close to the side of one of these cuts in the road. 'Twill help to keep us from blowing over. We can't go on until after the worst of it has passed and, besides, the road isn't any too good, either. Come on, stop her, Jim," he urged.

"You got us into this mess," replied Jimmy, hotly, "and it's up to me to see it through," he added, bending over the wheel, intent only on what he could see ahead. "And don't call this a road, either. There must be another Zion City around here somewhere. If we don't break a spring before we're through this, I'll be willing to forgive Hank Ford for all the other faults of his Lizzies. If you would have just listened to what they told us in Fayetteville about this road we wouldn't be here in this pickle," he again repeated. "It's all right to be positive about a thing, but when it grows into bullheadedness then I say it's time to call a halt," he concluded.

"That's what I'm trying to do, Jim, get you to halt," said Bob with all the good nature he could muster in view of what really appeared to be a bad situation. "Who's bullheaded right now?" he went on, as Jimmy turned on the juice to the already overworked Lizzie. Splash, splash, and bumpty bump, as she bounced from hole to hole through the torrents of rain now falling.

Jimmy brought her to a sudden stop, saying with a little more composure as he did so: "I guess we've gone as far as we can for awhile." And so the two sat in apparent comfort in the shelter of the faithful Lizzie.

"Well, we're quite some distance from home, old man," said Bob, trying to encourage Jimmy out of his unpleasant thoughts. "Wonder what the folks are all doing tonight."

"Same's they've been doing for the last twenty years, I suppose," grunted Jimmy. "Tonight's no different than any other night with them, so why ask such a foolish question?"

"We're getting into the heart of the South now," continued Bob.

"Well, if this is the heart, I don't want to see any of the rest of it," growled Jimmy in answer.

"Oh, that's not fair to these people, Jim. This is home to them."

"I guess they needn't worry about any one else stealing it from them," he answered. "I know I wouldn't take it as a gift if I had to live down here."

"Don't draw your conclusions, old boy, until we've seen more of it," cautioned Bob. "The scenery we passed through today was certainly beautiful. I saw more than one old mountain home in Tennessee that I'd like to own for a place to come to for a vacation."



BOB AND JIMMY FOUND THE BOYS IN THE SOUTH STUDYING COTTON AS THEY HAD STUDIED CORN IN THE COLLEGE CLASSES LAST YEAR

"You can't make a living on scenery," said Jimmy, cutting in on the conversation.

"Well, these people do," Bob answered, "and they seem to be mighty happy, too. There wasn't a fellow we met today, but what seemed happy and contented with what he was doing. Look how they all greeted us. I like to see people like that; it kind a makes one feel at home with them."

"People! Where did you see them today?" Jimmy again grunted. "For all I saw, we could've kept a machine gun hot all day without hitting one."

"There's none so blind as those who won't see," Bob commented, at the same time suggesting that they had better be moving on now that the storm had passed.

They reached Huntsville, Alabama, by ten-thirty and, after setting down the day's expenses, they tumbled into the white, clean sheets to forget the hard ride and to straighten out the kinks it had left in their bodies.

"We ought to reach Guntersville by noon," said Bob, as he studied the map next morning before starting.

"Not if the roads are like those we came over last night," commented Jimmy pessimistically.

"Well, let's hope that they will improve from now on," said Bob, as they sailed out of town on the stretch of concrete before them. "I'll drive all day today, Jim," he said. "It will give you an opportunity to either confirm your bad impression of the South or to think better of it."

"How could I think better of it?" he smiled back, pointing to a rack of bones with a cow hide stretched over them, standing in the doorway of a nigger cabin. "Would think that those pickaninnies would be afraid to stand near her. She looks hungry enough to eat most anything without regard for the color of it. Talk about a scrub mongrel, I'll bet she's got the blood of all cowdom running through her veins. Thought ours were bad enough before we got into full bloods, but she's got anything skinned of her kind that I've ever seen. Wouldn't she make a grand souvenir for some of our big northern breeders! Let's buy her and present her to the cow college as the missing link in the cow kingdom. These niggers are surely a funny lot. I don't see how they can be contented to live in such cussed ignorance."

"Oh, ho," came from Bob. "Here's the river and by the looks of things ahead, the road runs right along it for some distance. She's up and tearing, too. Look how high she is. Must have been raining here for some time. Guess the best of the soil down here in this country is carried away in the streams, judging from the color. Isn't it yellow, though, with sediment?" he emphasized. "This must be the Tennessee. Wonder where we cross her."

"This doesn't look so bad for a farming country," Jimmy volunteered, as he scanned the large expanses of cotton that skirted the river on either side. "But I'm getting sick of seeing cotton, cotton, and then more cotton."

"Yes, but you'd be a lot sicker if these people didn't raise the cotton of the country," answered Bob. "They're doing just what we in the North are doing—raising that which they are best fitted for."

Just then they were hailed by a voice in a wagon coming toward them. "Turn back, boys, you can't get across the old Tennessee this morning. She's on a tear again and the ferry isn't running because they can't land yeh; 'sbeen raining here for a month and that old river is rising at the rate of a foot every hour. Better go back to Huntsville and ask the Chamber of Commerce to route you out. Yeh won't find the roads any too good no matter which ones yeh take," he drawled.

"Well, this is another nice stunt," remarked Jimmy, his voice filled with disgust. "Two hours lost right here, and no telling when we will be able to get across. Why in the name of civilized people don't they put a bridge across the river somewhere. The idea of having to depend upon a ferry, and a one-horse affair at that, to get across that river."

"No use to shed tears about things that have to be," said Bob as he headed the car the other way.

They had ridden in silence for about half an hour, when Jimmy suddenly exclaimed: "Look, Bob, there's a kind of ferry over there with an auto and a horse and rig on it. They seem to be crossing all right in spite of the tearing of the old Tennessee. Hadn't we better inquire into this a little before going any further? It might save us miles and again it might be the means of a lot of trouble. I'm for finding out at least, aren't you, Bob?"

"Sure, we'll inquire," he answered, but I haven't much faith it is anything that will help us out of this trouble. Of course it's possible that it will be the very thing for us to do. Yes, it must be doing a regular business here," as he scanned the road leading down to the water's edge. "We'll stop and find out about it, anyway."

The old tug returned, carrying another auto with its passengers. "I'll just ask that fellow how the roads are across on that side," said Jimmy, "and if we can get to Guntersville by that way." The car had hardly landed from the tug, when Jimmy shouted to its driver: "How are the roads across that side? Can we get to Guntersville by going across here?" he added, all in the same breath.

"Well, now don't get too excited, young man. One question at a time, then maybe I kin answer yeh." So Jimmy repeated his first question.

"They're tol'ably rough and muddy, boy," he answered, "but I see you are driving a Henry, so I guess you kin make her if I did. But be sure to put on your chains; you'll need them."

"But is it possible for us to get to Guntersville by going across here?" Jimmy further inquired.

"Yep, I'd say so if you don't lose your nerve going up the one bad mountain you'll have to climb," he drawled, while a careless smile spread across his face. "It's tol'ably steep, boy, and she's surfaced with a layer of loose nigger heads 'bout the size of this," directing attention to his fists. "They'll do some rolling and scratching and cutting up of your tires and all them things that make you tourists swear and lose your religion, but, 'side from that, I think you'll make her. Yes, she's a bad one to even ask a Lizzie to climb. Good luck to you, boys," he waved as he steamed away, his Henry fairly puffing under the loads of red clay that her wheels were carrying.

Jimmy was game for taking a chance, saying as the car rolled onto the old tug: "It can't be much worse than some of the roads we have already been over." The boys proceeded to put on the chains whilst they were crossing, but found that the only way they could make them fit was to use wire to lengthen them. They had never been used before and evidently were a trifle too short. But, as they

left the ferry, they considered they had taken all the precaution that chains would afford. They soon found themselves axle deep in mud, but they reached the foot of the mountain without any accidents.

"Here we are," sighed Bob, as though he expected trouble from now on. He didn't have to wait long, either, for just ahead and in one of the narrowest parts of the road, they came upon a nigger with a balky team of mules hitched to a small load of stove wood. There they were, exactly crosswise in the road, refusing to budge under the hard lashes and cuss words of the driver.

"Can't blame 'em," whispered Jimmy. "They're plumb disgusted with life down here. They hain't got any strength to pull with."

"Haven't, not hain't," Bob corrected.

"Ah, cut that stuff," Jimmy blurted. "I'll talk the way I want to when I'm not in Skinner's English class and, besides, you're not getting on very fast, either." After a wait of about fifteen minutes, a mountaineer, driving a fine, healthy looking pair of hard tails, was compelled to stop on the opposite side of the balky team.

After sizing up the situation he exclaimed: "Hey, Jack, how much longer are you going to keep the road? Try coaxing them with a litle cawn," he added, as he spat a mouthful of tobacco juice upon the ground.

"Say, mistah," returned the nigger, "dem mules hain't seed no cawn for so long, they wouldn't know what 'tis," he grinned, while the perspiration streamed down his shiny black face.

"Guess you needn't tell us that," laughed the other, addressing Jimmy and Bob. "Well, you've got to get out of here, even if I have to pull you off the road myself," as he jumped from the wagon and started to unhitch his team. In less than five minutes he had pulled the balky team, wagon, and nigger and all out of the way and somewhat into the ditch.

"Wonder how that nig liked that?" commented Jimmy. "I thought that maybe he'd show some scrap."

"Well, I guess not," laughed Bob. "They know their place down here. The white people are good to them just as long as they stay where they belong; at least that's what I've been told and what we just saw bears that out pretty well, too, doesn't it? We kind a spoil them up in the North, more because we do not understand them than for any other reason, I suppose. But, maybe, if we had gone through what the South has with them, we'd know better."

"I don't call this half bad for a mountain road," said Jimmy as the car bounced from one rock to another. "It at least has a solid bottom, but it isn't any rougher than that Huntsville road, that's a cinch." He had no sooner finished with this last statement, than he spied what the mountaineer had described as the steep slope covered with nigger heads, in fact they had already commenced to ascend it.

"Looks pretty bad, Jim," said Bob, "and we've been running the motor in low so much this morning that she's mighty hot and there isn't the power we need to get up, I'm afraid. But we'll try her just the same, now that we're here. They crept about half way up, when it seemed to them that the motor was making its last death struggle. "I believe we're going to make her," said Bob.

"No, we won't," answered Jimmy. "She may make another yard, but that's all," and sure enough she stopped dead still about six feet farther on. "Too much for her, Bob, you might just as well give in right now. Everything's red hot."

"Oh, she'll make her all right," responded Bob, with his usual display of confidence. "We just didn't get a good enough start, that's all."

"Well, I'm not going to stay in the car," said Jimmy as he jumped to the ground and perched himself on a big boulder along side of the road. "Now you can do as you please," he added. "It's your car and you can abuse her that way if you want to."

Bob, himself, must have had his doubts, for any one with common sense and a little experience in driving might have known that it would be but a bare possibility that a car could ever get to the top on such a road. But he had lost his patience, partly because he found himself in this predicament and partly because Jimmy irritated him when he acted like this. "Come on, you big, red-headed stiff," he fairly shouted, "get in here. I'm going to make her," as he backed the car down toward the foot of the mountain.

But Jimmy was obstinate with disgust. "Big fool," he muttered to himself. "Half of his blamed confidence is nothing but ignorance. He's getting less practical every day," and he mopped his brow with the sleeve of his khaki shirt. "He won't get as far this time as he did the first," as he watched the car slowly creeping up again. "He hain't got the power he had then, and he knows it, too. But just bullheaded, that's all!"

As he had predicted, the car stopped within two rods of where he sat. "Now are you convinced?" he called as Bob began to turn off the radiator cap. "See what you've done," he yelled in anger, as the water spouted fountain-like from the radiator.

"Doesn't make any difference," Bob smiled back," at least to you, seeing that you have refused to ride further. And, besides, the only way we can get up to the top now is to wait for a team to come along and pull us up."

"Guess you'll probably remain right where you are for some time, then," Jimmy sulked. "I don't think any two teams of the mules I've seen down here so far could draw this car to the top."

"Doesn't make very much difference what you think," snapped Bob. "This car's going to the top of that mountain and before long, too, because I hear a wagon rattling along on these rocks."

Yes, he was right. Down the steepest of the slope came a pair of mules, not because they wanted to but because the wagon to which they were hitched pushed them along. Their driver was a typical mountaineer, tall, raw-boned, good hearted, and, from the looks of the outfit he drove, as poor as Job's turkey.

"Got her pretty well blocked, boys. How be I going to get by?"

"Not until you pull us out of the way," flashed Jimmy, now beginning to see the humor in the situation.

"Well, yeh hain't the first ones that these old babes of mine have pulled to the top," he drawled, as he rested a foot on the rump of one, preparatory to jumping to the ground. "Have a little moonshine, boys?" he asked, as he drew a flask from his hip. " 'Twill help a tol'able bit, I reckon," as he raised it to his lips.

Bob refused, as the flask was handed to him, but, as you may think, Jimmy did not decline, saying as he accepted it, "I always have wondered what the stuff was like and now is my opportunity to taste it."

"Don't take too much, Red," cautioned Bob, "so that you will be a nuisance on my hands for the rest of the day."

"That's right, Red," added the mountaineer familiarly. "There's kick enough in one swallah for yeh and, besides, that has got to last me until I get home again."

Jimmy grinned one of his roguish grins as he raised the flash, saying as he did so, "Bob, you ought to be an Irishman like the boss, here, and myself."

"Heah, yeh young rascal, don't drain the flash," said the owner, as the gurgling sound continued longer than he had expected.

"Pretty good stuff, if I'm any judge," replied Jimmy, the grin on his face broadening. "Would like dad to get a taste of that. He'd be happy for a week. Well, now, the next thing is to get this box to the top of this hill," he exclaimed with enthusiasm, at the same time catching the mules by the head and swinging them around to the front of the car.

"Reg'lar old hawd tail driver," laughed the boss, as he poked Bob in the ribs.

"Now, you get in, Bob, and start the motor. It will be a big lift for these old skins," Jimmy commanded. Up they started, leaving the astonished owner standing in his tracks, and they didn't stop 'til they had reached the top.

As Jimmy returned with the team, the boss remarked: "Yeh'd bettah stay in the South, boy. Yeh seem to fit exactly with them hawd tails."

"There isn't enough money in the South to keep me here, mister," he replied.

"Mebbe there's moonshine 'nough then," slyly chuckled the old man, to which Jimmy gave but a sheepish look.

"What do we owe you for your trouble, sir?" he inquired.

"Wall, I usu'lly git five bucks from people like yeh," he replied, "specially when they hail from the North, and Yanks at that," he added. "But yeh both seem to be good fellahs, so I'll only ask $2.00."

"Very good," commented Jimmy, as he drew forth the two dollars, "and we're mighty thankful for what you've done. And I want to thank you, also, for the little drink; not that I am fond of liquor at all. But I just wanted to be a good fellow with you, and to be a Roman when I am with them."

"Yere a brick, sonny, and I only wish yeh was my boy. Good-bye and God bless yeh," as he slapped Jimmy on the back and waved a farewell.

"Mighty good old scout," said Jimmy to Bob, as he reached the top all out of breath.

"He was that," returned Bob, "and we can consider ourselves lucky that we got away so soon. Are you sure you're sober, old top?"

And before he could add another word, Jimmy flashed back as he jumped into the driver's place: "Watch me drive this Fliv and then decide for yourself."

[To be continued]

Junior Letter

Hoard's Dairyman Juniors:—Well, I am still alive and well. I suppose you thought I had left for parts unknown because I did not write for such a long time. We have quite a few apples this season. We also raised 490 bus. of oats and 65 bus. of wheat. We have a large crop of hay on account of lot of new meadow. I planted a patch of Golden Bantam corn but we had cold nights almost all summer and the corn did not do so well, neither did the rest of the garden I planted, although it was pretty fair. I planted a hot-bed this spring but it did not grow enough to amount to anything. I then planted some squash in the same bed and they grew first rate.

I bought 5 pairs of pigeons, 1 pair pure white homers and 4 pairs of the blue homers. Two pair hatched once and that was all. I presume that will be the last until spring.

Everything is getting dry. A little more rain is needed for the pastures. I deliver milk to 125 houses daily. I leave home at 6 o'clock a. m. and get home about 2:30 p. m. I then get the cows, sometimes, and milk them. We have the milking machine going so it is not much to milk the cows. I then feed the horses and sleep a while and start over again. We get up about 4:45 a. m. Early enough, isn't it?

We got a new side delivery rake. It works splendidly on level land. The next thing will have to be a caterpillar tractor, then we will be jake.

Well, I will close for the present; will write again in the future.

Michigan. Ardell Zurcher.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

For Sale—30 choice, high grade, Holstein cows, springing and fresh. Also 6 well marked heifer calves, $30.00 each, express paid to your station. CRAWFORD STOCK FARM, Mukwonago, Wis. 13*

For Sale—Carload choice bred and heavy springing Holstein heifers, mostly sired by 31-pound bull. CHARLIE DEARTH, Mineral Point, Wis. 13-4

Seven young registered Holstein cows, 2 just fresh, 5 due soon. Also 9 yearlings. All choice individuals. Herd on accredited list. Liberty Bonds taken. O. E. MULLEN, Watertown, Wisconsin. 13-3

Don't pay for my calves until you see them. Beautifully marked, high grade Holstein heifer calves, $25. Registered bull calves, $40. I ship C. O. D. and guarantee safe delivery and satisfaction. J. M. McFARLAND, Watertown, Wisconsin. 14-2

Registered Holstein heifers for sale. Priced for quick sale. E. A. FOTH, Sparta, Wisconsin. 14-3

100 head high grade Holstein cows and heifers to freshen in November and December. Must sell at once. Prices right. ADAM DUERST, Monticello, Wisconsin.

Closing out desirable herd registered Holstein cows, heifers and bulls. February bull forty-pound sire, 29.85-pound dam, official. Clean herd. BUENA VISTA PARK FARM, Glenwood City, Wisconsin. 15-2

For Sale—Holstein bull, 3½ years, Boon Korndyke King. Very white. JOHN A. MULDOON, 1201 W. Lake St., Chicago, Illinois.

For Sale—Ten registered Holstein heifers to freshen soon. F. F. MEYER, Vickery, Ohio. 15-2

We need the room and are pricing to move quickly, real Holstein bulls from 6 weeks old up to serviceable age. Best of individuality and breeding. All are from heavy producing dams and sired by one of the best bred bulls in the state. BEECHTON STOCK FARM, Cataract, Ind. 15-3

Tried Holstein Sire—Sir Korndyke Kekke De Kol. Has more World's Record blood than any other sire living today. Sell, avoid inbreeding. Price only $600.00. G. G. WHITE, Elkader, Iowa. 15-2

Good, registered Holstein cows and serviceable bulls for sale. Information on request. G. E. VOLLAND, Bridgman, Berrien County, Mich. 15-spl

High grade Holstein heifer calves from high producing dams, $25.00 each, satisfaction guaranteed, C. O. D. WHITE HILL FARM, Cambridge, Wis. 15-6

For Sale—20 registered Holstein females, my own breeding; daughters of Justice Lyons 180745. Forward Pontiac Korndyke 247425. Cows bred to latter. Sound and healthy. W. J. MARTIN, Darlington, Wisconsin.

Holstein bulls—Ready for service. 31-lb. sire, tested dams. MAX WITTE, Route 5, Watertown, Wis. 15-2

Holsteins for sale—Five registered pure-bred springing cows, $250 each. Seventeen choice high grade springing cows $150 each; all bred to registered bull whose sire was grand champion, and whose dam produced 126 pounds milk per day; bull $400. HELM & HELM, Metropolis, Illinois.

For Sale—Registered cows and calves, either sex. Also high grade calves and cows. Tuberculin tested. SUCCESS STOCK FARM, W. A. Strauss, Watertown, Wisconsin. 15-2

High grade Guernsey cows, heifers all ages, and registered bulls; also five young, grade heifer calves at $30.00 each delivered. Write me your wants. OAKLAND GUERNSEY FARM, Mukwonago, Wis. 13*

STOCK FOR SALE

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

Several very nice May Rose Guernsey bull calves from high producing ancestry. Prices reasonable. SHORELAND FARM, Hartland, Wisconsin. 14-3

For Sale—Entire herd of Guernseys. Three registered females, one bull. Seven high grade cows, eight heifers and calves. WALTER E. SATTERLEE, Irving, Illinois. 14-3

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

For Sale—A few choice Guernsey bulls of serviceable age. Excellent breeding. Prices very reasonable. TARBELL FARMS, Smithville Flats, N. Y. 14-4

For Sale—4 serviceable grandsons of Itchen May King, Grand Champion 1920 National Dairy Show. From A. R. dams with records up to 546 lbs. fat. Prices, $150 to $500. Federal Accredited herd. ROY BURTON, Eagle, Wisconsin. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-8

Serviceable grandsons of Langwater Rosie. A. R. sire and dams. C. M. McCONNELL, West Salem, Ohio. 15-spl.

For Sale—Entire herd registered Guernseys. All bred to, or sired by son of May Rose King 2nd. Splendid individual. GEO. NICHOLS, Estherville, Iowa.

Registered Guernsey bulls—Sired by May Rose Secret of Pencoyd 27844. Tested and untested dams. Priced for quick sale. Herd tuberculin tested. ROSE DALE FARM, Box 254a, Chaska, Minn. 15-2

Registered Guernsey bulls. All ages. FAIRVIEW FARM, Brodhead, Green County, Wisconsin. 15-4

For Sale—Registered Guernsey bull, six months. Glenwood, Yeksa breeding. GEO. EINFELDT, Greenwood, Wisconsin. 15-2

For Sale—Registered Guernsey bull 8 months old. Extra large. May Rose breeding. Dam on official test. C. A. BALCOM, Ohio, Illinois.

Thirty registered Guernsey bulls on hand. Must sell at once to make room. HARRY GRISWOLD, West Salem, Wisconsin. 15-4

For Sale—One serviceable Guernsey bull, two younger. Federal Accredited herd. ADOLPH H. THOMPSON, Black River Falls, Wisconsin.

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. Will take note for 90 days. HOMER RUNDELL, Livingston, Wis. 15*

For Sale—Pure-bred Jersey bull. Grandson of Hood Farm Torono, 71 daughters in Register of Merit. Lass 66 of Hood Farm with 1,047 pounds butter. Age 3 years. Fine individual. Write P. S. McLURG, Phillips, Wis. 14-2

For Sale—5 registered Jersey cows. 2 just fresh, one to be fresh in November and 2 in January. First check for $850.00 gets them. J. A. BOYER, Conrath, Wisconsin.

For Sale—Fine, large Jersey bull, born December 1st, 1919. For pedigree and further particulars write J. C. BIGLER, Route 5, Stevens Point, Wis. 15-3

For Sale—My entire herd of grade Jerseys—35 head cows, heifers and calves. J. A. HUFF, Lancaster, Wisconsin. 15-2

Eight head good grade Jersey cows, all bred, $600.00. Can buy some cheap cows to make carload if desired. WEST SHORE FARM, Douglas, Mich. 15-2

For Sale—14 head pure-bred Canadian Ayrshire females, two to six years old, mostly springers; good individuals, tuberculin tested. Also one two-year-old bull. Price for quick sale, $3,500. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-4

STOCK WANTED

Wanted—Two May Rose heifers and young May Rose bull. MARION H. SMITH, La Harpe, Illinois.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

For Sale—Pure-bred Shropshire ram lambs and yearlings. F. S. HALLADAY, Green Bay, Wis. 13*

For Sale—Two registered yearling Hampshire rams. WALTER VAUGHN, Marion, Iowa. 15-2

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKOA KENNELS, Herrick, Illinois. 12-4

SWINE

Duroc Jerseys—Both sex, all ages, registered and unregistered. ROUND TOP FARMS, Damariscotta, Maine. 13-4

Hampshires. Growthy, good type boars from State Fair winners. Also females. EDGAR BUZZELL, Delavan, Wisconsin. 14-4

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS, De Graff, Ohio. 14-8

Berkshire Pigs—Eight weeks old and ready for immediate shipment, thrifty, vigorous and well bred, priced very reasonable. Registered. LOUIS FAWCETT, Stanley, Wisconsin.

Registered Berkshires. April boars and gilts. Choicely bred, farmers' prices. QUINEILO FARMS, 297 East Water, Milwaukee. 15-2

For Sale—Big type O. I. C. pigs, $12.00 with pedigree. One registered boar ready for service. DR. SHEDD, Harrisville, N. Y.

Pure-bred, big type, Chester White boars. Excellent breeding. LLOYD NESBIT, Barron, Wis. 15-3

4 three-month-old Poland China gilts for sale, splendid individuals. Each $12. J. NIEDERFELD, Babcock, Wisconsin.

RABBITS AND GUINEA PIGS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

MACHINERY

For Sale—Double Unit Empire Milker. Complete in good condition. ROY NYCUM, Mt. Carroll, Ill.

For Sale—Two unit Sharples Milker; 160 Ampere Delco lighting plant. Both as good as new. D. OFFRINGA, Ames, Iowa. 14-2

For Sale—James' pig pen outfit, 5 stalls, complete with automatic gates opening all into one with adjustable troughs. Bargain. JOHN A. MULDOON, 1201 W. Lake St., Chicago, Ill.

Overstocked. I offer for quick scale subject to stock on hand. Perfection and Empire double unit milkers. All in original packages, perfect condition, at attractive discounts. FELIX JULIUS, Stockton, Illinois.

For Sale—Eight H. P. boiler, shafting and hangers. 24 bottle Facile tester, small for bottle filler. W. A. DOPKE, North Milwaukee, Wisconsin.

Hinman Milker—3 units, extra pail and teat cups, for 20 cows. Good condition. $125.00. SETH HENSLEY, New Florence, Mo.

Holm automatic sharpener. A device that will fit on Globe, Smalley or Plymouth feed cutters and when operated correctly is guaranteed to keep knives in a fairly sharp and straight condition. It sharpens while the machine is in operation. 10 days free trial. CHAS. A. HOLM, Tigerton, Wisconsin. 15-2

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Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

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Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

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Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

Clover extracted honey, ten-pound can $3.00, postpaid first and second zone. SCHULTZ APIARIES, Ripon, Wisconsin.

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For Sale—A well located creamery in a growing agricultural locality. Building is of stone construction and large enough to permit of the installing of cheese making equipment, if desired. All the creamery equipment is of the best. Reason for selling, all those interested have other business. If you are looking for an opening, investigate. Address BOX 417, care Hoard's Dairyman. 14-2

BUTTERMAKERS

Buttermaker wanted—In answering this advertisement, state age, experience and salary wanted. FARMERS' WAUKON CREAMERY CO., Waukon, Iowa. 12-4

FEED BAGS

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

We pay for second hand bags all the market will permit us to pay; no more, no less, and pay freight on lots of 500 or more. CATLIN BAG & BURLAP CO., Catlin, Illinois.

MOLASSES

Molasses—Kentucky Country Sorghum, made the good "old fashioned way". Pure cane molasses, no adulterants. Sample and price list mailed for 10c. S. ROSENBLATT, Hawesville, Ky. 12-4

DAIRIES

Dairy for Sale—Select dairy retailing 600 quarts of milk at 20 cents and large amount of cream, butter, eggs and vegetables, within a mile of dairy house. Location 8 miles from New York. Finest opportunity. For full particulars address ROBERT ALLEN, 10 Ames Ave., Rutherford, N. J. 14-2

Dairy for Sale—40 milch cows, one bull, delivery car, 2 horse wagon, boiler, sterilizer, bottle washer, bottles, cans and everything needed in a dairy. 18 months' lease on 126 acres. 50 acres in cultivation, rest in pasture. Six-room house. Three miles from Wichita Falls, Texas. 50,000 population, and the oil center of Texas. Give possession at once. Milk $1.00 per gallon, 25 cents per quart. Price, $7,000; $4,000 cash, balance in small monthly payments. E. A. DEBUS, Wichita Falls, Texas. 15-4

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

MISCELLANEOUS

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin.

FARMS FOR SALE

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss.

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

Landology. Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE—RIEHLE LAND COMPANY, 47 Skidmore-Riehle Bldg., Marinette, Wisc. 7-9

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Fifty-eight acre farm complete with house, barn, silo, windmill, etc., near Lake La Belle, within ten minutes ride from Oconomowoc. Apply C. E. DINGWALL CO., 536 First Wisconsin National Bank Bldg., Milwaukee, Wisconsin. 12-4

Illinois farms for sale—Several choice grain, stock and dairy farms, located convenient to St. Louis, at bargain prices. Free descriptive matter. IRVING M. CLARK, Brighton, Illinois. 12-4

Land that is real land in St. Louis County. "The County of real farms". Now is your chance to get one of our reasonably priced farms at little cost. We need good farmers to supply our markets. We are offering our lands on a small down payment and give you a long time to pay balance. Remember a great railroad stands back of this offer. Send for free information today. L. B. ARNOLD, Land Commissioner, 154 Wolvin Bldg., Duluth, Minn. 12-4

For Sale by Owner—420-acre farm in Lake County, Illinois. Best of soil. Good set of buildings including house, two barns and silo. Two miles from town. Price for quick sale $120 an acre. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-6

300-acre dairy farm with thirty-three head of Holsteins, including pure-bred sires. Modern dairy barn, all new buildings, two silos, two houses, located 1½ miles from creamery and cheese factory and on the condensery route; five horses and complete all new farm equipment. 100 acres under cultivation; 50 acres of pasture, balance marsh and trapping lands. GREENLAW & THOMAS, Oshkosh, Wis. 13-4

For Sale—Superb Washington Co., N. Y. home and farm, 86 acres. With dairy, stock and implements, $16,000. Address BOX 407, care Hoard's Dairyman. 14-4

Farm for Sale—Our modern, 200-acre farm, 1½ miles from Marinette, on macadam road, with Green Bay Shore frontage. All under cultivation, and well fenced. No stumps, stones, low land, quack, or thistles. All buildings built last four years and newly painted. A real farm and opportunity. Easy terms. HOTEL MARINETTE, Marinette, Wis. 14-4

Let us help you choose a farm in Price county, the center of the Clover, Dairy and Potato Belt of Upper Wisconsin. Write for official soil map and booklet to the COUNTY AGRICULTURAL AGENT, Phillips, Wisconsin. 14-2

We have a farm for you in the Ozarks that you will like. DURNELL LAND CO., Cabool, Mo. 14-4

For Sale—116-acre dairy farm in sunny Tennessee. High state of cultivation, good improvements, fine water, near good college. R. F. REGISTER, Greeneville, Tenn. 14-2

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Farm Bargains—60 miles Twin Cities. Free list. man. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

Would you like fine farm near city markets, among western people; good soil, for cost of buildings? Write NEW YORK FARM AGENCY. Westfield, N. Y. 11-spl

For Sale—245-acre grain, dairy and stock farm. Old colonial house in splendid condition; modern 20-cow barn, milk house, two big silos, horse barn, machine sheds, bull and calf pens, garage; water in all buildings, good fencing. Write for description. One hundred per acre, terms. W. A. STOCKTON, Blackstone, Va. 15-2

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Farms for Sale—In Trumbull County, Ohio. Any size by a farmer who has had twenty-four years' experience in this section and knows farm values. Write for descriptions. NEAL DUCK, North Bloomfield, Trumbull County, Ohio. 15-4

"Let the world know."—Fertile lands at from $30.00 to $150.00, about $75.00 average, growing season of 244 days, snow and sunstroke equally unknown, progress in full swing. These just a few of South Georgia's advantages. Write the MACON TELEGRAPH EXTENSION BUREAU, Macon, Ga., and be listed for free supplements telling the story in word and picture.

South Dakota has 1,000 farms ready now, on which it will loan up to $10,000 to new settlers. This is your opportunity to own a farm. South Dakota produces more agricultural wealth per capita than any other state. Write today for information. IMMIGRATION DEPARTMENT, Capitol F15, Pierre, South Dakota.

275 acres, $7,000 with 17 cows, 5 horses, crops and thoroughbred bull, 4 calves, poultry, 16 pigs, wagons, machinery, tools, gas engine, large quantity potatoes, oats, corn, fodder, 50 cords fitted wood; great money-maker; near R. R. village; 175 acres loam fields, big crops; 40-cow spring-watered wire-fenced pasture, estimated 10,000 cords wood, valuable timber, nearby market; 900 sugar maples, many fruit trees; 12-room house, 72-ft. basement barn, running water both other buildings; owner made money here, retiring, includes everything only $7,000, part cash, balance easy terms. Details page 23 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

Oklahoma Farms. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla.

Farms—Improved farms and muck land on good roads, close to markets. PONTIUS & HAMMOND, 602 Western Reserve Bldg., Warren, Ohio. 15*

New York farms for sale—Excellent soil, climate, water. 112 acres, $6,500; alfalfa land, two houses, two barns, running water in buildings. 76 acres, alfalfa land, large good house. $3,500, only $1,500 down. Others. GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 15-4

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For Rent—Good farm near Fort Atkinson on shares or by the month. Address BOX 432, care Hoard's Dairyman.

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Wanted—By married man, age 27, American, farm to rent on shares or will take good place as hired man. HENRY KROUCKE, Route 4, Mukwonago, Wisconsin.

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Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

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For Sale—Tin silo roof for 14-ft. silo. Can be opened up and six feet extra silage put in. ROY WILLIAMS, Waukesha, Wisconsin.

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HELP WANTED

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Guernseys. Work to begin at once. Write inclosing salary desired and credentials to NORTHLAND COLLEGE, Ashland, Wis. 10*

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

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Firemen, Brakemen, $350-$300 monthly, all railroads, everywhere, experience unnecessary. RAILWAY ASSOCIATION, Desk W5, Brooklyn, N. Y. 13-3

Testers Wanted—Single men for cow testing associations, good wages paid men experienced in feeding and operating Babcock test. Give age, school training, dairy or farm experience, name and address, previous employer. Write A. J. CRAMER, Agricultural Hall, Madison, Wisconsin. 14-2

Wanted—Men for official testing of pure-bred dairy cattle in Illinois. Have several openings now and will have more later. Opportunity for men who can leave farm during winter to gain experience. Only men with two or more years of high school training, one or more years farm experience and clean habits need apply. Write M. H. CAMPBELL, University of Illinois, Urbana, Illinois. 14-2

Wanted—Single herdsman for about 20 cows. Must have some experience in A. R. O. work. State wages expected. Position open at once. MORTON FRIEND, Orland, Indiana. 14*

Wanted—At County Asylum, experienced herdsman who understands fitting for show and A. R. O. work. Either married or single. If married could give wife employment. In either case we furnish room, board and laundry free. Please give age, reference and nationality in first letter, also wages expected. Please don't answer unless you mean business and want a permanent position. Address R. H. POSTON, Route 3, Box 130, New Richmond, Wisconsin. 14-2

Wanted—Herdsman to take full charge of registered Jersey herd. 30 cows on test. Must be experienced. Married man with no children preferred. Best of terms, is a fine opportunity for the right man. SOUTH PARK FARM, Box 386, Fargo, North Dakota. 14-4

Wanted—Single white man for general farm work, must milk three cows, state age and wages expected. S. P. POULTRY FARM, Silver Hill, Md., Station H., Washington, D. C. 14-2

Wanted dairyman—Herd of Jerseys. Must be capable, enterprising and a good disciplinarian. A man who has technical as well as practical training. No married man need apply. Good wages. PENNSYLVANIA TRAINING SCHOOL, Morganza, Pa. 14-2

A single man would like to hire man and wife on farm where general farming is carried on. JAS. S. HAIGHT, Poynette, Wisconsin. 14-2

Wanted—Single men for agents in New York State Cow Testing Associations. Good wages and expenses to competent men. Experience in feeding and in operating Babcock test desirable. Give age, school training, farm experience, names and addresses of former employers. Write G. W. TAILBY, JR., Animal Husbandry Department, Cornell University, Ithaca, N. Y. 14-3

Wanted—Married man for general farm work. Wife to assist with the house work in modern home. Good place. State wages and particulars. H. W. COIT, Galesville, Wisconsin. 14*

Wanted—A real herdsman, married, without children. One with experience as feeder and general care of a R. of M. herd of Jerseys. SAM E. CRABBE, Fargo, N. D. 14-2

Wanted—Married man to take care Holstein cows. Furnish house, garden, milk, etc. State salary, experience. Must come at once. G. G. WHITE, Elkader, Iowa. 15-2

Wanted—Good, reliable men in barn and bottling room in southern dairy. Winter resort town. Address J. S. DUNLOP, Pinehurst, N. C. 15-3

Wanted at once—Good, reliable single herdsman, one who is steady and a good live worker. Must be good dry hand milker and understand feeding for the big flow of milk. Must understand calf raising. Have milking machine, good handy barn. Best of feed furnished. Middle aged man preferred and one with practical experience. My herd is grade Holsteins. Don't answer this ad unless you want the job. State wages in first letter. Steady job and good home to the right man. C. H. HICKS, Marshalltown, Iowa.

Housework—Girl for general work at 2808 and at 2908 Chestnut St., Milwaukee, Wis.

Wanted—Working herdsman who can board necessary help to care for nearly 100 Guernseys. Must be good calf raiser and able to economically and sucessfully feed the herd that best results may be had from a large breeding herd, where Advanced Registry records are of value. State past experience, habits, references, also salary expected in first letter. Address BOX 420, care Hoard's Dairyman.

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Jerseys. A man capable of handling milk and the making of first grade butter. State wages and experience in first letter. Address FARM MANAGER, Pennsylvania Training School, Morganza, Pa. 15*

Wanted at once—Married man for farm work, capable of assuming some responsibility if necessary. Wages $80.00 per month, house, milk, garden. Wife to board from two to four men. MERRYGLADE FARMS, Somerset, Pa.

Wanted—Protestant, single man, for general farm work and assist with milking, on modern farm near Chicago. Scotchman preferred. Good wages to competent man. C. A. ERICSON, 226 W. Adams St., Chicago, Ill. 15-3

Wanted—Single man for bottling room on pure-bred dairy farm, bordering town of 40,000 in Illinois. Steady position for clean, intelligent worker. All conveniences. State wages and references. Start any time, not later than Nov. 25th. Address BOX 422, care Hoard's Dairyman. 15-2

Wanted—Intelligent, single man on pure-bred modern Holstein farm, for calves, barn chores, milking and other work. Located 2 miles from town of 40,000. Good position with all conveniences. Steady man only. State your wages. CHAS. KLOSE, Fitchome Farms, Aurora, Illinois. 15-2

Wanted—Married or single herdsman to take care of registered Holsteins. Prefer man with some experience making A. R. O. records. Write stating wages expected, experience and references. CITY VIEW FARM, Barron, Wisconsin.

Agricultural College graduate to teach vocational agriculture; salaries eighteen hundred and up. E. B. MATTHEW, State Supervisor, Little Rock, Arkansas.

HELP WANTED

Wanted at once—Experienced dairyman, single, butter making, cottage-cheese, testing, pasteurizing, care of dairy machinery, boiler, sterilizer, etc. State wages, experience, age. No cigarettes. DR. J. VAN HOUTEN, Valley City, No. Dak.

Wanted—Man and wife on an up-to-date farm. Wife to take charge of boarding house and man to do chores. Must give references. HOLLYHOCK FARMS, Dousman, Wisconsin.

I want a first-class, up-to-date dairyman and farmer to rent my good Holstein dairy farm on shares. SAM B. WOODS, Crown Point, Ind.

Wanted—On farm, chore man who has had some experience with poultry and truck gardening. All modern conveniences. Near Chicago and only one mile from R. R. station. Address BOX 425, care Hoard's Dairyman.

Wanted—Farm superintendent and manager who has had both field and live stock experience and who is also capable of superintending modest estate near Chicago. Address BOX 424, care Hoard's Dairyman.

Wanted—Reliable, married man, who is a good dry hand milker for year 1921 to milk and work in dairy room. I use Sharples milking machines. Give references and state wages wanted in first letter. J. CLIFFORD MILLER, Brandy Sta., Va. 15-2

Two efficient dry hand milkers for work in up-to-date cow barn where milk is produced under certified conditions. $65 per month and board to start with, a guaranteed increase as willingness and ability is proven. Address with particulars, DOSORIS PARK, Glen Cove, N. Y. 15-2

Wanted—Single man for work on general farm with dairy. Good proposition to right party. CLAYTON C. HARRISON, Ringwood, Illinois.

Wanted—Married man as assistant herdsman, to work with pure-bred Holstein cattle, one who can make A. R. O. records or who likes cows and can work into it. House to live in will be furnished and reasonable wages will be paid to a man who is willing to earn it. Address GEORGE J. SCHUSTER, 300 Broadway, Milwaukee, Wisconsin.

Wanted—Herdsman, single, to take charge of milking herd of 30 Holsteins. Must be clean, steady and reliable. Steady job to right man. State wages and reference in first letter. FRED BARNES, Box 282, Iowa City, Iowa.

Wanted at once—Single herdsman for Guernseys doing A. R. work. Must be good caretaker and calf raiser. Cigarette smokers need not apply. O. K. SPIRES, Burlington, N. Dak. 15-2

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Waned at once—Position as manager of up-to-date dairy herd, Holsteins preferred. Single, 25 years old, plenty of experience, graduate agricultural college, strong, ambitious, plenty of initiative and a good hard willing worker. Highly recommended. Address BOX 412, care Hoard's Dairyman. 14-2

Wanted—Position as manager or herdsman on large dairy farm. Experienced in general farming. A. R. work, stock raising, tractors, etc. Married, Scotch. References. Address JAMES JOHNSTONE, Route 3, Redford, Michigan. 14-3

Wanted at once—Position in dairy on a large stock farm by single man, twenty-five years of age. Can assume herdsman's or manager's responsibilities when necessary. Wish to co-operate with owner to build a fine herd. No tobacco. Able to do common veterinary work. Good milker, feeder and calf raiser. Salary, $125.00 per month with advancement when ability is assured. If interested write BOX 416, care Hoard's Dairyman. 14-2

Leadsman and Fitter—Consignment and dispersal sales a specialty. Save time and money by employing an experienced man to fit and show your sale cattle. References. JACK ROBINSON, care Ohio Holstein Asssociation, Tiffin, Ohio. 14-3

Wanted—Position as herdsman. Age 35, experienced in A. R. O. work and running milking machines. State wages first letter. Address BOX 428, care Hoard's Dairyman.

Herdsman wishes position immediately. Married, small family, 30 years old. One of the best showman on circuit. Can get results from help. References from best herds. Address BOX 427, care Hoard's Dairyman.

Farm manager, with proven ability, desires position on large, modern farm, where faithful, conscientious work will be appreciated. Experienced in Advanced Registry, stock of all kinds, farm machinery, modern building, gas and steam engines. Married, 3 children. Best of reference. Address BOX 421, care Hoard's Dairyman. 15-2

Girl wishes position as dairy maid. Sanitary and experienced. Address BOX 430, care Hoard's Dairyman.

POSITIONS WANTED

Wanted—By refined, educated, American business woman, position as housekeeper and office assistant; preferably dairy or stock farm. Address BOX 423, care Hoard's Dairyman. 15-2

First-class herdsman with 15 years experience in feeding and calf raising wishes position November 1st. Good buttermaker. Salary $75.00 to $100.00 per month. ALFRED LINNIG, Laporte, Minn.

Wanted—Position as a working manager on dairy farm by a young married man, small family. Special dairy course training. Eight years experience, including Cow Testing Association work, etc. Good executive. Pure-bred stock preferred. Salary according to size of proposition. The past two years have been farming for myself. Am selling out. Will be open for engagement about December 15, 1920. Address BOX 426, care Hoard's Dairyman.

Single experienced farm hand, Canadian, age 23, desires position as regular barn man. Address, stating wages, to BOX 433, care Hoard's Dairyman.

Wanted—Modern dairy farm to operate by young married man. Life experienced and university training. Pure-bred Holsteins preferred or would consider position as herdsman. Address BOX 431, care Hoard's Dairyman.

Wanted, January 1, 1920, position as herdsman. Married, expert milker and feeder of test cows. First class reference. G. O. TURNER, Grandview, Mo.

Wanted—Position as herdsman on modern up-to-date farm. Pure-bred stock. A. R. O. work. I am single, 35 years of age. State wages paid in first letter. Address HERDSMAN, BUENA VISTA PARK FARM, Glenwood City, Wisconsin.

Married man, aged 28, desires position as manager or herdsman of Holstein breeding establishment. Would like place where my ability to build up a herd may be shown. Am thoroughly familiar with all lines of breeding; experienced in both official and semi-official work. An expert in the show ring. Best of references. Address BOX 434, care Hoard's Dairyman. 15-2

Working manager of 200-acre grain and stock farm wants to connect with larger farm proposition. Ten years' experience, four years with present proposition. Agricultural graduate, age 34, active, on the job, responsible; familiar with farm operations, can get the work done on time, understand farm machinery, tractors, gas engines, trucks. Want share proposition. Have best of references. Will locate anywhere; prefer vicinity of Baltimore, Md. Address BOX 435, care Hoard's Dairyman.

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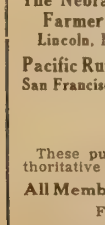
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Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Endometritis

This term, endometritis, which is used so much nowadays by qualified veterinarians in reference to the abortion disease, means inflammation of the endometrium or mucous membrane lining the uterus or womb. It usually is catarrhal in that there is an abnormal discharge or exudation from the inflamed membrane. This discharge may be scant or profuse, but is readily recognized by the expert. Endometritis is the most common cause of barrenness or sterility. The latter term is, perhaps, best applied to the impotent condition of the bull and the former to unfruitfulness of the cow. The cause is infection by germs resulting from difficult calving, laceration of the womb by instruments, or by the finger nails of a person who has not carefully cleansed and disinfected his hands. In such cases severe or acute infection (septic metritis) is the result and endometritis remains as a secondary or less active or acute condition. It may also result from infection of a less acute character occurring at the time of calving, or afterward.

The cow afflicted with endometritis usually fails to conceive when bred, although her periods of heat are regular. The vaginal discharge may be increased and unnatural in appearance. To determine the matter the trained veterinarian brings the mouth of the womb (os uteri) into sight by use of special forceps and examines it carefully. The healthy os is dry and pink in color, as is the womb, unless the cow happens to be in heat. The color is deeper in chronic endometritis and in the catarrhal condition there will be an increased secretion of mucous. This may show a turgid or sticky consistency and possibly pus admixture, but only a specially trained and experienced veterinarian can decide whether the secretion is normal or abnormal, or the degree of abnormality present which indicates slight or severe infection. It may be that the os and its secretions appear practically normal, but when examination of the womb and ovaries assure the veterinarian that pregnancy does not exist he proceeds to open the mouth of the womb and neck (cervix) and purulent discharge may then flow from the catheter used for the purpose. Large quantities of pus are not seen in true cases of chronic catarrhal endometritis.

Having determined the nature of the disease present the veterinarian treats it by irrigating (douching) the womb with a mild antiseptic solution and swabbing the canal of the neck of the womb with a strong solution. The flushing out of the womb is done by means of special return-flow catheters of the Albrechtsen type. It is continued until the liquid comes away clear and is repeated at intervals of a week or so until the womb is pronounced healthy by the operator. Periods of heat usually come on regularly after the treatment and the cow will be likely to conceive when bred, unless the tissue of the membranes has been greatly changed by disease. The greatest possible care has to be taken not to spread the disease from one cow to another when such treatment is given. All instruments therefore have to be perfectly sterilized each time. Only a trained expect should do or attempt to do such work.

"First Aid" for Cows

EVERY farmer, dairyman and stockman knows that prompt treatment saves loss. With a Pilling "Easy-to-Use" Cattle Case, you can give an animal immediate relief from milk fever, bloat, etc. Pilling Cattle Case No. 2, shown here, contains high-grade "Easy-to-Use" instruments of the latest approved designs. Purchased separately, they would cost $18.00. But we ship complete set, in oak case, with "Easy-to-Use" directions, only $12.50, postpaid. Order today. Booklet free.



G.P. PILLING & SON CO
2300A Arch St., Phila., Pa.

No! She's Not a Mooley



She has been dehorned with a KEYSTONE DEHORNER, making her gentler, safer and more profitable. This also applies to steers. We make Keystone Dehorners, Bull Staffs, and other appliances for dairymen and cattlemen—all sold on a money back guarantee. Write for circular.

JAS. SCULLY, Box 109, Pomeroy, Pa.

Fistula 10,000 horses successfully treated last year with **Poll Evil**
Fleming's Fistoform $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Fistula and 200 other Horse and Cattle Diseases.
FLEMING BROTHERS, 255 Union Stock Yards, Chicago

Sale Announcements

Nov. 1—Holstein Dispersal. C. E. Ward, Palmyra, Wis.
Nov. 3—Guernseys—The Lake County Guernsey Breeders' Ass'n., Libertyville, Ill. W. E. Watkins, Secretary.
Nov. 3—Holsteins. Washington County Holstein Sale at West Bend, Wis.
Nov. 4—Holsteins. Wachsmuth Bros.' Dispersion Sale at Owen, Wis.
Nov. 5—Holsteins. John Vanderploeg's Dispersal Sale at La Crosse, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 5—Guernseys. C. D. Curtis and J. D. Bolton, New Lisbon, Wis. F. E. Fox, Sale Mgr., Waukesha, Wis.
Nov. 6—Holsteins. Richland County Holsteins Breeders' Sale at Richland Center, Wis. A. A. Thompson, Secretary, Richland Center, Wis.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
Nov. 10—Holsteins. Eastern Pennsylvania Breeders' Consignment Sale at Perkasie, Pa. Howard P. Corsa, Mgr.
Nov. 10—Holsteins. Consignment Sale at Viroqua, Wis. F. H. Everson, Sale Mgr., Lake
Nov. 12—Holsteins. L. H. Field's Dispersion at Osseo, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 13—Holsteins. Richard Boehlke's Dispersion at Little Rapids, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 15—Holsteins. Walworth County Holstein Breeders' Sale at Elkhorn, Wis. Ben Bachhuber, Mgr.
Nov. 16—Holsteins. W. W. Brundedge & Sons Dispersion at Zanesfield, Ohio. F. G. Johnston, Columbus, O., Sale Mgr.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 18—Holsteins. Katterjohn & Hickerson at Blue Bell Farm, Boonville, Ind.
Nov. 19—Guernseys. Guernsey Cattle Club of Van Wert Co., Ohio. M. S. Myers, Secretary, Van Wert, Ohio.
Nov. 19—Holsteins. Jefferson County Holstein Breeders' Consignment Sale at Lake Mills, Wis. A. F. Gafke, Jefferson, Wis., Sec'y.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 25—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Dec. 7—Holsteins. D. V. Whiteleather Dispersion at Columbia City, Ind. F. G. Johnston, Columbus, O., Sale Mgr.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Twin Bulls

We have a pair of twin bulls from a very valuable cow and sire. Is it advisable to raise twins for breeding purposes? I have been told twins should not be safe breeders.

Stoughton, Wis. B. J. L.

Twin bulls are fertile; but when a bull and a heifer are born as twins, the heifer usually is barren and is termed a "free martin". The bull of such twins also is fertile.

Red Milk

Our cow has been giving milk of pinkish, sometimes red, color for three weeks. Please tell us what causes this and what we can do to correct this condition.

Jonesboro, Ark. E. S. H.

A germ known as bacillus prodigiosus sometimes turns milk pink or red after it has been set for some time in infected vessels. Set a sample of milk from each quarter of the udder in a separate sterilized vessel to determine if any quarter is giving abnormal milk.

Mammitis (garget) in the chronic form sometimes causes blood in milk and there is no remedy. More often blood in milk in clots or coming freely is due to congestion of the udder before or at calving time, causing rupture of tiny blood vessels in the glands; this soon subsides. In other instances, growths in one teat, or more blood at milking time. Such growths may be removed by operation when close to the opening of the teat; but when high up it usually is best to let a calf nurse or dry off the milk secretion. Make a careful examination and investigation to determine the cause of the discoloration of the milk. Meanwhile more carefully cleanse, scald, and sun dry the milk utensils.

Indigestion

I have a calf that gnaws on boards and chews on everything it gets hold of. This calf has been troubled with scours. Have been giving lime water and lime phosphate but no change. What's the best to do?

Have a cow due to freshen about the 20th of next month. This cow's bag is hardening. Last year when she freshened her bag was all in one hard lump.

What is the best treatment for pneumonia? Should an animal have anything to eat while down with pneumonia?

Glyndon, Minn. P. N.

Indigestion is the cause of depraved appetite and a calf such as you describe will not likely be worth while raising. It may do better if you give it a dose of castor oil in milk and then let it have free access to oats, bran, and oil meal, in addition to fine hay, and milk fed twice daily blood warm and containing an ounce of limewater to the pint. Cleanse, scald, and sun dry all milk vessels. Keep the calf in a large, clean, well lighted box stall. If possible, put in a big lump of chalk for the calf to lick.

Congestion of the udder is usual before and at time of calving. It usually passes off soon after the birth of the calf. It may be lessened by opening the bowels, feeding light, laxative rations and making the cow take active exercise daily for three or four weeks before calving, during which time she should be "dried off". The udder also may be massaged twice daily and a little melted lard rubbed in at night. If excessively congested a little serum of milk may be stripped away once or twice daily.

Symptoms of pneumonia have to be treated by the veterinarian as they appear. Appetite should be encouraged and the animal allowed to eat light, laxative feed. If you care to give full particulars, we shall be glad to give advice.

Corn in the Dough

HOARD'S DAIRYMAN:—What a fine year this will be to prove the value of Farm Bureau Corn Variety Test results! Tests have been carried on in the agricultural counties of New York State for five years or longer. These tests have shown appreciative farmers the futility of planting late maturing varieties of corn for silage. Time was when all farmers thought that the greater the growth of corn the better, regardless of the factor of maturity. Many farmers are still gamblers enough to run chances on a variety that may possibly get ears that will show kernels during an average growing season but will produce fairly well matured ears once in a memory. Such varieties have no place on the farm of a real dairy farmer.

A cold spring with little moisture gave corn a slow start. Cool evenings later further prevented rapid growth, until early in September when men got corn harvesters in shape to work did they find comparatively few fields with corn advanced to a really semi-matured growth. We will miss our good silage such as we had last year when we try to make profitable milk this winter. To be sure we could not foretell what kind of a growing season we would get this year; we did not need to. Why should we guess at the seasons? Why should we guess at getting a corn crop? Guess factors are numerous enough in our best farm practice without courting unnecessary ones.

Our state college has advised against southern grown varieties and varieties grown in climates unlike our own. Farmers support their agricultural colleges, experiment stations, and farm bureau associations and yet many there are who will choose to believe a clever talking corn seed agent rather than one of their own thoroughly reliable experimenting agencies. May 15 to Sept. 15 is perhaps the maximum growing season in the central or Mohawk Valley section of New York State. Practically the only sure varieties for this length of time on best corn soils are Sweepstakes, Luces Favorite, Cornell Number 12, and a sure-fact, Improved Early Leaming. Most of our silage corn is put in after May 15; much in early June. For these later dates we have some excellent varieties. Luces Favorite will usually make excellent silage in this length of time. We are sure of Cornell 11, Early Huron, Bailey Dent, Webbers Early Dent, and Bloody Butcher. In fact these varieties will do to husk in many seasons. It is our conviction that we get best results and most food value from a crop of corn that reaches a stiff dough to a fair glazed condition for ensiling. We do not object to having the dent show in dent corns. We do not want a thoroughly matured corn because much will pass through the cow and, too, we would not get the use of the full growing season.

Most of us plant our silage corn too thickly. Many of us do not give the corn a chance to produce ears, much less to grow them to near-maturity. Too often, too, we neglect to cultivate the corn enough. We used to produce a lot of husked corn in this state but we have lessened our production in direct proportion to the diminished work and attention we give our corn fields. We have noticed the best fields of silage corn this year where farmers were far sighted enough to put their silage corn in check rows so that they could horse work their corn. Cultivating both ways insures a good crop of corn providing a proper selection of variety has been made.

Best results with corn come from planting on a good alfalfa sod with an application of a couple of hundred pounds of 16% acid phosphate per acre. A good clover sod is next in value. A heavy timothy sod top-dressed with manure for the last cutting of hay together with the indispensable acid phosphate also insures good production.

Look over your field and that of your neighbor's and see if what we have noted is not true. Also note the good results men have this year where and when they have added some sunflower seed to their corn.

New York. W. J. HAGAR.

The Label Tells the Story

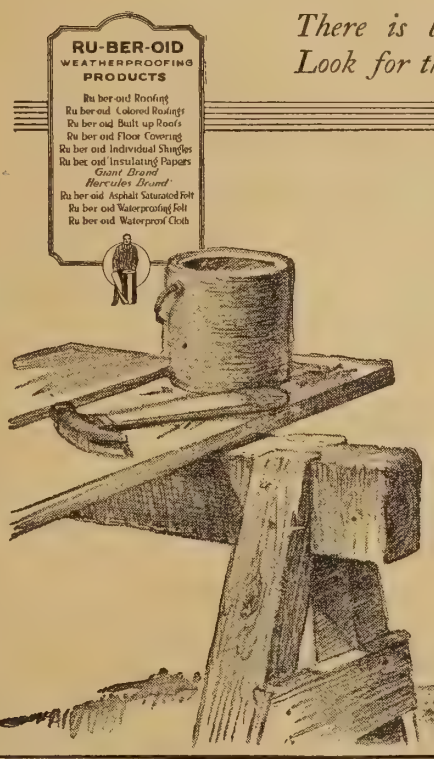
The sight of a Ru-ber-oid Label where a roof is being laid is conclusive evidence that the owner knows what's best and will be satisfied with nothing less.

For over twenty-five years Ru-ber-oid has been regarded as the standard by which ready roofings may be judged. The enviable position it occupies was won and has been held through sheer merit.

On many a farm roof Ru-ber-oid has been in service a score of years or more—with the limit of its endurance yet to be determined.

When you buy ready roofing remember that the name Ru-ber-oid stands for dependability and Ru-ber-oid will be your choice.

There is but one Ru-ber-oid
Look for the Man on the Label





Ohio Jersey Quartet Averages 732 Lbs. Fat

Three cows in the herd of H. W. Bonnell, Cranberry Run Farm, Ohio, have recently completed very creditable Register of Merit tests. This farm is the home of many high producers including the former state champion, Fox's Queen of Minerva, with 14,403 lbs. milk, 823 lbs. fat, and Sophie's Dolly Dimple, the present junior two-year-old champion with a record of 10,814 lbs. milk, 689 lbs. fat.

Snip Wauger 2d has produced 14,876.5 lbs. milk, 823.27 lbs. fat. She was started on test at the age of ten years and nine months. This is the highest record in Ohio for cows beginning test at ten years of age.

The third cow, Financial Raleigh's Foxy, becomes the senior three-year-old champion of Ohio. She was started on test at three years and seven months of age, and produced 12,115.8 lbs. milk, 667.25 lbs. fat.

Gold Butter Beauty 296476, owned by L. J. Taber, completes the quartet. Her production for the year was 13,491.3 lbs. milk, 715 lbs. fat, age seven years and seven months at start of test. Butter Beauty is the dam of the present yearling champion of Ohio, Beauty's Gold Medal, who finished test eight months ago with 10,585.5 lbs. milk, 552.86 lbs. fat.—American Jersey Cattle Club.

Fall-sown grain crops in the South provide a winter cover for the land, thus preventing washing and leaching. They also provide winter pasture and grain and forage for work stock and may be grown to advantage in rotation with corn and cotton. The oat crop is one of the best for fall sowing where it withstands the winter.

Readers are leaders.

Tecktonius Silos

at Wholesale Prices

1 Piece Fir Staves

12 x 20 — $262.75
12 x 24 — 305.85
12 x 26 — 332.65
12 x 28 — 359.45
12 x 30 — 386.00
14 x 30 — 440.50

Including fixtures and staves

F. O. B. your Station

Write for circulars

McDonald Yards, Appleton, Wis,

For Sale or Rent

Maple Grove Dairy Farm
Smithville - Ohio

Is for sale or rent. If not sold by Dec. 20, will be for rent. 212 acres, 50 head of registered Jersey cattle. Fertile soil and very fine buildings. No better location.

Address: Mrs. L. I. Buchanan, 904 Beall Ave., Wooster, Ohio.

When writing advertisers please mention Hoard's Dairyman.

There's Nothing So Dark as the Inside of a Cow *Unless*—

it's the inside of a bag of feed.

Look at feeds—they all appear alike and you can't tell anything about them.

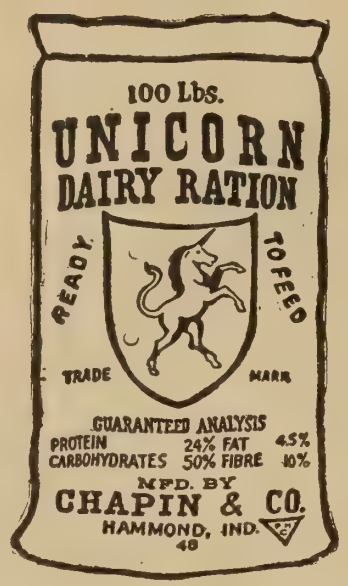
Analyses and names don't deliver the goods.

The only proof of a cow or a feed is in the milk pail.

Unicorn has been proved by scores of Testing Association winners to be the greatest milk and largest profit producer.

If it is profits you want, then feed Unicorn.

Forget the price and look at the profits.



Porter County, Indiana, Cow Testing Association reports Morgan Brothers led all herds for August, 1920. Their 19 cows averaged 40.3 lbs. fat and are fed Unicorn Dairy Ration the year round.

CHAPIN & COMPANY
Chicago

NOW READY TO SHIP

DRIED BEET PULP

Palatable succulent vegetable feed for dairy cows. beef cattle, sheep and hogs

We can take care of orders from any part of the country

The Larrowe Milling Company
Detroit, Mich. Los Angeles, Calif.

BEATS 15c GASOLINE
Starts Car Easy in Cold Weather



Amazing auto invention. Wonderful new carburetor. Guaranteed to reduce gasoline bills from one-half to one-third and increase power of any motor from 30 to 50 per cent.

Sent on 30 DAYS' TRIAL

Fits any make of car. Put on in a few minutes. Fords make as high as 40 miles to a gallon of gasoline. Other cars show proportionate increase. Take advantage of our special 30-day trial offer. Name your car. **AGENTS WANTED.**

AIR FRICTION CARBURETOR CO.
1305 Madison Street Dayton, Ohio

For Sale

A lot of first class

Grade Percheron Horses and Mares

three and four years old. These animals are free of blemish, of good size and splendid appearance. They are of good disposition, fine color and all have been worked or handled. They are of our own breeding and will be sold in pairs or as a lot, as buyer may desire. Any one desiring a good investment should write or call at

The Wiley's Kent, Indiana

Play the Game

(Continued from page 657)

N. Y., a prosperous city in loyal League territory, came out with a leading editorial October 14 entitled, "Solving the Milk Problem by Co-operation". I would like to quote it intact here as further evidence that not all canny city men see the difficulties and dangers in our pooling plan which are so strangely apparent to those destined to be hardest hit—the milk buyers themselves. Here is the editorial: "Judging from full-page advertisements appearing in many newspapers, it would appear that the co-operative plans of the Dairymen's League which numbers among its members some 85,000 farmers in New York and adjoining states are not meeting with the approval of at least one of the largest manufacturers of milk products in the world. One-half of the advertisement consists of a letter written to the manufacturer by a gentleman who describes himself as a citizen, a tax payer, and the father of growing children, and who wishes to know what the manufacturer is going to do to defend the state of New York from the most deadly milk peril by which it has yet been menaced. The other half is the reply to the letter.

"Assuming that the letter was written in good faith with no other motive than to assure an adequate supply of milk for his growing children, it is difficult to see wherein the 'peril' of which the writer complains, exists. There appears to be plenty of milk for all. In fact, the closing down of milk plants by manufacturers for the reason given by them, that they are overstocked, would lead one to suppose that there is more than a sufficient supply. Surely the peril cannot exist from the fact that the plans for a closer co-operation among the farmers are meeting with such a large measure of success. The principal of co-operation is a good one. It has been approved by most of the leading thinkers of the world. The banding together of many small producers for the sale of farm products is permitted by the laws of the state and advocated by officials of the state. Co-operation, practiced in conformity to the laws of the state, is generally admitted to be a good thing for the farmer and not inimical to the best interests of the consumers.

"It has been practiced successfully for many years and in many countries, and is getting headway in America by leaps and bounds. There is little doubt but that it is a good thing. Under the circumstances, the wisest thing for the farmer to do is to stand by his organization. He must have had faith in the officers of his league when he elected them to office, and nothing has apparently come up to show that the faith was misplaced. Several critical periods have safely been passed since the league was organized, and its actions have always met with the approval of a large majority of the 85,000 members. Its co-operative plans will not be put into effect until 50,000 farmers have agreed that they shall be. And when they are, they must still conform to the law. The officers of the league may have made mistakes. They are but mortal. At the same time it would be difficult to find any reason why they should not always work for the best interests of the farmers whom they represent."

The above states our case fairly and without hysterics as regarded by an editor who is neither swayed by prejudice nor passion. We are advised to stick together and make hay while the sun shines—in other words, put our eggs into one basket and then "everlastingly watch that basket", as Andrew Carnegie said. We have tried the old way of each dairyman for himself and we got just what the defenseless always gets—the very little end of the horn. We have tried working together in comparative ease and harmony for several years and we have known the sweet taste of milk made at a profit.

It is now up to us to use our heads, act like men instead of mice, and have a little faith and integrity in our fellows and hired servants—until we find that this, our only hope, won't work, in which event we can go back to our fathers' ways and let the buyers take the whole hog.

But it will work if we make it work; if we want it to work hard enough and play the game. Is it worth while to take a slight monthly loss while adjusting ourselves and the world to our new plan, or shall we believe instead in the self-interested buyers and our own fevered imaginations and refuse to be saved or led out of the wilderness? It would seem only sporting to play the game with the rest of the pack, for if we assist in undermining ourselves, the League, we are only fit to become meat for the foxes.

JERSEYS

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.
Address: J. Q. Emery & Son, Edgerton, Wis.

Jersey Bull For Sale

dropped February 4, 1920. Sired by McKay's Noble Fox No. 164786 and from McKay's Pauline No. 385951. This calf is the best for his age of any I have seen. Will sell at $125. Is easily worth $300. Write
J. F. Schmidt, Whitehall, Michigan

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

Jersey Bulls

If you want to breed size, type, large production and improve the breeding on and up qualities of your herd, write us for prices and descriptions of some herd improving bulls we have for sale.

HOOD FARM, INC.
Lowell, Mass.
N. B. Price list of Forty females on request.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

Register Your Jerseys

UNREGISTERED cows are just cows. You may know their fine points, but nobody else does. Registered Jerseys speak for themselves.

If you own Jerseys eligible to registration, write for application blanks and have them registered. The cost is small, and in many cases the value of the animal is doubled by the fact that it is registered.

JEREY

Owing to the great demand now existing for Jersey cattle, it is advisable for both seller and buyer to see that all registration papers on Jersey cattle are kept up-to-date.

Every animal and every sale should be promptly reported for registration and record to the American Jersey Cattle Club.

Free application blanks for this purpose are always available. Write for a supply today.

The American Jersey Cattle Club
324-E West 23rd St., New York
An Institution for the Benefit of Every Jersey Owner



POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

GUERNSEYS

35 Registered and Grade Guernseys

All cows and heifers including two entire herds
Will be Offered For Sale on
November 19, 1920
by the
Guernsey Cattle Club of VanWert County, Ohio
Catalogues after Nov. 10
M. S. Myers, Sec'y, Van Wert, Ohio

May Rose Guernseys for Sale

Bull Calves and Heifers
from A. R. Bulls and A. R. Cows

Sweet Springs Farm
Troy, Ohio

CLELAND FARMS' GUERNSEYS

We always have a few good females in both bred heifers and cows in milk to offer.
At this time we can offer two choicely Golden Secret bred bulls most ready for service.
CLELAND FARMS, Chagrin Falls, O.

Guernsey Bull For Sale

Woodlands Senegal (42282)—official records of dam and sire's dam average 15,459 lbs. milk and 773 lbs. fat. Also a few *Registered Females* of equally good breeding. Pedigrees and particulars on request.
F. H. Farrington, Brandon, Vermont

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)
Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.
Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

A Great Sire IS FALCON'S PROUD WARRIOR

considered by many to be
The Greatest Son of Langwater Warrior
Outstanding bull calves for sale.
Falcon's Flight Farms, Litchfield, Conn.

GERAR GUERNSEYS

We are offering an exceptionally fine lot of young bulls, some old enough for service.
SEND for our sale list.
Headed by a son of Langwater Royal 4th, the only bull with three sisters that are class leaders, out of a 525-lb. two-year-old Langwater Royal 2d daughter.
Louis McL. and E. Gittings Merryman
Cockeysville - - Maryland

TIMONIUM Pure-bred Live Stock Exchange

We offer for the account of Mr. T. G. Tinsley of Baltimore, Maryland, about forty (40) females of the best breeding and individuality. These animals were formerly the property of the Herdlea Farms Co., and represent the best of that famous collection.
Louis McL. Merryman - Cockeysville, Md.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.
Write for particulars.
L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

CITY HOME FARM GUERNSEYS

Fine registered Guernsey bulls of serviceable age and younger of most fashionable breeding. Priced right. Can also spare a few fine females.
F. W. MEYER BARRON, WIS.

BIRCHWOOD GUERNSEYS

Young bulls for sale sired by Sunkistson No. 45371 who has thirteen dams in the first four generations that have A. R. records that average 582 lbs. fat, and out of officiallly tested dams.
M. L. Welles, Rosendale, Wis.

Let Waukesha County Supply You With Guernseys

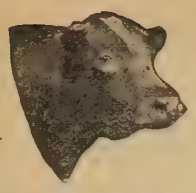
Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.
Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write
WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN.

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.
FOR SALE
Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.
Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.
WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

LONE TREE FARM

GREEN LAKE, WIS.
Has in its Herd 15 A. R. Guernseys and 11 R. of M. Jerseys
And Carries About 16 Cows on Test.
To inquiries for BULL CALVES we give full, honest particulars and stand behind every animal sold.
Jersey Sire—A Son of Pogis 99th. Guernsey Sire, Langwater Islander.



Economy in Production ← GUERNSEYS → Quality of Products



ORGANIZATION means PROGRESS. Join your local Guernsey Breeders' Association. Let us tell you what your community can do.
THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 93, PETERBORO. N. H.

OAKS FARM GUERNSEYS
COHASSET, MASSACHUSETTS



MODENA'S BOND BEAUTY NO. 42716 A. R.

10,596 lbs. milk, 551.78 lbs. fat, Class "C" 6,559 lbs. milk, 322.08 lbs. fat 145 days in "A"

We are offering Modena's bull calf dropped Feb. 3, 1920, sired by Moonlight King of A. D. F. (A. R.), a son of Imp. Daisy Moon 3rd with an A. R. record of 18,019 lbs. milk, 928 lbs. fat. Write for extended pedigree and price.

Also offering some choice IMPORTED FEMALES, all ages. Herd tested by United States Bureau of Animal Industry since 1913.

C. W. BARRON, Prop. (Address) W. S. KERR, Manager.

Appletree Point Farms



PENCOYD'S SECRET MAROSE 48332

This bull won first prize, senior and grand championships at the New England Fair, Connecticut and New York State Fairs. His "get" (4-mo.-old calves) were first at The Eastern States Exposition and fourth at the National Dairy Show with thirteen "gets" shown. His heifer calf, Appletree Point's Dolly Dimple, was Junior Champion at New England Fair, Eastern States Exposition and was Grand Champion at Connecticut State Fair. This bull calf was unbeaten in all eastern shows and won at Waterloo and National Dairy Show. Write for prices on May Rose calves that combine type and production.

U. A. Woodbury, II, Burlington, Vt.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.9 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection

OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right and animals guaranteed to suit. W. A. Cloues, Mgr.

Guernseys for Sale

Twenty females, cows and heifers, a number of May Roses. Mostly bred to Laverna's Ultra May King 24660 and Gerar Pearl's Royal 58411, who is full brother to three class leaders. Also several sons of Langwater Royal, Langwater Raritan and Laverna's Ultra May King from A. R. cows or cows on test, several ready for service. All are priced to sell.

M. T. Phillips, - Pomeroy, Pa.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

For Sale

Green Meadow Warrior (58910), a yearling son of Langwater Renown (39636), who was first prize and Grand Champion Bull at Eastern States Exposition and just sold for $8,000. The Dam of Green Meadow Warrior is Imp. Viola of the Isle (35247), A. R., 16,519 lbs. milk and 717.79 lbs. fat. He is large and well grown, is fawn and white, clear nose, and a fine individual.

We also have younger bulls by Renown and out of Daughters of Pencoyd's Golden Secret (16550). For price and all particulars address

Walter Jauncey, Manager, Green Meadow Farm, Williamstown, Mass

Herd on Federal Accredited List

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by

RADISSON FARM, ANOKA, MINN.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

GUERNSEYS

C. D. Curtis—J. D. Bolton

New Lisbon, Wis., Nov. 5th

25 Pure-breds—25 Grades

King May Secret of Homestead No. 52964 Offered

He is sired by Pencoyd's Golden May Secret No. 39636, that sold for $10,100.00; dam, Nella Jay IV, third highest record Guernsey, 1,019.2 lbs. butterfat. Dam, Raymond's Tidy, A. R., milk 8,419 lbs., butterfat 435.81 lbs., at 2 yrs. A number of animals sired by this bull are listed. Females bred, are bred to King May Secret.

Two daughters of Langwater King of France 16724 A. R. are offered. He is by King of the May, A. R., and out of Imp. La Belle Petite, A. R., 547.8 lbs. butterfat at 3 yrs.

A number of cows are listed that have A. R. records, also several are now on official test. The best blood lines are represented in the pedigrees, such as May Rose, Yeksa, Masher Sequel, etc.

Send for copy of catalogue to

F. E. Fox, Sales Manager, Waukesha, Wis.

Waukesha County Guernsey Breeders' Association Announce Their

Seventeenth and Semi-Annual Consignment Sale of

Registered Guernseys

Waukesha, Wisconsin, November 17

A few of the selections to be offered

SHORELAND LILY NO. 73922 (A. R. 7935), milk 9,281.5 lbs., butterfat 397.5 lbs. at 2 years.

BEAUTY OF LYNNHURST NO. 57787 (A. R.) milk 8,950.4 lbs., butterfat 572.88 lbs., Class A.

HILARIA No. 59053 (A. R.) milk 11,157.40 lbs., butterfat 513.35 lbs., Class C.

LILY ROSE OF MAPLE HILL NO. 76842
Sire—May King's Vrangue of Ingleside No. 15430, A. R., sire of 13 A. R. daughters.
Dam—Lillian's Milkmaid of Maple Hill, A. R. 4026
Milk 12,980.70 lbs., butterfat 567.3 lbs. at 2 years.

REX OF BROAD RIPPLE NO. 61960 (An exceptionally fine individual).
Sire—Rex of Rich Neck 31472 (A. R.) full brother to 2 Class Leaders.
Dam—Marietta of Maple Hill, (A. R.) 4946
Milk 15,071.1 lbs., butterfat 797.70 lbs. at 5 years. Sold for $5,025.

SWEETHEART OF MAPLE HILL NO. 96686
Sire—Langwater Royal 4th No. 19331, full brother to 2 Class Leaders.
Dam—Lamont's Sweetheart, A. R., milk 9,389.5 lbs., butterfat 548.2 lbs. at 3 years.

TRISTELLA'S KING OF UTILITY NO. 64425
Sire—Don Diavolo's May King of St. Austell, whose sire sold for $10,000.
Dam—Tristella 2nd, A. R., milk 8,930.0 lbs., butterfat 445.44 lbs. at 4 years.

ONE DAUGHTER AND ONE SON OF HOPEFUL OF EDGEMOOR (Winner of many Championships) sired by Itchen May King, Grand Champion, National Dairy Show, 1920.

TWO DAUGHTERS OF BLOSSOM'S LORD YEKSA LORD NO. 30842, sired by Lord Waukesha and out of Butternut Blossom, A. R., 444.92 lbs. at 2 years and dam's record is 981 lbs., 6th Class A.

Auctioneers: Love, Benjamin and Jones

Catalogues issued by

F. E. Fox, Secretary, Waukesha, Wisconsin

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association
Appleton, Wis.

A Good One Ready For Service



ANTON OF PROSPECT 59853
Dropped September 17, 1919
Sire—Anton's King Confidence 43517. Dam—Dona of Prospect 67924, A. R. 6540.

Anton bids fair to even exceed the size of his dam's sire, Sir Snowdoun (19252), who weighed over 1,800 pounds.
His sire has six May Rose crosses and is out of Ma Chere Confidence, who has a junior four-year-old record of 764.65 lbs. of fat.
The dam of Anton is now on her second A. R. test and she is much ahead of her previous record. This calf is guaranteed in every way.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

Young Bulls 6-10 Months Old

From tested dams or dams now on test making from 450 to 750 lbs. fat. They are sired by excellent bulls of May Rose, Clara Sequel, and other breeding as good. Price $100 to $500. Write for more complete information.

CORIUM FARM, F. J. Rueping, Owner, Fond du Lac, Wisconsin

Homestead Farm

Offers some

Choice Bulls For Sale

To avoid inbreeding, will dispose of a son of "Pencoyd's Golden May Secret" (39626) also five grandsons of Pencoyd.

Eight sons of Pine Blossom's Cherub (44600).

A grandson of Imp. King of the May, out of a daughter of Pencoyd's Golden May Secret.

Also seven cows that are all safe in calf to good bulls.

Five of these cows have A. R. records. Prices on all this stock reasonable considering quality.

Herd under Federal supervision for tuberculosis.

Write for sale list.

W. G. Jamison & Sons
R. 2, Appleton, Wisconsin

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, Minot, N. D.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 860 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.6 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Third Semi-Annual Sale

Fond du Lac and Winnebago Counties Guernsey Breeders' Associations

Sale Pavilion, Fond du Lac, Wis.

November 18, 1920

10:30 a. m.

Seventy head of high class pure-bred Guernseys, A. R. Cows, bred Heifers, Bulls from A. R. Cows

Whole herd of E. V. Maltby and Consignments from the herds of Drew Ten Broeck, F. J. Rueping, B. F. Sheridan, Wm. Illian, Chas. L. Hill & Son, E. P. Sawyer and others.

Send for catalog

Charles L. Hill, Rosendale, Wisconsin

Sale Manager

Waukesha Co. Sale., Waukesha, Nov. 17.

LAST CALL!

70 Registered Guernseys

At Auction

Libertyville, Illinois

November 3, 1920

12 o'clock sharp

Lake County Guernsey Breeders' Association

W. E. Watkins, Secretary



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS' last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right - put an
AYRSHIRE BULL
at the head of your herd



Accredited Herds in Mississippi

HOARD'S DAIRYMAN: — Mississippi has 62 accredited herds and 314 herds that have passed one successful test with a view of becoming accredited. The small number of tuberculous animals found here is a surprise though we have known several years that there were very few tuberculous animals as there were over 500 tested in this vicinity and not one found tubercular. I now have two herds on the accredited list and Mrs. Gurler has one herd of about 100 animals which is on the accredited list. One of my herds has 244 animals on the list and the other herd has 71. One county in Mississippi had ten thousand tested and only nine found tuberculous, and in all but one case the source of contamination was traced.

There have been some tuberculous animals shipped into Mississippi by unprincipled men of the stripe of Dorsey of Illinois who was sent to the United States government pen for a time for his cussedness.

The dairy business is growing rapidly in the South and we now have over 30 creameries in Mississippi. Some dairies have been selling as high as $18 per month per cow to the Macon creamery this summer. Our largest herd reached $20 per month per cow on pasture grass only.

I never saw better pastures anywhere than we have had this season. We have a variety of grasses in our pastures including lespedeza, paspalum, white clover, Johnson grass, Bermuda, and sweet clover. This belt of country in Northeastern Mississippi that is underlaid with the selma chalk rock surely is a fine live stock section. The state is now grinding this selma chalk rock for shipment to sections that need it to sweeten their soil. The cotton growers are quite discouraged this year and there will be many more dairy herds started next year as they learn that the dairy cow can be depended on. Some of the most successful cotton growers of the past tell me now that they shall put in dairy herds next year.

Mississippi. H. B. GURLER.

SWINE

Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of

Epochal Berkshires

Get a Foundation Trio or Bred Sow

From the herd that has won more first prizes and more championships at the biggest shows this year than all its competitors put together.

Some statement, but it's true!

The Epochal Herd won 62 firsts out of a possible 106 and 23 championships out of a possible 42 at the 1920 Missouri, Illinois, Iowa, Indiana, and New York State Fairs, the Eastern States Exposition at Springfield, Mass., and the National Swine Show.

Bred Sows $250 Each and Up

Trios of six months old pigs carefully and properly mated—a real foundation—$300 to $2,500.

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Epochal Berkshires are the deepest and smoothest big-type hogs.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

Berkshires for Sale

First class fall and spring Boars. At prices from $50.00 and up.

Write for particulars.

Cedar Crest Farms

J. K. Dering, Owner, Lake Villa, Ill.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL, Wellington, Ohio

Registered Ayrshires for Sale

12 — 4-yr.-olds. 8 — 3-yr.-olds.
8 — Heifer calves. 5 — bulls: 4-yr.; 1-yr.; 6 mos.
Straight and Right

GEO. T. KIDDER, Richfield Springs, N. Y.

A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals.
Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.

JOHN R. VALENTINE, Prop. PHILIP C. PALMER, V. S. Mgr.

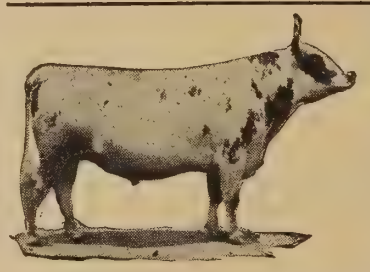
Middlesex Meadows Ayrshires

No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.

We offer Nona's Chancellor of Middlesex, the six month's grandson of a champion out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.

A. Henry Higginson

SOUTH LINCOLN, MASS.



We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANIA

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.



Milking Cows
Fresh and Bred Heifers
and Sons of
Ringmaster's B. B. Diplomat
For Sale

DUNCRAGGAN, WESTFORD, MASS.

Addington's Champion

No. 19561

Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk

FOR SALE—Sons and Daughters from high milking dams.

Tuberculin Free Herd

BLACKBURN FARM Sewickly, Pa.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,320 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

For Sale

8 head of two-year-old Ayrshire heifers. Some of them will freshen in two months. They are all nicely marked and of the large type and from heavy milking cows. Priced to sell.

E. N. MANLEY & SONS, Lyons, Nebr.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons. Richland Center, Wis.

Jersey Cattle Notes

For week ending Oct. 8:
Number of animals registered: Bulls, 236; cows, 570; total, 806. Number of transfers recorded: Bulls, 145; cows, 610; total, 755.

When writing advertisers please mention Hoard's Dairyman.

BROWN SWISS



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.
RA INMA N, Secretary Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

Brown Swiss Bulls for Sale

We offer to Brown Swiss owners and other dairymen the finest lot of pure blood Brown Swiss Bull calves ever offered. These calves have all been registered, are all from high class normal production cows. We offer photographs and records of the animals and invite a full inspection and investigation.

The Wiley's **Kent, Indiana**

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Brown Swiss Cattle
Stock For Sale

Correspondence Solicited

HULL BROS., Painesville, Ohio

HOLSTEINS

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.

King Oak Segis Pontiac

The Oak Dale Herd Sire Tells About His Breeding



You know it's pretty hard for a fellow to talk about himself. Folks might think he's a little bit conceited, but the boss said that they wouldn't if I stuck to facts and didn't do any bragging. So here goes.

I was born March 11, 1915, on Joe Hackney's Arden Farms, near St. Paul. You know Joe, of course. He has a pretty fair line of breeding which includes a number of the best families of Holsteins. I come from the best he had.

My dad is King Segis Pontiac Count, "The Marvel of All Sires" they call him. He has eight daughters with year records of 1,000 pounds of butter. More than 100 world records have been made by his daughters. He is also the sire of three 21,000-lb. two-year-olds. Jewel Pontiac Segis and Beauty Beets Walker Segis, at one time world's champions for both milk and butter productions in the long time divisions of the two- and three-year-old classes. In four years his daughters have won more first Association prizes than the daughters of any other sire have in a life time. His dam was a former world champion long distance daughter of the only double century sire.

My dam is Bess Piebe Ollie Homestead. She, too, has a wonderful record. At three years and ten months she made a record of 23.59 lbs. of butter and 512.09 lbs. of milk in seven days. Pretty hard to beat that, isn't it?

Her sire was Oak De Kol Ollie Homestead. Twice Grand Champion at the National Dairy Show.

Her dam is Johanna Wisconsin Bess Piebe who, as a three-year-old, produced 18.98 lbs. of butter and 472.02 lbs. of milk in seven days.

That's about all I'm going to write for this time, but I'll tell you more when I write again. In the meantime, if you are looking for some good foundation stock or want to learn more about the line of breeding carried on here at Oak Dale, just drop a line to my boss, or come and see us.

King Oak Segis Pontiac
OAK DALE FARMS
Austin, Minnesota

Grandsons and Granddaughters of Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

25 Holstein Cows For Sale

or exchange. 23 are high grades, 2 are registered. Also my herd bull, a grandson of K. S. P. A., the $50,000 bull. This bull is from a 27-lb. cow. Most of the cows are bred to him. All are young cows, well marked, heavy producers. Price, $200 per head if entire herd is purchased.
Will take 2 good teams of draft mares or mules as part payment or might consider a good used automobile as partial payment.
G. A. HIGGINBOTHAM, Rossville, Kas.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.
Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

November 18, 1920 November 18, 1920

Katterjohn and Hickerson
Dissolution and Dispersal Sale of

31 Registered Holsteins

27 Females - - 4 Bulls

at Blue Bell Farm, 3 1-2 Miles N. W.
Boonville, Indiana

After seven years of a pleasant partnership, C. M. Katterjohn, the senior member of the firm, has been stricken down with a heart affection that forces him to retire from all active business. This hard luck forces the sale of the farm, and the sale of the farm forces the sale of the cattle.



You Can Buy at Your Own Price

the 32-lb. five-year-old herd sire, PRINCE KORNDYKE PONTIAC SEGIS, H. B. No. 169913. His dam has the 7-day official record of 31 lbs. butter and she is a daughter of one of the best sons of KING SEGIS. His sire's dam has the official record of 33.75 lbs. butter in seven days and she is a daughter of PONTIAC KORNDYKE. Just think of it, a chance to buy a herd sire, chuck full of the blood of KING SEGIS AND PONTIAC KORNDYKE at your own price, yes, and YOU CAN BUY AT YOUR OWN PRICE, 15 daughters of this 32-lb. bull, 6 due to calve in the months of October and December, 1920. One due in April, 1921, four 2-year-olds and four yearlings not bred. YOU CAN BUY AT YOUR OWN PRICE, 5 four-year-old daughters of the 32-lb. bull, FLOOSMORE PONTIAC BUTTER BOY, H. B. No. 89719 and they are bred to our 32-lb. bull.

YOU CAN BUY AT YOUR OWN PRICE a 30-lb. cow whose dam is a 30-lb. cow, and whose sire's dam is a 30-lb. cow. Also a 15-lb. junior 2-year-old both bred to our 32-lb. bull. Yes, and you can BUY AT YOUR OWN PRICE, cows bred to our 32-lb. bull that will earn for you 20% on a valuation of $750 and $1,000 per head after deducting cost of feed, depreciation and all fixed charges. 11 head due to calve October and December 1920, 4 head in April, 1921. These are cattle free from tuberculosis and contagious abortion. We have never had any abortion or udder trouble.

BOONVILLE, WARRICK COUNTY, INDIANA, is located on the Evansville, Indiana branch of the Southern Railway, is seventeen miles from Evansville, Ind., and 105 miles from Louisville, Ky. The Evansville Suburban and Newburg Traction line runs cars from Evansville to Boonville every hour up to 11:15 P. M.

This sale will be held under cover, rain or shine, hot or cold, Thursday, the 18th of November, 1920, starting 1 P. M. Write at once for printed matter and catalog. Remember the date, this ad will only appear one time.

Automobiles will meet all trains and dinner will be served on the ground.

Col. D. L. Perry, Auctioneer

Katterjohn & Hickerson, Props. Blue Bell Farm
Boonville, Indiana



$250 Buys This Bull

Born Dec. 19, 1919.
Dam — A. R. O. 18.10, milk 406 lbs., age 23 months. Sire — A 32.74-lb. son of King Korndyke Sadie Vale. This bull is from a Federal Accredited herd. If interested apply for pedigree to

Michael Seberger - Schererville, Ind.

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Bull Calf

Sire: Pabst Pontiac Hengerveld, 34-lb. son of King Pontiac Champion out of a granddaughter of Hengerveld De Kol. Dam: A 19-lb. two-year-old out of a 2,365-lb. junior 3-year-old. This heifer promises to materially increase her record as a three-year-old. This splendidly bred fine individual is priced reasonable — buy him now as he will be worth more when dam makes her 3-year-old record.

A. W. DOPKE & SONS, No. Milwaukee, Wis.

5-10 WELL BRED HEIFERS
SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Holstein Dispersal

The Well-known Herd Owned by John Vanderploeg

La Crosse, Wisconsin

50 Head—Friday, November 5

Tuberculin Tested, Productive and Worthy of Your Attention

Nice, large cows, of good breeding and many of them of Show Type. 84 Ribbons have been won on this herd in the last five years also two silver cups. This tells you something of their individuality.

All these prize winners are to be sold, also thirteen fresh cows, and a number of springers. Some dandy male calves.

The Senior Herd Sire, head of this herd for 5 years and a 29.72-lb. grandson of King of the Pontiacs will be sold. Most of the young animals are sired by him, and a number of the cows are in calf to him. He will make a fine sire for some one.

A dozen of the cows are in calf to the Junior Herd Sire, King Konigen Pietertje De Kol, a 986-lb. grandson of King Segis Pontiac Konigen and Beecher Wythe 2nd, the Great Indiana Cow. Good breeding to get in your herd.

A number of daughters of fine record cows; a granddaughter of Finderne Holingen Fayne; a granddaughter of Caroline Princess Pontiac, 1113.72 lbs. for a year, and due in November to one of the best grandsons of Sir Piet., selling in the last State Breeders' Sale for $6,000; also a granddaughter of King Pontiac Champion and in calf to the Senior Herd Sire.

Sale will start at 10:30 a. m. and will be held at the Farm 5½ mi. from La Crosse on the Trunk line, 4 mi. from end of the Mormon Cooley St. car line. Conveyance to and from street car line.

Auctioneers: Mack and Jones - - Sale Manager, F. H. Everson

Absolute Dispersion of Registered Holsteins

Owned by Boehlke Brothers

Little Rapids, Wisconsin

Saturday, November 13, 1920

50 head of very nice Holsteins, tuberculin tested. Many of them Show Cattle and Winners at the Northern Fairs, and of choice breeding.

There will be 35 mature cows and 2- and 3-year-olds, most of them in calf, and a dandy bunch to select from. If you want something in the cow line that will pay you money, here is a chance.

There are thirty head in the sale sired by Cornucopia Pontiac Grindetia, No. 167685, a son of Spring Farm Pontiac Cornucopia and from Spring Farm Grindetia Pontiac. He is the sire of many winners in the Show Ring, and his breeding speaks for itself.

There are twenty-five cows and heifers bred to the Herd Sire, Vickery Sir Champion, No. 162584. He is a son of Pinehurst Champion, and his dam is the Grand Cow, Vickery Vale, with 937.75 lbs. for the year. This bull will be sold, and will be a bargain for some enterprising breeder.

Sale at 1 p. m. Sharp — Under cover if bad weather.

Sale at Farm, known as the Fox River Valley Farm, at Little Rapids. Little Rapids Station opposite farm. Interurban line from Green Bay to Fond du Lac runs through farm.

Auctioneer: J. E. Mack Sale Manager, F. H. Everson

Richland County Holstein Sale

Richland Center, Wisconsin
Saturday, November 6, 1920

A Quality Sale of 75 Registered Holsteins

The reference sires are leaders. Five of them have 30-lb. dams, one is a son and one a grandson of S. P. O. M.

Pabst Korndyke Arnold will be sold. His two nearest dams average 34.54 and all the dams in his pedigree average over 31 lbs. He is a son of Korndyke Segis Johanna, sire of Pabst Korndyke Cornflower, the world record heifer that sold for $30,000 in the national sale.

20-lb. to 22-lb. cows bred to 30-lb. to 34-lb. bulls.

Four excellent, large, typy show cows in calf to a 30-lb. son of Homestead Jr. De Kol.

A 22.65-lb. cow bred to a son of S. P. O. M. 41st.

A 16-lb. 2-year-old daughter of a 30-lb. Colantha Bull bred to a son of S. P. O. M.

Other valuable consignments are: A number of large, fine looking cows due to freshen this fall from the noted reference sires.

Choice heifers from record dams.

Heifer calves such as you read about.

About fifteen bulls that are top notchers.

All cattle over six months of age have been tuberculin tested.

Auctioneers: Mack, Marshall and Miller

PEDIGREES:

F. H. Everson, Lake Mills, Wisconsin

Dispersal of Registered Holsteins

The Noted L. H. Field Herd
Osseo, Wisconsin
Friday, Nov. 12, 1920

Is Ranked as one of the Best Herds in the State.

Clean, tuberculin tested.

Has never had anything but the best of care.

Where sires of excellent breeding have always been used.

Where many good records have been made under normal conditions.

Where individuality and productiveness are combined.

Follow the ads.

Sale at the Farm.

Auctioneer: J. E. Mack

Sale Mgr., F. H. Everson, Lake Mills, Wis.

Waukesha County Holstein Breeders'
Quality Sale
Monday, Nov. 22d

80 Selected Pure-breds

There will be:

30-lb. bulls, bulls with yearly record dams of over 1,000 lbs. together with the choicest cows, heifers and calves of like breeding and individuality. One of the attractions will be the dispersion of one of the best Waukesha herds.

As in the past, the quality will be in keeping with Waukesha standards. We do not expect them to go high. In fact, just at present we expect them to sell for far less than you could buy them — privately. This sale will give the man who wishes to get started an opportunity.

Watch For Next Issue

Waukesha County Holstein Breeders' Ass'n
Waukesha, Wisconsin

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Wayside Stock Farm
OFFERS
4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.
TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac
THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.
FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

ORMSBY BULL · Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Two Ormsby Bulls
Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

Both tuberculin tested and guaranteed right.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Last Call!

to the Washington County

Holstein Sale

Fair Grounds

West Bend, Wisconsin

November 3d, 1920

60 Registered Holsteins
of Exceptionally Good Individuality

Much of the blood of this year's senior and grand champion Holstein bull at the National Dairy Show is represented in this sale. CEDAR LAWN CANARY PAUL was raised in Washington County and is typical of the Holsteins to be sold in our first annual sale.

Washington County Holstein Breeders' Ass'n

J. W. Gehl, Sec., West Bend, Wis.

Her Son Is For Sale



OAK LODGE COLANTHA LADY

This 8 months old calf is a dandy, as he should be from such a sire and dam. He is priced to sell.

His *Dam*, Oak Lodge Colantha Lady, made her record of 17.76 lbs. butter from 405 lbs. milk as a senior yearling and we think she is one of the best prospects we have.

His *Sire*: King Pontiac Artis Sadie Vale, the 34-lb. son of the great K. K. S. V., formerly head of our herd and his daughters are now doing nicely on test.

Write us today about this bull.

Hollyhock Farms, Dousman, Wis.

GUSTAVE PABST, Owner F. J. SOUTHCOTT, Manager

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. S. A. BAIRD & SON, WAUKESHA, WIS.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams age over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter, King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

HORICON BELLE HOLSTEINS

Herd headed by Pabst Korndyke Baldwin, a son of Korndyke Segis Johanna and from a 32-lb. granddaughter of King Pontiac Champion. Five females in my herd average 24.12 lbs. butter as 2-yr.-olds.

E. F. KUEHN, - - HORICON, WIS.

$100 Bull Bargain

4-week-old bull calf. Light in color. Fine individuality. Sire's dam has three records over 900 lbs. butter. Dam is a daughter of a 37-lb. sire. Clean herd. Check or bond takes him.

CHIC DAIRY FARM Juneau, Wis.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked — out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 to 9 months old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

F. H. HEMBROOK
Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Wayside Lawn Farms

offer

Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 3 to 9 months old. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

1000---HERD---1000
Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

For Sale

Holstein bull calves from 1 to 8 months old, sired by a son of Colantha Johanna Champion and out of A. R. O. dams up to 21 lbs. $50.00 and up.

MRS. MAY DOOHER, Itasca, Wis.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

Sir Pietertje Ormsby Mercedes 41st

One of Our Herd Sires



The only son of Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. His sire has more 1,000-lb. daughters than any other sire in the world and his dam is the only 1,000-lb. cow having three 1,000-lb. daughters.

Twenty daughters of "41st" have been sold at public sale during the past year at an average of over $2,000. They were all out of either low record or untested dams.

We have for sale several young sons of "41st" from yearly record daughters and granddaughters of Sir Pietertje Ormsby Mercedes at prices that you can afford to pay. Write us for pedigrees.

E. C. SCHROEDER FARMS

Moorhead - - - Minnesota

(Federal Accredited Herd)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

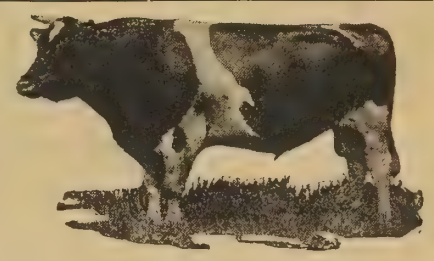
Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

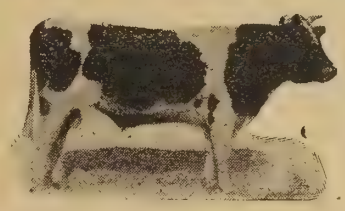
Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Just About Ready for Service — $500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

King Segis Pontiac Fayne Star

is one of the highest record sons of King Segis Pontiac Count. We think he is the best individual son of his famous sire. He is siring the kind of calves you would expect him to sire. Now is the best time to get one of his sons. All ages. Nothing cheap for sale.

FLECKS FARMS, FARIBAULT, MINN.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.
(A Federal Accredited Herd)

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**
H. R. Searles, Mgr. Rochester, Minn.

Wright Co. Holstein Breeders' Sale

65 head, bulls, cows and heifers with excellent type, guaranteed absolutely right in every way. Don't forget the date, October 5th, 1920. Howard Lake, Minn. Sale in New Sale Pavilion, at Fair grounds. Send for Catalogue.

Chas. Oby, Maple Lake, Minn.

For Sale

Minnesota bred Ormsbys; Fresh Cows, Heifers and Young Bulls, by two of the best bred, year record Sires in Service. From A. R. O. dams.

M. L. Enright, East Grand Forks, Minn.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Facts in BLACK & WHITE

Purebred Holstein Cattle Save Labor

Whatever the amount of milk or butterfat you wish to produce, is it not better policy to use large-yield cows than to feed and shelter the necessarily greater number of small-yield cows? Use Holsteins and you save labor, feed, stable-room equipment and risk. They are always healthy and ready for work. Choose cows according to their capacity for converting coarse feed into milk. That is the function of a dairy cow, and that is where the big Holstein excels.

Send for Free Illustrated Booklets. They contain valuable information for any Dairyman.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.
ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.
W. D. ROBENS, Poland, New York.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.
ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.
We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.
Write for prices and pedigrees.
G. BURLINGAME, - - CAZENOVIA, N. Y.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

M&P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.
An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.
PRICE $225.00
MARKHAM & PUFFER, AVON, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to
McKAY BROS., - - CADDOA, COL

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address
The Purebred Live Stock Sales Company

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.
BISCAY SALES CO., BISCAY, MINN.

This Son of King Pietertje Ormsby Piebe

is one of the best herd sire prospects ever offered at public sale. His dam, a 25.58-lb. 4-year-old, made 1,045 lbs. butter from 19,173 lbs. milk at the same age. His two nearest dams average 1,217 lbs. butter from 24,701 lbs. milk,—both of them as 4-year-olds.

King Pietertje Ormsby Piebe 22nd will suit you if you want individuality and long distance production.

He and 9 good females, most of them heavy in calf to K. P. O. P., will be sold in the **Iowa Breeders' Guaranty Sale Nov. 16-17** at Des Moines.

We will gladly send you further information.

Hargrove & Arnold Holstein Co., Norwalk, Ia.

Do You Want

A 30-lb.—1000-lb. Ormsby Bull?



If you want one of that kind—and a real individual, write for our sale catalog. We are moving our herd to California and rather than take these bull calves we are offering them at sacrifice prices.

They are sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, and they're from cows with records of from 27 to 40 lbs. that either have or are making good yearly records. (Several of those dams have over 30 lbs. and will finish the year well above 1,000 lbs.)

Better write today for that sale catalog.
MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21, 465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

HOME FARM HOLSTEIN FRIESIANS

A Son of Woodcrest Sir Clyde

born March 1920, three-fourths white and straight as a line.
His sire is a son of the great 33-lb. and 970-lb. cow, Alma Clyde. His dam has 26.43 lbs. in 7 days, 105.6 lbs. in 30 days, 98.8 lbs. milk in a day. She has 3 records averaging 25 lbs. and 3 daughters with 2-year-old records of 20.2 lbs. 18.38 and 18.2 lbs. in 7 days.
Write for photo, price and pedigree.
W. B. BARNEY & SONS - - - - - - Chapin, Iowa

Grandson of Sir Pietertje Ormsby Mercedes 37th

Born May 15, 1920, out of a daughter of Sir P. O. M. 44th. This royally bred calf is a fine individual and priced right for the farmer or small breeder. Let us tell you about him.
CERRO GORDO FARMS, Mason City, Iowa

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.
Hubert Stuckart, - Raymond, Iowa

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

Son of a 37-Lb. Ormsby Bull

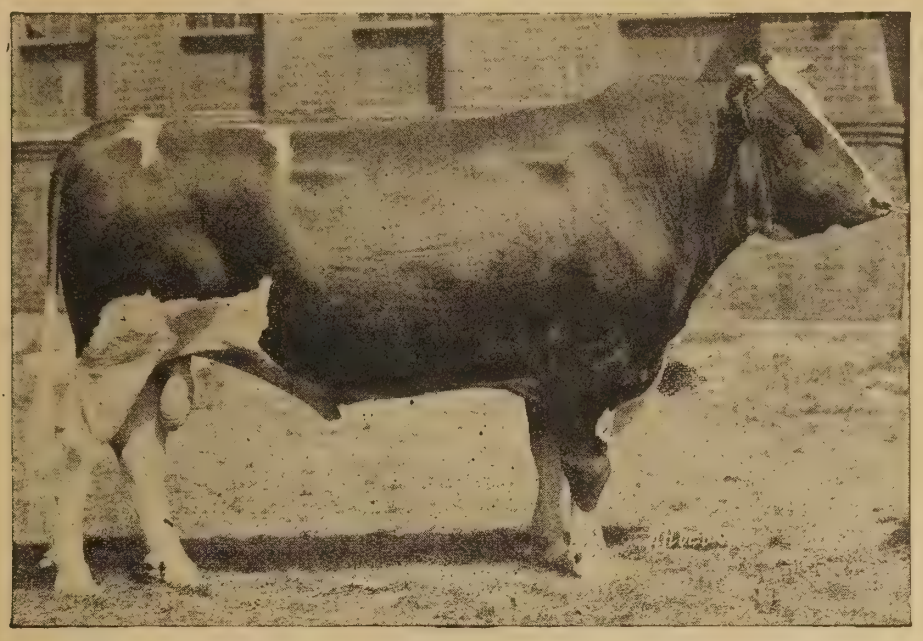
Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white. $150. Herd under Federal Supervision.
BLUEBELL FARM, RICEVILLE, IOWA.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandesburg, Mgr.

SENIOR CHAMPION BULL, 1920 OHIO STATE FAIR—FOR SALE

Son of King of the Pontiacs



King Pontiac Hengerveld Pondyke

Born Nov. 21, 1914 — Guaranteed in every respect

One of the finest individual sons of his noted sire. He was first in the aged bull class and senior champion at the recent Ohio State Fair. He has been used rather extensively in our herd and the offspring we have from him testify to his value as a sire.

SIRE King of the Pontiacs. The only double Century sire. Sire of 265 A. R. O. daughters, 30 with records above 30 lbs., 164 proven sons. Son of Pontiac Korndyke from one of the great daughters of Hengerveld De Kol.

DAM Hengerveld Pondyke Pietertje, a twice 30-lb. granddaughter of King of the Pontiacs. At 6 years she made 32.58 lbs. butter from 590 lbs. milk and has a 30-day record as a 5-yr.-old of 106 lbs. butter from 1,962 lbs. milk. Her sire is from a 25-lb. cow by King of the Pontiacs.

A GREAT INDIVIDUAL SIRE TO HEAD SOME GREAT HERD

Send for His Pedigree

PINERY FARMS **Mentor, Ohio**

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. **LISLE FARMS CO., LISLE, ILL.**

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57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.
WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.
Long Distance Phone 389.
DUETT ROBINSON, R. 3, Capron Ill.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.
GEO. E. STEVENSON, Scranton, Penna.

We Are Now Offering

5 YOUNG BULLS, Pure-bred Holsteins, ready for light service, all nicely marked. Sire: Harkland Prilly Pontiac (171277), who is a 30-lb. son of Hark Prilly Colantha (192558). His sire, Tell Nudine Pontiac (110522). He carries 37½% same blood as K. P. Pontiac Lass (4418). These bulls are all out of A. R. O. dams with records from 15 to 27 lbs. We also offer a 4-YEAR-OLD BULL who is sired by a 26-lb. bull and out of a 26-lb. dam, average 4.82%. We guarantee this bull to be a sure breeder, gentle, nice to handle.

If you need a bull of this age you can't beat him and reason for selling him, we have 2 other aged bulls.

MAPLE LAWN FARM
C. A. Parks, Manager, Assumption, Ill.

Sexauer Stock Farm

For Sale: A bull born Oct. 22, 1919. Outstanding individual, evenly marked in color. From a 27-lb. cow, 624 lbs. milk. He is sired by Woodcrest Pietje Clyde (33 lbs.) whose daughters, so far tested, averaged 19.25 lbs. as junior 2-year-olds. Write for other information and price.
John Sexauer & Sons, Belvidere, Ill.

Buffalo Creek Farm
Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.
H. L. Bingham, Supt., Arlington Heights, Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Yearly Record
ZEHRINGHURST
HOLSTEIN FRIESIANS
Accredited Herd



Zehringhurst Farm

Offers

A few splendid young bulls that have show ring type that are backed by short and long time records and by the best productive breeding Ohio has produced.

They are guaranteed right and are priced to sell.

Oscar O. Zehring, Prop., Germantown, Ohio

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.
Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

Missouri's Sensational Guaranty Sale of Pure-bred Holstein-Friesian Cattle

representing some of the richest blood lines of the breed

100 head of selected pure-bred Holstein-Friesian cattle taken from the well-known A. J. King herd of Grandview, Mo.

Sale to be held at the Farm adjoining the little city of
Grandview, Mo., a suburb of Kansas City
Tuesday, November 9, 1920

Special Attractions of the Sale

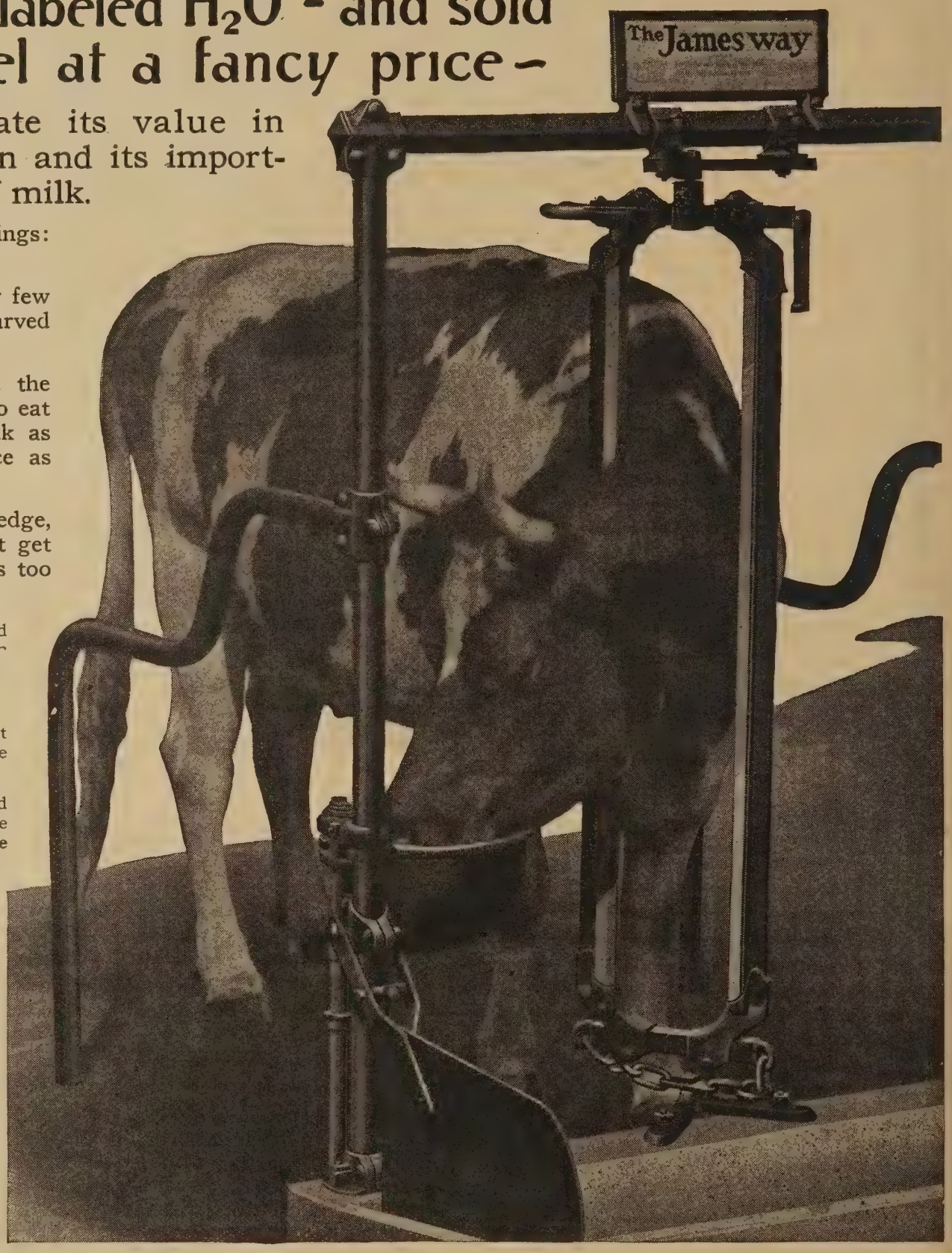
10 Daughters of King Segis Pontiac.
5 Daughters of Joe Calamo Hengerveld, the great show bull.
25 Heifers of good lines of breeding selected for this sale on account of their superior individuality. All the above bred to the senior herd sire Imperial Rag Apple, whose dam was the world record heifer Albina Josie.
30 Cows, either fresh or heavy springers, many with A. R. O. records.
20 Heifer calves, daughters of Imperial Rag Apple.
10 Young bulls of outstanding individuality by the senior herd sire. All ready for service.
Bear in mind — Sale at the farm at Grandview a short drive out from Kansas City. Sale headquarters at the Dixon Hotel, Kansas City. All parties coming from a distance come to the hotel where conveyance will be provided to farm. Come early. First auto bus will leave at 8 a. m.
All cattle tuberculin tested and sold with a 90-day retest privilege.
Write today for catalog to A. J. King, 12 East 9th St., Kansas City, Mo.

W. H. Mott, Sales Mgr., Herington, Kans. A. J. King, Owner, Kansas City, Mo.

Water, Milk *and* Money

If water were labeled H_2O - and sold by the barrel at a fancy price -

more might appreciate its value in the dairy cow's ration and its importance in the making of milk.



A cow makes milk from two things: Feed and water.

Feed costs money, and yet very few of our dairy cows are being starved for want of it.

It is common knowledge that the cow that does not get enough to eat does not produce as much milk as she could produce, nor produce as cheaply.

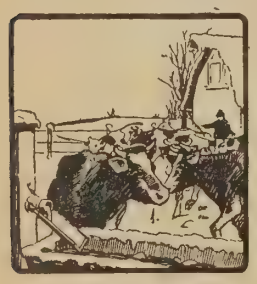
It should be common knowledge, too, that the cow that does not get enough water to drink produces too little milk.

Water costs practically nothing, and yet many, very, very many of our dairy cows thirst for want of it.

Milk is seven-eighths water.

In order for a cow to make milk most cheaply it stands to reason that she must be given plenty of water.

Thousands of dairymen have learned that they have been getting too little milk in the past because they gave their cows too little water.



Herded out twice a day to shiver through a drink of icy tank water

They have learned that when a cow has all the water she wants when she wants it at any hour of day or night, remarkable increases in milk yields follow.

Yet there is no magic about it.

It is simply the natural consequence of following out natural laws. Just as too little feed meant too little milk — lack of enough water means less milk and a higher production cost.

Proven By Milk Records

An investigation was made in 28 herds (759 cows) where milk records were kept.

One herd showed an increase of from 5 up to as high as 10 lbs. per cow, per day, just as a result of giving the cows all the water they wanted when they wanted it.

Four herds reported an average increase of 4 lbs. per cow, per day; three stated 3 lbs.; five showed 2 lbs., three 1½ lbs.; one ¾ lbs.; one reported an increase in milk yield valued at $8.56 per cow, per year; one averaged $5; one $10; one received 3% increase; one 8%; two 10%; one 12½%; one 20%; one 33⅓%; and only one herd out of the 28 found that the increase was "not much." An average increase per cow per day of 2.45 lbs.

And now you ask yourself the question, "Can I afford James Cups in my barn?" "Would it not be better to wait until next year?"

Neither of the questions has anything to do with the matter.

The real question is "Can you afford to be without James Cups?"

You Lose By Waiting

The plain fact is that if next year some one were to make you a gift of the James cups, you would lose money by waiting.

Two pounds milk per cow per day, for the 200 days the cows are in the barn, means 400 lbs. of milk, which at $3 per cwt. is a total of $12 for the season.

In these days when feed and other costs are high, can you afford to neglect this extra profit?

James cups will pay for themselves twice over during the season. Can you afford to be without them?

James cups will save much time and work — investigation shows that the labor saving is $2.50 at least each year.

Can you afford to continue the frost biting work of chopping open the ice bound tank out of doors?

Can you afford to continue feeding the bothersome tank heater through the chilly winter days?

Don't put off this drinking cup proposition a single day. Write us at once for a definite price estimate covering a drinking cup installation in your barn.

We will quote you a definite price if you will tell us the number of stalls, of calf pens, of cow pens, of bull pens and whether wood or steel.

Barn Book Free

If you are interested in other labor saving equipment for the dairy barn such as cow stalls, carriers, steel pens, ventilators, etc., or if you are interested in up to the minute ideas in the planning of the new barn, ask also for our big barn building and barn equipment book "The James Way No. 27."

James Mfg Co. Ft. Atkinson, Wis. Elmira, N.Y. Minneapolis, Minn.

The James way

Labor Saving Equipment for the Dairy Barn

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Expt. Sta.
Urbana Ill.

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., NOVEMBER 5, 1920. | Number 16

Fall Reflections of a Farm

HELEN S. K. WILLCOX, NEW YORK

HERE it is autumn again and the various poets of note, nonsense, and notoriety are in the midst of spouting timely verses concerning the frost on the punkin' and the harvest moon and the wind on the oat stubble and so on and so forth. As for me, I am thinking rather painful thoughts of the long, cold season ahead and wondering dismally if our next six months will come up to, rival, or beat the good old winter time of 1919-20. Folks who pretend to know a thing or two have always said that I do my best when the snow drifts pile mountain-high and cover my fields and pastures so that I do not feel the cold, icy drafts nor run the risk of being scantily covered with a chilly sheet of ice, which smothers the sleeping seeds in my care.

But farms have feelings just like you humans, I would have you to know, and such a winter as last is going it a bit strong, even if it is good for our unborn children, the crops. Farms, if they had their choice, would prefer a medium stiff winter, snow enough for slick sleighing and motoring for four months, maybe, and plenty of nice warm sun pretty near every day to jolly things along a little. But then! Why worry over the future? It is the pessimistic present I started in to cuss and discuss.

Of course you understand that what bothers our owners, the farmers, bothers us in the same proportion, and as things are turning out this fall, it stands to reason that we are being bothered 'way down to our farthest formations. And why? Well, you don't have to dig around very deep to find the reason. The fact is, our kind old mother, Nature, in sending the world such an unusually severe winter as last, rather overdid the matter, if it is a sure fact that bumper crops do follow that kind of a season. As a result, we farms found ourselves raising record rations for man and beast all through the country. In the beginning of the growing season, our owners were tickled pink and they told us we were sure some old sports to get into the produce game so thoroughly and help out the near-famine the world was predicted to be facing this winter.

But alas and alack! It now seems that in spite of the frightful shortage of farms and farmers over which the city papers have been hollering ever since the war, those of us who were left managed in spite of less acreage and less workers to raise a surplus of food, which would be a matter of sincere congratulation and pride to any honest farm and farmer if it weren't for the forceful fact that the plentiful bounty of our combined efficiency (our owners' and ours) is in some instances rotting on the ground, and in others is being sold at far below cost to whoever will buy.

Yes, we farms are telling each other that it's a queer situation and we are wondering where our owners are planning to go from here. I happen to be a fertile river farm in Chenango County, old New York State. I neighbor with a lot of fellow-farms who feel just the way I do about these things. We dope it out that this crop question is a lottery all right, all right. How in a pear tree's name is a farm and its owner going to know at planting time that their stuff won't be worth a miller's dam and they might as well hang up their spade and hoe on the start and call it a six-hour day? It certainly is enough to give honest soil the shivers.

Probably you've read lately how in Connecticut and those down-east states, as well as out in the far west, the land has been taken up considerably by what most folks think are earthquakes. But don't you believe it. You listen to me and you'll learn that my brother and sister farms in other states are just plumb disgusted with the way their fine fruit and grain and vegetables have gone begging recently on our metropolitan markets and they are showing their combination of nerves and fear and disgust by shaking and shivering and throwing things around generally. And who could blame decent, well-treated, hard-working land for resenting such a state of affairs when we and our owners were led to believe this spring that the whole world would go to the demnition bow-bows if we didn't raise enough cows to keep everyone fat and good natured?

Well, I'll say we've done this thing all right with a vengeance, and while the railroad men and others draw down a meagre ten dollars a day and so on, we behold the sad spectacle of our owners sacrificing the champion foods we raised for tiny little prices one would need a microscope to find, and at that, some of our men refuse to dispose of their fruit and cabbage and potatoes at such unfair figures and instead are recklessly and very ruefully feeding them to the hogs and cattle and anything else that has teeth.

Yes, it's a fact that in our part of the state, early, heavy, dandy, Danish, ballhead cabbage is worth only $5 on the car.

Oh, no, we didn't sell ours for $5 a ton, not by a long shot. Instead, the pure-bred black and whites are going to get cabbage for breakfast and dinner and supper and if they live through it, we anticipate their making some milk, rather thin, perhaps, but it is decidedly up to them.

The only possible good which my owner managed to extract from the cabbage situation was to erect a sign out in front beside the potato sign and advertise to the world that we would

(Continued on page 702)



PART OF THE MOUNT HERMON HOLSTEIN HERD OF MASSACHUSETTS

Considerable attention was lately directed to the Mount Hermon Holstein herd in Massachusetts because of the sale of twenty head for shipment to Hawaii. These animals were selected after a number of herds in different parts of the country had been seen and the sale is a tribute to the character of animals which have been developed at Mount Hermon.

The foundation herd at Mount Hermon was purchased in 1906 for less than $2,500. Of the present herd of 200 head, 90 per cent trace to ten foundation cows. Only two animals were not bred and developed at Mount Hermon. In the original selection, particular attention was given to individuality. From that time nearly 700 pure-bred Holsteins have been bred of which 51 per cent have been heifers and 49 per cent bulls. A great per cent of the bulls have been sold to New England farmers. Of the entire number of animals born in the herd, fewer than five calves have died from scours and only thirty have given premature births. These premature births have been scattered over the entire period of fourteen years.

In the development of this herd, the work with Holsteins has been purely incidental in the larger work of the school. The cattle are cared for almost entirely by students. While this decreases rather than increases the production, it nevertheless gives many students a chance to have a very vital part in the care of live stock, which should be of great value to them in years to come. Every animal tested in the herd stands in her regular stanchion, is milked by students, and tested under herd conditions.

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
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Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Dairy Cattle Breeders Plan Testing Company

Representatives of the Holstein, Jersey, and Brown Swiss Dairy Breed Associations, the University of Illinois, and the Illinois Agricultural Association at a meeting held at the offices of the Illinois Agricultural Association, Chicago, October 11th, were of the opinion that a central cow testing company or farm for pure-bred dairy cattle was feasible and should be encouraged. A committee of two men from each of the organizations represented will be appointed by E. M. Clark of the Live Stock Marketing Department of the Agricultural Association to work out definite plans to submit to breeders.

It is planned to have a farm owned by breeders, equipped for official milk and butterfat testing, where breeders can send their cows for official test work. The dairymen also believed that this farm testing company should own one or two outstanding bulls for service on the cows which are sent to the farm. The greatest danger of such a company would be the spreading of disease, but it was thought that if barns were built so that no animal would come in contact with another, the plan could be successfully carried out. A committee consisting of E. W. Wilson of Peoria, president of the Brown Swiss Association, W. A. Brewerton of Libertyville, president of the Jersey Breeders' Association, George Fox of Sycamore, president of the Holstein Breeders' Association, and H. W. Mumford, director of the Live Stock Marketing Department of the Illinois Agricultural Association, was appointed to promote the erection of new dairy barns at the state fair grounds and at the University of Illinois. This committee will take action on any subject of interest to all breeds of dairy cattle.—Illinois Agricultural Association.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Jones—"If you had this Bolshevism thing to settle, what would you make them do?"

Brown—"Put rings in the noses of prize bulls, get stumps and rocks out of unplowed land, guide a tractor or a balky hoss over a field in the hot sun all day, and then make 'em eat at a city restaurant at city prices."

⚜

Saturday Night in Town

The wagons hitched on the square.
The automobiles that need no hitching.
The crowds along the streets.
The movie fans trying to get a seat.
The special sale of kitchenware at Brown's.
The children, just a little frightened.
The tea and coffee stores aroma.
The dash for ice cream soda at the bank corner.
The laying in of chewing tobacco stock.
The purchase of the new cream separator.
The giggling girls everywhere.
The ride back to the farm in the moonlight.

⚜

"Every time I see an orchard tree, so filled with big apples that the boughs rest on the ground and they look as if they were suffering from the load they carried, I feel as if I wanted to reach up and shake hands with 'em, and pat 'em on the shoulder for their good work."

⚜

Letters Home

"Dear Maw: if it's all the same to you, I'd like to come back to the farm. After I had been in the city three weeks I got a job as conductor on a trolley car. But it's the eating in restaurants that I can't go. If I don't get some flapjacks and maple syrup and country sausages and apple pies before long I'll just nachally die. Gee, Ma, I never knew what a fine cook you was until I left home."

⚜

A Thought for Mother

In all my dreams, there comes to me
A mother at her daily tasks.
Love, wide as any boundless sea,
The one who gives and never asks.
The hands that toil, the hands that give
Caresses, softly tender, sweet;
The hands that make the wide world live,
The heart that makes the earth's heart beat.

The country mother I love best,
The one who has the harder task;
The one who has the clod-made zest,
Who has but humble chores to ask.
I know her pies, her wholesome bread.
The butter and the crocks of cheese.
The hand clasp and the patted head,
The little thoughts that seem to please.

⚜

After I visit a county fair, I always respect the farmer more and more. You can't pay much respect to a potato or a cucumber or a bottle of milk when it is handed to you on a silver platter. Contact with the source of things is what breeds respect.

⚜

"How did that city sharper come out who tried to sell Dairyman Jim Higgins a gold brick?"

"Well, before Jim got through with him, Jim had sold the other chap an abandoned farm and three lots in a swamp."

DE LAVAL

CREAM SEPARATORS

Save in 7 Ways



COST since while a De Laval Cream Separator may cost a little more than a poor one to begin with, it will last from ten to twenty years, while other separators wear out and require to be replaced in from one to five years.

PROFIT in more and better cream, with less labor and effort; every time milk is put through the machine, twice a day, or 730 times a year for every year the separator lasts.

SATISFACTION which is no small consideration, and can only come from knowing you have the best separator, and being sure you are at all times accomplishing the best possible results.

QUANTITY of cream that no other separator will recover completely, particularly under the harder conditions of every day use.

QUALITY of cream as evidenced by De Laval butter always scoring highest in every important contest.

LABOR in every way over any gravity system, and also over any other separator, by turning easier, being simpler, easier to clean and requiring no adjustment.

TIME by hours over any gravity system, and as well over any other separator by reason of greater capacity and the same reasons that save labor.

Easy to prove these savings

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval agency write the nearest De Laval office, as below.

The De Laval Separator Co.

165 Broadway NEW YORK
29 East Madison Street CHICAGO
61 Beale Street SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

SURFEITED WITH NITROGEN

W. W. WEIR, WISCONSIN

SOME who delight in studying the habits of plants would like to believe that they possess a peculiar ability to secure from the soil and air the elements they require in just the right amounts and proportions to best meet their growing needs. If this is so, then the grain-lodging problem is a myth. But the lodging of grain is a problem, a real and a growing one.

We hear our fathers tell of the wonderful growth of straw during the early days of farming when the land was new. "Every stalk stood up like an Indian, tall and straight." Now after only about fifty to sixty years of cropping, the grain on some of those same fields grows only about half the length of straw and frequently, long before harvest, the whole crop, or the major portion of the oat crop, may be found lopping upon the ground as if the stalks were too lazy to hold up their heads to allow proper maturity.

The lodging of grain is general. It has come within the experience of every grain farmer to a greater or less degree. It has been and is still a common experience of the Illinois and Iowa farmers. This had considerable to do in giving corn its pre-eminence on those rich, black prairie soils of the corn belt. The lodging problem looms up big in sections given over to intensive dairying. This is certainly true in Wisconsin. Indeed, many a Wisconsin dairy farmer has already come to recognize the growing of oats, in particular, as a most annoying problem. Others are in a quandary whether or not to grow small grains at all. It is a common question now at agricultural meetings how to prevent oats from going down. There are soil conditions where the only answer to that question is, "Grow no oats at all". In the early stages of marsh land development the growing of small grains is seldom recommended, because the crop is sure to go flat long before harvest.



Fig. 1. Response to a liberal supply of available nitrogen; but no lodging of this crop. Each shock represents amount of corn cut from one square rod.



Courtesy J. B. Lippincott Company.

Fig. 2. The use of mineral fertilizers goes a long ways in solving the lodging problem on peat soils. To right, rock phosphate and potash applied in 1913 for corn caused oats to stand up in 1918.

It is rare, indeed, to see grain lodge on depleted soils, on red clays, on light-colored silt loams and clay loams, and on sands. This crop problem is confined to black soils—soils that are usually well supplied with organic matter and comparatively rich in available nitrogen. There is a close relation, therefore, between grain lodging and the nitrogen supply in soils. It is the comparative abundance of nitrogen rather than the lack of it to which we must turn our attention as the cause of the trouble.

Those Generous Appetites

It seems that generous appetites are widely distributed in nature. Seat a small boy before a pile of candy, and it's ten to one he will eat himself sick. Set a huge, juicy, strawberry shortcake before a man just finishing his meal. We can guess the rest. Once, when a boy down on the farm, the writer brought from the corn field thirteen grown mice and about twenty young, hairless ones, and gave them all to the house cat. As a result the cat went mad, very mad. Corn fodder grown on nitrogen-rich soil is richer in nitrogen than fodder grown on a poor soil. Corn is lavish in the use of nitrogen when given a chance. Sow oats on a soil "black with nitrogen" and the chances are you'll get grain surfeited with nitrogen.

Nitrogen, Shade, and Lodging Relations

Just an over-dose of nitrogen is not enough to explain the lodging question. Corn is a gross feeder on nitrogen, yet did you ever see checked corn lodge like oats? The writer never did, though he has seen thickly and closely planted fodder corn lodge badly. Have you ever observed how much better wheat stands up than oats or barley? And rye the best of all—even though it may grow six feet tall. Why this difference? It isn't because rye and wheat have more mineral in their straw to the pound of crop. Oats heads the list in this respect. This is what average chemical analyses show. It is not to be inferred that the mineral feeding of grain has no bearing on the lodging problem. The taking in of a sufficiency of phosphorus, potassium, and calcium (lime) by the plant may produce an important physiological effect upon the living protoplasm of the cells, which effect may exercise a better "balanced" control over the intake of nitrogen. This, however, has not been experimentally or practically shown. Thus it remains only a theory.

The author has tried acid phosphate and rock phosphate on some "lodging" soils, but with no apparent results. Some claim that potash fertilizer helped to some extent in making stronger straw. In a few cases pulverized limestone has been tried on acid soil for barley—and, strange to say, surprising results were secured. Rainfall and other weather conditions must be carefully taken into consideration before any definite conclusions can be drawn on this particular phase of the questioin. It is known for a certainty that the judicious use of phosphate and potash fertilizers on peat and muck soils goes a long ways in solving the lodging problem on these two types of soil.

It is nitrogen that is largely responsible in making plants green and in promoting growth. When a gardener wishes to "force" his vegetables, he feeds them a ration rich in nitrogen, and obtains as a result crisp and juicy products. Grain that secures a liberal supply of nitrogen makes a rapid growth, and the stems tend to become rather watery and weak. Shade or half-shade augments this condition, and hence a much weaker straw results.

Rye possesses comparatively meager leaf surface. Its leaves are narrow and they are inclined to hug the stems, quite unlike oats or barley. This scarcity of leaves permits sunlight to strike on every portion of the rye stem clear to the ground; and, because of the sunlight, quick, watery growth is prevented, and the stem grows strong and tough instead, possessing the remarkable bending and straining powers peculiar to hollow cylinders. This explains the strength of the cornstalk when planted in checked rows. Wheat is very much like rye except that its leaf surface is somewhat greater.

Oats and barley, on the other hand, develop an abundance of broad leaves, particularly when liberally fed on nitrogen. These broad and heavy leaves cast a heavy shade upon the lower portion of the stem and, as a result, that portion of the straw growing in the shade becomes succulent and consequently weak. As the crop advances, greater and greater weight must be carried until finally the super-structure becomes so heavy, especially when wet with dew or rain, that the underpinning gives way, and down goes the crop probably just entering the dough stage.

Incidentally, this shading proposition in the case of oats and barley makes it doubly difficult to get a stand of clover or of grasses. When lodging occurs, the chances are that so thick a matting of straw and leaves is formed that the young seeding is killed entirely because of the lack of sunlight. In this relation wheat and rye are splendid crops to use in getting a stand of clover. As regards rye, too often the land is rather poor to nourish the seeding properly, to say nothing of the moisture supply after the rye is harvested. The writer well remembers that whenever his father wanted to be sure of getting a good catch of clover on any particular field, or a portion of it, winter wheat was sown, and he does not recall a single failure. In this respect wheat is a splendid crop to introduce into the rotation, not necessarily for the whole farm, but for certain fields that need the clover. Barley has an advantage over oats as a nurse crop in that it matures earlier, and hence is cut earlier, thus giving the seeding a better chance—that is, if the sun at the time of harvest is not too burning hot.

What Can We Do About It?

It seems very probable that the rapid growth due to nitrogen, together with the shading factor are the prime causes at the bottom of practically every case of grain lodging on rich, upland, mineral soils. What can we do about it? Can anything be done? In some cases very little or nothing can be done to immediately correct the soil condition. Instead of small grains, other crops should be grown, such as corn, cabbage, and sugar beets. There are, nevertheless, certain points well worth keeping in mind when dealing with this question under discussion.

It is known to be a fact that some farmers have been advised to plow some of their fields very deep so as to bury the top layer of soil containing the organic matter (not too much

(Continued on page 710)



Fig. 3. Keep the soil compact and you check the formation of available nitrogen in the soil. To left, sod was fall plowed; to right, sod was spring plowed—other conditions being equal. Oats would lodge on area of the big corn.



Fig. 4. The oat crop that stood up because the seed was broadcasted on a rich corn stubble field, and covered by shallow disking. If this is a premium on laziness, then here is a case where it paid to be lazy.

Electricity in New Zealand

GEORGE OSBORNE, NEW ZEALAND

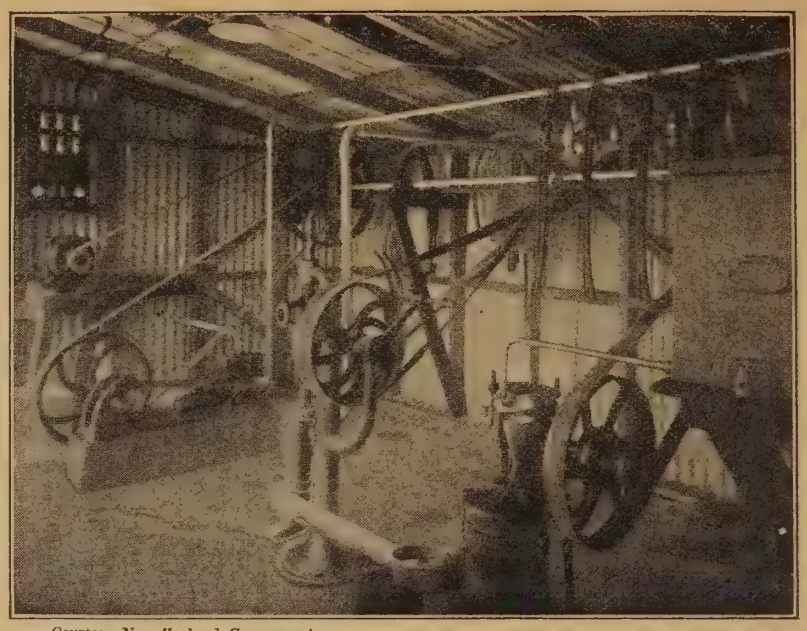
THE government of the Dominion of New Zealand in 1910 passed legislation which enabled it to develop water power throughout the country, and as a sequel the Lake Coleridge Works were started and a continuous service run there from March 1st, 1915. The water is taken from an Alpine Lake 1,667 ft. above sea level, and is discharged into the Rakia river, 500 ft. below. The terminal of the line is at the city of Christchurch, 65 miles distant. The country passed through is mainly wheat growing, and a fair amount of it is in dairying. In Christchurch itself the current is used for industrial and municipal undertakings and domestic lighting and heating. The rural district served, although large, is not essentially dairying as say the large part of the southland, Waikota, Taranaki, Thames Valley, and North Auckland. At the same time the industry is carried on along quite modern lines in the area served by the Lake Coleridge scheme, mainly by the Taitapu Dairy Co.

Mr. Evan Parry, the engineer who was specially engaged by the government to inaugurate the work and as chief electrical engineer of the Dominion, was an enthusiast in the application of electricity to the dairying industry to the fullest possible extent, and he included electricity as a substitute for other means of heating surfaces, taking the place of the boiler for water-heating, for pasteurizing, and for curd heating. He was most helpful to all dairymen interested in the application of electricity to their business. He has recently joined one of the great English electrical interests and his successor is Mr. L. Birks, to whom I am indebted for the leading facts of this article, given specifically for Hoard's Dairyman.

There are over 100 farms around the city of Christchurch using the Lake Coleridge current. The cost of lighting a moderate sized farm with 24 lights is $48 to $50 per annum, providing lights in the cow byres, stables, outhouses, and dwelling house. The milking machine motor used is additional. It is used for separating machine and pumping, and when not in use for these specific purposes can be employed in supplying power for wood-cutting or other work. The government's fixed charge for these motors is $101 per annum. The even speed of the motor is much preferred for driving the separator. All churning on farms and factories within the Lake Coleridge system is now done by electricity. The motor is found to be the ideal power for the milking machine.

The Taitapu Dairy Factory Company operates its large factory and plant with the Lake Coleridge current, and it also has installed complete reticulation throughout the area occupied by its milk suppliers. This has resulted in a great stimulus to the industry in this district.

A test was recently carried out by the New Zealand Public Works Department in Christchurch to ascertain the energy required to operate five milking plants. The motor in each case was 3 h. p., all of the same make. The milking machines were of different makes. The cream separator was installed in each case, but it was running after the milking machines had finished, except in plant E, when separator and skimmilk pump were running simultaneously with the milking machines. The following are the results:



Courtesy New Zealand Government

AN ELECTRICAL INSTALLATION IN NEW ZEALAND

This is a typical installation of milking, pumping, and separating for a New Zealand dairy. Current for a three horse power motor is supplied by the government at a cost of $101 a year, and this is sufficient for a dairy of 40 to 90 cows.

Plant	No. cows	No. buckets	Units used per month Jan.	April
A	45	3	99	72
B	40	3	114	105
C	35	3	138	115
D	90	6	96	65
E	65	6	186	162

These months correspond to July and October in the Northern Hemisphere, in temperate countries. The conclusion drawn from the figures is the low power required. The value of the idle current is also enhanced. The energy taken was very variable and apparently depended more on the efficiency of the milking plant employed than on the number of cows milked. The largest herd, 90 cows, required the smallest amount of energy. The charge for electricity in each case was $101 per annum.

As already stated, the Lake Coleridge plant is owned and operated by the government, but there are private companies supplying current to dairy farms and factories at about the same price as quoted. The use of electricity is extending wherever farms and factories can obtain it at a reasonable price. It is a material factor in ameliorating the labor difficulty. New plants are arranged for in Southland, Te Awamutu, and Thames, and extensions at Hora Hora in the Waikato (North Island) and Lake Coleridge. These will all serve dairy territory and increase the industry.

Hardy Alfalfas in Oregon

F. L., BALLARD, Oregon College of Agriculture



GRIMM AND COMMON TYPE IN BLUE MOUNTAIN SECTION OF OREGON

Grimm on right yields $56 more per acre than common.

GRIMM alfalfa is making dairying a more profitable industry in several parts of the state of Oregon as it is proving well adapted to districts of high altitudes where severe winters prevail. Before the general adoption of Grimm alfalfa as the most desirable variety, considerable winter-killing was experienced, often to such an extent that alfalfa was considered a hazardous risk. Now, however, in these districts large acreages are being harvested annually and with the development of silos in these regions through the use of sunflowers and corn grown from acclimated seed, dairying is becoming more profitable and many young farmers are taking it up who, under the old type of farming based on wild hay and range for live stock, would not consider the dairy industry.

Union and Deschutes Counties are two leading counties in the acreage of Grimm alfalfa and are also among the leading counties in Oregon from the standpoint of increased interest in the dairy business. Union County was formerly a range live stock county. In parts of the county wheat was grown under the summer-fallow system which leaves the land plowed and harrowed but in idleness every second year in order to conserve sufficient moisture for the wheat crop.

A few seasons ago, under the leadership of County Agent P. H. Spillman, a number of farmers sowed Grimm alfalfa on lands which had previously lost their crop because of winter-killing. The Grimm alfalfa succeeded well and a series of field meetings and farmers' picnics were held to demonstrate the value of the hardy type alfalfa. Fred Zaugg was one of the farmers demonstrating the improvement of Grimm over other alfalfa types. He found that where his common alfalfa was badly injured by winter-killing and produced two tons per acre, his field of Grimm produced four and three-fourths tons. Hay in that county is valued at $20 per ton usually, and on that basis Mr. Zaugg's profit per acre from Grimm alfalfa was $56.

Several other farmers had equally favorable results and as a result the following year Mr. Spillman pooled orders for sufficient seed for 1,200 acres and a total of about 1,600 acres were sown. The yields from this seed are proving equal to expectations and several hundred acres additional were sown this spring.



GRIMM ALFALFA IN HIGH MOUNTAIN VALLEYS OF EASTERN OREGON IS PROVIDING THE BEST TYPE OF FEED FOR DAIRY ANIMALS



GRIMM ALFALFA ON RIGHT VS. COMMON TYPE AT ELEVATION OF 3,000 FT. IN EASTERN OREGON

While working with the Grimm alfalfa, County Agent Spillman also succeeded in demonstrating that the summer-fallow land on the wheat farms could be used to advantage for growing acclimated corn or sunflowers for ensilage. The wheat crop following corn was slightly reduced but the gross returns of grain and ensilage for two years compared with a grain crop and a year of idle summer-fallow were in favor of the diversity plan. As a result, where there were about 300 acres of corn and no silos in Union County in 1914, there are this season approximately 2,000 acres of corn and 116 silos, with about thirty silos to be erected this year.

Practically as good results have been obtained with Grimm alfalfa in other mountainous districts. For in-

(Continued on page 703)

How Big Is the Farmer's Job

L. R. LUTHER, INDIANA

WE can safely say at the outset that the farmer's job is as big as he makes it. It depends entirely upon the farmer himself and the view he takes of his own occupation. He who merely follows his team and never concerns himself with the problems and possibilities that lie before him may not have a big job. But the man who has a keen desire to make every farm operation pay, to do constructive work by building up his land, by improving his live stock, and by beautifying his home, has a job that compares favorably with that of the president of the United States in all respects excepting salary.

In the following discussion I hope to set forth what seems to me essential qualifications of a successful farmer.

What the Farmer Should Know

The earliest conception of a farmer was one who tilled the soil. This early idea still holds true, for even the highest specialized type of farming requires the use of at least a small amount of soil. It is therefore necessary that the farmer have a working knowledge of his soil. It would be well to understand the various classes of soil, their composition and relative water holding capacity. A composite sample of both the surface and subsoil in various fields should be taken occasionally to have tested. There is a right way to take his sample and we expect that our modern farmer has learned this method. If he has had special training in agriculture, he will probably make the various tests for himself for acid, humus, and phosphates. In preparing to put alfalfa or clover in a certain field, the approximate lime requirement of the soil should be taken.

Last fall I took a composite sample of both the surface and sub-soil from a field where I planned to sow alfalfa this year. Upon making a careful test of this soil, I found it was in need of about three tons of lime to correct the acidity. Of course I applied three tons per acre, where had it not been for the test made, I might have stopped at two tons as was recommended by several.



THE COWS MUST BE UNDERSTOOD AND KEPT COMFORTABLE TO BE A SOURCE OF PROFIT



THE FARM GARDEN IS COMING INTO ITS OWN AS A SOURCE OF PROFIT AS WELL AS PRIDE AND PLEASURE TO THE FARMER AND HIS FAMILY

Perhaps second in importance to the soil itself, is the proper selecting, rotating, growing, and handling of farm crops. The farmer must study closely the crops available and make a wise selection of those best adapted to his soil, climatic conditions, and his own needs.

It is a recognized fact that the successful farmer should keep live stock. This must be done to consume the cheap roughage and maintain the fertility of the soil. With this branch of farm business comes many problems such as the breeding, feeding, care, handling, advertising, and selling of stock. Each of these divisions is a special subject to be studied, practiced, and mastered by this modern successful farmer.

The farm orchard is another very important factor which must be understood and handled carefully. No thinking person would be willing to rate one as a good farmer unless a well kept farm orchard stood out prominently as a testimonial to the farmer's ability, forethought, and good judgment. To handle rightly and maintain a good farm orchard, one must know the fundamentals and many details of horticulture. Spraying, pruning, thinning, harvesting, and planting are the important factors that must be studied and practiced.

Pressure of necessity, during our great war, forced upon the people the importance of gardening. The farm garden is in fact coming into its own as a source of profit as well as pride and pleasure to the farmer and his family. There has been developed new ways of storing, canning, and preserving vegetables so they may be used throughout the year. New insect

(Continued on page 694)

SETTING THE STAGE FOR A BIG SALE

ORIN CROOKER, ILLINOIS

FEW people who attend a big sale of live stock or dairy animals appreciate the large amount of work that has been necessary in order to "put it across" without a hitch. To the spectator it looks easy enough. The animals are led on and off the platform—the auctioneers and bid getters go through their accustomed gymnastics and vocal exercises—the crowd goes home—the clerk totals up the days' receipts! Thus, at least, does it appear on the surface. But to set the stage for this three- or four-hour performance requires weeks—perhaps months—of effort. The scope of the sale must be worked out, suitable publicity must be given, animals must be brought to sale ring condition, provision for the comfort of the crowd must be made. After it is all over, those who have engineered it are apt to feel that with a day or two of coaching they could handle a three-ring circus.

So many of those who attended the Guernsey sale at Tilden Farms, near Delavan, Wis., recently, commended the way in which everything was handled that it seemed as though the story of how this sale was worked up would be of interest to the many readers of this publication who attend or engage in similar sales. The following account, although phrased in the first person, is really a composite description for which the writer is indebted not only to Mr. James H. Murphy, the manager of the farm, but to Wm. Geist, foreman, Joseph Deneen, herdsman, and others about the place.

"We started to make our plans for this sale many months ago," our informant began. "Of course, it wasn't until about the first of April that we actually began to put the animals in sale condition, but we were busy on the job long before this. Before we could do anything at all—even in the way of starting publicity—we had to decide upon the animals which we would offer for sale. In doing this we had to choose wisely and bear in mind that buyers would come seeking to meet their own needs and not particularly just to bid on what we might put up for sale. Consequently it was necessary to arrange our sale list with this in view. We decided that 60 animals would be all that could be disposed of without wearying those in attendance. Of this number, we determined first of all that only five should be males, as this was about the proportion we felt would be in demand. The remaining number we grouped in three classes in order to meet all sorts of buyer's needs. One-third of these animals were to be young cows and milkers; another third were to be cows bred to freshen around sale time; the balance were to be 'open' stock ranging from six to sixteen months. On this



GENERAL VIEW OF THE BUILDINGS ON TILDEN FARMS

1847 ROGERS BROS.
SILVERWARE



She has the best

Not only silverware, but the best silverware, is what every woman desires.

One reason why "1847 Rogers Bros." is today the most widely used and best known silverplate is because news of its beauty and quality travels from neighbor to neighbor. And think how long it has been on the tables of the best families—more than seventy years!

Louvain Pattern

Today you can buy Spoons, Knives and Forks which can be matched in pattern by Tea and Coffee Sets, Meat and Vegetable Dishes, etc.—all guaranteed without qualification.

To get exactly what you want, ask your dealer for it by FULL name, "1847 Rogers Bros." Write for X-76, illustrating other patterns, to International Silver Company, Meriden, Conn.

The Family Plate for Seventy Years

INTERNATIONAL SILVER CO.



Apollo
Roofing Products

Highest quality—Sold by weight

Why build to burn? Use Galvanized Roofing for farm buildings—and good Tin Roofs for residences.

APOLLO-KEYSTONE Galvanized Sheets not only excel for Roofing and Siding purposes, but are specially adapted for Culverts, Tanks, Spouting, and all exposed sheet metal work. KEYSTONE Copper Steel Roofing Tin Plates also give unequaled service. Sold by leading metal merchants. Look for the Keystone below regular brands. Shall we send our valuable "Better Buildings" booklet?

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Building, Pittsburgh, Pa.



FRESH WATER FOR EVERY DRINK

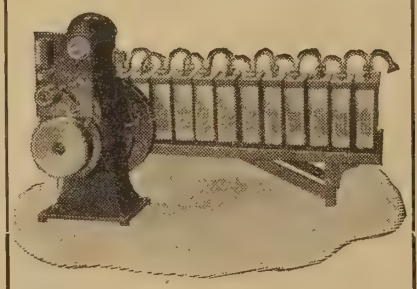
The more clean, fresh water a cow consumes the more milk she gives. Make it easy for her to get fresh water.

The ACORN Drinking Bowl

permits her to obtain fresh water by simply poking her nose into the bowl—valve opens automatically giving fresh flow of water. Write for circular.

John W. Ladd Co.
(Branch) 674 Lafayette Blvd.
Cleveland, Ohio DETROIT, MICH.

REGALITE

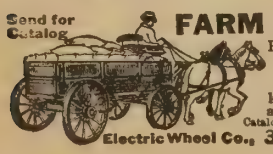


Farm Lighting Plant

A ¾ k.w. generator directly connected with a 2 H. P. air cooled motor. Capacity 45 20-watt lamps. Willard storage battery. Dealers wanted. Write for particulars.

REGAL GASOLINE ENGINE CO.
Jefferson Street, Coldwater, Mich.

Send for Catalog



FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 31 Elm St., Quincy, Ills.

basis, then, we went through the herd list and picked the animals to be included in the sale. This done, we were ready to prepare our advertising copy and start work on our sale catalogue.

"Publicity for a sale of this kind entails a lot of work. In our case we had to make a special bid for attention since it was to be our initial appearance in the way of an 'annual sale'. Guernsey men had to be informed of the fact that we were going to hold a sale. Another year, perhaps, many of them will be on the watch for it. We think we did a thorough job in the way of publicity. Some folks might think we over-did it. But we have no regrets. Every animal listed in the catalogue was sold. Our advertising was planned with a view of covering the field as thoroughly as possible. For instance, it appeared in a national publication going entirely to Guernsey people. It appeared in a national dairy paper going to dairymen who handled all sorts of cows. It appeared in a state farm paper going to Wisconsin farmers, all of whom, no doubt, keep cows even though they may not be engaged largely in dairying. In addition to these publications of wide circulation we ran display 'ads' in all the local papers in Walworth County by means of which we made sure of drawing a crowd—and a crowd is essential to a good, brisk sale. It may interest you to know that our advertising outside of the county brought us 200 special requests for sale catalogues—most of them from distant points.

"This, however, did not complete the work of publicity. We took the membership list of the American Guernsey Cattle Club and mailed our sale catalogue to five hundred selected addresses. Each catalogue was accompanied by a personal letter sent under separate cover. These letters were all alike, of course, but they were not mimeographed. Each was separately typed by our office man, and personally signed by Mr. Murphy, the manager. There was a 'personal touch' to these letters which we believe helped very much to focus attention on our sale.

"Publicity, too, is an expensive pastime, even in the live stock sale business. Our advertising cost between $700 and $800. Our sale catalogues, which were printed on a good grade of paper containing several photographs taken especially for it, cost us 45 cents each—and we used an even thousand of them. But to make money one has to spend money, and our sale expense, as you will see shortly, did not exceed the average which such sales entail.

"The work of getting the sale animals ready was under way fully two months before they went onto the platform. Our first move was to separate these sixty animals from the rest of the herd and put them in a barn by themselves. Then we started a feeding campaign to put them in prime condition. They were fed liberally three times a day on grain, silage, and beet pulp moistened with molasses. Three weeks before the sale every animal was clipped. If their feet were out of shape they were trimmed up. Accumulations on the horns were worked off with horn rasp and sandpaper and the horns themselves brought to a splendid state of polish. A week previous to the sale the animals were given a bath to put their skin and coats in good shape. Their tails were scrubbed and combed. We had as pretty a bunch of cows on the day of the sale as you ever saw. But this, too, was work. Mr. Deneen, our herdsman, will vouch for that. In addition to all of this, each animal was broken to lead on the halter and put through its stunt of making its bow to an imaginary audience. We didn't want them to get stage fright. With one or two exceptions they behaved remarkably well. All of us were proud of them.

"The day of the sale Mrs. Murphy, the manager's wife, assisted by part of the farm help, attacked another huge task—that of feeding the hundreds of people whom we anticipated would be in attendance. As the sale began at 12:30 o'clock we knew that many would have had their lunch before their arrival, but we knew, also, that there would be scores upon scores whose 'tummies' would need a bit of refreshment in order to put them in good humor for the afternoon's work under the roof of the big implement shelter where the sale would be staged. Accordingly, Mrs. Murphy and her aides packed 400 cartons of lunch. Each of these contained two ham sandwiches, a cookie, a doughnut, a piece of cheese, a banana and a good cigar. On the morning of the sale we bottled 400 pints of fresh milk and placed it on the ice. Hot coffee was served to all who wished it. Three hundred of these cartons were taken before the sale. The other hundred were given out at the close to such as might have no opportunity of securing supper before a late hour. There was no charge for this service, and the crowd was not backward in voicing its appreciation of our hospitality. But it's some work to prepare food for 400 cartons and assemble it properly in the containers. If you don't believe it ask Mrs. Murphy.

"There were other things—many of them—to see about. Drinking water had to be piped to a convenient place, autos provided for handling such of the crowd as came on the train, the barns and premises were put in shape for visitors. This last was no great task, however, for we aim always to keep things pretty tidy. Our chief effort in this line was to whitewash all the stables and clip the lawns.

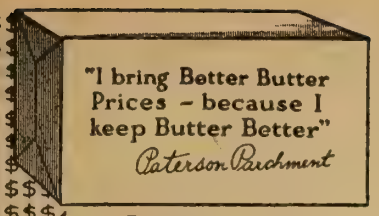
"Fortune favored us with a perfect day and the whole farm force of thirty odd was on tip-toe for the event. Autos began driving in about half past ten and by noon the pasture lot looked as though we had grown an auto crop of bumper proportion. There were between seven and eight hundred people in attendance. Everything went through without a hitch and every animal of the sixty was sold save one which through an error had been omitted from the sale catalogue. The total receipts were $21,880—an average of $365 a head. The sale expense, including all outside expenditures over and above the regular farm operating costs, was a trifle under $35 a head, which is not far different, we believe, from expense accounts on similar sales."

How Big Is the Farmer's Job

(Continued from page693)

pests have been discovered along with new methods for their control and eradication. Gardening, then, is a smaller branch of the farm business which cannot profitably be neglected or overlooked. It will be seen that to do it justice, some thought and study must be devoted to the subject.

In the successful handling of farm crops, horticulture and gardening, one will become familiar with the subject of entomology or insect life. Something should be known concerning the insect pests, their habits, life history, characteristics, and methods of control. The same may be said of the science of botany or the study of plants. The agricultural course at the state colleges today is rich in the study of plants, their habits of growth, methods of identification, and plant breeding. These are things



Make Your Butter Pay More Profit

Quality butter brings top prices. But it must be a quality beyond the cow and the churn. In what condition does your butter reach your customer? *That's the secret of butter profits.*

For an amount too small to consider you can wrap your butter in

Paterson Pioneer Parchment Paper

stamped with your own brand, which to your customer becomes an identifying mark of fresh butter, free from dirt, impurities and bad odors—wholesome, fine flavored butter which people gladly pay more for. Try it.

Write for free samples and book, "Better Butter". Worth money to every dairyman.

THE PATERSON PARCHMENT PAPER CO.
37 Eighth St.
Passaic
N. J.

TRADE MARK
THE PATERSON PARCHMENT PAPER CO. PIONEER PASSAIC N.J.

Cow Waters Herself



with this wonderful new **Libbey Automatic Water Bowl.** Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

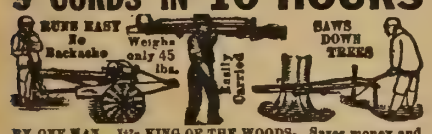


PAT. 7-2-07
ANTI-COW-KICKER

Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.

9 CORDS IN 10 HOURS



BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B125 showing low price and latest improvements. First order gets agency.
Folding Sawing Machine Co., 161 West Harrison St., Chicago, Ill.

Learn to be an Auctioneer

Taught by the practical method. By our plan you study at home and receive a part of the commission while learning. Enroll now and be ready for the fall business. Write for our free catalog. Address

Kissling's Auction School of America, Indianapolis, Ind., Dept. F, William C. Kissling, President.

DAILY FOOD STOCK FEED $12.50 FOR 50 GALS
MOLASSES
Best and Greatest Stock Feed ever discovered. Equal to corn and cheaper. Barrels weigh 625 pounds, over 50 gallons. Big feeders using 60-barrel car lots cheaper. Can be mixed with roughage to replace grains. Will ship sight draft to bill of lading payable on arrival at your station. Sample and book free.
THE J. J. GARRES COMPANY, DEPT H, NEW ORLEANS, LA.

which the farmer must appreciate in order to best maintain and improve his best varieties of grain and other crops.

Other sciences such as chemistry, physics, etc., relate more or less directly to the farmer's job. And while a knowledge of these is not absolutely essential, yet many times one of these scientific facts, stored away in the farmer's brain cells, may be called forth to explain a perplexing problem.

What the Farmer should be Capable of Doing

It is not sufficient that this great fund of information be held ready for instant use in the farmer's mind. He might be in possession of all the practical and scientific facts mentioned, yet without the happy combination of an ability to do things. He would be doomed to failure within a reasonable length of time. On a farm of any considerable size, the operator is the responsible person and all hands look to him to keep the work moving smoothly, with no confusion and without a break. To do this successfully the farmer must be a close observer and student of his machinery. He should have a complete kit of tools and repairs at hand so that, when a piece of machinery breaks, he can quickly make the necessary repair and avoid a big loss of time.

The working ability and condition of the horses usually depend upon the degree of watchful care and supervision given to them by the owner himself. This important part of successful farming must not be left with the hired help; if it is, it often happens, at a busy time perhaps, that a horse must be taken out of a team on account of a sore neck, sore shoulder, sweeney, or the rough-pin.

Managing the milk cows for profit the hogs, sheep, and poultry are all very important in the curriculum of successful farming. Any one of these branches is sufficiently complicated that it may be made a study in itself.

The Farmer's Personality

I have often thought that if the farmer were as careful of his personal appearance and personality as the average business man in the city, how wonderfully it would change the common conception of the farmer. It always seems that city men in business are continually striving to make their personality stand out as a shining light before the world. It is largely their capital, their stock in trade, and they make the most of it.

In a farm journal some time ago I was interested in reading a controversy between a man and a woman contributor. The question was concerning the personal appearance of the farmer. I believe the woman made the assertion that a farmer should be very careful to appear in public clean and neat at all times when possible. The man contributor took up the defense and claimed that many successful farmers were too busy to consider their clothes. He said at times it became necessary for the farmer to rush into town, coming direct from the cow barn or hog lot and for these reasons he would look pretty rough, but at the same time he might be a successful hog breeder or dairyman. The woman stoutly maintained that the farmer should wash and take a few minutes necessary to put on clean clothes. I should hate to judge who was right in this dispute but I imagine practically every one except the farmer himself would agree with the woman's views on the subject. There is one thing certain, if we ever hope to dignify the farmer's job we cannot do so by wearing dirty, shabby clothes on our trips to town or any gathering where we come before the public.

Yield of Each Cow Figured for You



By the *CP* Pail Balancing Scale

Has two indicators. Weighs the milk in the pail. Eliminates errors. First hang the empty pail on the scale. Turn the thumbscrew in the center of the dial, which moves the red indicator until it is at the 0 mark, thus balancing the weight of the pail. Then add the milk or cream and the result shown by the red indicator gives the net weight of the milk or cream, and at the same time the black indicator gives the gross weight of pail and milk.

The capacity of these scales is 30, 60 and 120 pounds, according to size, in pounds and tenths of pounds. With each scale we furnish special blanks that will contain the record for two milkings a day for one week for 14 cows.

The scale can also be used for all weighing purposes.

Price each, 30 lbs. capacity by 1-20 lb. $4.85, 60-lb. $5.65, 120-lb. $8.85. Extra records per dozen, 15c.

Price each Postpaid **4.85**

Send for Big Dairy Mail Sales Catalog

The Creamery Package Mfg. Company
68 W. Kinzie St., Chicago

For Hogs Too

In sleeping and farrowing pens, cold floors are dangerous, while wood is unsanitary and soon rots out. Hogs are as susceptible as dairy cows to the diseases that result from dampness and cold, and young pigs especially require warm, dry floors.



HOG HOUSE FLOORED WITH CIRCLE A CORK BRICK.
THOS. DEVLIN, JANNEY STATION, PA.

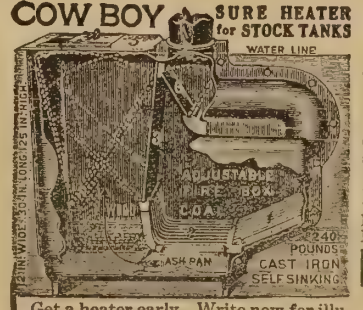
Laying boards over concrete is a makeshift. Why not put in a floor that is warm, non-absorbent, easily kept clean and practically everlasting? Circle A Cork Brick are used in over 12,000 dairy barns—a good floor for cows is a good floor for hogs.

"Better Stall Floors" is a 28-page illustrated book on barn floors. If you are building a hog house, send for it and a sample of cork brick. It will help you and it's free.

Armstrong Cork & Insulation Company 112 Twenty-fourth Street PITTSBURGH, PA.

Circle A Cork Brick
FOR ALL STALL FLOORS

COW BOY SURE HEATER for STOCK TANKS



Get a heater early. Write now for illustrated circulars and dealer's name, to

DON'T WASTE FEED

SAVE IT this winter by heating the water for your stock with Coal, Wood or Cobs in a

COW BOY TANK HEATER

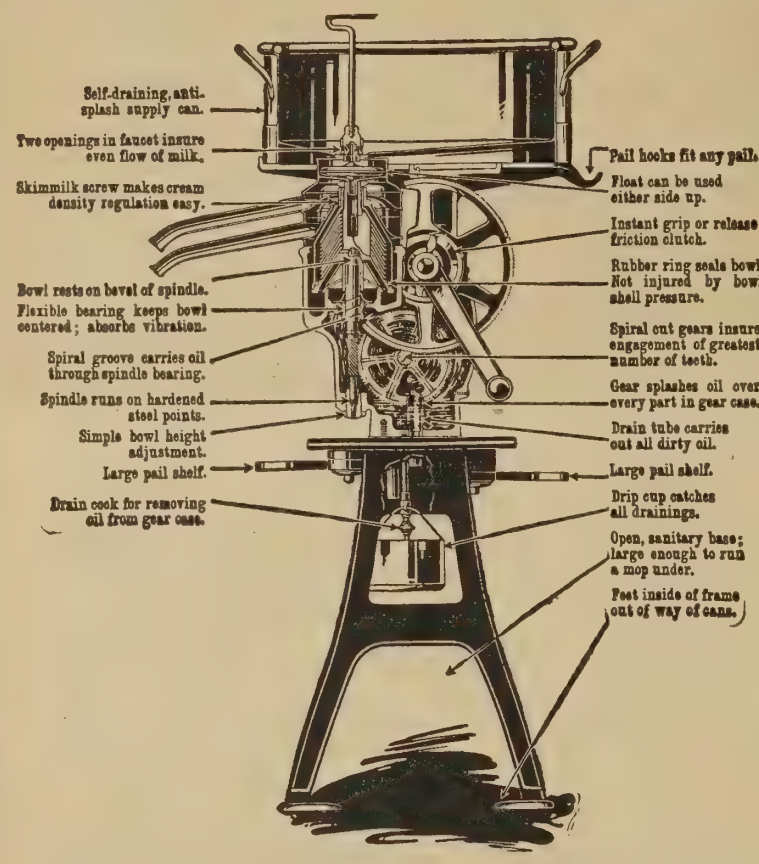
Quickest to heat; strongest draft; adjustable grates; ashes removed without disturbing fire; keeps fire 24 hrs. **Absolutely Safe;** pays for itself in 2 months with 4 cows; **Self-Sinking;** can be used in Wood, Steel or Concrete Tanks of any size. Most reliable, practical, efficient and durable Tank Heater manufactured. Thousands used everywhere.

"Purchased 3 of your Tank Heaters last Winter, worked very satisfactorily and are well worth their cost. Every stockman should use one," W. H. PEW, Prof. of Animal Husbandry, Iowa State College, Ames, Ia.

THE MUNDIE MANUFACTURING COMPANY
513 Brunner Street, Peru, Illinois

Primrose Mechanics—

After all, when you come right down to it, buying a cream separator is chiefly a matter of mechanics, isn't it? The skimming efficiency, ease of operation, durability — they are all based on little details of mechanical design and construction. Consider carefully, therefore, the following self-explanatory diagram of the PRIMROSE!



The catalog that we have ready to mail to you will give you more detailed information about the **Primrose** — and your nearby International dealer has a sample machine on his floor that he will be glad to explain and demonstrate for your benefit.

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA (INCORPORATED) U S A
92 Branch Houses in the United States



Save Time, Save Trouble —get more milk with UNION GRAINS!

IT takes time to mix special feeds and in the absence of the most careful selection and tests you can't be sure of the ingredients. Let us take the trouble off your hands and give you a *certainty!*

For 17 years Union Grains has been made to the same splendid formula. Hundreds of dairymen—feed experts themselves—have tested it against the best of home mixed feeds—and then adopted Union Grains for good! They know it pays!

For the man who appreciates the good business of feeding good feed to good stock and who has plenty of other work to do Union Grains is a God-send!

Try a load now!

Ask for a Union Grains Cost Sheet. It will show you where your profit comes from, and help you spot the "boarders" in your herd.

Other Ubiko Products: Ubiko Stock Feed, Ubiko Buttermilk Egg Mash, Ubiko Buttermilk Growing Mash, Ubiko Pig Meal. 10

THE UBIKO MILLING CO., Dept. F. Cincinnati, Ohio

UBIKO
BALANCED RATIONS
For All Farm Stock
UNION GRAINS

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Pa.	Westmoreland Co.	Daniel G. Glenn	Sept.	281	19	59.6	F. S. Blank
Mich.	W. Allegan Co.	Carl O. Robb	"	235	4	47.4	Morgan Bros.
Ky.	McCracken Co.	Ben G. Marsh	"	326	6	50.5	Milliken & Dexter
Wis.	Racine & Kenosha	T. N. Boyer	"	397	16	62.9	Harvey Nelson
Mo.	Webster Co.	F. M. Herman	Aug.	482	22	78.3	W. W. Shertz
"	Webster Co.	F. M. Herman	Sept.	396	14	62.6	R. E. Jackson
"	St. Louis Co.	J. L. Malone	"	290	12	63.4	Christ Ehmler
Colo.	Douglas County	R. E. Sherman	"	450	12	58.0	E. J. Lindquist
"	Platte, Boulder & St. Vrain	L. L. Simpson	"	319	28	72.6	W. C. Sauer
"	Otero County	A. A. Eastman	"	152	1	42.4	J. H. Holm
"	Johnstown	Walter Guerkink	"	286	49	63.7	W. B. Polley
N. H.	Hillsboro	W. E. Sargent	"	10	5	49.3	Batchelder Farms
"	Cheshire	Geo. I. Boyce	"	10	9	67.3	W. E. Johnson
"	Merrimac	W. H. Abbott	"	10	10	58.2	Francis Pratt

Association Notes

Westmoreland County, Pennsylvania:—Five new silos have been built and filled by members of the association. In September the condensery paid $3.05 per cwt. for 3.5% milk. Milk retails for 16c per quart and butter for 70c per pound. Feed prices are: Union grains, $80 per ton; Larro, $76.60; cottonseed meal, $63 in carload lots; oil meal, $64 in carload lots.

Western Allegan County, Michigan:—September market milk testing 3.5% sold for $3.30 per cwt. and 4c per point above this test and 6c per point above 4%. Butter retails for 62c per pound. Hay is rated at $28 per ton; cottonseed meal, $80; oats, 65c per bushel; corn, $1 per bushel.

McCracken County, Kentucky:—Eight unprofitable cows have been sold to the butcher since the founding of the association. Two pure-bred Jersey bull calves have been placed with members. Through the assistance of the county agent, a boys' and girls' calf club has been organized. Four good pure-bred Jersey heifers have been placed in the county and seven or eight Holstein heifers are to be brought in in the near future. The dairymen and cattle feeders are cooperating in the buying of cottonseed meal. In September, market milk testing 3.6% sold for $4.50 per cwt. and 6c per point above. The creamery paid 57c per pound for fat. Milk retails for 18c per quart and butter for 60c and 65c per pound. Feed prices are: Bran, $55—$60 per ton; cottonseed meal, $60—$80; gluten feed, $70.

Webster County, Missouri:—In August, the creamery paid 53c per pound for fat. Bran sold for $52 per ton; cottonseed meal, $73; pasture, $2 per head. In September fat sold for 55c per pound at the creamery, and feeds are rated as follows: bran, $50 per ton; cottonseed meal, $70; pasture, $2 per head.

St. Louis County, Missouri:—A Hereford bull and a scrub Guernsey have been replaced with registered Holstein bulls. This association is now 100 per cent in pure-bred sires. Ten poor producers were sold out of the herd of Bellefontaine Farms with the result that the average milk production per cow was increased from 695 lbs. to 965.6 lbs., average fat production from 22.74 lbs. to 33.32 lbs., and the average profit from $11.94 to $23.61. La Salle Institution sold 20 grade Holsteins for an average of $240 each. September market milk testing 3.25% sold for 30c to 42c per gallon. Milk retails for 16c and 18c per quart and butter for 80c per pound. Feed prices are: bran, $40 per ton; shorts, $55; cottonseed meal, $55; linseed meal, $60; alfalfa hay, $36; clover, $30; clover and timothy mixed, $25 to $30.

Douglas County, Colorado:—Nine "boarder" cows have been sold and seven high grades purchased during September. Another tile silo has been erected. The creamery paid 80c per pound for fat. Milk retails for 10c per quart. Local feed prices are: alfalfa, $16—$20 per ton; silage, $8—$10; bran, $2.30—$3.30 per cwt.; cottonseed meal, $3.75—$5; linseed meal, $4.75—$5.50; oats, $3.20—$4; barley, $4; corn chop, $2.40—$3.50.

Platte, Boulder & St. Vrain Valleys, Colorado:—The condensery paid 75c per pound for fat in September. Alfalfa is rated at $14—$17 per ton; dry beet pulp, $1.75 per cwt.; bran, $3; cottonseed meal, $4.25; linseed meal, $4.75; oats, $3; barley, $3; corn chop, $3.25—$3.50.

Dairying Thirty Years Ago

For nearly twenty years we have counseled the dairy farmers against letting their cows run out to pasture when cold rain storms occur. It is one of the most wasteful things in the world to do.

The farmer keeps these cows for the milk they give, yet he will expose them to a beating cold rain storm when he knows that such a practice will shrink their milk supply greatly. We will wager that of all the cold rain storms which have swept Wisconsin the past three weeks, not one dairyman in ten kept his cows in the stable during the storms. Yet they would have made money if they had done so. The daily milk record at the Fort Atkinson creamery has told its patrons the theory of shrinkage from this cause with unerring accuracy, and so will every creamery. Yet still the foolish practice goes on. When will farmers learn how to handle a cow? When will they learn the fact that the giving of milk is a mother-function and that warmth and comfort are essentially necessary to a full and profitable exercise of this function?

They are paying a fearful tax every year to their carelessness and indifference and, with all it has cost them, they do not seem to learn and practice any better yet. No intelligent dairyman will let his cows be exposed to a cold rain. Set that down as an axiomatic truth.

Siloing Sorghum Leaves

Mr. C. S. Jobes, president of the Attica, Kansas, bank, writes us there

are sugar works in his place and that he is trying the experiment of siloing the leaves stripped from the stalks of sorghum, of which he has plenty at no cost. His immediate anxiety was to know if a covering made of "bagasse", which is the chips of the sorghum stalks after the sugar has been abstracted, would answer the purpose. We have written him we know of no reason why that will not make the best kind of a covering, certainly as good, if not better, than marsh hay or old straw, cut. By using it he will get pressure and air-tightness by the one act of putting it on.

He has a pit that will hold some 240 tons of silage. Of course the siloing of sorghum leaves is an experiment, but we do not see why they cannot be as successfully used for the purpose as clover or beet leaves and shall expect to hear Mr. Jobes has secured a large amount of cattle food at a slight expense. If we are to enter on the production of sugar from sorghum extensively, the by-product of cattle food may become a source of much revenue.





Kelly Caterpillars are their own best advertisement

The fleet-owner who begins by trying out Caterpillars on one truck almost invariably ends by equipping his entire fleet with them.

The reason is not hard to find. Caterpillars are the most economical truck tires made.

Their massive volume of rubber gives them amazing resilience. Their patented construction gives them traction power which no other truck tires possess.

They save power, gas and oil. They protect the truck from road shocks, cut repair bills to a minimum and lengthen the life of the truck.

In addition to all this they give an excess mileage which alone would be sufficient to convince any truck owner of their economy.

Kelly-Springfield Tire Co.
GENERAL SALES DEPARTMENT
1710 Broadway New York

The Toronto Globe lifts the veil in regard to how "compound lard" is made, by which it will be seen it continues a swindle that is commenced to make oleomargarine. It says that after the oleo oil is pressed out of beef fat, the contents of the filter bags are mixed with cottonseed oil and then from 25 to 30 per cent of lard is added to the beef and cottonseed compound, and the result is the "compound lard" of commerce, of which 320,000,000 lbs. were made in a year. Is it any wonder the makers squirm when they have to brand their stuff, stating the ingredients of which it is made? What kind of statesmen is it who say there shall be no police officials to execute a law to prevent such swindling of the people?

A short time since the cow was sad; she could scarce raise her head, begad. Her hoofs were sore, her tail was limp; her mane and bangs had lost their crimp, and miles she trudged from grass to drink, with scarcely strength enough to wink. The owner, too, looked blue and glum, and cussed the cattle business some. But since the rains the grass is tall—the cow can raise her head and bawl; her side is sleek, no bones protrude, she prances like a Deming dude. Her tail is sleek, her eyes are bright, she snorts and dares the crowd to fight. Her owner, too, digs up the chink and asks the boys to take a drink. God bless the rain, the gentle rain, it makes a man feel young again. He feels like tossing up his hat and howling like a Democrat.—Colorado Clipper.

New England Holstein Organization Campaign

A series of forty-five organization meetings were begun in New England October 20th and will continue to November 20th, under the direction of of the New England Holstein-Friesian Breeders' Club. In this campaign six state associations are co-operating and are being assisted by the extension service of the Holstein-Friesian Association of America. It is expected that through the increased membership which will result from this campaign, sufficient funds can be raised to employ a field secretary for New England.

The first meeting was in Windham County, Vermont, the home of the National Association. Among the speakers in the campaign are President D. D. Aitken, Secretary F. L. Houghton, R. C. Pollock, and Wm. M. Rider. A complete schedule of the meetings to be held can be secured by addressing Wm. M. Rider, Brattleboro, Vermont.

Kentucky and Indiana Dairymen Organize

HOARD'S DAIRYMAN:—Dairymen of Kentucky and Southern Indiana have formed an organization known as the Kentucky and Indiana Milk Producers' Association. It is composed of small producers who do not operate a distributing agency in the city, but sell their product to the big distributors. The association has been incorporated under the laws of Kentucky and is capitalized at $300,000. W. C. Callahan is the secretary, with headquarters in the Inter-Southern Building, Louisville.

The organization comes as a result of what the small producers believe is an effort to hold them to an unfair portion of the profit on the part of the big distributors. They contend that the cost of producing milk has gradually risen without an accompanied increase in returns to them. The primary object of the organization is to form a huge distributing plant in the city of Louisville, which will belong to the entire body of small producers. Each man will bring his products to this depot and distribution to consumers in the city will be made on the unit plan. In this way the promoters of the association expect to cut delivery costs to such an extent that they will be able to sell milk to the consumer for less than the larger distributors, of whom there are four or five in the city and who necessarily duplicate territory as far as delivery is concerned.

A meeting was held at the Seelbach Hotel, Louisville's principal hostelry, about the first of October. Invitations had been sent out to farmer-dairymen in all parts of Kentucky and Southern Indiana. The response was generous and there were several hundred in attendance. Mr. Callahan, the active head of the organization, is very enthusiastic about the prospects for advancing the interest of the small producers of dairy products.

Kentucky. GEO. T. HOLMES.

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EDITORIAL COMMENT



THE TUBERCULIN TEST

Every person who owns cattle should understand the limitations of the tuberculin test and know how tuberculosis may spread. Not infrequently do we get communications from breeders who have purchased cattle subject to the tuberculin test and a sixty-day retest, stating that upon application of the combination test two or three years afterward a large number of their herd reacted. Invariably such men do not understand the limitations of the tuberculin test or how healthy animals can be infected.

A short time ago a breeder wrote that he had purchased fifteen animals from a prominent breeder in another state. All of these animals were purchased subject to the tuberculin test and a sixty-day retest. One year later, one of the fifteen reacted. On this same farm there were 28 other cattle and eight of this number reacted to the test. Without doubt, the fifteen brought to this herd were all free from tuberculosis, but being associated on the same farm with animals suffering from this disease they became infected. It is not difficult in this case to point out the source of infection because it was on the farm, but the owner failed to make the connection and is inclined to hold the breeder responsible from whom he purchased the fifteen head.

Another breeder writes that he purchased nineteen head from a herd known to contain tuberculosis, but that none of those he purchased responded to the test, made at the time of shipping, or to the sixty-day retest, but one year from that time two of the animals reacted. He doubts now whether the tuberculin test is of any value. This man fails to take into consideration, even though only two of the nineteen head he purchased responded to the tuberculin test, that all of them had been exposed to the disease and that the test does not always reveal animals which have only lately been exposed or when the disease is in its incipiency.

Another breeder writes us that he purchased twenty-five animals that at one time responded to the test, but the owner claimed they were no longer suffering from the disease as they did not respond to the tuberculin test made six months ago. In testing these animals for shipment, none of them responded to the test. However, one year from that time, upon retest, five of them reacted to the subcutaneous test, and they all reacted to the combination test, which includes the ophthalmic and intradermal tests. Upon slaughter it was found that all but two had generalized tuberculosis.

The Bureau of Animal Industry holds that if an animal has once reacted to the test it is always a reactor. Last year the Bureau conducted experiments with 343 animals known to have tuberculosis, and upon retest 129 animals failed to react the second time. Upon slaughter and careful post mortem, it was found that the 129 had tuberculosis. It is highly desirable that men purchasing cattle should bear in mind the limitations of the tuberculin test, what it will do and what it will not do. If the tuberculin test were thoroughly understood and how infection spreads, there would be fewer disappointments in eliminating tuberculosis from herds.

FARM BUREAU AND CO-OPERATIVE MARKETING

The Butter, Cheese, & Egg Journal seems to have gotten off on the wrong foot in discussing the activities of the farm bureau and the U. S. Bureau of Markets. It speaks of the work of these institutions as being under the guise of a co-operative movement, and intimates that when their plans are fully developed the distribution of food will be carried on through government agencies and at practically no cost.

There is no foundation for such supposition or charges. It is not contemplated by the U. S. Bureau of Markets to do away with the legitimate distributors of food or to assume the role of the distributors, but it is attempting to improve our present system of marketing and to do away with the speculators. In this it has the hearty co-operation of the farm bureau. The officials and advocates of the farm bureau recognize the necessity of middlemen. This function must be performed by some one, but they also appreciate the necessity of improving our present system of marketing farm products.

Farmers have never been in a position to hold their products but have been forced to sell them at the time of harvest when prices, as a rule, are at their lowest point. This condition has given the speculator an opportunity to buy farm products at low prices and, after holding them, realize good margins. The purpose and object of the U. S. Bureau of Markets and the farm bureau is to establish co-operative enterprises whereby farmers will not be forced to sell a large portion of their crops at the time of harvest or in a rigid market. It is their purpose to place the producer in a position to take care of his own business and not be forced to take prices set by the speculators.

The Butter, Cheese, & Egg Journal asks: "Is it the theme of the farm bureau to establish socialism through a governmental department for one line of industry, thereby establishing socialism a step at a time?" We have not observed that either the farm bureau or the Bureau of Markets is attempting to establish socialistic principles in the marketing of farm products any more than the Wisconsin Cheese Federation is attempting to establish socialism in the marketing of cheese.

The cheese factories in the vicinity of Plymouth a few years ago built a large warehouse where their cheese could be stored and cured and shipped, when necessary, direct to wholesalers or retail stores. It was found, owing to the large production of cheese during the summer, that private corporations purchased cheese at a comparatively low price and sold it in the winter at a comparatively high price. There was nothing wrong about this. On the other hand, there is nothing wrong or is it socialistic for these cheese factories to have federated themselves together for the purpose of curing the cheese and holding it until the market will pay a better price. This is only good business.

The Bureau of Markets has no money invested in this enterprise and it is nonsense for any paper to say that people are being taxed to enable the government to engage in marketing farm products. The plan now under way is for farmers to provide their own funds and to build co-operative institutions whereby all farm products may be handled upon the same basis as the cheese federation is handling cheese.

McCANN AND THE LEAGUE

Can a leopard change his spots? If so, then possibly McCann may have reason to believe that dairy producers are of short memory and he can now come before them as a friend and counselor. But let us take up just one of the many and varied activities of this man who whines and cries out against the "nefarious" League and its officials, and then judge what his support or attack is worth.

In 1915 Alfred W. McCann, as a representative of Borden's and the New York Globe, visited a few creameries in Wisconsin and the Wisconsin Dairy School. After his visit he proceeded to write a series of articles regarding conditions under which butter is manufactured in Wisconsin and viciously attacked the creamery industry of Wisconsin, the Wisconsin Dairy School, and Professor E. H. Farrington, its head. He grossly misrepresented conditions and facts, and brought false charges against leading men in the dairy industry of Wisconsin.

We made editorial comment and printed letters from several responsible men denouncing the false charges which Mr. McCann made at that time. Professor T. L. Haecker of Minnesota, in a letter to Dr. H. L. Russell, Dean of the Wisconsin College of Agriculture, stated, "I have been astonished at the statements made by Mr. McCann, and I have often wondered whether the man was crazy or whether he thinks he can build up a business, for which he seems to be the advertising agent, by attacking other parties and interests. The statements attributed to me with reference to the Dairy Department of the University of Wisconsin are gross misrepresentations and are neither true in word nor substance."

Dean Russell, in commenting upon a letter to Mr. McCann written by Mr. Guy Speirs, president of the Eau Claire Creamery Company, states: "His disavowal of the repudiated conversation, which is reported by Mr. McCann, is indicative of the fact that Mr. McCann's statements cannot be relied upon."

Mr. McCann, through the New York Globe of December 22, 1915, attacked W. D. Hoard, then the editor of Hoard's Dairyman. He accused Mr. Hoard of duplicity because he spoke out in plain terms against Mr. McCann's unwarranted attack upon Professor E. H. Farrington. He tried to show the Senior Editor's duplicity by quoting one of his statements which he claims were made behind closed doors and before a congressional committee in 1913. Mr. W. D. Hoard did not appear before any congressional committee in 1913, nor had he been in Washington, D. C., since 1909.

This same Alfred W. McCann now comes out in the New York Globe of October 6, 1920, in an open letter to the Nestle's Food Company, condemning the New York Dairymen's League. In the light of his past history, how should honest men accept his most recent eruption when he charges the officials of this organization as making false statements and states they should be put in prison?

Mr. McCann now says: "How can the farmer be blamed for listening to this compound of Holy Writ and crap, when there is nobody to set him right, and when the columns of the Dairymen's League News are not open to plain statements of facts that would refute the falsehood or neutralize the deadliness of the poisoned pill which the farmer is asked to swallow?"

He condemns the contract which the Dairymen's League officials are asking the farmers to sign in order that they may be sure of receiving the farmers' milk over a period of time and that they may lay their plans accordingly. He charges the officials of the Dairymen's League with fraud and stupidity.

The purpose and object of the Dairymen's League is to place the farmer in control of his own business, giving him opportunity to have something to say regarding the price that shall be paid for his milk. We believe the officials of the League are earnestly trying to serve its members.

It is our advice to take no heed of the charges made by Mr. McCann, and we regret that any company or milk distributor would go to the pains of distributing an article written by him or would in any way associate themselves with a man who has proven himself a misrepresentor of facts and who has in times past been an enemy of the dairy industry and the producers of milk. There should be no controversy between the milk distributor and the milk producer. Each has a service to perform. A farm organization is committing no crime when it attempts to establish institutions and methods of selling the farmers' products to the best advantage. The milk distributor is committting no crime when he attempts to buy the farmers' milk as cheaply as possible. However, the farmer is unwise if he is willing to accept any price the distributor might offer and if he does not place himself in position to market his products upon the same basis as other enterprises.

We believe in the New York Dairymen's League. We have faith that it is to succeed. We do not question the sincerity of its officials. We are convinced that, with the past affiliations and history of McCann exposed, members of the League will be induced, by his harangue against their organization, to support it and to generally sign the pooling agreement. It is their protection. The crux of the whole question is, Shall the farmers of the

section supplying New York with milk put their trust in corporations which buy their milk or in their own organization, the Dairymen's League, which they created and over which they have supreme control?

Kind of Fertilizer to Use

Kindly advise what fertilizer to use on my small farm of ten acres. I keep no stock and farmers around here are too wise to sell manure.

Ogdensburg, Wis. L. D. M.

Where no live stock is kept it is the practice of good farmers and it is also recommended by our best soil authorities to use legumes, such as clover, soy beans, alfalfa, etc, to keep up the nitrogen and organic supply of the soil.

On Hoard's Dairyman Farm we raise alfalfa and keep each field in this crop three, and sometimes four, years and, when it is broken up in the fall, the fourth crop will be from a foot to 18 inches high. It has been our practice to apply 1,000 lbs. of rock phosphate per acre, as we feel that the manure which we return to the land does not keep up the supply of phosphorus.

It may be said, as a general statement, that the lands which have been cropped for a number of years lack in the element phosphorus. Some are lacking in nitrogen and potash also, but as a rule our upland soils contain an adequate supply of potash, and, if live stock is kept or legumes grown, the nitrogen supply is sufficient.

While rock phosphate furnishes phosphorus cheaper than acid phosphate, we would not advise its use unless applied with barnyard manure or plowed under with some legume crop, such as clover, alfalfa, or soy beans, unless the soil is very rich in active organic matter. It requires a decomposition of organic matter to liberate the phosphorus in the raw rock phosphate. For land deficient in organic matter, we would prefer to use phosphorus in the available form, such as acidulated bone meal or various other forms of phosphatic fertilizers known to contain phosphorus in the available form. It is the practice to apply from 250 to 300 lbs. of such fertilizer per acre and immediate returns may be expected.

The results of the Ohio Experiment Station from experiments carried on for nearly twenty years indicate that acid phosphate, even though it costs more, gives larger returns on money expended than raw rock phosphate. The Illinois Experiment Station has found raw rock phosphate to give better returns than acid phosphate. In our own experience we have used both forms of phosphatic fertilizer. Where it is desirable to have immediate returns we have used acid phosphate. When plowing under a green crop of alfalfa, we have used raw rock phosphate and in the amounts mentioned.

It will be found necessary on most soils that have been in use for many years to apply from one to three tons of ground limestone per acre, for they are acid and an acid soil will not grow either clover or alfalfa. The nitrogen-gathering bacteria which live upon the roots of these plants do not grow in an acid medium; it must be neutral or alkaline.

We would suggest that the soil be tested with litmus paper to determine whether it is sweet or sour. Litmus paper can be purchased from most any drug store. Take a strip about one-fourth inch wide and four inches long and place it in an opening in the soil that has been made by a spade and then press the soil firmly around it. Permit it to remain two or three minutes and then spread the soil apart and remove the paper. If the paper is red or pink, it shows that the soil is acid. This test can be applied to several parts of the field in order to determine how general the acidity of the soil is. If it is found to be acid, lime should be applied in the amounts stated after plowing. This permits the lime to work its way through the furrow slice, which is more acid than the soil underneath and it sweetens the soil where it is most essential. If it is desired to obtain immediate results from fertilizing, an application of 250 to 500 lbs. of acid phosphate may be used. The application of lime is highly essential on the land to be sown to some legume.

Our discussion so far is general, and it is not possible for us to be wholly specific without thoroughly investigating the farm, but we can say this much: The land to which legumes are sown should receive an application of a sufficient amount of lime to sweeten it, and, if there is reason to believe that the soil is low in fertility, an application of about 250 lbs. of acid phosphate per acre should be applied. It may be that some nitrogen and potash is needed, but before we would purchase either of these elements we would determine by a demonstration if it would be profitable to purchase nitrogen and potash.

An acre of land of average fertility can be used for this work, applying potash to one-fourth acre and nitrogen to one-fourth acre, to another one-fourth of an acre apply acid phosphate, and to the fourth, all three elements, nitrogen, phosphorus, and potash.

It may be said, too, that if the land is sour that most crops will be benefitted by an application of lime. In short, we would sweeten the soil and then apply 250 lbs. of acid phosphate per acre as a start. We would raise legumes on such fields as they can be sown for the purpose of securing nitrogen and organic matter for the soil. Let ground limestone and acid phosphate be the first fertilizers to use.

A rotation of crops should be established, which would bring in legumes as fast as possible, for soils which have been cropped for many years are invariably low in nitrogen and organic matter. The results of the demonstration plots that we have suggested will help direct the future purchases of fertilizers.

Ills of the Young Calf

Success in dairy farming depends to a great extent upon the careful rearing of the calves. Carelessness in breeding and calf raising is bound to result disastrously to a herd, or at least keep it at a standstill, as far as improvement is concerned. Without raising calves from which to replace discarded animals it is almost impossible to raise the average production of the herd. Purchasing cows for this purpose is a very unsatisfactory method. Cows placed on the market are almost certain to be of very ordinary grade, since a good cow whose value as a milk producer is known is not offered for sale at market price. Therefore, the dairy farmer should take every precaution in handling the young calves which are to be placed in the herd.

Even though a young calf establishes respiration and gets its first meal without difficulty, it is still subject to many ills, chief of which are digestive disorders of some kind. These troubles are likely to be more numerous among calves that are weaned while young and fed from pails. Indigestion, or scours, as it is generally known, is the most common trouble in raising calves by hand. The chief causes of this trouble are: Overfeeding, feeding cold milk, old or sour milk, and the use of dirty pails, troughs, or stalls. By keeping the conditions right all the time these troubles might be avoided. Each calf should be watched closely for signs of indigestion. Foul smelling dung is often the first sign of the trouble. When such indications are present the ration should be cut down to one-half the usual amount. When a severe case of scours is noticed, the feed should be reduced and the calf should be given two or three ounces of castor oil in one pint of milk. For a few days following this treatment it is well to add one teaspoonful per pint of milk fed of a mixture of one-half ounce of formaline in 15½ ounces of water.

White scours, or calf cholera, is quite common with calves. This is a violent and deadly form of diarrhoea. It may appear immediately after birth and is likely to show itself within the first or second day. The calf is very sick from the beginning; the eyes are sunken, the belly retracted, the breathing is short and rapid, the temperature very low and the calf soon becomes unconscious. The discharge from the bowels is rather profuse, of a white color and very offensive odor. As a rule, the calf dies within twenty-four to thirty-six hours. This is a contagious disease which gains access to the calf's body through the naval soon after birth. An animal once affected rarely recovers. There seems to be no treatment, therefore we must rely upon prevention. The trouble may be avoided by making sure that the calf is dropped in a clean stall and that it is not allowed to come in contact with dirt or manure until the cord is dry. If the herd is on pasture, it is best to allow the cow to remain there until the calf is born. Infection is not likely to occur in the pasture. If the calf is dropped in the barn the surroundings should be free from filth.

Occasionally young calves suffer from constipation, notwithstanding the purgative effects of the colostrum or first milk. This may be due to unthrifty cows or the feeding of dry, innutritious feeds during the latter periods of pregnancy. Whatever the cause, if the calf is costive, showing signs as in colic and failing in appetite, no time should be lost in giving relief. First remove the cause if it can be located. To stimulate the bowels administer one or two ounces of castor oil.—D. G. Sullins, Animal Husbandman, Georgia Experiment Station.

Tobacco Does Not Add Fertility

We find that there is a popular belief among the tobacco growers of Wisconsin that the tobacco plant adds fertility to the soil. They claim as proof—any crop following tobacco will do unusually well. We claim it requires a large amount of fertilizer in some form to grow a good crop of tobacco. The tobacco crop does not use all of the plant food elements in the fertilizer, so they are left in the soil for use of the crop following, this together with the extra hoeing and cultivation required results in a heavy crop of corn, etc. Kindly set us right—give the facts from the best authority.

Brooklyn, Wis. F. L.

It has been determined that a crop of tobacco yielding 1,000 lbs. of leaf to the acre removes from the soil, in the stalks and leaves, about 67 lbs. of nitrogen, 85 lbs. of potash, and 9 lbs. of phosphoric acid. Heavier crops than this will draw upon the soil elements accordingly. Because tobacco is so rich in these elements is seen the reason for growing the crop on fertile soils, and also explains the reason why the growers are using much fertilizer.

The very fact that tobacco is usually grown upon the best soil the farm has, together with the facts that special attention has been given to the addition of fertilizer and that it is a cultivated crop, accounts for the successful crops which are to follow the tobacco crop. The tobacco crop contributes nothing to the soil as do legumes but, on the other hand, it is a crop which is regarded as drawing heavily upon the soil elements. The same observations might be made about the corn crop. The small grain crop following corn in the rotation is usually very good for similar reasons.

Harvesting Annual Sweet Clover

Last spring I received some annual sweet clover from the Iowa Experiment Station and planted it in June. The clover is now about five and one-half feet high and is doing nicely. Should I cut it this fall for seed or wait until next year? Will the clover get ripe in this section of Minnesota? How should I thresh it? If I get some seed, how much to the acre should I sow?

Wadena, Minnesota. R. S. L.

The annual sweet clover should produce seed this fall and, unless there is a considerable quantity, we would suggest that it be harvested direct from the plants as it ripens; that is, by stripping the seed heads by hand. In this way, the full quantity of seed produced is more likely to be secured than if the plant is allowed to stand until the majority of the heads are ready for harvest.

Sweet clover seed does not ripen at the same time and there is considerable wastage both by shattered seed and by immature seed if the plant is harvested as a whole. If the quantity is too large for this kind of handling, it may be harvested when the majority of seed seems to be mature. It can be threshed out by means of a flail or, if the quantity is sufficient, by the use of the usual threshing machine or clover huller.

Annual sweet clover is a relatively new introduction and we have not sufficient information concerning it to speak with authority as to whether it will mature seed in this section of Minnesota. However, from such knowledge of the plant as we have, we would think that it should mature seed, at least we do know that it will do this in southern Wisconsin. We are not advised as to whether this plant will make growth next year but we anticipate that it is not dissimiliar to the biennial sweet clover in this respect. In any event, it would be well to cut the sweet clover, leaving a 6- to 8-inch stubble.

As the annual sweet clover seed is very high in price, it is a questionable practice at the present time to use it as a regular field crop. For a year or two, at least, it should largely be grown for seed and preferably planted in drills and possibly cultivated somewhat so as to keep down weeds and foreign grasses. In any event, we would hestitate to seed at a rate greater than five pounds to the acre.



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What Next?

An Abstract From An Address Delivered by H. E. VanNorman, President National Dairy Association, Before National Association of Ice Cream Manufacturers

Why is it possible for this group of men, whose work and whose homes are in the city, to be here today? In early history of this nation we are told that 88 per cent of the people lived on the land, produced practically all of their own food and material for clothing, wove their own cloth, and made their own shoes. Today we are told only 33 per cent of our people live on the land producing the raw materials for not only their own food and clothing, but that for the other 66 who don't live on the land.

In other words, your business and your life in the city is only possible because out on the farm somewhere, somebody is producing for you raw materials for your food and clothing. This is only so because the methods of modern agriculture make it possible for the farmer to harvest a bushel of wheat with ten minutes of human labor today compared with over three hours of human labor per bushel required before the Civil War.

Getting more personal—your business as manufacturers of ice cream is only possible because somebody is out on the farm, often arising at four or five o'clock in the morning to milk the cows from which you secure enough dairy products which permit you to label your product "ICE CREAM", in spite of the yellow journals which may accuse you of having small foundation for your title. Again, your business is only possible because we have a great consuming population to provide a market for you.

Some of us are convinced that our national welfare is going to be much influenced in the near future by the amount of constructive thought which the thinking minds of the cities give to the problem of the relation of the cities to the open country.

We are told that the dairymen are selling their cows, are devoting their time to other branches of agriculture, are retiring and moving to town, that their sons are going into other lines of business, that the ownership of the land is going into the hands of a less intelligent, less educated type of immigrant. What is to be the influence of this type of man on our national welfare?

Our cities can prosper only if enough people remain in the country to produce the food, not only for themselves, but for our vast city population.

The National Dairy Show was organized some fourteen years ago, not merely to provide a place where some manufacturer could sell a churn to a creamery man, or a freezer to an ice cream manufacturer. These are but incidents to the more fundamental motive namely, that if we are to sell more churns and more freezers, it will be because there is more cream churned and frozen and that to produce this we must have more and better cows; and after all is said and done, the vastness of the industry can be developed only insofar as there are cows to supply the raw material for the consuming public to eat.

The men who have made the Dairy Show business, both financially and administratively, have looked far beyond the mere question of sale of floor space, or the awarding of cattle premiums.

Some firms who have spent thousands of dollars in expense for every hundred dollars of sales at the show have rightfully said: "If measured by our sales at the show, it would not pay us, but we make our living out of the dairy industry; therefore, it behooves us to support this enterprise which is striving to develop a greater industry, and therefore gives us an opportunity for a greater business."

What has the future in store for everybody whose business is dependent on the cow and her products? Europe is shipping products into this country. Does this mean that we have reached the time when we cannot feed our own people? Does it mean we are charging our own people so much that they must go to cheaper countries for food products? These are things about which somebody must think.

What is to be the part of your organization in the future of this Dai-

ry Show? This National Dairy Association, which conducts the show, is a membership organization to which every one of you men are eligible for membership at the rate of $50 for a life membership. Membership taken only because you believe in the cause for which this institution stands, only because you want to be a booster, only because you believe that in proportion as every branch of the industry contributes its share not only of financial support, but of its constructive thought and enterprise, will the whole prosper.

As president, I take the liberty of urging that you openly and aggressively align yourself as a business dependent on the cow with the other great organizations in the further development of this enterprise. With no wish to intrude on the professional problems of your branch of the industry, I still feel free to say that, after all, a great big whole of which you are only a part, needs your cooperation.

Florida Live Stock Round-up

The fifth annual live stock round-up was held at the University of Florida, Gainesville, on October 7th and 8th, with an attendance of nearly 300 from all parts of the state. The subjects considered were: the best methods of feeding and marketing live stock, and the control of diseases.

The growing and fertilizing of peanuts was handled by Dr. J. E. Turlington and Mr. S. W. Hiatt, and a talk on grasses given by Professor J. B. Thompson. Mr. W. C. Lassetter, of Progressive Farmer, described the best legumes for soil improvement.

Director P. H. Rolfs of the Florida Experiment Station described some of the best work done by the station in recent years, and told how the University is fast losing its best workers on account of being offered better salaries elsewhere. He brought out the fact that the Florida Station has received very little help from the state during the past twenty years, being supported almost entirely by federal funds.

Mr. W. H. Traer, editor of the Florida Farmer and Stockman, described the rapid growth of the live stock industry in the southeast during the last few years, and Mr. C. A. Cobb, editor of the Southern Ruralist, gave most valuable advice on the co-operative marketing of live stock as practiced in Mississippi. Mr. H. M. Bennett of California gave a strong paper on methods of financing the cattle business through loan associations. Before the close of the Round-up, the meeting adopted resolutions urging liberal action by the next legislature for support of the University, and pledged its members to work with their home representatives on this subject.

The night session included some moving picture films, showing the latest methods of eradicating cattle ticks in the South, and progress of the movement for better sires and better stock under auspices of the Federal Bureau of Animal Industry.

The second day the entire meeting discussed for several hours the improvement of pork production. One of the best papers was given by Professor J. F. Duggar, director Alabama Experiment Station, giving details of several years' work on pork products in Alabama. He showed where cowpea pasture alone produced 125 lbs. of pork per acre, and a similar lot was fed on pasture corn, making a gain of 336 lbs. of pork per acre. An acre of rape produced 452 lbs. of pork, chufas 374 lbs., and peanuts 335 lbs. per acre. One of the tests showed that a pound of pork can be produced with 1.84 lbs. of dried peanuts in the hulls.

Some recent work of the Florida Experiment Station has attracted great attention throughout the South, in which hogs were fed upon different feeds. This work alone showed conclusively that feeding peanuts for 44 days produced soft fat, and that the feeding of corn, shorts, peanut meal, and skimmilk again hardened the fat. Some variations occurred due to the individuality of the animals. All the results thus far obtained showed that there are several factors that produce soft pork, not only feeds, but the breeding, handling, and care of the animals.

Dr. E. N. Nighbert, in charge of tick eradication for the state and government, admitted that Florida is making only moderate progress in tick eradication, but urged more education and co-operation to improve the live stock industry by getting rid of ticks.

E. N. Wentworth of Chicago described how Florida might produce a larger proportion of her own meat supply instead of importing nearly three-fourths. Professor C. H. Willoughby gave a talk on the use of mixed feeds, and advised against using patent medicine remedies or cure-alls.

Florida. C. H. WILLOUGHBY.

1/12/20

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	" 5-A " " " " 400 " " "		349

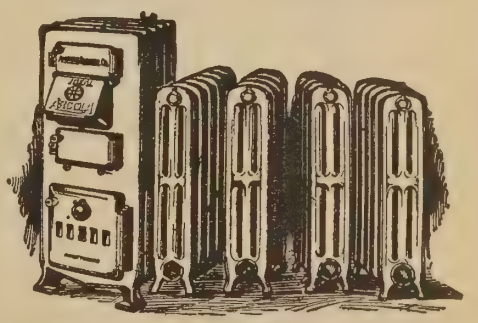
Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

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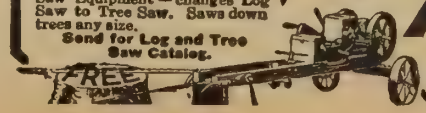
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FALL REFLECTIONS OF A FARM

(Continued from first page.)

be mighty thankful to sell three perfectly good heads for one quarter of a dollar to whoever would bite and buy. If three cabbages were too many for one family at this little price, our sign signified that we would part with just one for ten cents, though it was hard. (The parting, as well as the cabbage.) Well, my owner has sold a pile of them this way, as much as several tons would come to at those preposterous figures previously quoted, and they are still merrily selling at this writing—so the cows can't have them all.

But take potatoes. I did my best with this staple crop and I told my owner early in the spring that if he would put in double acreage, I thought it would be the smart and proper thing to do. So he took my advice as usual and as I had hinted that a power sprayer and a digger and plenty of fertilizer and so on would not come amiss, he went the whole hog and everything would have turned out lovely for me and I would have easily retained my reputation for sagacity and brains had not every other farm proceeded to figure likewise—with the rather painful result that I find myself slightly discredited as a prophet in my owner's eyes, while the potatoes aren't bringing enough to pay for the before-mentioned up-to-date articles.

But it's a long road that has no turning, at our place, and I tell my owner things might be dirt-sight worse, as for instance, if he had bought a cozy car on which had only been paid the initial installment and which had no appetite for cabbage and spuds in places of expensive gas and oil when a fellow is in a tight fix. He allowed that this might be so, but he ventured the prediction that many a good farmer has been lotting on his fall harvests to pay off the final mortgage on others like me and to buy much-needed labor-saving tools and to fix up his barns and the house and perfectly legitimate expenditures like that. And it's the truth. It's no laughing matter and levity from one of those hardest hit is out of place, my owner says. But it's like this. Last year the farmer, if he amounted to a hill of beans, made good at his dirt trade, and I have been in this game long enough to discover that agriculture is a lottery if ever an industry was. My owner and I made good last year. We bet that we could turn the same trick this year—and so many of us bet the same way that we all lost. Now next year you'll see a lot of farmers and their farms so sick of the game that they will refuse to bet at all, that is, to amount to anything, and then will be the time for the year-in and year-out gamblers to keep right on betting just as they always do. At least that's the way it figures out to me, and unless my owner and his family are so weak next spring from their cabbage and potato and milk diet that they can't get out to wake me up and turn me over, I bet you'll see me with my fields as green and as flourishing as ever—and green with cabbages and potatoes and meadows and pastures too!

But say! I have to chuckle quietly to myself when I think back as to how there wasn't going to be half enough food to go around this winter, if everybody else who wasn't a farmer was to be believed. And although I wouldn't hint it to the wrong person for the world, yet the joke appears to be on we farms and our owners who fell for this famine-cry and who thought that if all the neighbors had gone to the city to work, as was scare-headed all over the country, surely now was the time to go on in while the land was fine—and make a decent little fortune selling quite necessary food to the other farm-shy city natives.

But I figure that it wouldn't be safe for any half-baked newspaper reporter or average layman anywhere to come around to an average farm about now with the cheerful tidings that America is doomed because the agricultural population is dwindling away and that our very late census proves it. I don't know just what would happen to such a well-meaning prognosticator but I should worry for his personal safety if cornered in any ordinary farmer's field or back yard. Such a person might find that he had got in decidedly wrong, his host being in strangely peeved mood at such intelligence. And the reason therefore the owner of my broad acres, for instance, might proceed to make plain to his caller. If every other farm is abandoned (as reports state) and if every other farmer and his tickled family have gone to the city (as stated) why in Sam Hill do we find everybody trying to eat up the biggest and best crops in the country's history and, who, for the land's sake, is raising 'em? And if the misguided caller still insists that all this must be so, nevertheless, because statistics and figures say so, then it may be that my sore-tried and impatient owner will take his guest across his knee and administer good old fashioned chastisement of a style familiar to a less cock-sure generation.

The painful truth is that not every other horny-handed son of toil has emigrated cityward, nor that every other farm has been permitted to grow up to dandelions and witch grass. We may have rather recently kidded ourselves along these lines, even so-called wise calculators like me —but my owner and every other farm owner now knows that this was the biggest blither that ever was believed by a conservative set of country folk who are not in the habit of swallowing everything they hear and read for gospel truth.

This fall finds us with plenty of farms on the job and also plenty of farmers and their help, and if there be any city chap and his lady anywhere who is feeling the call to go back to the land and save the nation from famine and starvation, I'd strongly advise him to remain where he is because that back-to-the-land business is old, old stuff.

The almanac man has already come out with his bit for 1921. He predicts that the coming year is going to be a holy terror so far as crops go and that it is extremely likely that there won't be any at all. He lays these pleasant intuitions to the messy weather due for next season, but if he should ask me, from my experiences down the years as a canny old farm, I would venture to remark that too cheap produce made at a grand loss this season would be far more apt to cause the situation.

Be that as it may, my owner and I are resolved to go down with the ship, meanwhile taking all farm propaganda with a grain of salt, but ready to let out a link, as we did this year, whenever the time seems ripe. We aren't exactly elated over our big losses this fall, but we refuse to be too downhearted, and I expect that my owner is going to do business at the same old stand another season—which means that it's mostly up to me.

But I do hope that there won't any more of the boys leave farms in the lurch hereafter, for if they do, we might as well all quit today, for the crops will be sure to reach such stag-

gering piles and proportions that they will last the poor city people for ten years and a day and we'll have to pay them boot to get rid of the lot.

As I said in the begininng, it's an ill wind that usually blows nobody good, and between you and I and the big oak tree, my owner and I are hoping that this winter won't be too inclined to treat us rough, and maybe crops will then return to normal. There's such a thing, you know, as Nature giving the farms and farmers so much good-weather rope that they just all go and hang themselves. And who wants to go broke feeding Paddy Railroadman for nothing every fall?

Hardy Alfalfa in Oregon

(Continued from page 692)

stance, in Deschutes County in central Oregon, the increased yield has been so apparent that the First National Bank of Bend financed on easy terms for its patrons a 30,000-lb. pool of Grimm seed. This was distributed in co-operation with the Deschutes County Farm Bureau.

We have considerable winter-killing in this high altitude," said Mr. Ward, the agriculturist for the bank, "and we find that the superior resistance of Grimm alfalfa to cold will insure us much more vigorous stands. We need alfalfa in this country and a ton per acre additional yield from Grimm alfalfa will be a big factor in the dairy business we are trying to develop. Deschutes County has recently made an importation of Jerseys from the Willamette Valley, has recently organized a County Holstein Breeders' Association, and we are anxious to secure some foundation Guernseys. Our farmers who are located on small irrigated ranches have, to too great an extent, been selling their hay in the past few years. They are, at this time, however, beginning to realize that that is an unprofitable practice and are finding that a few good cows on every ranch are making the farmers more prosperous."

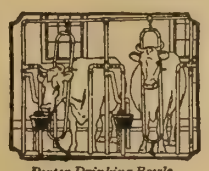
Wallowa, Klamath, Morrow, and Wasco counties are this year, through the farm bureaus, studying the adaptability of the hardy type alfalfa to their conditions.

According to agricultural history Grimm alfalfa was introduced into the United States by Wendelin Grimm, a German, who came to Carver County, Minnesota, in 1857, bringing with him from the old country fifteen or twenty pounds of alfalfa seed. It is distinguished from common alfalfa by the root system. Instead of the typical alfalfa tap root, it has a root system more nearly like the clovers, consisting of scattering underground shoots.

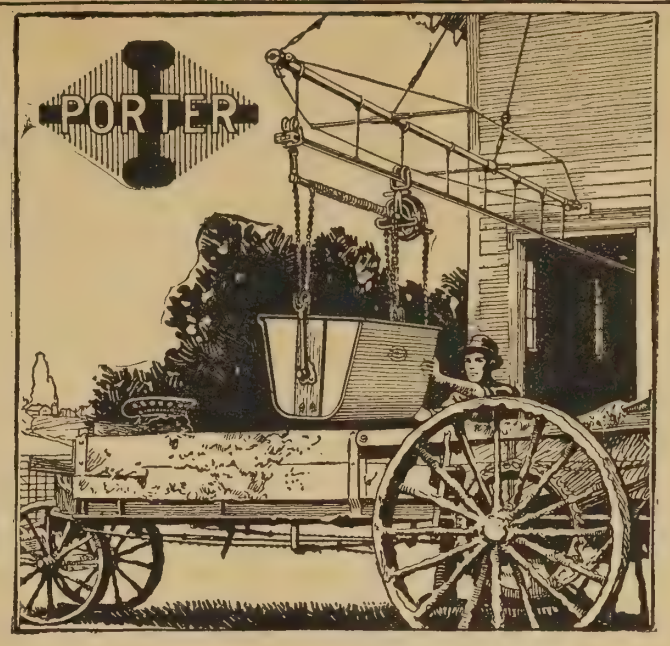
The seed can not be told with certainty from other alfalfa seed nor can the plants, although some experts maintain that Grimm produces somewhat finer and more leafy hay. It is a heavy stooling type. The flowers are the same color as those of common alfalfa but there are often many greenish blossoms varying to dark olive, some of them smoky in hue. The hardiness of this variety is attributed to long continued selection under adverse climatic conditions. In warmer districts it is not proving so productive as the common strains. Most of the seed is produced in Minnesota, Montana, Idaho, and the Dakotas. Grimm alfalfa is quoted on the markets at a higher price than common types but this is rapidly being determined a negligible factor in Northwest alfalfa growing districts at an altitude of 2,000 feet or more.

Most of the things put off until tomorrow should have been done yesterday. A careful planning of work this winter will enable you next spring to do today's job today.

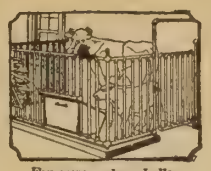

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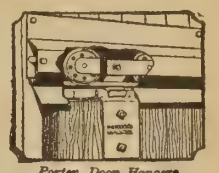

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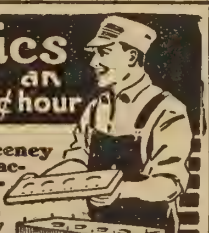
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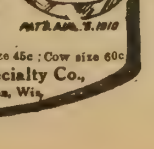
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Milk Situation in New York

News Items from E. R. EASTMAN, Editor Dairymen's League News

THE Board of Directors of the Dairymen's League voted to recommend to the members that the price for November milk and the conditions under which it is sold shall be the same as those during October. This is $3.65 per hundred pounds for three per cent milk at the 200-210 mile zone. This price is under the cost of production and is contrary to the custom of the price advancing from month to month at this time of the year because of increasing costs. The decision to go along on this price was reached by the directors, however, because of market conditions and the general tendency downward in all markets.

The November Price

At an earlier conference held with the dealers the League, officials were given to understand that the continuation of the October price for November would be accepted by them, although this sentiment was not expressed in actual words. While the directors were still in session, the dealers asked for a conference with the League and announced that if the October price were insisted upon for November, they would be obliged to close many of their fluid plants. The Bordens' Farm Products Company, one of the two largest distributors, handed the League a list of thirty-two fluid plants which they would close November first.

⚜

The directors of the League believed that this was another effort of the dealers in line with what had already been done by means of propaganda and otherwise to force the farmers' organization into a hole at a time when market conditions were bad, so they unanimously and emphatically reaffirmed the recommendation that the price for November be the same as for October, and that the dealers should keep all of their plants open the same as they had in October.

Sheffield Accepts

It, therefore, looked for a few days as if there would be a general fight. However, the Sheffield Company, the other largest distributor, has just accepted the price for November and will keep all of their plants open. This probably means that there will be no trouble with the fluid distributors.

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There were on hand in the League office on October twenty-fifth 20,746 signed co-operative contracts. This included 4,000 received by the League before the present campaign began. There are from ten to twenty thousand more signed contracts in the hands of the 1,100 field secretaries who have not had time nor opportunity to send them all in as yet. The League directors have voted that pooling would be started when at least 50,000 members had signed the co-operative contracts and orders for pooling.

Progress in Pooling

Another series of meetings is being held all through League territory. Farmers are making further study of the co-operative contract, and this better understanding of the principles involved and also the better realization of what the dealers are trying to do to the League are bringing about a renewed enthusiasm in the co-operative campaign. This will result very shortly in there being enough signatures obtained to start the pooling operation.

A factor that has done much to show the dairymen the need of immediately getting back of the co-operative campaign is the large amount of propaganda which the dealers have spread throughout League territory to injure the organization and to defeat the purposes of the co-operative campaign. This propaganda has had exactly the opposite effect from that intended by the dealers, although it is probable that some of that sent to the business men, whose co-operation the dairymen need, has had some effect.

The gravest trouble which the dairymen are facing at the present time is the great financial loss of the thousands of members who have now no good market for their milk, since the manufacturers ceased to accept it. These dairymen have been keeping their milk at home, or separating it and shipping cream, or selling it to butter and cheese factories. In every case, this has meant heavy loss, and there are thousands of them who cannot very much longer continue to do business in this way. They will either have to sell their cattle, as some of them have already done, or make arrangements to get their milk upon the fluid market. The fact that many of the fluid dealers want to close at least a part of their plants shows that this movement of the milk, which was formerly manufactured, toward the fluid market has already begun.

New York Pooling Contest

The New York Dairymen's League is seeking an efficient organization whereby the producers in that territory may protect themselves against exploitation and advance their interests. To accomplish this they are asking all League members to sign a contract for the sale of all their milk through their own organization and agreeing to pool the proceeds that each person may receive the same price for the same quality of milk regardless of the market to which sold.

The contract is severe and has teeth in it to protect the majority of the signers against the weak-kneed minority that through fear or cupidity might desert in times of stress and so wreck the organization. The League announcement is that until 50,000 of the 85,000 members sign, this contract is not to be put into operation. While the requirements are drastic, it does not differ in essentials from that of the California co-operatives that have recently been discussed in Hoard's Dairyman, and other organization in different sections of the United States; the proposed Wisconsin Cheese Federation adopting a somewhat similar contract. We have faith that milk producers have the brains and ability to build an efficient organization to hire competent managers to make this plan a success. If not, then this plan or any other plan will fail. We should not be half-hearted or go half way if we hope to build a strong co-operative institution. The only way to co-operate is to co-operate, and to co-operate with and not against.

The New York League contract reads as follows:

This agreement, made this.....day of .....192....., between Dairymen's League Co-operative Association, Inc., hereinafter known as the Association, a membership corporation incorporated by and under the laws of the State of New York, and having its principal office and place of business at New York, N. Y., party of the first part, and ....., hereinafter known as the Producer, party of the second part, for the purpose of acting as agent in performing for him services connected with the production, manufacture, preservation, drying, canning, storing, handling, utilizing, marketing, and selling all of the milk and dairy products produced by him, Witnesseth:

That in consideration of the outlays and expenses incurred and to be incurred by the Association in providing means for handling, manufacturing, and marketing the milk and dairy products of the producer as mentioned herein, the said parties have agreed to, and do hereby agree as follows:

1. The Producer, wishing to avail himself of the facilities to be furnished for marketing his milk and dairy products when the association is equipped for same, hereby appoints the association his sales agent and as such grants to it full power and authority to sell said milk in the fluid state, or in its discretion to manufacture the same into such products as it may from time to time determine, and to sell such manufactured products, the proceeds of all such sales to be blended into one fund and distributed as hereinafter provided.

2. The Producer covenants and agrees to and with the association that if he at any time refuses or neglects to deliver such milk or the manufactured product thereof produced or manufactured by him to the association, or upon its order, at such time and place as the association may direct, then and in that event in every such case the Producer neglecting or refusing so to do will pay to the association for such refusal or default, the sum of ten dollars ($10.00) per cow for.....cows, and if such default or refusal shall continue for more than one month, an additional sum of Three Dollars ($3.00) for each cow per month, for the same number of cows, so long as such default or refusal continues, none of which payments are to be construed to be a penalty or forfeiture, but as stipulated liquidated damages as prescribed by Section 209-A of Chapter 655 of the Laws of 1918 of the state of New York, and it is hereby agreed that the Association will suffer by reason of such refusal or default.

3. Such milk shall be delivered by the producer to such shipping stations or other plants as the association may from time to time direct, and to be of such test and quality, delivered at such hours and produced under such sanitary and hygienic regulations as may be required by the rules and regulations of the Association, and the Board of Health, the City, and the Laws of the State where the milk is produced and is to be finally marketed. If the Producer under the direction of the Association manufactures such milk, the products thereof to be cleanly and wholesome and in good marketable condition.

4. The Producer will endeavor to follow the instructions of the Association as to the proportionate quantities of milk produced during the several months of the year, in order that an adequate supply for consumers at all seasons of the year may be assured.

5. It is further agreed that in case the association fails to sell the milk of the Producer as herein stated, that the Producer will in each and every case manufacture such milk into such products as he may desire and deliver said manufactured product to the association upon its order for sale, or if directed by the Association, will deliver such milk at such station or manufacturing plant as said Association may direct.

6. It is mutually agreed between the parties hereto that the Producer shall have the right to give away or retain for his own use such of his milk or other dairy products as he may wish, but the producer shall not sell any products contracted to the Association, to any outside party, except such products only as are offered to the Association as herein provided, and rejected by it, or upon written consent of said Association.

7. It is further mutually agreed that if the Producer is offered a price for his milk or dairy products in excess of the price then obtained by the Association, said Producer will turn over such offer to the Association.

8. For direct loans made by the Producer to the Association to provide initial capital, the Producer shall receive a certificate of indebtedness, one-fifth of which with interest shall be retired each year from the special fund herein mentioned to be created.

9. The proceeds of all sales made by the Association for the Producer shall be paid for by the purchaser or purchasers thereof to the Association, which proceeds, together with the proceeds of sales made by the Association for other producers, shall be blended into one general fund, the Association to make distribution thereof after making the deductions hereinafter stated, and pay over such funds to the Producer and to other producers in the same proportion that the quantities delivered by the several producers to the Association for sale shall bear to the whole, so that the price received by the Producer shall be uniform with that paid other producers, regardless of any variation or differences in the price received by the Association from such sale for the several producers, subject to such equitable differentials as said Association may from time to time establish. The Association shall deduct from the proceeds of such sales such uniform percentages as they charge others for like services and which the said Association may deem necessary to meet the expenses already incurred, together with such other sums as may be necessary to cover interest, overhead, depreciation, guarantees and all such other expenses as may be reasonably estimated as essential to be incurred, by the Association in conducting its operations, for which no certificates are to be issued.

10. The said Association shall also make further deductions to create a special fund to retire loans; to be used in building warehouses or other necessary buildings; to purchase land and buildings; to secure necessary equipment; to provide such working capital as said Association may deem necessary; such deductions for the special fund to continue as long as the Producer delivers milk or milk products to the Association for sale. After the close of each fiscal year, each producer shall receive a certificate in such form and payable at such time or times and at such rate of interest as such Association may from time to time determine for all moneys which he has contributed that year to the special fund from the percentages levied on his milk and dairy products, as herein provided.

11. The Producer agrees that said Association may also receive the proceeds of sales to other producers, and that said deductions as herein specified shall be uniform as to each producer, so that each producer will receive the same price per unit subject to such equitable differentials as may from time to time be established by the Association; distribution to be made by the Association which is hereby appointed by the producer sold arbitrator of the distribution of said sums, and such distributions when so made shall be final and conclusive and binding upon the parties hereto. The Producer, in the absence of fraud, hereby waives all his rights in law or in equity to an accounting therefor, and this contract shall act as a bar thereto in any proceeding taken by the Producer therefor:

12. All of the aforesaid distributions as herein provided are to be distributed to the Producer on or before the 25th day of each and every month for approximately the amount realized from the milk and dairy products sold and paid for during the previous month, after the aforesaid deductions have been made; and as soon as the fiscal year as all of said milk and dairy products handled as aforesaid have been sold and pay received therefor, full settlement is to be made to the producers thereof.

13. The Producer hereby authorizes the Association from time to time and at all times when in its judgment such action will promote its efficiency, to borrow money in its name and to secure payment thereof to pledge part or all of any unsold milk and dairy products, accounts receivable, notes receivable and trade acceptances in which the Producer has any interest as owner or otherwise, the pledge to be first paid from the proceeds thereof.

14. It is further mutually agreed that the Association may deduct from the proceeds of sales as herein provided, a further sum of One Dollar ($1.00) for each year, which shall be a subscription to the Dairymen's League News.

15. It is further mutually agreed that this contract shall run continuously unless cancelled by further notice of either party to the other between the 12th and the 28th day of February, both inclusive, of any year, which notice shall be in writing and become effective on the 1st day of April then next ensuing, subject to any right or lien which the Association has against the Producer or his property until his indebtedness to the Association is fully paid, and subject to the rules and regulations prescribed by the by-laws of the Association.

In witness whereof, the parties have hereunto subscribed their names and affixed their seals, the.....day of..... .....192.....

DAIRYMEN'S LEAGUE CO-OPERATIVE ASS'N., INC.,
By.....
President.
.....(Seal)
Producer.

SALE ORDER
(To be signed in duplicate)

To.....
(Name of Dealer)

To assist in the performance on my part of a contract entered into between myself and the Dairymen's League Co-operative Association, Inc., in which it has an interest, you are hereby requested, ordered and directed to turn over and pay to the Dairymen's League Co-operative Association, Inc., all moneys due and to grow due to me from the sale of milk produced by me and heretofore or hereafter delivered to you, and I hereby give and grant to the said Dairymen's League Co-operative Association, Inc., full power and authority in my name to collect and receive all said moneys, and upon receipt thereof to give acquaintances or other sufficient discharges for me.

This order shall continue in force and to be effective until revoked, and as such authority to the Dairymen's League Co-operative Association, Inc., is coupled with an interest shall be revokable only upon notice between the 12th and 28th day of February, both inclusive of any year, which notice shall be in writing and become effective on the 1st day of April then next ensuing.

Dated.....
.....(L. S.)
Signature
.....
P. O. Address
Witness to Signature.....

Understanding is a well spring of life unto him that hath it: but the instruction of fools is folly.—Proverbs 16:22.

Butter Markets Greatly Upset

Top Grades Show Marked Weakness —Undergrades a Heavy Drag— Weather Conditions a Factor

[Report by U. S. Bureau of Markets]

Weakness that amounted almost to demoralization was typical of butter markets during the week ending October 23 so far as top grades were concerned. The prophecy made last week that prices were near bottom for the present was at least fairly well borne out. However, this fails to more than touch on the true conditions that existed. Fancy butter has been scarce all year and demand for it has often operated to support the market, but recently, while there has been no surplus of fine butter, its steadiness has failed absolutely to hold up undergrades.

Sales of storage butter for future delivery at rapidly declining prices on the Chicago Clearing House Call did little to inspire confidence. It appears at the moment that these sales were probably only anticipating a future condition of the market and perhaps saving it from decided disaster later. The fact remains that shippers and owners took many losses and the few sales that were made with great difficulty were at a great range of prices. The spread between 86 score and 92 score is now wider than ever. At the close of trading Saturday the shortage of fine butter was holding the markets about steady and a better feeling was noticeable in some quarters, especially at Chicago.

There was a fair decrease in storage holdings during the week, but the movement is either much later or much lighter than last year. A few fair sized lots of fancy storage creamery were sold at Chicago at 52c to 54c. No more could be obtained, and losses were registered by these sales. In the eastern markets trade that had been using storage again turned to fresh butter on account of the prevailing low prices.

The average wholesale prices on 92-score butter at five of the principal markets, for the week ending October 23, were as follows: New York, 59.1 cents; Chicago, 54.6 cents; Philadelphia, 57.9 cents; Boston, 57 cents; and San Francisco, 56.3 cents. For the corresponding week last year the average prices were 69.8c, 65.4c, 70.2c, 66c, and 62c, respectively. The receipts of butter at these markets were 7,681,167 lbs. as compared with 8,026,285 lbs. for the corresponding week last year and 7,619,753 lbs. for last week. Storage holdings are 64,688,993 lbs. which is a million less than a week ago and seven million less than a year ago.

Cheese Trading Declines

Tone of Market Weak and Unsettled —Price Drops not Uniform, Some Styles Breaking More than Others

[Report by U. S. Bureau of Markets]

A weak and unsettled feeling continued to dominate cheese markets during the week ending October 23. The opinion of many dealers, as expressed last week, that prices were due for further reductions proved to be correct, for the week's trading opened with declines averaging fully 3 cents on the Plymouth (Wis.) Cheese Exchange. The drop was not uniform on all styles, however, as Twins were but 1½ cents lower, while sales of Double Daisies were reported 4¼ cents below the previous week's prices.

Following this break dealers at Wisconsin primary markets in many cases stiffened their asking prices somewhat more than is customary, but without success, and by the middle of the week some of the larger distributors were selling at close to cost. Only those who were not overstocked held firm to their original prices, regardless of a current feeling that further declines would be necessary before a healthy demand was established. Trading in general at country markets was barely sufficient to maintain prevailing prices.

Condensery Cheese Reaches Markets

Prices at distributing markets did not show such radical declines as at country points, but the tone was unsettled and trading lacked life during the entire week. The break at primary markets had a depressing influence and other factors also contributed to weakness. Continued talk regarding lower prices and rumors as to a heavier production on account of the closing of so many condenseries had some sentimental effect. Considerable uncertainty still attends the latter, for the manufacture of butter at present prices is likewise profitable and there is no assurance that the surplus from all plants will go into cheese. The first condensery cheese in any quantity appeared on the markets during the week and strengthened the feeling that it might be a factor to reckon with, although so far the quality has been nothing to boast of. It is expected that there will be heavy arrivals of this cheese about the first of next month, as considerable quantities are being made, especially in New York State.

Export business is still quiet. The few inquiries received are for cheese at around 20 cents, but this price is too low to attract any real selling interest. Export figures for September, which are just available, indicate that the total quantity exported was approximately 744,000 lbs. In September, 1919, the exports of cheese amounted to 1,689,000 lbs.

The average wholesale prices on American cheese, style Twins, for the week ending October 23, were as follows: New York, 27.5 cents; Chicago, 23.7 cents; Boston, 27.6 cents; San Francisco 24.7 cents; and Wisconsin primary market, 24 cents. For the corresponding week last year the average prices at these markets were: 30.9c, 30.1c, 32c, 29.3c, and 29.8c, respectively. The total receipts of American cheese at these markets were 3,025,667 lbs., as compared with 4,024,891 lbs. for the corresponding week last year and 2,979,752 lbs. for last week. Storage holdings are 18 million pounds, which is slightly less than last week and only two-thirds of what it was last year at this time.

New York Butter Market

NEW YORK CITY, OCTOBER 27:—One year ago today extras were quoted at 70c, while the quotation on seconds was 55@58c. There was an active export demand and practically all arrivals were absorbed as soon as delivered at stores. Today extras are quoted at 59c, seconds fr... 17 to 20c lower; there is no export demand and great quantities of butter have accumulated in practically all stores. The situation is anything but encouraging to the manufacturer and distributor of butter. Trading for the last several days has been decidedly sluggish and, as in the weeks just passed, has been confined to butter of extremely high quality. Buyers are extremely critical of even fancy grades and refuse to purchase unless they find exactly what they want. To add to the unsatisfactory condition, chain stores and other large retailers of butter are drawing on their storage stocks as they feel that values may be lower later and they wish to dispose of their high priced storage stocks in order to avoid heavy losses. The general condition can be safely at-

(Continued on page 706)



Honest Shoes For Honest Work

Mayer *Honorbilt* Work Shoes

MADE of honest leather, "Built on Honor" by skilled workers, *Honorbilt Work Shoes* will give double the wear of ordinary shoes.

Suitable for every kind of work on the farm too. For the leather in *Honorbilt Work Shoes* is double tanned to resist the alkali in the soil and the leather-eating barn yard acids.

And you will find these long wearing shoes always soft and easy on your feet. Wet work will not make them hard; they stay pliable and comfortable with the roughest use.

Honorbilt work and dress shoes, for every one in the family, are sold by leading dealers everywhere. All bear the *Mayer Honorbilt* trade mark—a guarantee of quality that never fails. Look for it on the soles and if your dealer does not handle *Honorbilt Shoes* write us.

F. Mayer Boot & Shoe Co., Milwaukee, Wis.

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Sectional View of the ORIGINAL

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AND SANITARY STORE HOUSE

Beware of Imitations or Experiments

After smoking meats, use for store house. Absolutely fly and bug proof. Keeps meat without sacking. Worth its price many times over for this storage feature alone. Beware of imitations.

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Contains valuable prize-winning recipes for curing and smoking Hams, Bacon, Sausages and Fish at home. Gives full description and handsome colored illustrations of the **original** National Giant Smoke House. Quotes prices and gives all other details. Write for book today SURE!



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Just a few minutes' attention to fire-box, dampers and ventilators! Just a little sawdust and corn cobs for fuel—and bark for seasoning! That's all. Gives you smoked meats at **less than half butcher bills.** Or to sell to neighbors, town customers and stores at a **big profit.**

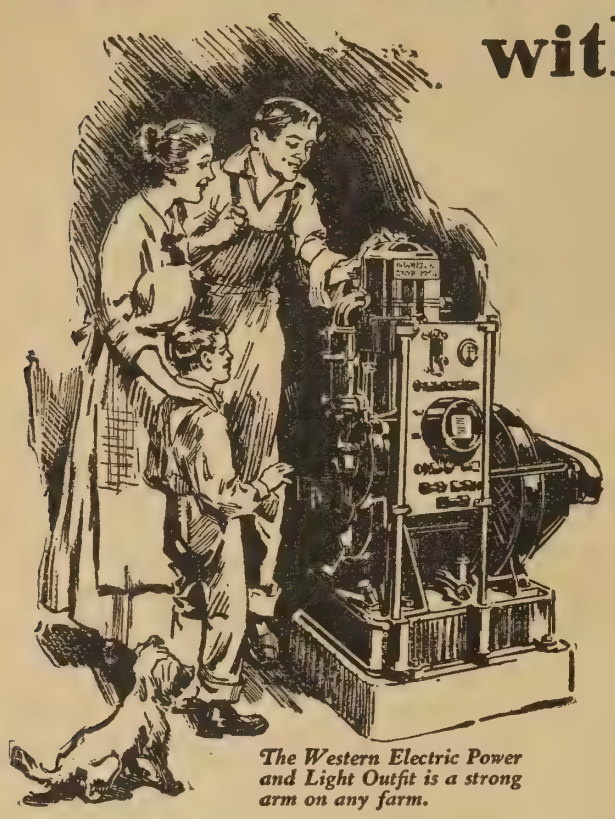
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Made in **3 sizes** to hold meat of two, five or ten hogs. Meat hanging racks permit putting maximum amount of meat in minimum space. Constructed of rigid angle iron and heavy galvanized steel. Nothing to rot, rust, burn, crack or break. **Positively fire-proof.** Investigate —save money on meat bills.

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"Did the first frost catch you with some corn still out?"



The Western Electric Power and Light Outfit is a strong arm on any farm.

"Harvest is a time of worry and hard work to us farmers — and we don't always get the crops in either. Time is short and help can't be had. Anyway, that was my fix up till this year, when I put in a Western Electric Power and Light Outfit. Of course this outfit doesn't do any field work. But the work it does do saved so much of my time that I was able to get all my corn in before the first frost."

B. B. Griesemer

Editor's Note: *Mr. Griesemer is a farmer near Griesemerville, Berks County, Pa.*

"MAYBE you have done better in getting farmhands to work for you than I could. In recent years I've been a sort of a farmhand and chore boy rolled into one. I was so busy milking cows, grinding feed and pumping water that I couldn't get through all my work in the field.

"Not long ago I began to notice the good work done by an electric farm plant belonging to one of my neighbors. It gave all the light needed, but what I liked even better was that it was a powerful plant, built with the idea of doing a man's work.

An outfit that saves time and labor

"The name of this powerful plant was Western Electric, and because I believed it would give me the help I needed, I installed a Western Electric on my farm. The story of what it did may interest you, if you need help too and if you believe an electric outfit should supply power even more than light.



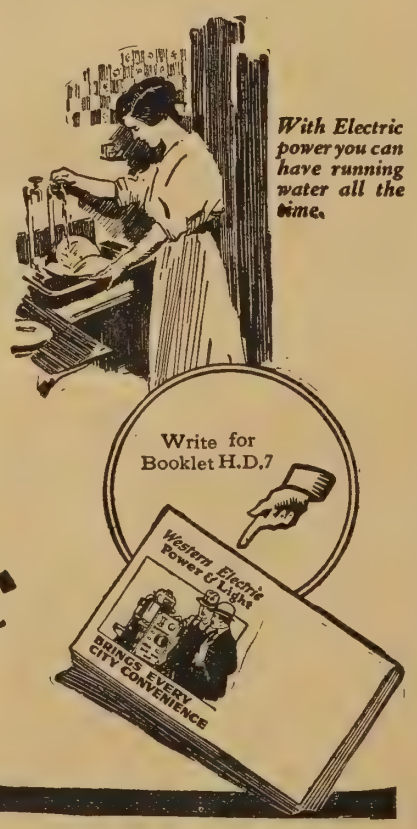
The portable motor makes churning easy

"Western Electric power milks the cows for me. There's half an hour a day saved right there. It also pumps water to my house and barn. Then I have a line shafting belted to the pulley on the engine, and belted to this shafting is a feed-mixer, fanning-mill and grindstone. I tell you, that engine can handle a lot of work. The powerful battery gives all the light needed, and it runs my wife's washing machine and pumps the water.

"So you see, Western Electric power is saving me a lot of time. When harvest came around, I was able to work about three hours more in the field every day. That is why I got all my corn safely in."

The battery lasts longer!

The reason the Western Electric battery lasts so long is that it is charged without stress or strain. As it fills, the rate of flow becomes less very gradually till the current stops by itself. This "tapering charge" means long life to the battery.



With Electric power you can have running water all the time.

How to save time and labor

Booklet H. D. 7 gives some facts and figures on how the Western Electric Power and Light Outfit helps solve the farm labor problem. For your copy write to the Western Electric Company at Chicago, or 195 Broadway, New York.

Some good territory still available for live-wire representatives.

Western Electric Power & Light

Makes the Battery last longer

CARBO STEEL POSTS
PATENTED Self aligning
TENSION FENCING SYSTEM
10 Times Strongest, No Breaking, Buckling Etc.
Half the Cost — No Concrete
CARBO STEEL PRODUCTS CO., 2607 W. 111th St., Chicago

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Only $2 DOWN ONE YEAR TO PAY

$44 Buys the New Butterfly Jr. No. 2½ Light running, easy cleaning, close skimming, durable.

EASY TO CLEAN

NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on

30 DAYS' FREE TRIAL

and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (21)

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Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

One Thousand Holsteins to France

Arrangements have been completed for the shipment of 1,000 American Holsteins to the devastated regions of France within the next four or five months. Dudley E. Waters, president of the Michigan Holstein Breeders' Association, recently returned from Europe and brought with him the story of the need of the French farmers for better stock.

At the National Dairy Show a joint meeting of the state associations and the officers of the National Association resulted in voting to get behind the movement.

France has suffered, as we all know, great losses of dairy cattle through the war. However, it is not a need of cows that is greatest among the dairymen today. It is the lack of pure-bred sires which is handicapping the future of the dairy industry in the liberated regions.

There are 112,000 females of various breeds in these sections, made up of English Shorthorn cows, the brindle and white Norman cow, the Dutch cattle, the German cattle and American grades. The last three are Holsteins, pure-breds and grades.

Good bulls are a scarcity, the scrub sires not only lacking in records of any kind, but particularly in individuality.

The State Holstein Associations of Michigan, Ohio, New York, Iowa, Illinois, Wisconsin, and Minnesota in this meeting at the National Dairy Show appointed the committee for the restoration of the dairy industry in the liberated regions of France, with Dudley E. Waters as chairman, R. C. Pollock, and Howard C. Barker representing the national and state associations.

The bulls to be donated will be six to eighteen months old, good individuals, and free from disease. Registration papers will accompany each animal. The French government through the ministry of the liberated region will take over the animals at the point of embarkation. They will see to it that the animals are placed in the hands of the best farmers in the various departments in need of pure-bred sires, and make these men responsible to the government for the care of each bull. More than one farmer will have the opportunity to breed his cows to these sires, but only one man will be responsible for the care of the sire.

Holstein breeders who wish to contribute to this cause should get in touch with the state association, or with Chairman Waters of Grand Rapids, Michigan.

Every breeder donating an animal will receive a personal acknowledgement from the French government, and in addition will have the satisfaction of knowing that a pure-bred bull from his farm is helping to increase the production of dairy products in a section which will require several decades to get back to normal in an agricultural way.—Extension Department Holstein-Friesian Association of America.

Jersey Cattle Notes

Week ending October 15:

Number of animals registered: Bulls, 179; cows, 463; total, 642. Number of transfers recorded: Bulls, 175; cows, 462; total, 637.

A few minutes given at a definite time each day will keep a record of the farm business; and with accurate figures at the end of the season a man can see at a glance where he is making money and where he is losing it.

Three big facts

More Milk
Better Milk
Healthier Cows



You'll get more milk, better milk and healthier cows if you feed regularly

Pillsbury's Dairy Ration

(the feed without a filler)

It is made exclusively from all high grade material, without a "filler". Contains no molasses or disguised roughage.

It contains sufficient mineral matter to maintain the health of the cow and is extremely palatable—cows go right after it.

Contains right *quality* as well as *quantity* of protein, perfectly balanced with fats and carbohydrates.

Absolutely uniform—contains eight ingredients, yet is mixed so scientifically and accurately that analyses from different samples tally exactly.

These results have been proved by actual feeding tests on practical dairy farms.

A high-grade ration for all dairy cows, yet costs no more than ordinary feeds.

Send for our booklet "Results"

Mail this coupon right now, while you think of it.

PILLSBURY FLOUR MILLS COMPANY
Minneapolis, Minnesota

Pillsbury Flour Mills Company
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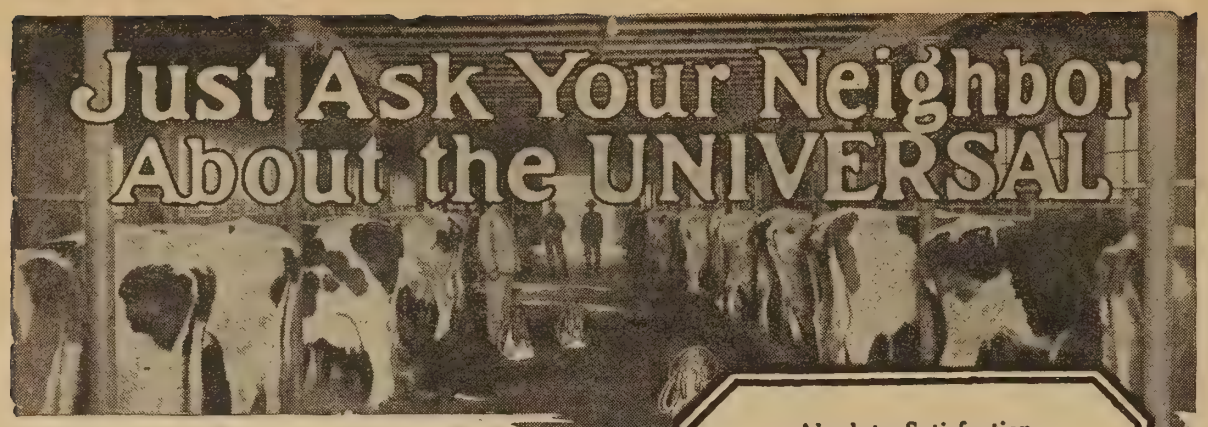
Gentlemen:—

I would like to learn more about Pillsbury's Dairy Ration. Please send me your free booklet "Results".

Name_____

Town_____

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HERE are three letters from farmers who milk their herds with the Universal Natural Milker—real profit-messages of vital interest to every farmer who milks six cows or more.

Universal natural milker

Read these letters. After that we believe that you will want to learn more about this Natural Milker. More than likely one of your neighbors milks his herd with this calf-action machine. Drop over to his place and put it squarely up to him, "Just what do you think of the Universal?"

We know what he will tell you. For our experience has shown that every one of the thousands of Universal users says just about the same thing:

The Universal is the *one* milker with the true, calf-like action.

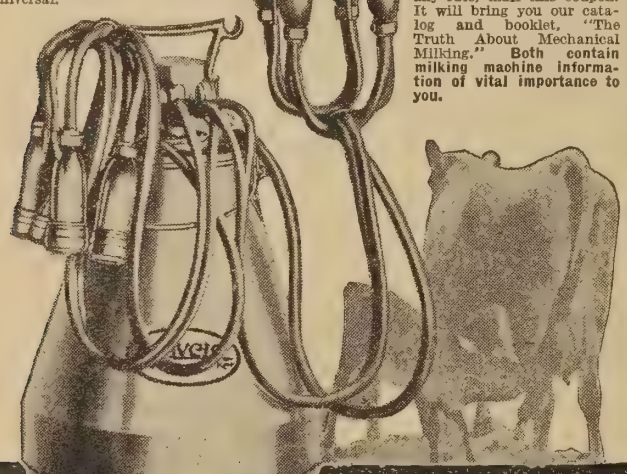
It is the *one* milker that can be depended upon to do a clean, 100% job of milking every day in the year—that does all that we claim for it and more—always.

The Universal Milking Machine Co.
Dept. 888, Goodale St. and Michigan Avenue, Columbus, Ohio

Its Perfect Teat Cup, its Alternating Action, the wonderful simplicity of the whole machine — these are the features that establish the absolute superiority of the Universal.



Write for the names of Universal users in your section — and the name of our nearest dealer. At any rate, mail this coupon. It will bring you our catalog and booklet, "The Truth About Mechanical Milking." Both contain milking machine information of vital importance to you.



Absolute Satisfaction

"We have used your milker for the past year and are more than satisfied with the results.

"We have been 30 years breeding the class of Jerseys we now have. Naturally they are the pride of our hearts and anything which would harm them in the least we would not use. But they take very kindly to your milker. It is efficient and milks quickly.

"We now milk 9 cows on official test using two single units — strip and weigh the milk in from 30 to 35 minutes.

"We recommend the Universal to anyone looking for a machine of merit."

(Signed) W. B. and W. R. COWLES,
Baraboo, Wisconsin.

Better than Hand Milking

"My Universal has been in daily service since Jan. 1st and it is yet to give us its first minutes' trouble.

"Our herd consists of 80 head of pure-bred Holsteins. Many of these cows are very valuable animals. For this reason we were a bit afraid of the milking machine proposition at first, but now we do not hesitate for we are having far better results with the Universal than we had with our average hand milkers.

"We believe the Universal is the best machine made and we recommend it to those wanting the best machine it is possible to buy.

(Signed) F. P. COWARD,
Java Village, New York

Most Rapid, Cleanest Milker Made

"Universal Milking Machines have been in constant use here for over a year in the production of certified milk, 5 double units being in service. After having used several other makes, I say that the Universal is unquestionably the most rapid, cleanest milker made.

"Certified dairying requires the bacterial count of the milk to be below 10,000. Our count is often below 3,000. The maintenance cost is less than that of the other machines which I have used.

"There has been absolutely no udder trouble due to machine and we have never had a cow with a quarter spoiled or the lactation period shortened from using machines."

(Signed) R. T. ROBINSON,
Manager Sleepy Hollow Ranch
San Anselmo, California.

UNIVERSAL MILKING MACHINE CO.,
DEPT. 888, COLUMBUS, OHIO.
Gentlemen:
Will you please send me further information on the Universal Natural Milker?

Name .....
Street or R. R. .....
Town .....
State .....

Milks Like The Calf



KANE SYRO

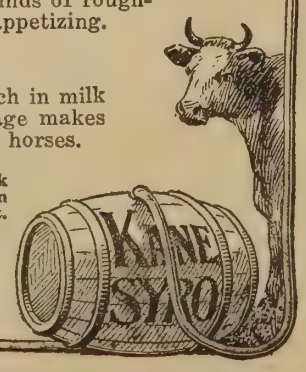
direct from Cuba to you

KANE SYRO comes direct from Cuba and Porto Rico, the home of real cane molasses—contains approximately 52% sugar and will make all kinds of roughage palatable and appetizing.

No Sugar is Extracted

This wonderful feed molasses is unusually rich in milk producing fats and when mixed with roughage makes an economical feed for cows, hogs, sheep and horses.

We have molasses NOW in our Philadelphia Tank Station for shipment at once. All shipments made in good, staunch barrels. Write for Prices and Booklet.



National Molasses Corporation
207 Walnut Place, Philadelphia, Pa.

When Writing to Advertisers, Mention Hoard's Dairyman

New York Butter Market

(Continued from page 705)

tributed to a general lack of confidence in the general situation.

Privately owned creameries and centralizers must necessarily be heavy losers on the butter which they are marketing at present. Cars of 87 score centralized are selling at 42@43c, 88 score at 44@45c, 89 score at 46@48c, and 90 score at 49@50c. Even at those prices, buyers are extremely scarce. As many of the centralizers must compete with well managed co-operative creameries, which make the best butter that can be secured on the market today, it is reasonable to suppose that they are losing vast sums of money. The tendency is to sell regardless of the price offered as a feeling has prevailed of late that bottom prices have not as yet been reached. However, there are some who prefer to hold butter, believing that values will again work upward with the coming of cold weather.

On Monday of last week, extras were quoted at 59@59½c. On Tuesday there was a decline of ½c and that was followed by a drop of 1c on the following day. Because of a scarcity of fancy butter on Thursday, there was a revival of interest and no further decline took place. However, a marked weakness developed on Friday and prices again fell 1c. On Monday, due to reports that the market was strengthening in Chicago, values recovered 1c and there was an additional advance of 1c today. On the whole, a better feeling prevails in the market today than has been in evidence for some time. There are many buyers going the rounds and some are asking to see medium grade butter. Values of that class of butter have risen in the same proportion as those of extras and higher scoring butter. Low firsts and seconds seemingly are not wanted, the latter being offered as low as 39c in some instances without arousing any interest in the prospective buyer. The usual quantity of Danish butter is arriving each week and considerable Argentine butter is known to be on the water. Established quotations are: Extras (92 score), 59c; higher scoring than extras, 59½@60c; firsts, (90—91 score), 52@57c; firsts (88—89 score), 46@50c; and seconds (83—87 score), 39@44c.

W. B. LIVERANCE.

Current Feed and Hay Prices

Bran Steady—Other Feeds Decline With Little Demand

[Report by U. S. Bureau of Markets]

During the week ending October 23 bran advanced slightly in the Northwest, but this was not noticeable elsewhere. Low milk prices and butter importation seem to be a factor in reduced buying.

Quotations on bran are: $29 in Kansas City, $31 in Minneapolis, $34 in Chicago, $40 in Philadelphia and New York, $38 in Atlanta, and $42 in Seattle. Middlings range from $30 in Minneapolis to $40 in New York and $48 in Seattle.

Prime, 43% cottonseed meal is quoted at $38 f. o. b. Texas common points and cake offered at the usual discount of $3 to $3.50 less, with southeastern markets finding poor sale for 36% meal at $36. The 41% meal is quoted at $40 in New Orleans, $42 in St. Louis, $50 in Chicago and Philadelphia, and $53 at Minneapolis and Boston.

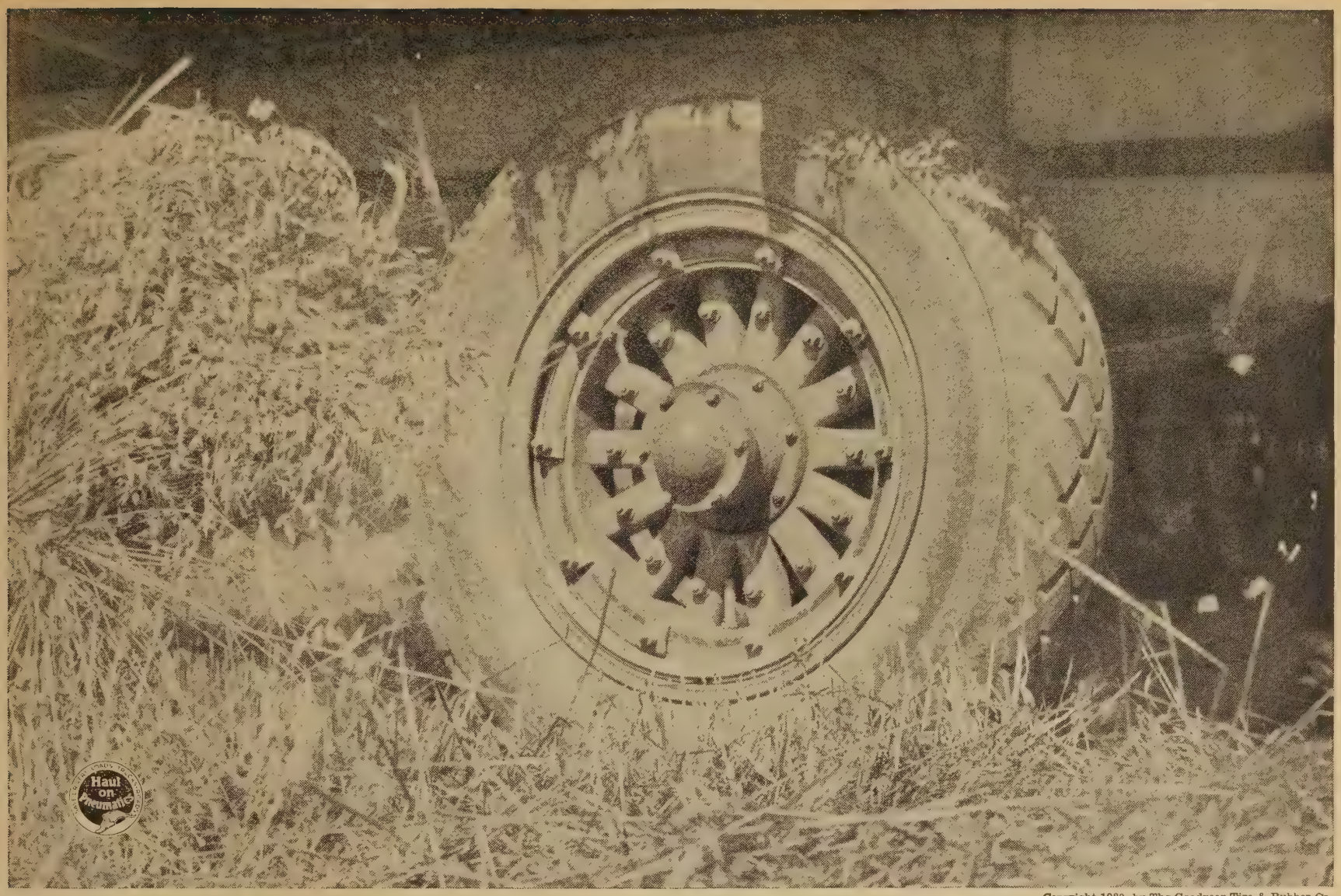
Minneapolis firms are quoting linseed oil meal at three dollars less than a week ago. Supplies continue heavy, and prices at mills are one dollar lower. Fine ground meal is in light demand, but there is fairly good inquiry for pea sizes. Ruling quotations are: $59 in Minneapolis, $61 in Chicago, $54 in New York, and $56 in Boston.

Hominy feeds for deferred shipment are $1 to $2 under the market. Quotations range from $34.50 in Chicago and St. Louis to $42 in New York and Boston.

Gluten feed holds its price under the guarantee against decline. Prices range from $40 in Philadelphia to $44 in Chicago and $52 in New York.

While all beet crops have not yet been harvested, reports received from principal factories indicate a much heavier production of dried beet pulp than was anticipated. Production estimates in a number of cases range from 80% to 100% higher than they were last year. The demand for this commodity, according to large handlers, is good. While $45 is asked for October-November shipment f. o. b. Chicago, imported beet pulp is quoted at $47 c. i. f. Philadelphia. Fairly large receipts from abroad are expected in the latter market next month. Other seaboard and Gulf ports quote

(Continued on page 712)



Copyright 1920, by The Goodyear Tire & Rubber Co.

"The big Goodyear Cord Tires make a motor truck a real farm tool. I use mine to pull a hay cutter, or a rake, or an automatic loader, as well as to haul grain to the threshing machine and then to the barns for storage. The pneumatics roll through our peat bogs, 14 feet deep in places, which we use for fuel supply; teams can't go into them after rains, pneumatics can. I haul pure-bred Holstein stock to St. Paul, 80 miles, without appreciable shrinkage. Others take days to do the harvesting that I do in hours—because of my truck on pneumatics."—E. H. Kuchenbecker, Owner, Oakcraft Grain and Dairy Farm, Owatonna, Minnesota, R.F.D. No. 1

THROUGHOUT agricultural America today there is many a farmer who can make a report similar to the one given above, regarding the all-round utility and value of a truck on Goodyear Cord Tires.

Just as the application of motor power quickens plowing, pumping, spraying, grinding and other farm operations, so does truck power aided by the active pneumatics quicken farm work in a large variety of ways.

All those tons of produce, stock and supplies that otherwise require such tedious toil in handling and hauling, are rapidly loaded and whisked between farm and town on the big, smooth-going Goodyear Cord Tires.

Farm products formerly limited to selling points only a few miles away, now have ready access by means of trucks on Goodyear Cord Tires, to markets sometimes 50 to 100 miles distant.

In the most strenuous of such duty these pneumatics demonstrate the rugged strength of their Goodyear Cord construction which makes possible that exceptional reliability with which they serve.

Farmers' reports of savings and advantages obtained with pneumatic-tired trucks and other motorized equipment, will be mailed on request by The Goodyear Tire & Rubber Company, from Akron, Ohio or Los Angeles, California.

GOODYEAR

CORD TIRES

"SNAG-PROOF"
Rubber Footwear



Here's the Way to Make Sure You're Right!

IF you want to see a man real downright happy over the rubber footwear he has bought, just ask any fellow wearing the green Snag-Proof label. He'll sure tell you that it stands for the best rubber boot, shoe or arctic you ever saw in all your life. And he'll back it up by saying he's been buying Snag-Proofs year after year—ever since he bought his first pair.

That's the reason Snag-Proofs are so popular and so successful. Every man who gets Snag-Proof footwear gets permanent satisfaction in warmth, comfort and service. He never changes.

You'll have the same experience. Look up the Snag-Proof dealer in your town. Give him a chance to satisfy you. He'll take a personal interest in pleasing you. For he has built his entire rubber footwear business on pleasing a customer so well the first time that he'll come back year after year. He wants to make a permanent friend of you—and he will if you'll go to see him. Try it.

LAMBERTVILLE RUBBER COMPANY
Lambertville, New Jersey



SURFEITED WITH NITROGEN

(Continued from page 691)

at that). Has any farmer tried this remedy? The writer would not cast a reflection on the good sense of the average farmer, for surely such a proposed cure is worse than the disease.

Thinner seeding may prove especially helpful in certain cases. This permits the entrance of more sunlight which not only strengthens the straw, but proves more favorable to the young seeding as well. One really gains three points in sowing less seed on "lodging" fields: (a) A considerable amount of seed is saved, (b) better yields are assured, and (c) the clover seeding is given a better chance. A few years ago one peck of barley was sown to the acre on a certain nitrogen-rich field near Burlington, Wisconsin. (Every other drill hole was closed when seeding.) At threshing time a yield of more than fifty bushels per acre was realized—and, in addition, the alfalfa seeding came through in fine shape. Had the usual amount of grain been sown per acre the yield probably would not have been more than about thirty bushels or less;—and furthermore, the alfalfa, no doubt, would have been smothered by the lodged grain. The thinner-seeding measure applies particularly well to certain brown and dark gray silt loams not overly supplied with organic matter, but on which, nevertheless, is developing the lodging problem. A narrow-leaved oat or barley may prove helpful. Here is a problem for the plant breeder, or, in fact, for any keen-minded farmer.

Curbing the Nitrogen Supply

Probably the most effective way to strike at the lodging problem on nitrogen-rich soils is to curb the supply of available or usable nitrogen. It is possible for the farmer, with simple means at his command, to actually control or regulate to a considerable degree the amount of available nitrogen for crop use.

Before proceeding, let us consider for a moment a few fundamental soil facts in order to make more clear this particular point:

Fact number one: Practically all the nitrogen an average soil contains is held in the form of organic matter.

Fact number two: The nitrogen in the organic matter is tied up in complex compounds too complex and insoluble to be absorbed by plant roots, —except possibly in only very small amounts.

Fact number three: Before a crop like corn or oats can secure any nitrogen from the organic matter it must undergo decomposition which makes possible the formation of usuable nitrogen.

Fact number four: The busy bodies in the soil which furnish usable nitrogen to the crop are the tiny organisms which inhabit any productive soil. Without these microscopic organisms in the soil, it would be just as impossible, under natural field conditions, to produce a crop of oats as by sowing it in glass sand and feeding it gravel stones, shingle nails, and liquid air.

Fact number five: These beneficial soil organisms are favored in their activities in furnishing available nitrogen when a given soil is sufficiently supplied with organic matter, with moisture, and with air. Loosening a moist soil rich in organic matter permits of the free entrances of air, and under these conditions a liberal supply of usable nitrogen is produced. On the other hand, if that same soil were left in a compact condition only a limited amount of available nitrogen would be formed.

Now let us return to the question of curbing the nitrogen supply as a control measure for the lodging problem. This takes us at once to the preparation of the seed bed. Do you plow for small grains? A Scot farmer on reading this will undoubtedly reflect that there is at least one fool bigger than the usual run, and that is the questioner. By the way, the writer was reared under the strait discipline of a Scotch farmer. Yes, he plowed for everything, and what he couldn't touch with a plow he spaded. That early training didn't do any harm; but the author had to change his ideas considerably in recent years as regards plowing for small grains. Under certain conditions he no longer hesitates to recommend shallow disking instead of plowing for oats or barley.

Take a corn stubble field on which lodging is the common rule. On one-half of this field, at seeding time, prepare the seed bed by shallow disking. Plow the remaining portion about five or six inches deep. Now sow the same variety of oats and sow the whole field the same day. Any farmer can perform this simple stunt. Many have done it, though in most cases accidentally. It's ten to one that the crop will lodge badly on the plowed area. Why? Because in the plowed and thoroughly loosened soil a liberal supply of available nitrogen is formed; whereas in the soil left compact the formation of available nitrogen is retarded or curbed. Figure three is a splendid illustration of the difference in the formation of available nitrogen in the soil, as shown in the growth of corn.

Production Economy Augments Profits

One spring morning two years ago while talking with one of Wisconsin's progressive farmers down near the Illinois line, the writer observed a neighboring farmer and his hired man begin the day's work in an adjoining corn-stubble field. One man had a disk harrow, the other a broadcast grain sower. The man with the sower jumped on his machine and began scattering the grain over the uncultivated stubble field. The second man followed with the disk harrow, covering the seed. Those two men made some time putting that crop in.

"Now, just look there," said my farmer friend pointing in direction of the modern sowers. "That seems to me a very shiftless way of farming. I can never bring myself down to such slip-shod methods as that."

There we had two conflicting opinions with only a wire fence in between. The one farmer didn't seem to have any doubts about scattering seed over unprepared ground. The other farmer had what might be termed a college idea concerning the preparation of an excellent seed bed. "I am for plowing," said he. "But," he added, "what puzzles me is why that farmer over there gets better yields than I do. It seems like putting a premium on laziness. I know my land, through manuring, is in better shape than his. His grain stands up, mine goes down."

It seems strange that this farmer finds it difficult to bring himself to giving his neighbor's method, or a modification of it at least, a fair trial even on a small area. He talks about the expensive field operations which are reducing profits; and he often wonders at certain seeding results—success vs. failure in the same field. Is there any reason why a farmer should feel shy about adopting simpler sowing methods when it cuts a big figure in economic production and

(Continued on page 719)



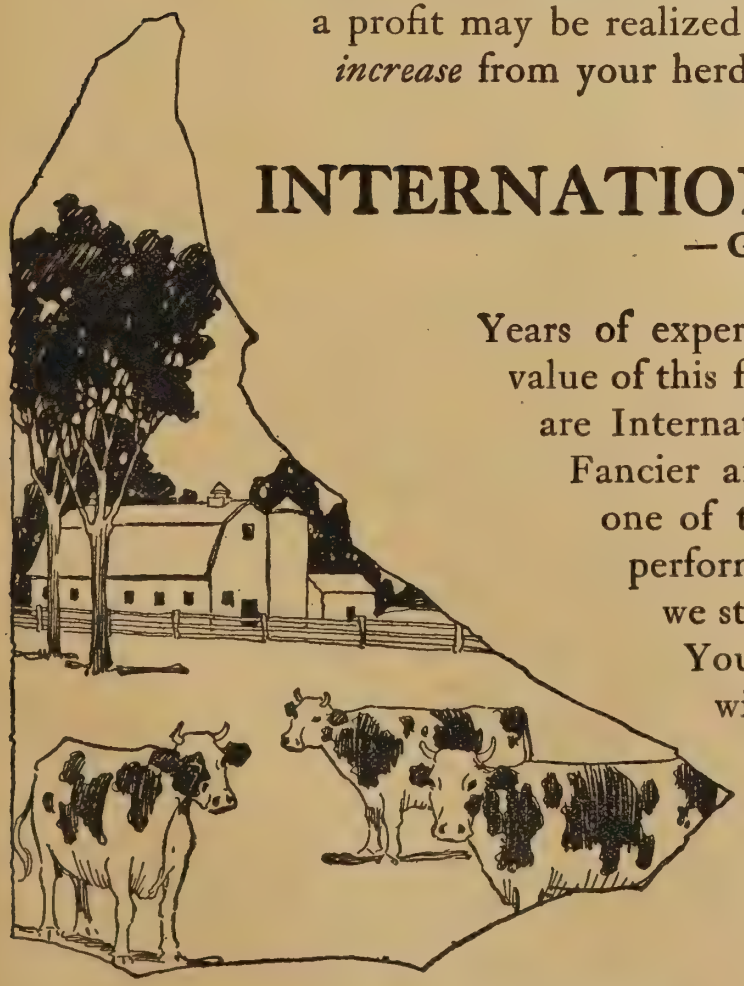
Back of the Guarantee

A guarantee, like a note or a bond, is worth as much as the party undertaking the obligation. The guarantee reproduced above is worded in very definite terms. Back of this warranty of performance is a responsible $1,000,000 organization. The character of this organization backs up the terms of this guarantee as solidly as the U. S. treasury backs up its promise to pay you hard cash for the paper money you hold.

The International Sugar Feed Co. really guarantees you bigger profits in the above document. But before we can help you, you must *help yourself*. Get away from the idea that cows are simply maintained through the winter that a profit may be realized from pasturage the following summer. Expect an *increase* from your herd *this winter* and you will *get it* if you feed

INTERNATIONAL DIAMOND DAIRY FEED

— GUARANTEED 24% PROTEIN —



Years of experiment and practical feeding have established the value of this feed, and *all* feeds in the International line. There are International feeds for the Stockman, Hog-Raiser, Horse Fancier and Poultryman as well as the Dairyman. Every one of these feeds comes to you with a known record of performance. Upon these known records of performance we stake our capital, and our reputation as feed builders. You *must be satisfied* with feeding results as compared with your expenditure for feeds or you will find us here to even up the difference.

Ask your dealer for International Feeds, whatever your feeding requirements. He should be able to supply you with any feed in the line. If he is not, write to us for information and full advice on any feeding question.

INTERNATIONAL SUGAR FEED CO.

MINNEAPOLIS, MINNESOTA **Mills at Minneapolis and Memphis** ***Live Agents Wanted***

Current Feed and Hay Prices

(Continued from page 708)

around $50. In Los Angeles dealers are asking $41 per ton. In the last named market coconut meal is quoted at $42 and rolled barley at $48.

Demand for hay continues light and market receipts have sharply declined. No. 1 timothy is quoted at $24 in Minneapolis, $22 in Kansas City, $31 in Chicago, $34 in Philadelphia, $37 in Boston, and $40 in New York. Mixed clover and timothy rules from $1 to $3 lower than clear timothy, with straight clover a dollar cheaper.

No. 1 alfalfa is quoted at $25 in Kansas City, $21 in Omaho, $23 in Seattle, $30 in Chicago, and $34 in Atlanta.

Coming Events

Nov. 9—11, 1920, Wisconsin Buttermakers' Association meets in Madison. Secretary, H. C. Larson, Wisconsin.

Farmers' National Congress, November 16 to 19, at Columbus, Ohio. A. P. Sandles, Sec., Columbus, Ohio.

MARKETS

CHICAGO, Oct. 28—Butter—Creamery, extras, 58½c; extra firsts, 51c; dairy, firsts, 46@53c; seconds, 45@46c.

Eggs—Ordinary, 49@55c; firsts, 58@59c.

Cheese—Twins, 21⅝c; Young Americas, 23c.

MILWAUKEE, Wis., Oct. 28—Butter—Creamery, tubs, 56c; prints, 57c; extra firsts, 54@55c; firsts, 52@53c.

Eggs—Fresh firsts, recandled for city trade, 60@61c; current receipts, country candled, 55@56c; checks, 37@41c; dirties, 41@44c.

Cheese—Twins, 21⅝c; Daisies, 21¾c; Longhorns, 20½c; fancy, 23c; Limburger, 1 lb., 21c; 2 lbs., 22c.

NEW YORK, Oct. 28—Cheese—Dull; state milk, common to specials, 20@28c; skims, common to specials, 10@21c.

Butter—Firm; receipts 4,317 pkgs.; creamery extras, 59½@60c; state dairy, tubs, 37@58c; imitation creamery, firsts, nominal.

FEEDING
MOLASSES

We are now in position to ship the famous **Dixie Brown Molasses** immediately on receipt of orders.

Write for low prices.

Dixie Brown Cane Molasses Co.

Dept. D, 123 W. Madison St., Chicago, Ill.

NOW READY TO SHIP

DRIED BEET PULP

Palatable succulent vegetable feed for dairy cows. beef cattle, sheep and hogs

We can take care of orders from any part of the country

The Larrowe Milling Company

Detroit, Mich. Los Angeles, Calif.

Leavenworth County Breeders'

Third Annual Sale

Registered Holstein-Friesian Cattle

At the New Sale Pavilion

Monday, November 22, 1920

10 Consignors have selected the good ones from their herds.
85 Head will sell

40 cows, a few fresh, many heavy springers, 30 coming two-year-old heifers bred to 30-lb. bulls. Among them are 7 sisters as handsome a lot as one ever saw.
10 heifer calves from record bulls.
5 bulls ready for service, from high record bulls and A. R. O. cows.
All cattle tuberculin tested and sold with 60-90 day retest privilege.
Come to this sale. A good place to buy.
Sale begins at 10 a. m.

Write today for catalog to

W. H. Mott, Sales Mgr., Herington, Kansas

Attention!

Sale consignors and breeders intending to hold dispersal sales.

Let an experienced showman fit and show your animals in your next sale.

An animal in sale shape gets the money, and I can do it.

My rates are reasonable and I can make money for you.

Write for full particulars and dates.

Address Box 439, Care Hoard's Dairyman

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.
They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.
The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

Bull Calf

Sire: Pabst Pontiac Hengerveld, 34-lb. son of King Pontiac Champion out of a granddaughter of Hengerveld De Kol. Dam: A 19-lb. two-year-old out of a 2,365-lb. junior 3-year-old. This heifer promises to materially increase her record as a three-year-old. This splendidly bred fine individual is priced reasonable — buy him now as he will be worth more when dam makes her 3-year-old record.

A. W. DOPKE & SONS, No. Milwaukee, Wis.

3 Sons of the Wonderful Sire

SIR PIETERTJE MAID ORMSBY
the greatest son of
SIR PIETERTJE ORMSBY MERCEDES
and BUFFALO MAID

Butter, 30.38 lbs. and milk, 621.60 lbs. in 7 days. Butter, 907.31 lbs. and milk, 21,796.60 lbs. in 1 year.

Only three left, 8 months to 1 year old.
All from tested dams.
Herd tuberculin tested every six months.
Write quick for prices and descriptions.

WILCO FARMS, W. R. Hale, Supt., Willisville, Ill.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke.

Wm. N. Osborn, Wanatah, Ind.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.



We Have Consigned to the

Second Iowa Guaranty Sale

Nov. 16-17, Des Moines, Iowa

Seven Females and Two Bulls, Bred for *Type and Yearly Production*

A yearling bull whose two nearest dams average 911 pounds butter from 22,500 pounds milk at age of 3 years, 5 months. His dam is a daughter of Sir Johanna Fayne (9 20,000-pound daughters) and his sire is a son of Oak De Kol Ollie Homestead (Grand Champion National Dairy Show 1916-17) and Fryslan Waldorf (Grand Champion at Waterloo Cattle Congress 1917).

A son of Oak De Kol Ollie Homestead from a daughter of Sir Johanna Fayne who won tenth prize last year for milk in the 305-day test. Her dam has milked over 100 pounds milk a day and has a good yearly record.

A daughter of Oak De Kol Ollie Homestead from a 20,000-pound daughter of Sir Johanna Fayne, four years old and bred to a great son of Sir Johanna Fayne.

Two daughters of Iowana Waldorf Homestead, who is a son of Oak De Kol Ollie Homestead from Fryslan Waldorf, 1,117 pounds butter as a junior four-year-old and both out of yearly record daughters of Sir Johanna Fayne.

A good time to buy *good foundation animals.*

Iowana Farms, Davenport, Iowa

Waupaca County Holstein Sale

MORE FEDERAL ACCREDITED HERDS THAN ANY OTHER COUNTY IN WISCONSIN

Fair Grounds, Weyauwega, Wis., Nov. 24th

Remember the date — Wednesday the 24th — the day before Thanksgiving

50 Choice Registered Holsteins

All animals over 6 months of age tested for tuberculosis

About thirty of the animals entered are choice cows, many with excellent A. R. O. records, and bred to high record bulls of the most popular breeding. Also a number of typy heifers of the best of breeding. Many of the cows and heifers due to freshen soon. Only A. R. O. bulls offered. If you want that famous 37th breeding you will attend this sale.

Waupaca County Holstein-Friesian Breeders' Association

Sale in Heated Pavilion
J. E. Mack, Auctioneer.

For information and catalog write
James H. Dance, Sale Mgr., Waupaca, Wis.

Weyauwega is on Soo Line
40 miles north of Oshkosh
F. H. Everson, in the Box.

October Milk Prices

The following table from the U. S. Bureau of Markets' report presents a comparison of the net prices received during October by producers for fresh milk (test 3.5%) f. o. b. local shipping points or milk plants operated by fluid milk dealers:

Sections	Range of Oct. prices per cwt.	Comparison of average prices 1920 Sept.	1920 Oct.	1919 Oct.
United States	$2.10–$6.16	$3.77	$3.80	$3.68
New England	2.75– 5.05	4.29	4.29	3.95
Middle Atlantic	2.84– 4.49	3.85	3.85	3.39
E. North Central	2.28– 4.09	3.53	3.56	3.62
W. North Central	2.10– 4.42	3.11	3.15	3.13
South Atlantic	3.48– 6.16	4.27	4.46	4.49
E. South Central	2.85– 4.80	3.44	3.53	3.67
W. South Central	3.14– 5.24	4.35	4.54	4.45
Mountain	2.62– 3.49	3.27	3.25	3.12
Pacific	3.38– 4.44	3.79	3.88	3.38

Producers' and Consumers' Prices

Prices paid producers during October averaged 13c higher than for September and 9c higher than a year ago. The next table shows for certain representative city markets the prices of standard grade milk (Grade B, test 3.5%) received by producers and paid by consumers during the month of October:

	Producer receives per cwt.	Consumer pays per qt.	Butterfat allowance per lb.*
Birmingham, Ala.	$3.15–4.07	$.20	$1.00
San Francisco, Cal.	4.51	.17	.30
San Diego, Cal.	4.71	.16	
Denver, Colo.	3.15	.13	.90
New Haven, Conn.	4.46	.16–.17	.40
Washington, D. C.	5.10	.17–.18	.40
Jacksonville, Fla.	5.52	.20–.28	.42
Atlanta, Ga.		.25	
Chicago, Ill.	4.77	.16	.40
Indianapolis, Ind.	2.98–3.23	.14	.80
Des Moines, Ia.	3.75	.16	.50
Kansas City, Kans.	3.36		flat
Louisville, Ky.	3.33	.16	.50
New Orleans, La.	5.35	.19	.45
Portland, Me.			
Baltimore, Md.	4.35	.16	.58
Boston, Mass.	4.88	.18	
Detroit, Mich.	3.80	.16	.40
St. Paul, Minn.	3.80	.14	.50
Kansas City, Mo.	2.97–3.92	.15–.16	.50
Butte, Mont.	3.33–3.49	.15	flat
Lincoln, Neb.	2.98	.15	.85
Carson City, Nev.	3.49	.12	flat
Trenton, N. J.	4.40	.15	.40
New York, N. Y.	4.97	.18	.40
Ashville, N. C.	4.80	.18	
Fargo, N. D.	4.07	.17	flat
Cleveland, Ohio	4.38	.16	.50
Cincinnati, Ohio	3.90	.15	.45
Okla. City, Okla.	3.50	.17–.18	1.00
Portland, Ore.	3.35	.14	
Pittsburg, Pa.	4.36	.16	.50
Philadelphia, Pa.	4.40	.15	.40
Providence, R. I.	4.88	.18½	
Sioux Falls, S. D.	3.75	.14	flat
Memphis, Tenn.	4.80	.20	flat
Dallas, Tex.			
Salt Lake City	3.26–3.49	.12½	flat
Burlington, Vt.	2.75–3.25	.15	flat
Seattle, Wash.		.14	
Wheeling, W. Va.	4.36	.18	
Milwaukee, Wis.	3.75	.13	flat
Cheyenne, Wyo.			

*In actual practice this allowance is made on the basis of a certain price per hundred of milk of a certain test, one-tenth of the price per pound fat being paid or deducted for each one-tenth per cent above or below the stipulated basic test. Where the word "flat" appears in this column, it means that no allowances are made for butterfat content but the milk must not be lower in test than legal requirement and must not be adulterated or skimmed.

The prices quoted for producers are for milk testing 3.5 per cent and delivered f. o. b. city, from which must be deducted the various transportation costs in order to get the actual price. In certain cities the prices given apply only to that portion which is considered as the producers' average production, the surplus being either handled by the producers' association or the dealers at somewhat lower prices.

The prices given are here reduced to the comparable basis of 3.5% fat, as different cities vary from 3% to 4% as the basic fat test. To reduce the prices per hundredweight to either a gallon or a quart basis divide by 11.63 or 46.33, respectively.

The prices paid by consumers are for average testing milk delivered in quart bottles. It is the grade of milk most generally sold in these cities and in most cases is for pasteurized milk.

Country Shipping Stations

Prices per cwt. paid at the dealers' country receiving stations or at producers' railway shipping plants are given as follows for October:

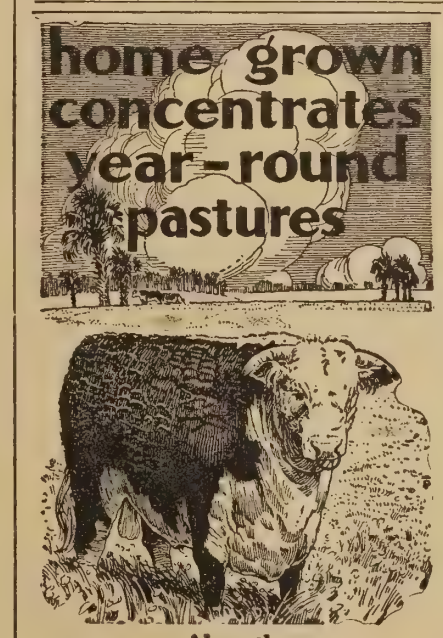
New Haven	$4.01	Kans. City	$2.15–3.57
Washington	3.90	Lincoln	2.62
Jacksonville	3.67	New York	3.85
Chicago	3.70	Albany	3.94
Indianapolis	2.42	Cleveland	3.60
Baltimore	3.28	Cincinnati	3.30
Boston	4.09	Pittsburgh	3.50
Detroit	3.80	Philadelphia	3.81

Retail Prices

The following table gives for a few cities the retail prices of milk, cream, and buttermilk for October, 1920:

Cities	Special milk per qt.	Certified milk per qt.	Butter milk per qt.	Cottage cheese per lb.	Light cream* per ½ pt.
	Cts.	Cts.	Cts.	Cts.	Cts.
Boston	21–25	28	22	26	16
New York	21	28	12	20	22
Buffalo	17	26–30	10	15	23
Philadelphia	17	30	13	8	18
Pittsburgh		25			19
Cleveland	20	32	15	18	20
Chicago	22	25	10–13	20.8	17–18
Milwaukee	15	25		12–16	15
Detroit	22	25	22	16	16
Minneapolis		22	15	16	16
St. Louis	20	25	28	18	18
Des Moines	18	25	12	20	16
Washington	18	30	16		18–20
Richmond	17		16		16
Jacksonville	30		12		
Baltimore	20		16		20
Louisville			16		16
Memphis		30	16		22
New Orleans	22	25	17		18
Colo. Springs	15			12	13
Salt Lake City	15		7	15	15
Portland		21	14		17
Spokane	16		15	18	15–17
San Francisco		25	17	20	18

*Cream testing 18–20 per cent butterfat.



Along the

Seaboard

the south's newest great railway

Productive prairie land along the Seaboard, with pasturage every month, can often be bought for but little more than interest Western farmers pay on mortgages.

Soy beans, velvet beans and peanuts furnish an abundance of rich home-grown concentrates. Instead of housing cattle for months and feeding them hay, silage and concentrates, they are turned into velvet bean pastures and rapidly get into market condition. Wonderful gains are made and splendid flavored meat. In the "Black Belt" of Alabama and in Georgia alfalfa flourishes.

Shoats hog down the peanuts, making big gains at lowest cost per pound, one acre of peanuts equalling two of corn.

Ewes in Florida and other States drop lambs from November to January. Early pastures are provided by sowing oats, rye and rape, and the farmers have a well-grown fat 65 lb. by April — get "hot-house" prices for pastured lambs.

Stock-raising, general farming, fruit and vegetable growing are paying big profits. Write me for booklet and information. Advise kind of farming in which interested.

J. M. Jones, General Development Agent
SEABOARD AIR LINE RAILWAY
Room 122, Royster Building, Norfolk, Va.



What Does Your Feed Cost Per COW?



What does it cost you to feed your cows? It depends entirely on **how** and **what** you feed them. The only way you can figure feed costs is to deduct the cost of feed from the value of milk production.

If you feed your cows sparingly and try to economize on feed, your feed costs will be high because the first use made of the feed your cows consume goes to provide bodily maintenance and leaves little for milk production.

But if you feed the **right kind** of feed liberally—give your cows sufficient to provide them with both bodily maintenance and milk producing nutrients, your feed cost will be low. That's why

SCHUMACHER FEED AND BIG "Q" DAIRY RATION

fed according to the Schumacher Feeding Plan have become so universally popular with dairymen and farmers everywhere.

Schumacher Feed, the world's greatest carbohydrate feed is composed of the **right** kind and variety of grains to supply bodily maintenance—to keep cows in tip top shape physically—provide them with energy—stamina, etc. while Big "Q" Dairy Ration, the renowned high quality protein ration, supplies the needed food nutrients to be converted into milk.

This combination fed liberally **reduces feeding costs** because it **increases health condition and milk** production. You can prove it to your own satisfaction and profit by making a test with any cow. The results will be gratifying and make you a strong advocate of the Schumacher Feeding Plan—the plan that costs **less** because it produces **more**. Ask your feed dealer.



The Quaker Oats Company
Address: Chicago, U. S. A.

"Try It Out Yourself"
says the Good Judge



And you will find how much more satisfaction a little of this Real Tobacco gives you than you ever got from a big chew of the ordinary kind.

The good, rich, real tobacco taste lasts so long you don't need a fresh chew nearly as often. So it costs you less.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

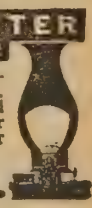
W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Alfalfa Hay
The Choice Dairy Kind

We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.
W. A. Ferson Hay Company, Kansas City, Mo.

3 TIMES BRIGHTER
STEEL MANTLE BURNER



Generates and burns gas from kerosene in ordinary lamp. White light. No smoke—no odor. Guaranteed. Send dealer's name and address and your name and address with 40 cents for burner if he cannot supply.
Agents wanted. Write now.
STEEL MANTLE LIGHT COMPANY
4035 Cottage Grove Chicago

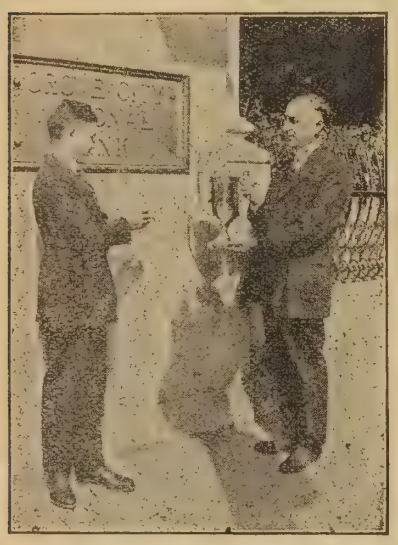
HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

A Worth While Show

Did you notice what a prominent part the young fellows played in the success of the show? If you were a close observer at the ringside while the judging was taking place you saw that many of the animals were being held by boys. In a number of cases these were the actual property of the lads, members of the Grove City National Pure-bred Dairy Cattle Club. In other cases the boy was lending a hand in showing dad's exhibit.

If you had been behind the scenes as was the writer you would have



JOHN McCUNE, JR., PRESENTS TROPHY TO WILSON McCLELLAND

been still more impressed with the interest the boys were taking. With the early arrivals on Friday afternoon from the edges of Grove City community came a quiet delegation of boys. There were Davis and Humphrey and Studebaker from Butler County and Westlake and Hassel from Mercer, and several others. This bunch slept together in the Young Farmers' Headquarters tent and the air was full of talk about the cattle and the show. Some time in the wee small hours of the morning Davis crawled out and made a round of the stalls to see that his Jerseys were all comfortable, and the whole bunch were up and had eaten breakfast by five o'clock.

The Grove City National Pure-bred Cattle Club has been an important part of the great dairy development that has been taking place in Grove City community. It was established in June, 1917, when Grove City National Bank, co-operating with the Mercer County Farm Bureau, brought in for the boys and girls a carload of fifty-three pure-bred Jersey, Holstein, and Guernsey calves. The heifers found their way into the hands of boys and girls within the creamery territory in Mercer, Butler, and Lawrence Counties, and in the supervision of the club members the county agents of the three counties have taken part.

The club was started and has continued as a permanent breeding organization. An effort is made to have the original animal and her female offspring stay right in the club. So far there have been very few sales of either and as far as has been possible the boys and girls have secured through the cow testing associations complete production records. The disturbing effect of the war was felt in the club as in many other agricultural activities and regular meetings were not held. A plan is under way now for meeting in community groups for the checking up of records and the discussing of feeding and breeding problems.

The members of the dairy club have been always encouraged to exhibit their animals at the show and picnic of the Accredited Herd Association. Special prizes have been provided by Grove City National Bank and they have also shown in the open classes. It is obvious that in a lot of fifty animals purchased as calves under six months old not all would develop as show individuals and yet a remarkably large number of the heifers and their offspring have done so. In the class for Guernsey cows over three years, Tom King has taken first place with his club heifer consistently and, furthermore, she has never been beaten in any of the fairs at which she has been shown.

At this place we would like to say a word or two to the members of the club who did not exhibit at the show. It is something of a task, we know, to fit a heifer for the show ring and drive or haul her several miles over dusty roads, but in the long run it pays big dividends to the boy or girl who does it. Among people who follow the show ring there is a maxim that two people get most of the good from any exhibit—the judge and the exhibitor. When the time rolls around for the next show let everybody appear with something in the show ring.

The stock judging contest for members of the dairy club has been a feature of the picnic. It was run this year under something of a handicap because the regular judging program lasted until nearly one o'clock. This made it necessary to confine the work to Holsteins and Jerseys, and the Guernsey boys were disappointed in not having an opportunity to work on their own breed. Despite this, a live group of club members, including a team from Armstrong County who were visiting Mercer County to get some experience in preparation for their trip to Springfield, worked throughout the contest under the direction of Professor A. A. Borland, head of the Dairy Husbandry Department of State College.

The John McCune, Jr., silver cup, a fine circulating trophy to go each year to the contestant having the highest total score, added greatly to the interest of the contest. Wilson McClelland was the winner but he was very closely pressed by several others. It will always be considered a great honor to hold this cup. Mr. McCune is one of the big men of Grove City and his interest in the young fellows who are going to make dairy history in the community is greatly appreciated by the club.

A new feature of the picnic this year was the active participation of the Young Farmers' Club. This is an achievement organization drawing membership from three sources: the club work, the vocational schools, and college agriculture courses. In order to be eligible a fellow must make an outstanding achievement in some phase of agriculture. Most of the members of the dairy club have already qualified and several have taken out membership in the Young Farmers' Club. This year the club brought down one of the big tents and part of its equipment and established a headquarters where members of both clubs could mingle. They also ran a stand at which ice cream and milk drinks were sold. The Young Farmers' Club has had many pleasant gatherings around Grove City and it is hoped that this plan of coming together at the picnic may be made a permanent one.

All this active interest on the part of the younger generation speaks well for the future of the dairy industry around Grove City. The community is committed to the development of a big program and much of the burden should fall upon the young shoulders. In plain arithmetic 15 plus 50 is the same as 50 plus 15. In the development of a community in pure-bred live stock, if the problem is a man starting with pure-breds at 50 with 15 years to go and a boy at 15 with 50 years to go, everybody will agree that the sums will be widely different.—By C. G. McBRIDE, State Club Leader in Grove City National, Pennsylvania.



GROVE CITY JUNIORS ARE LIVE WIRES

The Food Value of Milk and Its Products

The following is a first prize essay written by Melba B. Connor of Minnesota, winning in open state competition among boys and girls under twenty years:

Every state has its slogans and one of Minnesota's slogans is "Use more milk". Minnesota realizes that if her people understand the food value of milk, they will use more, and her citizens of tomorrow and even of today will be stronger and thereby better fitted to aid in the development of the state.

Milk is a nourishing food, rich in body building and energy producing substances. For this reason it is often spoken of as a perfect food. The real value of milk is determined first by what the body needs from food, how the food meets these needs and, finally, whether it may be replaced equally well by some other food.

Food taken into the body is used for energy, for building material, and for the substances which regulate the body. Before a well nourished body can be obtained, all these needs must be met adequately. The value of the food to the body is measured by its ability to supply some or all of these needs.

Two of the main sources in milk are milk fat and milk sugar. The fat of milk contains an unknown substance essential for growth and occurring in but few foods in amounts large enough to promote normal growth. Milk sugar is of importance in the changes which take place in the food canal, especially in the case of the infant and the young child.

The building material of the body includes the substances used to build and keep tissues in repair.

Milk is a superior source of protein especially where growth is taking place. The amount of protein required in the daily diet may be less if milk forms a considerable part of the diet than if such foods as cereals are mainly depended on.

Milk as a source of protein can be replaced more easily than milk as a source of lime. Comparatively few foods contain the amounts that can be eaten and digested by a child in a sufficient amount to provide for normal growth and health. Milk is the richest in available lime of all common foods and its absence or even its limited use may prove unsafe. Even if all members of the family are adults, a thought must be given to provide lime in other foods, if less milk is used, or the health of the adult is impaired.

Milk is comparatively rich in phosphorus as well as in lime. Milk is low in iron and when it forms a considerable part of the diet, should be in connection with foods rich in iron. In spite of the low iron content, it is an important food to use when the blood is low in iron, because lime in food increases the ability of the body to utilize iron.

Protein, phosphorus, lime, and iron not only serve as important materials for building the body, but also play a part in regulating its activities. Salts, acids, and flavors are all concerned in regulating body processes, and some of these are also found in milk.

Besides the nutrient substances such as protein, fat, starch, lime, acids, salts, and flavors, there are other dietary factors essential to health and growth. Two of these factors seem to be essential to right nutrition. One of them occurs dissolved in the fat of certain foods; the other can be obtained from certain foods dissolved in water. The one that occurs dis-

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

solved in the fat of certain foods, or more easily thought of as the fat-soluble factor, promotes growth and is essential to it. It does not occur in all fats. Milk fat as it occurs in milk and butter and perhaps cheese, the fat in egg yolk and cod liver oil, contain the necessary factor. Forage foods, such as alfalfa and cabbage leaves, seem to contain it in comparative abundance. It seems to be absent in all vegetable oils and lard. Therefore, since we have a limited capacity for forage foods and since this factor is essential in the diet of the child and to a great extent in the diet of the adult, we must depend upon milk, eggs, and meat to supply this factor. Meat contains this fat-soluble in lesser quantity than does milk fat.

In the absence of the water soluble factor, growth is prevented and serious illness results.

The protein in one quart of milk is equal to that in seven ounces of sirloin steak or four and three-tenths eggs. The energy produced by one quart of milk is equal to that produced by eleven and three-tenths ounces of sirloin steak, or nine eggs.

Butter is especially valuable for children, because it supplies the fat which is so essential in a palatable and easily digested form. Oleomargarine may have the same energy value as butter, but is not a source of the fat-soluble factor.

Cheese is said to be a concentrated food, because a pound contains more food value than two pounds of meat. Ninety-five per cent of its protein is digestible, and ninety per cent of its energy is available.

Buttermilk also is a nutritous food and a harmless stimulant which is valuable in the dietary of children and invalids.

Ice cream, the delightful and satisfying dish, ranks high as a food and is eaten by the sick and the well, the child and the adult.

If we possessed a valuable gift that had as many worthy points as milk has we would treasure it highly and watch it jealously, so it might come to no harm. Milk is a valuable gift—our normal health depends upon it. Surely such a gift should not be wasted but utilized to its utmost extent. If we waste it we rob not only ourselves, but others.

Junior Letters

Hoard's Dairyman Juniors:—I am 12 years old. My sister and I have five rabbits. We want to sell them for 75 cents apiece. We have four ducks, two young ones and two old ones, and want to sell them, too. We are going to move this fall. My father sold a calf yesterday for $200. He sold three others for $100 each. My sister and I have 45 tomato plants and lots of tomatoes on. I am in another club called Beech Grove Girls' Canning Club. There are six girls and a leader. My brother was in the pig club last year. He had two pigs and sold one for $60. He kept the other one. If any one of the juniors wants to write me my address is R. F. D. No. 8, Mansfield, O.

Frances Doolittle.

Hoard's Dairyman Juniors:—I am a junior 15 years old. I had a grade sow nine months old and it weighed 284 pounds. I traded her for a pure-bred Duroc-Jersey sow. She is due to farrow about the middle of September.

We have a good crop of apples this year. We have Winesaps, Delicious, Rome Beautys and Winter Bananas.

Washington. Keith Brooks.

Hoard's Dairyman Juniors:—This is my first letter. I have read the juniors' page in the Hoard's Dairyman for a long time and like it.

I am 14 and in the first year high.

I live on a farm and work for a family by the name of Smith. Mr. Smith works 200 acres of land. He has 24 head of cattle, 16 of which give milk. He has a registered bull and some of his cows are registered. He has three horses, two colts, and two mules.

This summer I helped Mr. Smith with the haying. We had a side delivery rake and a hay loader. I did most of his raking and drove on the hay fork and wagon.

We also have 7 rabbits. They are Flemish Giants.

We raised over 60 chickens this year.

Mr. Smith has a silo.

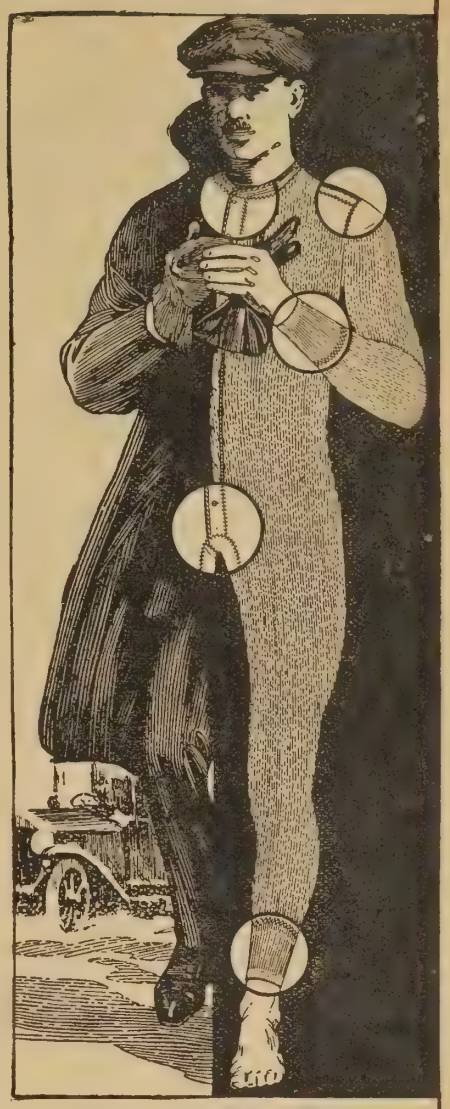
I will close as my letter is getting long.

New York. Eva Harrington.

It pays to put underwear money into "HANES"

—bigger value, longer wear and greater comfort!

HANES
ELASTIC KNIT
UNDERWEAR



FOR years "Hanes" winter underwear for men has proven itself to be the *national standard.* Its popularity extends from coast-to-coast! It wins on merit! Your confidence in every "Hanes" garment can never be misplaced. *"Hanes" guarantee proves that!*

"Hanes" underwear is made in heavy and medium winter weight union suits and heavy weight shirts and drawers. The medium weight union suit, new this year and illustrated in this advertisement, is exceptional value. It is made of full combed yarn, is silk trimmed and carries a yellow Hanes label.

"Hanes" Union Suits for boys

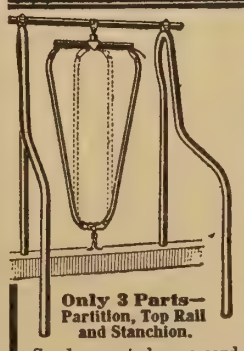
duplicate the men's Union Suits in important features with added fleeciness. They stand the stiffest wear and the hardest wash. Sizes 20 to 34, covering ages from 2 to 16 years. Two to four year old sizes have drop seat. Inspect these remarkable "Hanes" garments at your dealer's. If he cannot supply you, write us.

P. H. HANES KNITTING CO.
Winston-Salem, N. C.
New York Office: 366 Broadway

Read Hanes Guarantee:
"We guarantee Hanes Underwear absolutely—every thread, stitch and button. We guarantee to return your money or give you a new garment if any seam breaks."

Next Summer—You'll want to wear Hanes Nainsook Union Suits!

Lasts Longer Than *the* Barn



Only 3 Parts—Partition, Top Rail and Stanchion.

—and Increases Dairy Profits

CLAY Equipment installed in your dairy barn is there **to stay.** Strong, simple steel construction cuts upkeep cost. Bolting only 3 parts together completes a sanitary, **permanent** stall with swinging stanchion. Smooth tubing—no dangerous corners.

CLAY Steel Dairy Barn Equipment

provides safety, quiet and pasture comfort in the barn. Saves feed, time and labor. Helps increase quantity and improve quality of milk. CLAY 2-WAY Stanchion instantly closed or opened **both ways** with **one hand.** Hangs straight in center of stall—no sure-stops needed. Cow can't get in wrong. Instantly adjusted to any size animal. Cow-proof lock. Easily kept clean. CLAY Equipment costs less than others. Fully guaranteed.

Free Barn Plan Service. CLAY architects will plan your alterations or new buildings **free**

Send name today—a card will do—for big catalog and Free Barn Plan Blank. Address

IOWA GATE COMPANY, 701 Clay Street, Cedar Falls, Iowa

Heat the Water They Drink With the Cobs They Leave



No bother or fire danger with a Nelson Tank Heater. Just put a few cobs into the fuel box when you do your chores and have drinking water at 70° for your stock all winter. No ice to chop. No chilled stomachs. Stock gain faster—keep healthier. Cows average 15 quarts a month more milk. Heater soon pays for itself.

NELSON TANK HEATER
(Made by Hudson)

Heats water twice as fast as any other heater and with less fuel. Made of 20 gauge galvanized metal with cast flanged joints bolted and packed with one piece asbestos. No welded seams to leak or rust. End of tank and pipe cast in one piece to above water line. Won't rust out. More than one inch of clearance for water to circulate under Heater. Ashes easily removed. Burns straw, cobs, wood or coal. Lasts for years. Get one for your stock NOW. WRITE FOR FREE CIRCULAR. (2)

Hudson Mfg. Co., Dept. 32 Minneapolis, Minn.

How To Get More Eggs and Save Feed!

How to tell slackers and poor layers; how to feed to double egg yield; how to keep flock healthy; ventilate houses in winter; get good hatches, strong chicks—1,000 poultry secrets made plain in 38 lessons. Recommended by 25,000 students. Guaranteed to double profits. **FREE BOOK,** "Dollars and Sense," gives all the facts. Write today.



AMERICAN POULTRY SCHOOL
Dept. 1446 Kansas City, Missouri.



For bedding most convenient, serviceable and sanitary. Write for prices.

Defnet & Jagerson Supply Co., Neenah, Wis



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

For Sale—30 choice, high grade, Holstein cows, springing and fresh. Also 6 well marked heifer calves. $30.00 each, express paid to your station. CRAWFORD STOCK FARM, Mukwonago, Wis. 13*

For Sale—Carload choice bred and heavy springing Holstein heifers, mostly sired by 31-pound bull. CHARLIE DEARTH, Mineral Point, Wis. 13-4

Registered Holstein heifers for sale. Priced for quick sale. E. A. FOTH, Sparta, Wisconsin. 14-3

Closing out desirable herd registered Holstein cows, heifers and bulls. February bull forty-pound sire, 29.85-pound dam, official. Clean herd. BUENA VISTA PARK FARM, Glenwood City, Wisconsin. 15-2

For Sale—Ten registered Holstein heifers to freshen soon. F. F. MEYER, Vickery, Ohio. 15-2

We need the room and are pricing to move quickly, real Holstein bulls from 6 weeks old up to serviceable age. Best of individuality and breeding. All are from heavy producing dams and sired by one of the best bred bulls in the state. BEECHTON STOCK FARM, Cataract, Ind. 15-3

Tried Holstein Sire—Sir Korndyke Kekke De Kol. Has more World's Record blood than any other sire living today. Sell, avoid inbreeding. Price only $600.00. G. G. WHITE, Elkader, Iowa. 15-2

High grade Holstein heifer calves from high producing dams, $25.00 each, satisfaction guaranteed, C. O. D. WHITE HILL FARM, Cambridge, Wis. 15-6

Holstein bulls—Ready for service. 31-lb. sire, tested dams. MAX WITTE, Route 5, Watertown, Wis. 15-2

For Sale—Registered cows and calves, either sex. Also high grade calves and cows. Tuberculin tested. SUCCESS STOCK FARM, W. A. Strauss, Watertown, Wisconsin. 15-2

Carload grade Holstein springers, all young. Two registered bulls 8 months old. Price, $100. JOHN ZENTNER, Kilbourn, Wisconsin. 16-2

If you want the very best bred, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves. $25.00 each, I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 16-4

For Sale—24 young, heavy, high grade Holstein cows, to freshen in December or January. JOHN BLUST, Sheboygan Falls, Wisconsin.

Pure-bred and grade Holstein calves, either sex. Priced right. Sire, Pabst King Pontiac Lad 3rd. Dams extra good individuals. PINE BEND FARM, Dundee, Illinois.

Yearling registered Holstein bull—Grandson Prince Hengerveld Segis and Sir Pietertje Paul Johanna De Kol. Straight backed. ½ black, well developed. Price, $100.00. JACK SPRAGUE, Marseilles, Ill.

Holstein herd bull for sale, two-year-old. His ancestry all have good A. R. O. records. Reason for selling, must get new blood line. Also younger bull calves from dams that are on yearly test. Price $50 and up. No tuberculosis. FRED A. MUELLER, Milford, Illinois.

High grade Holstein heifer calves, 2 to 8 weeks old. O. M. KISER, Lake Mills, Wisconsin. 16-2

Brinkman's 3rd annual fall sale at Sheldon, Iowa, November 30. 65 head of pure-bred Holsteins. 25 young cows and heifers in milk. 5 young bulls, all nicely marked. Balance young heifers and calves. 12 daughters of King Segis Pontiac and 10 granddaughters by a 37-lb. son of this famous sire. Send for catalog. D. H. BRINKMAN, Sheldon, Iowa. 16-2

Registered Holstein heifer calves. N. W. PARKER, Granville, N. Y. 16-2

STOCK FOR SALE

Our greatest Holstein offer in calves. 3 weeks—$22.00. Why pay more? Ask about them. Satisfaction guaranteed. MAPLE LAWN FARM, Elkhorn, Wisconsin. 16-4

Grade Holsteins—Open heifers, bred heifers, cows to freshen this fall and early winter. W. J. PESTER, Whitewater, Wisconsin. 16-2

Large, young registered Holstein cows and bulls ready for service, out of good record dams, for sale. We always satisfy. DATE HOLSTEIN FARMS, Baroda, Michigan. 16-spl

For Sale—10 head choice high grade Holstein heifers to freshen from November first to fifteenth. All my own breeding and raising. These heifers from one of the best herd of cows in Lee County. Also a registered Morgan stallion, 7 years old, sound. Has never been beaten in the show ring. A. H. BOSWORTH, Dixon, Ill. 16-3

Choice, registered Holstein bulls, serviceable age, 32-lb. sire, record dams. Send for photo and price. FRANK THOMAS, Delavan, Wis. 16-spl

Wanted—Buyers for Wisconsin live stock listed for sale through banks of the state; all breeds and ages. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wisconsin. 16-spl

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

Several very nice May Rose Guernsey bull calves from high producing ancestry. Prices reasonable. SHORELAND FARM, Hartland, Wisconsin. 14-3

For Sale—Entire herd of Guernseys. Three registered females, one bull. Seven high grade cows, eight heifers and calves. WALTER E. SATTERLEE, Irving, Illinois. 14-3

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Three registered Guernsey bulls, nine to twelve months old, from good producing dams. B. L. SNYDER, Bloomer, Wis. 14-spl.

For Sale—A few choice Guernsey bulls of serviceable age. Excellent breeding. Prices very reasonable. TARBELL FARMS, Smithville Flats, N. Y. 14-4

For Sale—4 serviceable grandsons of Itchen May King, Grand Champion 1920 National Dairy Show. From A. R. dams with records up to 546 lbs. fat. Prices, $150 to $500. Federal Accredited herd. ROY BURTON, Eagle, Wisconsin. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-8

Registered Guernsey bulls—Sired by May Rose Secret of Pencoyd 27844. Tested and untested dams. Priced for quick sale. Herd tuberculin tested. ROSE DALE FARM, Box 254a, Chaska, Minn. 15-2

Registered Guernsey bulls. All ages. FAIRVIEW FARM, Brodhead, Green County, Wisconsin. 15-4

For Sale—Registered Guernsey bull, six months. Glenwood, Yeksa breeding. GEO. EINFELDT, Greenwood, Wisconsin. 15-2

Thirty registered Guernsey bulls on hand. Must sell at once to make room. HARRY GRISWOLD, West Salem, Wisconsin. 15-4

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. Will take note for 90 days. HOMER RUNDELL, Livingston, Wis. 15*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

Twenty high grade Guernsey heifers. From one to eighteen months old. Their sire has eleven of fourteen nearest ancestors in the Advanced Registry. R. B. WENDELKEN, Elkton, S. D.

For Sale—High grade Guernsey heifers. Beauties. SUMMIT FARM, Blue Ridge Summit, Pa. 16-2

For Sale—Pure-bred Guernseys—males seven months—$75.00, three months, $40.00. Heifers sixteen and one-half months, $140.00, sixteen months, high grade, $100.00, freshen in spring. F. O. B. Marshalltown, Iowa. OLIVER GIRKIN, Route 2.

For Sale—Good grade Guernsey bull and heifer calves, four to six weeks old, bred for production of milk and cream. $30.00 a piece delivered to any express station. THOMAS HAGERTY, Knapp, Dunn Co., Wisconsin. 16*

Auction sale of Guernseys—Nov. 12, 1:00 p. m. 58 Railroad, West Chicago, Ill. "James of Highknob" 4 years. Strong May Rose, grand individual, gentle. Also about 10 of his heifers bred to a registered bull from imported stock. Animals show for themselves. Rare chance to get something good, reasonable. J. J. GAHAGAN.

Registered Guernseys—Males and females. Herd under Federal Supervision and free from disease. Satisfaction guaranteed. CLOVERNOOK FARM, Milwaukee County, Wisconsin. 16-4

STOCK FOR SALE

Three registered Guernsey Sequel, May Rose, Chene bulls just in the bloom. HARRY HOUCK, Hannibal, Missouri.

For Sale—Young registered Guernsey bulls. Sons and grandsons of Bell Buoy of Linda Vista who has 17 A. R. daughters with large records. Out of A. R. dams with records as high as 615 pounds fat in class A. A. Write for sale list. O. R. SCHWALEN, Roberts, Wisconsin. 16*

For Sale—Fine, large Jersey bull, born December 1st, 1919. For pedigree and further particulars write J. C. BIGLER, Route 5, Stevens Point, Wis. 15-3

For Sale—My entire herd of grade Jerseys—35 head cows, heifers and calves. J. A. HUFF, Lancaster, Wisconsin. 15-2

Eight head good grade Jersey cows, all bred, $600.00. Can buy some cheap cows to make carload if desired. WEST SHORE FARM, Douglas, Mich. 15-2

Jerseys—Yearling bull, two bull calves, Register of Merit dams, good type. One registered heifer, bred. Some grade heifers, bred or open. Priced right before going into winter quarters. W. A. LAMB, Roberts, Wisconsin.

For Sale—5 registered Jersey cows, 2 just fresh, one to be fresh in November and 2 in January. First check for $850.00 gets them. J. A. BOYER, Conrath, Wisconsin. 15-2

For Sale—14 head pure-bred Canadian Ayrshire females, two to six years old, mostly springers; good individuals, tuberculin tested. Also one two-year-old bull. Price for quick sale, $3,500. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-4

Ayrshire registered bull, thirteen months old, for sale. HENRY ENGEL, Neenah, Wisconsin.

Your choice of twenty, out of herd of forty-four registered, tuberculin tested, Ayrshire cows and heifers. Freshen in January and February. Herd bull Zobart of Finlayston. Price one hundred fifty dollars each. L. G. WILLSON, Cattaraugus, N. Y. 16-2

For Sale—Several Ayrshire bull calves and yearlings from Advanced Registry cows. Priced right. RAY FELTON, Dwight, Kansas. 16-2

For Sale—Two pure-bred Ayrshire bull calves. One is a year old and one is a week old. Fine looking animals. JOHN PERSON, Route 2, Braham, Minn.

For Sale—Chief's Burn Brae Juan 155182. Dropped January 12, 1917. Fine individual, priced reasonable. C. P. MARKHAM, Eyota, Minn. 16-2

STOCK WANTED

Wanted—15 head A-1 grade Guernseys to freshen December, January and February. Do not reply unless cows can give seven thousand pounds of milk per year. Must not be over four years old, and must be bred to a good bull. Address BOX 441, care Hoard's Dairyman. 16-2

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

For Sale—Pure-bred Shropshire ram lambs and yearlings. F. S. HALLADAY, Green Bay, Wis. 13*

For Sale—Two registered yearling Hampshire rams. WALTER VAUGHN, Marion, Iowa. 15-2

DOGS

Airedales, collies, and Old English Shepherd dogs. Trained dogs, brood matrons, puppies all ages. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 26*

Superior, rough coated, pedigreed Collies, guaranteed. Two females and a male left. Write immediately if interested to JAMES FARM, Fort Atkinson, Wisconsin.

SWINE

Duroc Jerseys—Both sex, all ages, registered and unregistered. ROUND TOP FARMS, Damariscotta, Maine. 13-4

Registered Duroc gilts sired by Lykins O. C. K. XI, a prize winner. JAMES R. LYKINS, Route 8, Muncie, Indiana.

Hampshires. Growthy, good type boars from State Fair winners. Also females. EDGAR BUZZELL, Delavan, Wisconsin. 14-4

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS, De Graff, Ohio. 14-8

For Sale—Some Duroc spring boars. Sired by the world's greatest boars and out of the largest and best sows in the state. Several by Pathfinder that sure are killers. BRIAN L. RUNDELL, Livingston, Wis. 5-spl

Registered Berkshires. April boars and gilts. Choicely bred, farmers' prices. QUINEILO FARMS, 297 East Water, Milwaukee. 15-2

Pure-bred, big type, Chester White boars. Excellent breeding. LLOYD NESBIT, Barron, Wis. 15-3

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

Pedigreed Himalayan rabbits. Foundation stock from the great California winners. Just a few pairs left. They are right and we will guarantee them. $10 a pair. W. D. JAMES, Fort Atkinson, Wis.

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

Lack room, must sell immediately Rose Combed Red cockerels, $3.00 up. Satisfaction guaranteed. J. G. ENGELSTAD, Milltown, Wisconsin.

Some choice, pure-bred, single comb, Buff Leghorn Cockerels, sired by National show winners. Best laying strain in the land. $4 and $5 each. JAMES FARM, Fort Atkinson, Wisconsin.

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

DAIRIES

Dairy for Sale—40 milch cows, one bull, delivery car, 2 horse wagon, boiler, sterilizer, bottle washer, bottles, cans and everything needed in a dairy. 18 months' lease on 125 acres. 50 acres in cultivation, rest in pasture. Six-room house. Three miles from Wichita Falls, Texas, 50,000 population, and the oil center of Texas. Give possession at once. Milk $1.00 per gallon, 25 cents per quart. Price, $7,000; $4,000 cash, balance in small monthly payments. E. A. DEBUS, Wichita Falls, Texas. 15-4

For sale or will trade a small well equipped dairy, or will rent on shares or would hire a good man to run it. Everything new and up-to-date, milking machine, automatic water, 2 silos. Located right in town close to high school. BOX 296, Piper City, Ill. 16-2

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

FARMS FOR SALE

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

For Sale by Owner—420-acre farm in Lake County, Illinois. Best of soil. Good set of buildings including house, two barns and silo. Two miles from town. Price for quick sale $120 an acre. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-6

300-acre dairy farm with thirty-three head of Holsteins, including pure-bred sires. Modern dairy barn, all new buildings, two silos, two houses, located 1½ miles from creamery and cheese factory and on the condensery route; five horses and complete all new farm equipment. 100 acres under cultivation; 50 acres of pasture, balance marsh and trapping lands. GREENLAW & THOMAS, Oshkosh, Wis. 13-4

For Sale—Superb Washington Co., N. Y. home and farm, 86 acres. With dairy, stock and implements, $16,000. Address BOX 407, care Hoard's Dairyman. 14-4

We have a farm for you in the Ozarks that you will like. DURNELL LAND CO., Cabool, Mo. 14-4

For Sale—245-acre grain, dairy and stock farm. Old colonial house in splendid condition; modern 20-cow barn, milk house, two big silos, horse barn, machine sheds, bull and calf pens, garage; water in all buildings, good fencing. Write for description. One hundred per acre, terms. W. A. STOCKTON, Blackstone, Va. 15-2

Farms for Sale—In Trumbull County, Ohio. Any size by a farmer who has had twenty-four years' experience in this section and knows farm values. Write for descriptions. NEAL DUCK, North Bloomfield, Trumbull County, Ohio. 15-4

Farms—Improved farms and muck land on good roads, close to markets. PONTIUS & HAMMOND, 602 Western Reserve Bldg., Warren, Ohio. 15*

New York farms for sale—Excellent soil, climate, water. 112 acres, $6,500; alfalfa land, two houses, two barns, running water in buildings. 76 acres, alfalfa land, large good house. $3,500, only $1,500 down. Others. GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 15-4

New York Farm Agency, Westfield, New Work, specializes dairy stock farms. Westerners buying fast. Best bargains on earth. 8-spl

Free map and list land bargains near Twin Cities. BAKER S-76, St. Croix Falls, Wisconsin. 6-spl

Where dairy farming is profitable—There are localities in the South where, on account of the rapid development of industrial cities and towns, supplies of dairy products are short and prices are high. In these same localities long grazing seasons and winter cover crops cut down feeding costs and all conditions are exceptionally favorable for profitable dairy farming. Good improved farms can be bought at prices much lower than are asked for similar lands in other parts of the United States. Buy a Southern dairy farm now while prices are still low, make money and build up a valuable property. Forr full infromation write to J. C. WILLIAMS, Manager, Southern Railway Development Service, 1302 Pennsylvania Avenue, Washington, D. C. 14-spl.

If interested in dairying on the Pacific Coast, where climatic conditions are right, communicate with Pacific Real Estate, Chehalis, Washington. 16-2

Free Maps of Mississippi, showing views and describing the famous Black Prairie alfalfa, corn, clover, stock and dairy belt in northeastern Mississippi, where Lincoln Harbold, the largest hog feeder in the world, has located. Good water, schools, hard roads, creameries, healthy climate. Best general farming and stock section in the south. WISHART REALTY CO., Aberdeen, Mississippi. 16-2

For Sale—Our Leader—160 acres level productive soil, three crop country, 15 miles from Mobile, 50 acres in cultivation, balance can easily be put in shape for cultivation. Farms no better, near this, clearing themselves each year. Well improved, convenient to shipping facilities. Price, $12,000.00. A bargain. For particulars regarding this and other lands we have for sale in a healthy and prosperous country. References exchanged. Address THOMPSONNEELY REALTY CO., 65 St. Francis Street, Mobile, Ala. 16-2

South Dakota. Your opportunity is waiting for you in South Dakota. For each farm family in 1919 this state produced $5,000 in new wealth. South Dakota offers you a special opportunity now to secure a farm. Write for further information today. IMMIGRATION DEPARTMENT, Capitol F15, Pierre, South Dakota.

Farm near town, 100 acres, fully equipped, $3,800. Immediate income, no additional investment, everything ready business; machine-worked fields, deep loam soil, 20-cow trout brook-watered pasture, 1,000 cords wood, 2,000 cord pulpwood worth $11 cord nearby market; 250 apple trees, other fruit; 1,500 sugar maples, house, equipment included; near good town; 7-room residence, water in kitchen, big piazza, telephone, elm and maple shade; big barn, granary, horse stable, other buildings; retiring owner includes pair horses, 4 cows, wagons, machinery, tools, cream separator, lot furniture, large amount stovewood, 25 tons hay, lot vegetables, grain, etc., for winter; everything for $3,800, less than half cash, balance easy terms. Details page 7 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, D L 150 Nassau St., New York City.

For Sale—Dairy farm 404 acres—100 black loam bottom, 50 sand loam, 150 pasture land, 100 woodland. Three miles city, 15,000. 10-room dwelling, stock barn, 3-story, 40x80, accommodates 65 head, concrete floors—garage, horse barn, running water. Price for this magnificent farm only $12,500, cash, $4,000. CAMPBELL BROS., Oneonta, N. Y.

FARMS WANTED

Farm Lands Wanted—Many Iowans will buy land in other states during the next few weeks. Why not sell your land to one of these buyers? Not long ago the Stoutenberg Land Company, Butterfield, Minnesota, sold three farms in a single day by our plan. Send us a complete description of the land you have for sale, the number of acres, its distance from town and school, what improvements it has, if any; how it is divided into fields; your price, terms, etc., and we will tell you, without obligation on your part, how little it would cost to get in touch with these Iowa buyers. At the same time we will send you our free booklet, "Farm Buyers and Where to Find Them". It will open your eyes. Write today, for the land buying season is on. THE DES MOINES REGISTER AND TRIBUNE, Dept. 47, Des Moines, Iowa. 16-spl

Want Southern Wisconsin highly improved farms from 80 to 200 acres with stock. Can handle at once. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

FARMS FOR RENT

I want a first-class, up-to-date, dairyman and farmer to rent my good Holstein dairy farm on shares. SAM B. WOODS, Crown Point, Ind.

Wish to correspond with party who would be interested in a share proposition in raising pure-bred Durocs and Holsteins. I have all the necessary buildings, feed, etc. Can furnish part of the stock if desired. R. F. JOHNSON, Assumption, Ill. 16-3

For Rent—My 180-acre farm with pure-bred Holstein-Friesian herd. Applicant must be graduate of agricultural short course. Only strictly honest men without bad habits need apply. Possession March 1st. Inquire W. A. CANNIFF, Watertown, Wis.

MACHINERY

Holm automatic sharpener. A device that will fit on Globe, Smalley or Plymouth feed cutters and when operated correctly is guaranteed to keep knives in a fairly sharp and straight condition. It sharpens while the machine is in operation. 10 days free trial. CHAS. A. HOLM, Tigerton, Wisconsin. 15-2

Wanted—One only, B-L-K double unit milking machine pail, top, hose and teat cups. State style. CLAIRE HAVEN, Grafton, Ohio.

For Sale—B-L-K Milking Machine, two double-units with extra pail. Equipped for thirty-six cows. In good working order. Priced right. GEO. D. FERGUSON, So. Lyons, Michigan.

For Sale—Vacuum and pressure pump for Sharples Milker. Good condition; two cylinders. Price $45. ALMER FARM, Caro, Michigan. Tom Kimmel, Manager.

We have an extra single unit for Sharples Milker, including pulsator, teat cups and pail. Will sell for $40. Good condition. W. J. GAMBLE, 96 Taylor Ave., Detroit, Michigan.

For Sale—One double unit Perfection, one vacuum pump, one tank and safety valve and two gauges, milking outfit, new and never installed. Cost $253.00 November 1919. Will sell for $150.00 F. O. B. Ford, Virginia. Sight draft with bill lading attached. J. H. DUANE, Ford, Va.

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

SALESMEN

Two live salesmen for Wisconsin, exclusively, to sell full line of dairy, stock and poultry feeds—mixed cars. Only those experienced and with some trade desired. Excellent opportunity with big mill for right man. Address BOX 429, care Hoard's Dairyman.

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52



Advertising in this department is 7c per word. Result in advance.

HELP WANTED

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

Experienced man for general dairy farm work. $60,-00 to start. LEE P. GRANT, Bloomville, N. Y. 12*

Wanted—Herdsman to take full charge of registered Jersey herd. 30 cows on test. Must be experienced. Married man with no children preferred. Best of terms, is a fine opportunity for the right man. SOUTH PARK FARM, Box 386, Fargo, North Dakota. 14-4

Wanted—Single men for agents in New York State Cow Testing Associations. Good wages and expenses to competent men. Experience in feeding and in operating Babcock test desirable. Give age, school training, farm experience, names and addresses of former employers. Write G. W. TAILBY, JR., Animal Husbandry Department, Cornell University, Ithaca, N. Y. 14-3

Wanted—Married man to take care Holstein cows. Furnish house, garden, milk, etc. State salary, experience. Must come at once. G. G. WHITE, Elkader, Iowa. 15-2

Wanted—Good, reliable men in barn and bottling room in southern dairy. Winter resort town. Address J. S. DUNLOP, Pinehurst, N. C. 15-3

Wanted—A competent herdsman to supervise the care of a herd of pure-bred Jerseys. A man capable of handling milk and the making of first grade butter. State wages and experience in first letter. Address FARM MANAGER, Pennsylvania Training School, Morganza, Pa. 15*

Wanted—Protestant, single man, for general farm work and assist with milking, on modern farm near Chicago. Scotchman preferred. Good wages to competent man. C. A. ERICSON, 226 W. Adams St., Chicago, Ill. 15-3

Wanted—Single man for bottling room on pure-bred dairy farm, bordering town of 40,000 in Illinois. Steady position for clean, intelligent worker. All conveniences. State wages and references. Start any time, not later than Nov. 25th. Address BOX 422, care Hoard's Dairyman. 15-2

Wanted—Intelligent, single man on pure-bred modern Holstein farm, for calves, barn chores, milking and other work. Located 2 miles from town of 40,-000. Good position with all conveniences. Steady man only. State your wages. CHAS. KLOSE, Fitchome Farms, Aurora, Illinois. 15-2

Wanted—Two or three good farmers and milkers, Hollanders preferred. Am operating 240 acres of land and 50 A. R. O. Holsteins. Must be reliable and dependable. State wages, etc. in first letter. Will offer a partnership after two years' faithful service. C. A. PARKS, Assumption, Illinois. 16-3

Wanted—Reliable, married man, who is a good dry hand milker for year 1921 to milk and work in dairy room. I use Sharples milking machines. Give references and state wages wanted in first letter. J. CLIFFORD MILLER, Brandy Sta., Va. 15-2

Two efficient dry hand milkers for work in up-to-date cow barn where milk is produced under certified conditions. $65 per month and board to start with, a guaranteed increase as willingness and ability is proven. Address with particulars, DOSORIS PARK, Glen Cove, N. Y. 15-2

Wanted at once—Single herdsman for Guernseys doing A. R. work. Must be good caretaker and calf raiser. Cigarette smokers need not apply. O. K. SPIRES, Burlington, N. Dak. 15-2

Wanted—Single or married man for general farm work. State age and salary desired first letter. BOX 65, Baldwin, Wisconsin.

Wanted—Man and wife to operate boarding-house and commissary for large dairy. Woman must be good cook and house-keeper. Man must help around the house, also work at dairy. Good proposition for right parties. Apply W. R. HALE, Manager Wilco Farms, Willisville, Ill.

Wanted—Experienced test feeder and milker in Holstein herd. Married or single. State ability, reference and wages first letter. MAPLE LAWN FARM, Assumption, Illinois. C. A. Parks, Mgr. 16-3

Wanted—General dairy farm hand, single, to work side of owner at anything. Must be good milker. Prefer man who also has knowledge of milking machine. Ford truck and Fordson tractor, but this is not essential. Hours about 5:00 a. m. to about 6:00 p. m. $80.00 per month and room and board. $100.00 bonus end of each year to a good worker. JOHN W. HARMS, 6 Mile Post, White Bluff Road, Savannah, Georgia.

Wanted—A good, practical man as a milker to feed and take general care of dairy herd and barn. State experience, give references and salary expected. DAIRY DEPARTMENT, Florida Agri. Experiment Station, Gainesville, Florida.

Wanted—Three good dry-hand milkers, single, must be first-class dairy hands. Good chance for advancement for right men. Thoroughly modern plant, pure-bred Holsteins. $75.00 with good board and room. Apply W. R. HALE, Manager Wilco Farms, Willisville, Ill.

Wanted—Single man for general farm work. Must be good dry milker. State age and wages expected. H. H. WEBB, Route 1, Mulkeytown, Ill.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

LITTER CARRIERS

Litter Carriers—Price only $16.75. Write for catalogue and price list to O. A. TORGERSON MFG. CO., Baldwin, Wisconsin. 9-8

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

Choice honey for sale in 30- and 60-lb. cans at 30 cents per pound. E. NASON, Isle, Minn. 16-2

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

MISCELLANEOUS

U. S. Government wants Railway Mail Clerks. $135 month. Particulars free. FRANKLIN INSTITUTE, Dept. E121, Rochester, N. Y. 16-4

HELP WANTED

Wanted—Holstein herdsman. Applicant must have made 30 lbs. as well as yearly records, come well recommended, good calf raiser, fitter for shows. Herd of 168 of which 80 are in milk. PONTIAC STATE HOSPITAL, E. H. Halsey, Steward, Pontiac, Mich. 16-2

Reliable single man for general farm work, for five months, on stock and dairy farm, with chance for good job by year. State wages and experience. SUNNY CREST FARM, Lynxville, Wisconsin.

Wanted—At Thorn Hill School which cares for boys who are wards of the Juvenile Court of Allegheny County, Pennsylvania, married couples preferably without dependent children to take charge of cottages, in which about twenty of these boys live, and care for and train them for good citizenship. Compensation $75 to $90 per month for the couple with furnished quarters, food, fuel and lights thus relieving them from any outlay for rent, food, fuel and lighting and all other items of household expense. Only people of recognized character and interested in helping boys desired. Send three letters of reference with answer. Address SUPT. THORN HILL SCHOOL, Warrendale, Penna. 16-2

Married herdsman for small herd registered Holsteins. Experienced in A. R. O., calf raising and fitting for shows. Salary and percentage. H. H. SISSON, Willits, Calif. 16-2

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Wanted—Job as milker on good dairy farm with modern improvements. Am good milker. 19 years old. Will go anywhere. Write me stating wages and particulars. ROY PLANT, care Geo. B. Owens, Mt. Morrison, Colo.

Wanted—Position as manager or herdsman on large dairy farm. Experienced in general farming. A. R. work, stock raising, tractors, etc. Married, Scotch. References. Address JAMES JOHNSTONE, Route 3, Redford, Michigan. 14-3

Leadsman and Fitter—Consignment and dispersal sales a specialty. Save time and money by employing an experienced man to fit and show your sale cattle. References. JACK ROBINSON, care Ohio Holstein Asssociation, Tiffin, Ohio. 14-3

Farm manager, with proven ability, desires position on large, modern farm, where faithful, conscientious work will be appreciated. Experienced in Advanced Registry, stock of all kinds, farm machinery, modern building, gas and steam engines. Married, 3 children. Best of reference. Address BOX 421, care Hoard's Dairyman. 15-2

Wanted—By refined, educated, American business woman, position as housekeeper and office assistant; preferably dairy or stock farm. Address BOX 423, care Hoard's Dairyman. 15-2

Married man, aged 28, desires position as manager or herdsman of Holstein breeding establishment. Would like place where my ability to build up a herd may be shown. Am thoroughly familiar with all lines of breeding; experienced in both official and semi-official work. An expert in the show ring. Best of references. Address BOX 434, care Hoard's Dairyman. 15-2

Herdsman, married, American, good education, wants opening in well equipped modern breeder's herd. Good, long and short time records. Good calf raiser. Interested in high grade proposition affording opportunity and future. All inquiries answered. Address BOX 439, care Hoard's Dairyman.

Wanted—Position in milk room. Single, experienced with boiler, separator and care of milk and cream. Address BOX 437, care Hoard's Dairyman.

Are you satisfied with the present management of your farm? Have you a good system of farm accounts? My ability and experience as a farm superintendent will put your farm on a paying basis. Efficient management in all branches with the executive ability to make your farm a success. References. Address BOX 436, care Hoard's Dairyman.

Wanted—To rent or work a farm or work by year. Married, age 34, Hollander. T. WALLENDAL, Route 2, Waupun, Wisconsin.

Position wanted as herdsman by single man experienced in all details pertaining to modern breeding establishment. Good A. R. O. records and good references. Address BOX 438, care Hoard's Dairyman.

Farm and dairy manager, with energy, push and proven ability, desires position on large modern certified milk or stock farm, institution or private estate, where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and dairy. No proposition too large. Married. Age 38. Excellent references. Address FARMER AND DAIRYMAN, 4463 North Uber Street, Philadelphia, Pa.

Wanted—Position on up-to-date dairy farm. Will be available after January 1. Single and willing work. BOX 25, Dundee, Minn.

Wanted—Position as herdsman, understand feeding, milking and care of A. R. O. cows and raising calves, also handling milk. $125 per month with board and room. Can start Dec. 1. Address BOX 442, care Hoard's Dairyman.

Wanted—Position as manager of large modern farm or estate January 1, 1921. Married, no children, Protestant, ten years in last position as manager on one of the most modern farms and estates in Ohio. Well versed in the production of high classed milk, poultry, gardening, lawns and shrubbery. Only up-to-date, modern place or new place about to be started where you wish things done systematically. Address BOX 440, care Hoard's Dairyman. 16-2



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Curtis Woodwork—built-in furniture for the living-room, dining-room, bedroom, and kitchen; and doors, windows, stairways, porches, and "trim" for the inside and outside of the house—is made in standardized designs and standard sizes.

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If there is no Curtis dealer in your town, send us 25c in stamps (50c in Canada) and the portfolio you desire will be sent you direct. Ask for "Better Built Homes" Volume VI, if you are interested in houses of three, four, and five rooms; Volume VII, for houses of six, seven, and eight rooms; Volume VIII, for houses especially designed for farm use.

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Clean Cows Give Clean Milk

Clipping Betty of Lakeview For Clean Milk Production



Grand Champion Brown Swiss Cow at 1919 National Dairy Show and 1920 Waterloo Dairy Cattle Congress

Clipping Dairy Cows is a Sanitary Necessity

The stabling period of winter and early spring makes clean milk production a problem. Dirt and filth lodge in the cow's long hair, and it's impossible to keep it out of the milk pail.

Progressive dairymen clip their cows at regular intervals on udder, flanks and underline. This enables them to be quickly cleaned, and lessens the danger of milk contamination from disease-breeding bacteria.

Five minutes a month with this machine keeps the hair short, and makes cleaning an easy job. A necessity for every milk producer. Urged by dairy authorities everywhere. Read these letters:

Stewart No. 1 Cow Clipping Machine

Endorsed by University

UNIVERSITY OF MINNESOTA.
DIVISION OF DAIRY HUSBANDRY.
January 15, 1920.

We have always considered the clipping of our cows *an important aid in keeping them clean* during the winter months, and have gone over our entire herd quite recently.

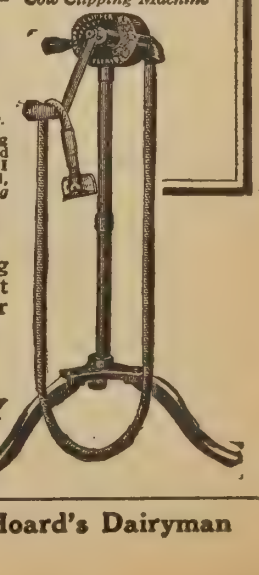
C. H. ECKES,
Chief Division
of Dairy Husbandry.

Improves Milk Quality

ELM LEAF STOCK FARM
Belvidere, Ill.,
April 7, 1920.

I have used the Stewart Clipping Machine for the past 10 years and it is satisfactory in every way. I find if cows are properly clipped, it aids materially in *improving the quality of milk produced.*

F. WILLIAM BLAKE.



The Stewart No. 1 is the world's standard clipping machine. Hand-operated—runs easily—strongly built—will last a lifetime. Complete, only $14. Your dealer has it, or send $2 and pay balance on arrival.

Electric Clipping Machine, 110 Volts, A. C., $80

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. A-156, 5600 Roosevelt Road, Chicago

Barren Cows

Must Be Made to Breed or Your Dairy Business Will Be a Failure. They

Can Be Made to Breed

By the use of

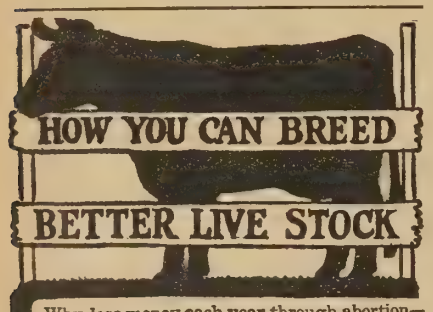
Hood Farm Breeding Powder

We say this confidently because it has been used with such marvelous results by so many breeders. Every cow at Hood Farm is treated with the Breeding Powder, and we know that it does make barren cows and heifers breed; we know that it checks and prevents abortion; we know that it makes cows clean quickly, thereby saving us hundreds of dollars annually.

Order today, mentioning this paper.

Prices prepaid $1.15, $2.75 and $5.00. Flexible Injection Tube, by mail, 90c. Mammoth size Breeding Powder and Tube, prepaid, $5.75.

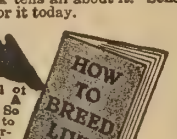
C. I. HOOD CO., Lowell, Mass.



HOW YOU CAN BREED BETTER LIVE STOCK

Why lose money each year through abortion—through high-priced animals failing to breed—through animals dying at birth—through diseases and countless other causes when a little special knowledge of animal raising would stop all this, and put your live stock on a big-paying basis. The National School of Animal Breeding, through its famous home-study course, has taught hundreds how to breed more and better live stock, and how to increase their profits. Stop the leaks in *your* profits! A few minutes reading of this course each day in your own home is all that is required. Course is the result of long years of experience. Brings the school to the breeder. Written by experts. Our free book tells all about it. Send for it today.

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"How to Breed Live Stock,"—a really remarkable book! Chock-full of valuable pointers on animal breeding. A few of the chapter headings: Why So Many New Born Animals Die—How to Prevent Abortion—How to Control Heredity—How to Care for Breeding Animals—Complete Instruction in Capsule Breeding. Many others as well. Shows pictures of breeding organs! Simply fill out coupon, mail it to us today—and this amazing book is YOURS! Mail Coupon NOW.

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that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with



ABSORBINE

also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. $2.50 per bottle delivered. Book 3 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. $1.25 a bottle at dealers or delivered. Book "Evidence" free.

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Lump Jaw Fleming's Actinoform, for 30 years the standard Lump Jaw remedy. $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Lump Jaw and 200 other Cattle and Horse diseases.

FLEMING BROTHERS, 265 Union Stock Yards, Chicago

DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.

Write for free booklet with guarantee and letters from farmers and dairymen

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.





BOOK ON DOG DISEASES And How to Feed

Mailed free to any address by the Author

H. CLAY GLOVER CO., Inc., 118 West 31st Street, New York

America's Pioneer Dog Medicines

ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis

ABORTION IN CATTLE



CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT. REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

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VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Retained Afterbirth

Under normal conditions the afterbirth, technically termed the placental membrane, placentae, or secundine, should be expelled an hour or two after calving. Often it comes away earlier; frequently it is retained for many hours or days, or eventually rots away. To understand this condition it should be known by the stockman that the chorion or outer envelope of the fetus is studded on its inner surface with multitudes of little finger-like projections called villi which fit into corresponding cavities or crypts in the cotyledons or "buttons" projecting from the surface of the mucous membrane lining the womb. Minute blood vessels ramify in the villi and finally unite to form the large blood vessels of the umbilicus or naval cord through which the fetus is nourished with blood containing nutrients derived from the blood of the dam, which is carried to tiny end blood vessels in the crypts. During pregnancy and at the time of calving all of these blood vessels are engorged with blood and the villi accordingly are tightly embraced by the crypts, At the time of birth of the calf the umbilical blood vessels rupture and discharge their contained blood into the womb. This bleeding drains the villi of blood so that they immediately lessen in size and loosen in the crypts. Consequently the crypts lose their hold upon the villi of the afterbirth and that membrane falls, loose, into the womb. Then contractions of the walls of the womb take place and cause expulsion of the afterbirth. The contractions referred to sometimes are termed "afterpains".

Should anything prevent draining of blood from the villi they fail to loosen in the crypts and the chorion (afterbirth) remains in place, clinging tightly to the cotyledons of the womb which number 50 or more. Infection of the womb by germs has just that effect. The infection usually is by the bacillus abortus, of Bang, hence retention of the afterbirth commonly is due to the abortion disease. The infective germs either enter the womb by way of its os and cervix, the mucus plug of pregnancy having become pervious through accident or disease, or by the way of the blood stream of the body infected in the usual way, or possibly by injections of vaccines containing the abortion germ and employed with the aim of remedying the abortion disease. Infection by other injurious germs also is a possibility, but much less common than infection by the abortion bacillus.

If the afterbirth be left in place decomposition follows and invasion of the womb by pus-forming micro-organisms causes pus. A foul smelling, pus-containing discharge now issues from the womb and gradually carries away the broken down placental membrane. In some cases absorption of poisonous or morbid matters resulting from retention and decomposition of the placentae kills the cow, or she may only absorb a sufficient amount of such matters to cause an unhealthy, unthrifty condition of the body and failure to yield a normal amount of milk. The womb in such cases remains diseased and the condition is known as pyometra, discussed in a previous article. How to deal with the retained afterbirth will be considered later.

Worms in Pigs

In an article on "Pigs" by A. O. Choate in Hoard's Dairyman some years ago, among other things, he referred to worms in pigs and gave as his certain remedy for their eradication "a heaping tablespoonful of lye to a barrel of swill. It can be fed once every day for a week and then not given for a month or more when it may again be given for a few days". To me a barrel seems rather indefinite as to capacity. Could you ascertain for me what number of gallons would correspond with that barrel; also, what proportion of swill each pig should get as his share? I would be grateful for the information.

New South Wales. O. A. W.

A wine barrel contains 31½ gallons; the ordinary barrel used for swill contains 44 gallons, when full. We cannot, however, recommend dosing hogs with lye in slop. That treatment now is practically obsolete. The better practice is to withhold feed for 24 hours and then give in a little slop or in water carefully as a drench, for every 50 pounds of body weight of pig, 2½ grains each of santonin and calomel, 1 dram of powdered areca nut and ½ dram of bicarbonate of soda. Repeat the treatment in 10 days and at any time afterward when seen to be necessary. Keep all feeding utensils scrupulously clean and keep pigs from drinking surface water or that from old hog wallows. Sows and litters of pigs should occupy colony houses on green grazing crop to be furnished in succession from early spring until autumn.

Barrenness

I have a nice registered Jersey milk cow. She comes in heat every 9 or 18 days but she won't become pregnant. She has been milked with this calf for about 18 months. I have changed bulls with her but to no effect.

Akron, Ala. R. J. H.

It is not sufficient to give vaginal injections in such cases as the cause of barrenness is seated in the womb or ovaries. For that reason success will be most likely to result from treatment of the womb and ovaries. This has to be done by a specially trained veterinarian who has the necessary instruments. The womb has to be opened and perfectly cleansed and disinfected until in normal condition. The ovaries may also have to be treated by manipulation through the wall of the rectum to break down cysts or remove a persistent yellow body. Infection by germs of the contagious abortion disease is the cause of a majority of cases of barrenness and it is to destroy such germs that the treatment is given. Meanwhile flush out the vagina daily with a lukewarm, boiled water containing 30 grains of permanganate of potash to the gallon.

Sale Announcements

Nov. 6—Holsteins. Richland County Holsteins Breeders' Sale at Richland Center, Wis. A. A. Thompson, Secretary, Richland Center, Wis.
Nov. 6—Jerseys. National Jersey Show Sale, Shreveport, Louisiana.
Nov. 10—Holsteins. Eastern Pennsylvania Breeders' Consignment Sale at Perkasie, Pa. Howard P. Corsa, Mgr.
Nov. 10—Holsteins. Consignment Sale at Viroqua, Wis. F. H. Everson, Sale Mgr., Lake
Nov. 12—Holsteins. L. H. Field's Dispersion at Osseo, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 13—Holsteins. Richard Boehlke's Dispersion at Little Rapids, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 15—Holsteins. Walworth County Holstein Breeders' Sale at Elkhorn, Wis. Ben Bachhuber, Mgr.
Nov. 16—Holsteins. W. W. Brundedge & Sons Dispersion at Zanesfield, Ohio. F. G. Johnston, Columbus, O., Sale Mgr.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 18—Holsteins. Katterjohn & Hickerson at Blue Bell Farm, Boonville, Ind.
Nov. 18—Guernseys. Fond du Lac and Winnebago Counties Guernsey Breeders' Ass'ns., Fond du Lac, Wis. Chas. L. Hill, Rosendale, Wis., Sale Mgr.
Nov. 19—Guernseys. Guernsey Cattle Club of Van Wert Co., Ohio. M. S. Myers, Secretary, Van Wert, Ohio.
Nov. 19—Holsteins. Jefferson County Holstein Breeders' Consignment Sale at Lake Mills, Wis. A. F. Gafke, Jefferson, Wis., Sec'y.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 23—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Nov. 23—Holsteins. Dr. Blackburn's Sixth Annual Consignment Sale at Cuba, Ohio.
Nov. 24—Holsteins. Waupaca Co. Holstein Breeders' Ass'n. Annual Consignment Sale at Weyauwega, Wis.
Nov. 26—Holsteins. Macoupin County Breeders' Sale, Shipman, Ill.
Dec. 1—Holsteins. Stephenson Co. Hol. Ass'n. Sale at Freeport, Ill. R. N. Thompson, 130 N. Wells St., Chicago, Ill., Field Sec'y.
Dec. 2—Holsteins. Effingham Co. Hol. Ass'n. Sale at Effingham, Ill. R. N. Thompson, 130 N. Wells St., Chicago, Ill., Sec'y.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Dec. 7—Holsteins. D. V. Whiteleather Dispersion at Columbia City, Ind. F. G. Johnston, Columbus, O., Sale Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an AYRSHIRE BULL at the head of your herd
No class of cow is in as great a demand to day as a GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an AYRSHIRE BULL at the head of your herd





We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager. ROSEMONT, PENNSYLVANIA

A Grand Opportunity

In order to make room, we offer a few choice Ayrshire Cows, 10 yearling heifers, 6 heifer calves, one yearling bull, ready for service, all from A. R. stock.

This is a splendid opportunity to get good animals. Choice Bull Calves always on hand.

HIGHLAND FARM, BRYN MAWR, PENNA.
JOHN R. VALENTINE, Prop. PHILIP C. PALMER, V. S. Mgr.

Addington's Champion

No. 19561

Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk

FOR SALE—Sons and Daughters from high milking dams.

Tuberculin Free Herd

BLACKBURN FARM Sewickly, Pa.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Middlesex Meadows Ayrshires

No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.

We offer Nona's Chancellor of Middlesex, the six month's grandson of a champion out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.

A. Henry Higginson

SOUTH LINCOLN, MASS.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

FOUR BULLS 15 to 18 Months Old

They are in pink of condition and ready for immediate service. They are from choice stock. Priced reasonable.

FRED TSCHUDY & SONS, Monroe, Wis.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

For Sale

8 head of two-year-old Ayrshire heifers. Some of them will freshen in two months. They are all nicely marked and of the large type and from heavy milking cows. Priced to sell.

E. N. MANLEY & SONS, Lyons, Nebr.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.



Milking Cows

Fresh and Bred Heifers and Sons of Ringmaster's B. B. Diplomat For Sale

DUNCRAGGAN, WESTFORD, MASS.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL, Wellington, Ohio

When writing advertisers please mention Hoard's Dairyman.

Registered Ayrshires for Sale

12 — 4-yr.-olds. 8 — 3-yr.-olds.
8 — Heifer calves. 5 — bulls: 4-yr.; 1-yr.; 6 mos.
Straight and Right

GEO. T. KIDDER, Richfield Springs, N. Y.

Surfeited with Nitrogen

(Continued from page 710)

in net profits per acre and per man?

It is not to be understood that disking is to be recommended in preference to plowing on all soils. Probably most soils need plowing for best results. On the heavier soil types of medium fertility fall plowing probably proves best for oats and barley. On soils of low fertility spring plowing is to be preferred. Special consideration should be given certain rich fields of alluvial origin in narrow valleys because of the weed problem. To give the weeds as much set-back as possible, shallow to medium plowing is recommended immediately prior to sowing. The seed bed, however, should be made as firm as possible even before planting.

Much more can be said on this question, and more definite information should be found out as touching directly on the lodging problem and on certain phases of it. It is the aim in this talk to focus more attention on the points herein discussed so that farmers may become familiar with them through study, field observation, and experience.

Washington Cattle Win at Western Shows

HOARD'S DAIRYMAN:—A show herd of 27 dairy cattle from the herd of the State College of Washington has been shown at three western fairs under the direction of Professor E. G. Woodward. At the Spokane Interstate fair, the herd of eleven Holsteins, eight Ayrshires, and eight Jerseys took fourteen championships; at the Walla Walla Fair, seven championships, and at the Yakima, five championships. The entire herd was bred on the State College farm with the exception of the three herd sires and one Holstein heifer. The herd was fed and managed by J. A. Knott, a 1920 graduate of the State College.

Washington. EDWARD C. JOHNSON.

Remember that standing timber will keep; it can wait over a period of low prices without rapid deterioration.

"Let the hair go with the hide"

Specialists in tanning Horse, Cow, Calf or any kind of hide with hair or fur on it. We make robes, coats, caps, gloves, muffs, rugs, etc., to your order. *You save money* and we save your furs. *Free* catalog of stylish fur garments: *Free* instructions for handling furs. Fur garments and goods of all kinds repaired and *made like new.*

We mount large and small game, birds and fish. Write today.

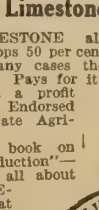
ROCHESTER FUR DRESSING CO,
655 WEST AVE.
ROCHESTER N.Y.

Want Bigger Crops? —Then Use Limestone!

QUALITY LIMESTONE always increases crops 50 per cent or more. In many cases the yield is doubled. Pays for itself and returns a profit the first year. Endorsed and used by State Agricutural Dept.

Write for free book on "Increasing Production"—it will tell you all about QUALITY LIMESTONE and what it will do for you.

Waukesha Lime & Stone Co.
Dept. 10, Waukesha, Wis.



WAUKESHA QUALITY LIMESTONE Acts Immediately LIME & STONE CO.

for AGRICULTURE and HORTICULTURE

Alfalfa Hay
The Choice Dairy Kind

We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.

W. A. Ferson Hay Company, Kansas City, Mo.

Learn Auctioneering

at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog.
Jones Nat'l School of Auctioneering, 38 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

Alfalfa Hay

200 tons car lot, first class quality.
Write for prices.
Charles B. Wing, Mechanicsburg, Ohio

When writing advertisers please mention Hoard's Dairyman.

Butter Manufacturers to Meet

The annual meeting of the American Association of Creamery Butter Manufacturers will be held on November 9th, at 9:30 a. m. on the mezzanine floor of the La Salle Hotel.

A very elaborate program has been arranged. Experts will discuss different subjects. Among the things that will be discussed will be dairying from the farmer's standpoint, cement, and its relation to the creamery and dairy industry, the milking machine as a factor in dairying by an expert from New Zealand, the efficiency of churning or the loss of fat in buttermilk, the benefit of grading cream by an expert from Northwest Canada, and improving or building up the dairy herds by good sires. The future outlook for business will be discussed by a prominent business man at the close of the luncheon hour.

All creamerymen are invited to this meeting. We are expecting a large attendance from many states.

The association has just engaged Professor J. W. Mitchell of Canada. Professor Mitchell is a graduate of Queen's University, formerly Professor of Dairying at Manitoba Agricultural College, and later has been Professor of Animal Husbandry and Superintendent of Dairying in the maritime provinces. He comes to the association very highly recommended. The association expects to take up a lot of investigational work. This work will be carried on by Professor Bouska and Professor Mitchell in connection with the chemists in the association's laboratory. G. L. McKAY, Sec.

Minnesota Grade Guernseys Average $211

At Floyd Wilson's sale of Guernseys in Minnesota recently, his herd sire, a grandson of Glenwood Main Stay, sold for $400. His grade cows, which were well marked and of good conformation, averaged $211. Yearling grade heifers sold for $125. The high prices reached were in proportion to the quality obtained through crossing a Guernsey bull on grade cows.

"Tom, Tom, the piper's son,
Stole a pig and away he run.
Thomas, leave that pig alone,
Join a pig club, raise your own!"

JUBILEE FARM
Brown Swiss Cattle
Completely sold out on heifers. We offer a number of excellent young bulls at special prices.
BOX 747, PEORIA, ILL.

JERSEYS

JERSEYS—DUROCS
TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys
Bull calf born March, 1920. Sired by imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd
At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

Six Splendid Jersey Bulls
FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON. Edgerton, Wisconsin

JERSEY BULLS
Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Ayranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

POLLED JERSEYS
Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Jersey Bull For Sale
dropped February 4, 1920. Sired by McKay's Noble Fox No. 164786 and from McKay's Pauline No. 385951. This calf is the best for his age of any I have seen. Will sell at $125. Is easily worth $300. Write
J. F. Schmidt, Whitehall, Michigan

Montpelier Jerseys
Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

Jersey Bulls
If you want to breed size, type, large production and improve the breeding on and up qualities of your herd, write us for prices and descriptions of some herd improving bulls we have for sale.
HOOD FARM, INC.
Lowell, Mass.
N. B. Price list of Forty females on request.

Jersey Bull Calves and Heifers
Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

For Better Jerseys
We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.
We have a few young bulls for sale.
THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

158 R. O. M. records made by
AYREDALE JERSEY COWS
Average 10,503.6 lbs. milk, 582.5 lbs. fat.
We offer bulls and bull calves from these cows, sired by
CARRY-ON of AYREDALE (164012). His dam and two grandams average 17,151.2 lbs. milk, 928.4 lbs. fat.
SOPHIE GILSLAND TORMENTOR (123584). Dam made as a 4-year-old 15,952 lbs. milk, 888 lbs. fat.
SOPHIE 19TH GRANDSON (165221). Dam made 15,578.7 lbs. milk, 809.5 lbs. fat.
The bulls we offer are close up to the World's Champion producer Sophie 19th of Hood Farm. Correspondence solicited. We would appreciate information about your herd, so as to price you bulls calculated to add size, type and increased production.
Write F. W. AYER
AYREDALE STOCK FARM, Bangor, Maine

GUERNSEYS

TristramFarmGuernseys
A 3-year-old son of Langwater Princeling for sale. A sure breeder and a fine crop of calves to show. Two yearling bulls of serviceable age, good A. R. backing. One, a son of Dairymaid's Nonpariel of Iowa, whose two nearest dams average over 860 B. F.
TRISTRAM FARM CO., Eau Claire, Wis.

Homestead Farm
Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.
W. G. JAMISON & SONS, Appleton, Wis.

HERE'S YOUR OPPORTUNITY---BULLS
Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.
Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Public Sale
to be held at
White Hall Farm
Waynesboro, Pa.
Tues., Nov. 23, '20
30 Registered Guernsey Heifers
A very promising lot, well grown. Ages are from 6 months to 2 years.
These heifers are granddaughters of such sires as Bob Rilma Glenwood's Main Stay 40th, Dimple Bloom and others of equal breeding.
About half of these heifers are bred to a grandson of King of the May.
Catalogues on request
J. HARLAN FRANTZ
Waynesboro, Franklin County, Penn.
Electric cars pass farm every hour. Stop No. 11.

For Sale
Two Advanced Registry Guernsey Bulls of excellent breeding and conformation. Tuberculin tested. One 2-year-old and other a yearling. Dams' records over 515 lbs. per year as 3-years-olds.
Address
Emil Walther, Medford, Wis.

Tratt Guernsey Herd
Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.
RALPH TRATT, WHITEWATER, WIS.

Fond du Lac Guernseys
Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.
B. F. SHERIDAN, Secretary, Fond du Lac Wis.

40 Guernseys
At Mankato, Minn., Nov. 23, 1920
In the New Sale Pavilion
The entire herd of JENS ARNBAL of Albert Lea. 28 females, 7 bulls. 18 females in milk. Also 5 cows and heifers from the herd of T. C. Norman, Lake Crystal, Minn. Both are Federal Accredited Herds. Catalogues Nov. 10th. Write for one to
Dr. M. B. Wood, Mankato, Manager of Sale
Oliver S. Johnson, Auctioneer
First Nat'l Bank of Mankato, Clerk of Sale

BROWN SWISS



Buy a Brown Swiss Bull
Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.
IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.



Yearling Bull for Sale
Dropped June 21, 1919, solid fawn color, well grown, well bred toppy bull. Sired by a grandson of Mabel's Raleigh and Noble of Oakland. Dam is of Eminent breeding, R. of M. class AA—486 lbs. 15 oz. butter, adv. test 5.97%. This bull's pedigree is full of records and blue ribbons. For further particulars write,
W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

Attention—
Guernsey Breeders or Prospective Breeders!
We have for sale some very high class cows that would make a great foundation for prospective Breeders, or they would make a very valuable addition to any herd.
Most of the cows have splendid A. R. records, or records in the making.
If you are looking for something of the highest quality in Guernsey breeding you cannot do better than write us.
We also have several young bull calves sired by the great bull, "Cherub's Prince", whose progeny won all the highest honors at the 1920 National Dairy Show.
Address all inquiries to Percy Jones, Farm Superintendent, Iowa Dairy Separator Company.
W. W. Marsh - - Waterloo, Iowa

Third Semi-Annual Sale of Pure-bred Guernseys

Under the auspices of the

Fond du Lac and Winnebago Counties' Guernsey Breeders' Associations

Sale Pavilion, Fond du Lac, Wis.

10:30 A. M.

Thursday, November 18

Seventy pure-bred Guernseys, eight bulls and sixty-two females. A large number of these being cows, and many of them with high class A. R. records or now under test.

Included in the sale will be the whole herd of E. V. Maltby, Midlothian, Ill., and thirty head of particularly good ones consigned by Drew Ten Broeck, McLean, Illinois.

There are also consignments from the herds of F. J. Rueping, B. F. Sheridan, E. P. Sawyer, Charles L. Hill & Son, Harry W. Lewis, Ingalls Farm Co., Wichern Bros., Wm. Illian, and W. G. Jamison & Sons.

The cows are bred to some of the great bulls of the breed including Kenilworth Gold, Admiration of Edgemoor, Superb of Edgemoor, Beauty Mar, Pencoyd Crackerjack, Pine Blossom's Cherub, and Lone Pine Illustrator.

The dams of these bulls are such cows as Quaker Maid of Pencoyd 759.72 lbs. fat, Donnington Goldie 5th 796.52 lbs. fat, E. Langwater Charity 721.54 lbs. fat, and other well-known cows.

These cattle will be sold under strict guarantee and with privilege of 60-day retest.

If you are looking for foundation Guernseys you will find them here.

For catalog, address

Charles L. Hill, Sale Manager

Rosendale - - - - Wisconsin

Waukesha County Registered Guernsey Sale

Sale Pavilion, Waukesha, Wis.

Wednesday, Nov. 17, 1920

Seventeenth and Semi-Annual Consignment Sale

REMEMBER:—Every animal is guaranteed as represented.
Every animal sold subject to 60-day retest.
Every animal sold, is carefully inspected previous to sale
No consignor is allowed to bid on his own consignment.

A Few of the Choice Offerings Are:

BELVA OF AURELIAN FARM (A. R.), Milk 8,179.5 lbs., butterfat 443.72 lbs., Class GG.

REX OF BROAD RIPPLE NO. 61960.
Sire — Rex of Rich Neck A. R. sire of 3 A. R. daughters and full brother to 2 Class leaders.
Dam — Marietta of Maple Hill A. R., Milk 15,071.1 lbs., butterfat 797.7 lbs.

BEAUTY OF LYNNHURST (A. R.), Milk 8,950.40 lbs., butterfat 572.88 lbs. at 5 years.

LILY ROSE OF MAPLE HILL No. 76842.
Sire — May King's Vrangue of Ingleside (A. R.) sire of 13 A. R. daughters.
Dam — Lillian's Milkmaid of Maple Hill A. R., milk 12,980.7 lbs., butterfat 567.3 lbs. at 2 yrs.

SHORELAND LILY (A. R.), milk 9,281.5 lbs., butterfat 397.59 lbs. at 2 years.

HILARIA (A. R.), milk 11,157.40 lbs., butterfat 513.36 lbs. at 4 yrs.

SWEETHEART OF MAPLE HILL NO. 96686.
Sire — Langwater Royal 4th, full brother to 2 class leaders.
Dam — Lamont's Sweetheart A. R., milk 9,389 lbs., butterfat 548.2 lbs. at 3 yrs.

TWO DAUGHTERS and ONE SON OF NOBLE REGENT, who is by Allenwood King Regent A. R., and out of Polly's Beauty A. R., 774.4 lbs. butterfat, 7th place Class C.

ONE Daughter and One Son of HOPEFUL OF EDGEMOOR (Winner of many prizes) and sired by Itchen May King, Grand Champion, 1920 National Dairy Show.

TWO EXCEPTIONALLY FINE HEIFERS, sired by MARSHALL MA CHARMANTE, who is by Imp. Ma Charmante's Hero A. R., and out of Helen Marshall's Jeannette's Sequel A. R., milk 10,872 lbs., butterfat 595.4 lbs.

TWO DAUGHTERS OF DAIRYMAID'S CRITERION OF IOWA 28187, who has 8 daughters on test and is out of Imp. Itchen May Rose 6th, A. R., milk 15,885.1 lbs., butterfat 661.87 lbs.

These Offerings Should Please You. Be at the Sale

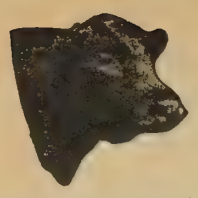
Auctioneers: Love, Benjamin, Jones

For catalogue, address

F. E. Fox, Secretary, Waukesha, Wis.

Waukesha County Guernsey Breeders' Ass'n

Note: Remember sale of Registered Guernseys at Fond du Lac, on November 18th.



Economy in Production ← GUERNSEYS → Quality of Products



Calf Clubs build knowledge and character in boys and girls. They create a community interest in better dairying and better live stock breeding. Let us tell you how to organize and supervise a Guernsey calf club in your community.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 94, PETERBORO, N. H.

Upland Farms, Inc., Ipswich, Mass.

We are able to offer choicely bred heifers and cows for foundation herds. Animals are American bred from the best producing strains, and are bred to Langwater Cavalier No. 21012, or Upland's Sentry No. 54691, a grandson of Langwater Cavalier. Sentry's dam has 614 pounds fat as a four-year-old, and her dam has a record of 816 pounds fat in Class A.

A rare opportunity to select a few choice females and perhaps the bull that will do you the most good, is here.

F. P. Frazier & Son, Proprietors

W. K. Hepburn, Manager

A Good One Ready For Service



ANTON OF PROSPECT 59853
Dropped September 17, 1919
Sire—Anton's King Confidence 43517. Dam—Dona of Prospect 67924, A. R. 6540.

Anton bids fair to even exceed the size of his dam's sire, Sir Snowdoun (19252), who weighed over 1,800 pounds.

His sire has six May Rose crosses and is out of Ma Chere Confidence, who has a junior four-year-old record of 764.65 lbs. of fat.

The dam of Anton is now on her second A. R. test and she is much ahead of her previous record. This calf is guaranteed in every way.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.8 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection

OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

A Great Sire
IS
FALCON'S PROUD WARRIOR

considered by many to be
The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.

35 Registered and Grade Guernseys

All cows and heifers including two entire herds

Will be Offered For Sale on
November 19, 1920
by the
Guernsey Cattle Club of Van Wert County, Ohio

Catalogues after Nov. 10

M. S. Myers, Sec'y, Van Wert, Ohio

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by

RADISSON FARM, ANOKA, MINN.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

For Sale
Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

May Rose on both sides. Dams in A. R or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

CLELAND FARMS' GUERNSEYS

We always have a few good females in both bred heifers and cows in milk to offer.

At this time we can offer two choicely Golden Secret bred bulls most ready for service.

CLELAND FARMS, Chagrin Falls, O.

Young Bulls 6-10 Months Old

From tested dams or dams now on test making from 450 to 750 lbs. fat. They are sired by excellent bulls of May Rose, Clara Sequel, and other breeding as good. Price $100 to $500. Write for more complete information.

CORIUM FARM, F. J. Rueping, Owner, Fond du Lac, Wisconsin

Gordondale Guernseys

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

May Rose Guernseys for Sale

Bull Calves and Heifers from A. R. Bulls and A. R. Cows

Sweet Springs Farm
Troy, Ohio

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 860 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Gustave Pabst's
Hollyhock Farms

Offer at the Waukesha County Sale
Waukesha, Wis., Nov. 22nd

Summit Bonny Pietertje Ormsby, Born May 9th, 1920
From this Great Cow



BONNY JOHANNA MOOIE DE KOL NO. 177916

She has a 29-lb. 7-day record as well as a 305-day record of 694.42 lbs. butter from 18,124.8 lbs. milk. She is one of our foundation cows and will be tested at next freshening, and will be put on yearly test. We confidently expect that she will materially increase her records. Individually, she is one of the best in our herd.

Sired by Sir Pietertje Ormsby Mercedes 41st

We do not need to describe him, he is best known as the $65,000 son of Spring Brook Bess Burke, "The Greatest Mother of the Breed", the only cow in the world to have a 1,000-lb. record, who also has 3 daughters with 1,000-lb. records. 41ST also has more 1,000-lb. sisters than any other bull in the world. One of his daughters was awarded Grand Championship female at the 1920 Waterloo Dairy Congress. Remember the bull we are offering is a brother to this winner.

The Gustave Pabst Farms ask that you consider very carefully this young bull if you are desirous of securing a herd sire of real merit.

Gustave Pabst's Hollyhock Farms, Dousman, Wis.
F. J. Southcott, Manager

SHEBOYGAN COUNTY HOLSTEIN BREEDERS'

CONSIGNMENT SALE
Plymouth, Wis., Saturday, Nov. 20

Probably the Highest Record Bunch of Holsteins Sold in Wisconsin in Public Sale Ring Since the Last State Sale

Selected by a Committee of Breeders, and the Committee says that besides Breeding they are of Fine Individuality

Bred to 31-, 34- 37- and 38-lb. bulls.

A Mighty Fine 31-lb. cow on yearly test, and who will have between 1,000 and 1,100 lbs. for the year. Bred to Pabst Pontiac Adonis, the 38-lb. bull.

A daughter of King Segis Pontiac and bred to a full brother to the 38-lb. Cornflower Cow.

A year record cow, bred to Sir Ormsby Beauty Pontiac Segis, the 37-lb. bull. Her present record is 20,407 lbs. milk, 748.97 lbs. butter. She is all ready to go on test again.

Five 20-lb. junior 2-year-olds. One with nearly 25 lbs.

A 26.95-lb. cow bred to Johanna Clothilde Pontiac De Kol.

A 27.67-lb. cow bred to a son of the 37-lb. Ormsby bull.

A few dandy record young bulls, one whose 9 nearest dams average 1,000 lbs. and whose 11 nearest dams average 30 lbs.

Sounds Good Doesn't It? It will be as Good as It Sounds.

Sale at the Fair Grounds, Plymouth, Wis.

Auctioneers — Mack and Laux Sale Manager — F. H. Everson

A. C. Baltzer Leaves Purdue

A. C. Baltzer of the dairy extension division of Purdue University leaves the work in the college to go with the Gossard Breeding Estate in Indiana. Mr. Baltzer during the past year has been in charge of bull association work, dairy short courses,



A. C. BALTZER

and dairy exhibits for the University. In his new position he will have charge of the sales department for Ayrshire cattle in Indiana. Mr. Baltzer is a graduate of Missouri Agricultural College and outside the period of war when he was in France, he was in charge of the dairy herd first at the University of Nevada and later at the University of Idaho.

Millet Bran

Millet bran, the offal obtained in the manufacture of millet flour, has low value as a feedstuff, according to W. H. Stroud, head of the Feed Inspection Division of the Wisconsin Department of Agriculture. This product has recently been found for the first time on the Wisconsin markets.

An analysis in the feed inspection laboratory of the department showed that it had about the same composition as oat hulls and, therefore, the feed belongs in the class with roughage, such as hays and straws and not with concentrates, such as middlings. Since the product looks very much like wheat middlings farmers are cautioned against the purchase of feed without a label giving the analysis.

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of
Epochal Berkshires

Get a Herd Sire or a Foundation Trio

From the herd that has won more first prizes and more championships at the biggest shows this year than all its competitors put together.

Some statement, but it's true!

The Epochal Herd won 62 firsts out of a possible 106 and 23 championships out of a possible 42 at the 1920 Missouri, Illinois, Iowa, Indiana, and New York State Fairs, the Eastern States Exposition at Springfield, Mass., and the National Swine Show.

The Epochal herd won in 1919 and 1920, 429 prizes; 140 firsts, 44 championships, and 14 grand championships. This is more prizes, more firsts, more championships, and more grand championships than were ever before won in two consecutive years by any one Berkshire herd in the world.

Young boars that are herd sire prospects of the kind that lift strains to the top, $200 each and up. Trios of six months old pigs carefully and properly mated—a real foundation—$300 to $2,500.

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Epochal Berkshires are the deepest and smoothest big-type hogs.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES

DUROC BOARS

of Pathfinder, Colonel, Orion Cherry King breeding. They are the big long kind that will grow out and make good. They are priced to sell.

Let us tell you about one on our guarantee to satisfy.

BERTLEY FARMS
Glenwood, Illinois Post Office Box 1

Pure-bred Duroc Jersey Boars For Sale

We have good spring boars by the great Cherry King's Jack **at $60.00 each**

Ercell E. Tyler, Care People's Natl. Bank Warrensburg, Mo.

Berkshires for Sale

First class fall and spring Boars. At prices from $50.00 and up.

Write for particulars.

Cedar Crest Farms
J. K. Dering, Owner, Lake Villa, Ill.



MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

The National Duroc-Jersey Record Association. Dept. 300 Peoria, Ill.

The Watertown Holstein Sales Co.
Holds Its
FALL SALE
November 23rd
at Watertown, Wis.

Sufficient cattle have been offered us this Fall to warrant a two-day sale as originally scheduled but in keeping with the policy that has governed us in the past we are sifting out the undesirables by means of a rigid inspection of all consignments. In consequence we will have just enough good ones left to make a splendid one-day sale on Nov. 23rd. We like to emphasize the fact that our directors inspect and when necessary reject. We feel as though it is one of the essential features of our semi-annual sales. And we know that it convinces our patrons that the Watertown Holstein Sales Co. aims primarily to satisfy.

And this is why
We do get by
With sales Ace-High
WE SATISFY!

For Catalogue Write

Frances Darcey, Watertown, Wis.

Haeger — Mack — Wood

Absolute Dispersion
Registered Holsteins Owned by Boehlke Bros.
Little Rapids, Wis.
Saturday, Nov. 13, 1920

50 Head — Tuberculin Tested. Choicely Bred and Good Individuals. Show Cattle and Winners at the Northern Fairs

Thirty-five mature cows and two- and three-year-olds, most of them in calf, and a dandy bunch to select from. If you are looking for something in the cow line that will pay you money, here is a chance.

Thirty head in the sale sired by Cornucopia Pontiac Grindetia, No. 167685, a son of Spring Farm Pontiac Cornucopia, and from Spring Farm Grindetia Pontiac. He is the sire of many winners in the Show Ring, and his breeding speaks for itself.

Twenty-five cows and heifers bred to the herd sire, Vickery Sir Champion, No. 162584. He is a son of Pinehurst Champion with a long list of A. R. O. daughters, and his dam is the Grand Cow, Vickery Vale, with 937.75 lbs. for the year. This bull will be sold and will be a bargain for some one.

Sale at 1 p. m. sharp. Under cover if bad weather and held at Farm, known as the Fox River Valley Farm at Little Rapids

Little Rapids Station is opposite Farm. Interurban line from Green Bay to Fond du Lac runs through farm.

F. H. Everson, Sales Manager

J. E. Mack to sell

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Vernon, La Crosse and Monroe Counties
Holstein Consignment Sale
Viroqua, Wis., Wed., Nov. 10
50 Head — Good Holsteins

Cows and heifers in calf to Sir Johanna Ollie Piebe, a dandy year-record grandson of Sir Johanna Aaggie Posch. His dam has a junior 3-year-old record of 19.49 lbs. for 7 days, and 825.80 lbs. for 365 days. His sire's dam has 34.85 lbs. for 7 days and 1,208.18 lbs. for 365 days. His first two dams on the dam's side and the first two dams on the sire's side all have fine yearly records.

A nice bull, a 2-year-old grandson of Admiral Walker Prilly, and from a 20-lb. dam.

Granddaughter of Homestead Junior De Kol and from a 19.60-lb. dam. Milking 70 lbs. per day at present time.

Granddaughter of King Segis Pontiac Polkadot and due in January to a 33-lb. sire.

Two male calves of Show Quality, both sired by the 33-lb. bull, Sir Aaltje Pontiac Hengerveld, and from good record dams.

A nice 4-year-old daughter of Pabst De Kol King and in calf to Sir Vickery Vale Mechthilde, the yearly records of whose two nearest dams average 1,129 lbs. butter, 24,849 lbs. milk.

Some large Show Cows, heavy producers in the Cow Testing Assn., all in calf to Edenvale Roy Pietertje, himself a winner in the show ring, and who is a son of Sir Pietertje Ormsby Mercedes 41st, and from a daughter of North Star Jennie Sir Beets by a son of Aaggie Cornucopia Johanna Lad and from the highest record daughter of De Kol 2d's Paul De Kol.

Well bred heifers, daughters of Pabst Beechdrop Champion, daughter of Johanna De Colantha Champion 3d, daughters of Sir Johanna Almeda and from record dams, and with 4 generations of A. R. O. backing. Daughter of Lady Reka Mooie Son, from the Show Cow, Lady Reka Mooie, and in calf to Canary Inka Fobes Oak.

Two daughters of Bairdland King Pontiac Leon.

Sale Held in the New Pavilion at Viroqua, Wis.

Sale Manager, F. H. Everson, Lake Mills, Wis.

Auctioneer — W. H. Krause

Wayside Stock Farm
OFFERS
4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Two Ormsby Bulls
Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

Both tuberculin tested and guaranteed right.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Jefferson County Holstein Breeders' Association

First Annual Sale

Nov. 19, '20—Lake Mills, Wis.

In The Lake Mills Sale Pavilion—Commencing at 10:00 a. m.

70 Quality Holsteins

A Sale Where Both Health and Quality are Guaranteed

The 60 Females to be Sold are Without Question the Best Individual Lot that Ever Passed Through any Consignment Sale Ring, large or small. There is not one Poor One in the Lot — Not One but that Would Look Well in Your Herd. All but 12 of Them are of Breeding Age, are Bred to good Sires and are due to Freshen about sale time or shortly after. Only two of the 60 are over 8 years old.

The 10 bulls are all from good Record Dams — They are well bred — most of them are of serviceable age.

Every Animal over 6 month olds will be tuberculin tested and sold subject to a 60 - 90 day retest guarantee.

Send for your catalog today to

Jefferson County Holstein Breeders' Association

A. F. Gafke, Secretary . . . . Jefferson, Wisconsin

Watch next week's issue for more detailed information

Dispersal of Registered Holsteins

The Noted L. H. Field Herd, Osseo, Wis.

Friday, November 12, 1920

A rare opportunity for the man who wants Holsteins

A herd, Clean, Tuberculin Tested, that has never had anything but the best of care, where sires of Excellent Breeding have Always been used, and where Many Good Records Have Been Made, under the Best of Conditions.

Numbered among the Best Herds of Wisconsin.

Herd Sire—Milford Meadows Ormsby Oak De Kol No. 136425. A Son of Canary Homestead Oak De Kol, and from a 34.51-lb. dam.

Several Bull Calves that will just do some one a Lot of Good. Records all through their pedigrees.

Nine calves and short yearlings, from High Record Sires, and from Dams with Records from 21-lb. 3-yr.-olds to 29-lb. cows. This lot includes a Daughter of Sir Pietertje Ormsby Mercedes 42nd and from a 29-lb. dam. Also a Wonderful Heifer from a 23-lb. Jr. 3-yr.-old and Sired by the 42-lb. bull, King Bess Burke Ormsby.

Fifteen Senior Yearlings—Large, Growthy Ones, Nearly all from High A. R. O. dams. These heifers have all been bred to the Ormsby bull, Sir Ormsby Korndyke De Kol, who is Sired by a Grandson of Sir Pietertje Ormsby Mercedes and is from a 1,146-lb. 4-yr.-old Daughter of Sir Piet.

All of these Heifers are Sired by M. M. Ormsby Oak De Kol, the above Herd Sire, who is from a 34.51-lb. dam, and is sired by a son of Jessie Fobes Bessie Homestead, the 34.96-lb. 4-yr.-old.

Also, Mooie Johanna Creamelle, from a 30-lb. dam, next dam 39 lbs., and from a Son of Lady Reka Mooie, the Noted Show Cow who won Grand Champion at our State Fair Two Years in succession.

Nineteen Cows—All young—None over Seven Years Old. Mostly Three- and Four-year-olds.

Nearly All Have Good A. R. Records. Just one of the Best Chances You Ever Saw to Secure Some "Honest To Goodness" Cows That Are Worth Taking Home.
These Cows are Sired by such bulls as these—

Leland Korndyke Segis, whose first five dams on his dam's side have good year records.

Windsor Homestead Oak De Kol, from the Great Cow, Windsor Sweet Butter Maid. Milford Meadows Ormsby Oak De Kol, a 34-lb. Grandson of Jessie Fobes Bessie Homestead.

This lot includes a 3-yr.-old who made over 23 lbs. with first calf, whose dam has 30 lbs., next dam 39 lbs., and who is sired by a 34.50-lb. bull. She is on Yearly Test, and is making a very fine record. Will be announced at sale.

Come and see for yourself. You won't be sorry. Sale at the farm, Osseo, Wis.

Auctioneer: J. E. Mack

Sales Mgr., F. H. Everson, Lake Mills, Wis.

Waukesha County Holstein Breeders'

Conscripted Sale

Monday, Nov. 22

Bulls —

A 10-month-old son of Carnation King Sylvia, "the $106,000 bull", and out of a 34-lb. daughter of Sir Pietertje Ormsby Mercedes. She has three records over 30 lbs. and a milk record of 19,900 lbs., 805 lbs. butter in 295 days. A wonderful individual, combining the blood of the two greatest families in the world. **The First Opportunity to Buy This Combination.**

A 10-month-old son of 41st and out of Bonny Johanna Moore De Kol with 29.64 lbs. of butter in 7 days and 18,124 lbs. milk and 694 lbs. of butter in 305 days. Individually right. Good enough for any herd and bound to increase in value as he becomes older.

A number of other bulls, the best, from 30-lb. dams, near 30-lb. dams, or from 1,000-lb. dams. **You'll Be Surprised!**

20 other bulls from the greatest sires and from young cows with good records.

Females —

Several daughters of 30-lb. cows.

A number of choice cows with good records, one of them a young cow with twice over 27 lbs. now on test, and a sister to Wellington Vashti Korndyke, now making between 1,200 and 1,300 lbs. in a year.

A dispersion of 20 head of large frame, typy cows from the Duke Burnell herd, most of them bred to freshen this fall to Woodcroft Perfection, Wisconsin's first 40-lb. bull with a yearly record of 1,000-lbs. butter. These cows have never been developed. **Here's an Opportunity.**

Others all the way from 4 months to 7 years selected from the herds of **Waukesha's Largest and Most Reliable Breeders.**

Every animal comes from a **Tested Herd,** tested to ship anywhere and sold subject to a **60-Day Retest.**

The committee have conscripted the kind they would want for foundation stock. You buy them at your own price.

Watch for Our Ad in Next Week's Issue

Waukesha County Holstein-Friesian Breeders' Ass'n

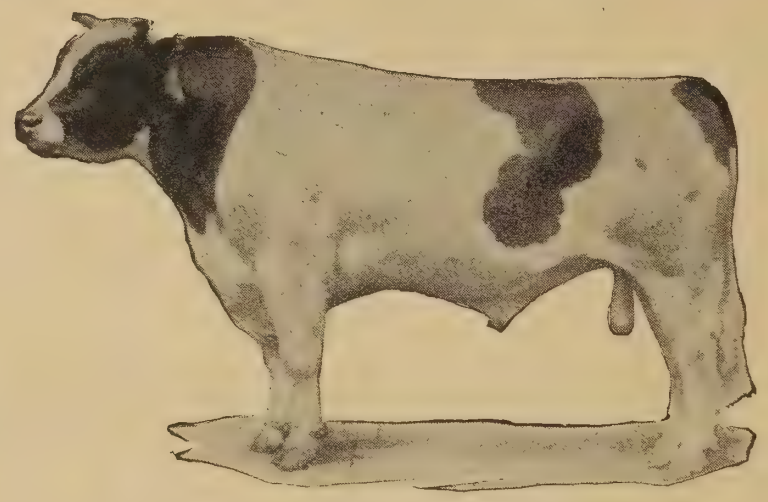
Waukesha, Wisconsin

Walworth County Holstein Sale

Nov. 15, Elkhorn, Wis.

Held in the Judging Pavilion at the Fair Grounds

A Sale of Quality Holsteins—Guaranteed Healthy



IOWANA SIR OLLIE
1919 Grand Champion and a Sire of Champions.
A Son and a Good 4-year-old Bred
to Him will be Sold.

Included in the Sale Are:

A show son of Iowana Sir Ollie from a 21-lb. Ormsby-bred dam now doing very well on 305-day test.

A 4-year-old (16-lb. 2-year-old) maternal sister to Walcowis Ollie Netherland — (junior champion at the 1919 National). Her dam, a 25-lb. cow with 19,640 lbs. milk, 833 lbs. butter in a year. Bred to Iowana Sir Ollie and due to freshen early in February.

5 yearling daughters of Sir Pietje Ormsby.

4 yearling daughters of Champion Battles Pontiac.

The third prize aged cow at the 1920 Walworth Fair.

First prize bull calf at the same fair.

A Son of King Pontiac of Brothertown — his 6 nearest dams average over 30 lbs., his own dam an 18-lb. 2-year-old daughter of a 30-lb. cow.

A daughter of King Pontiac of Brothertown from a 19-lb. dam bred to a grandson of May Echo Sylvia.

A 29-lb. and a 27-lb. Ormsby bull.

Lunch will be served on the grounds at noon.

All animals over 6 months old tuberculin tested (most of them by a federal veterinarian) and sold subject to a 60-day retest. Four consignments from Accredited Herds.

Walworth County Holstein Breeders' Association

For Catalogs write Ben Bachhuber, Elkhorn, Wis.

Mack and Beaumont, Auctioneers

J. G. VOSS in the Box

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Waupaca County Holstein Breeders' Association

1. Where the largest breeders can secure their choicest herd sires.
2. Where the average breeder can buy those animals of high class breeding that will build up his herd.
3. Where the beginner can obtain that good foundation stock with most excellent type and good records at moderate prices.

Buy that carload in Waupaca Co., the county noted for its large number of Federal Accredited Herds.

Stock for sale at all times.
Write to

A. B. Rowe, Sec'y, Waupaca, Wisconsin

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin

Wayside Lawn Farms

offer

Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 3 to 9 months old. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former Champion Jr. 2-year-old; Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., MENOMONIE, WIS.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

SPECIAL Holstein Bull OFFER

DELMA SEGIS VERBELLE—Ear Tag 1174

HIS sire, Matador Segis Walker Delma, is by a full brother to 12 cows all averaging over 30 pounds of butter in seven days.

His dam, Blanche Monk Verbelle, tested with one quarter of her udder not functioning, made 27.86 pounds of butter, and 559.9 pounds of milk as a four-year-old.

His sire's sire is Matador Segis Walker, who has fifteen A. R. O. daughters, who at two and three years of age average over 23 pounds of butter in seven days. His dam's sire, Johanna Verbelle De Kol, whose A. R. O. daughters average 27.52 pounds butter in seven days, is from a half brother to the sire of Finderne Pride Johanna Rue, with a yearly record of 1,470.5 pounds butter. Buy this bull and look him over. If not satisfied, return him at our expense. He is guaranteed free from disease.

5 Mos. Old—Price—$600.00

Eastern Office:
1111 Consumers Bldg.,
Chicago, Ill.
Western Office:
1111 Stuart Bldg.,
Seattle, Wash.

Carnation Stock Farms

Home of Contented Cows

FARMS
Washington Farm,
Near Seattle, Wash.
Eastern Farm,
Oconomowoc, Wis.

Your Choice of **50** Young Bulls

They Are Out of Yearly Record Dams And Sired By—

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his granddams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow—the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms

Winterthur - - - Delaware

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Are You Interested?

We have just completed a record of 27.08 lbs. on the five-year-old cow Jessie Canary Fobes 3rd. She has a handsome, light-colored bull calf born Feb. 29th, that we are offering for sale. Write for particulars.

S. T. JONES, - R. 8, Watertown, Wis.

JOHANNA BOY TWISK

heads my herd. He is by Dutchland Colantha Belle Boy a son of Colantha Johanna Lad. His dam is a 24.38-lb. granddaughter of Korndyke Wayne Paul De Kol. N thing for sale at present.

T. W. LUCK, R. 1, HORICON, Wis.

Rock River Stock Farm Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale 3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

LEVEL-LAY FARM HERD

headed by Sir Rachel Canary Oak No. 172428. His sire a half brother to Iowana Sir Ollie. His dam a 30-lb. cow. Calves both sexes for sale. Also cows and heifers bred to him.

E. O. FEHLING, Tel. No. 15F12, Juneau, Wis.

$100 Bull Bargain

4-week-old bull calf. Light in color. Fine individuality. Sire's dam has three records over 900 lbs. butter. Dam is a daughter of a 37-lb. sire. Clean herd. Check or bond takes him.

CHIC DAIRY FARM Juneau, Wis.

Registered Heifer and Bull Calves

I can offer for sale a few calves, either sex, sired by Sir Canary Gewina Homestead, he a 28-lb. grandson of Homestead Jr. De Kol. Write for further information. **Chris. Indermuehle, R. 1, Juneau, Wis.**

PABST KORNDYKE SEGIS

a son of Korndyke Segis Johanna heads my herd. His dam, Pabst Citronella, made 669.4 lbs. butter, 16,867.8 lbs. milk in 1 year as a 2-yr.-old, 26.285 lbs. butter in 7 days as a 4-year-old.

HERMAN LUEBKE, R. 8, WATERTOWN, WIS.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - - Burnett, Wisconsin.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Iowa Holstein Breeders'
Second State Sale

At Des Moines — Nov. 16-17

A Sale of the Best the State Affords

Hand Picked—Tuberculin Tested—Guaranteed

The 85 Animals to be Sold Include 10 Splendid Young Bulls and 75 Females Good Enough for Foundation Stock in Any Herd.

Among the Entries—

King Pietertje Ormsby Piebe 22nd, a 5-month-old son of the famous K. P. O. P. and from Rose King of Cornella, a 1,000-lb. 4-year-old. A show calf backed by the best of long time records.

Eleven High Class Females from the herd of Hargrove & Arnold, 4 of them bred to K. P. O. P., and one to King Piebe, whose dam holds the world's record for 3-year records in heifer form. With one exception, all are two-year-olds or younger.

A son and a daughter of Oak De Kol Ollie Homestead from Iowana Farms, as well as 8 other young females representative of the best they have bred.

A 28-lb. cow and a 24-lb. cow both bred to an excellent year-record bull will be sold.

A show daughter of **K. K. S. V. 24th**, and 3 good heifers bred to Woodcrest Sir Clyde.

Seven cows bred to King Korndyke Pontiac Lass, the 44-lb. sire.

THE 75 FEMALES entered for this sale are all young cows and heifers — many are first calf heifers — due to freshen this fall or early winter. They are foundation females themselves and more — they are bred to the best bulls in the state — some of them sires of nation wide reputation. We planned this sale to serve the progressive breeder who wants females of this quality and with splendid individuality. You are included in that class. COME WHETHER YOU WANT TO BUY OR NOT.

The Consignors—

Hargrove & Arnold, Norwalk
G. and L. Gilbertson, St. Ansgar
Corwin Farms, Rock Valley
F. L. Thorpe, Algona
A. A. Dreyer, Whittemore
J. O. Schaff, Comanche
Hastings, Wylam & Son, Plainfield
Fairburn & Woods, Fonda
Tom Wicks, Radcliffe
W. S. Leaverton & Son, Granger
Holmes Dairy, Whiting
Iowana Farms, Davenport
W. B. Barney & Sons, Chapin
G. T. Junkin, Dexter
B. Hemphill, Dexter
E. J. Erickson, Cambridge
J. H. Cleverly, Maxwell
M. Breen & Son, Colfax
H. H. Schroedermeier & Son, Waverly
Niemann Holstein Co., Avoca
R. Bohren, Monticello
Hanson — Sauerbry, Oelwein

REMEMBER, every animal is sold subject to a 60-90 day retest guarantee. Send today for your catalog and plan to be at the state fair grounds Nov. 16 - 17.

Iowa Holstein-Friesian Association
C. F. Jenness, Secretary - - Waterloo, Iowa

This Beautiful Heifer



LORELLA CORNUCOPIA SADIE VALE

in our consignment to the Des Moines Sale, November 16-17

She is a 16-lb. 2-year-old daughter of King Korndyke Sadie Vale 24th and has in 154 days, 267 lbs. butter. With her we are selling an 18-lb. 2-year-old from a dam that milked 99 lbs. a day and has 3 records averaging over 25 lbs. Also a yearling daughter of a 28-lb. sire and a young daughter of K. K. S. V. 24th.

Three of these are bred to the 33-lb. 970-lb. sire, Woodcrest Sir Clyde.

Don't overlook this fact at Des Moines.

W. B. Barney & Sons Chapin, Iowa

Empire Stock Farm

Offers a six-month-old son of

King Segis Pontiac Fayne Star

Best individual son of "Count" and

Alexander of Pleasant View 2nd

Record

Butter over 800.00
Milk over 21,000
Butter — 7 days 27.39
Milk — 7 days 667.20

Priced to sell.

Price, picture, and pedigree upon request. A Federal Accredited herd.

Empire Stock Farm
William Schmidt & Sons - St. Peter, Minn.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.
BISCAY SALES CO., BISCAY, MINN.

Walcowis Farms

—offer young sons of—

Iowana Sir Ollie

—and—

Sir Ollie Mooie Ormsby

Most all of them from yearly record dams. They combine TYPE with PRODUCTION. Write for pedigrees, etc. Herd under Federal supervision.

Walcowis Farms, Lake Geneva, Wis.

Grandsons and Granddaughters of

Colantha Johanna Champion

We have for sale several sons and daughters of Ontonagon Emblagaard Duke, son of a 700-lb., 10-year-old cow that is also the dam of a 1,227.48-lb. 3-year-old (world's record). These are all good individuals from good A. R. O. dams. They are from 6 to 14 months old and priced at from $150 to $500.

Write for pedigrees and prices.

ONTONAGON CO. FARM, Ontonagon, Mich.
T. G. Roberts, Herdsman, J. S. Netterauer, Secretary

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.

KITTLE BROS., Holland, Ohio.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address
THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

Sir Pietertje Ormsby Mercedes 41st

One of Our Herd Sires



The only son of Sir Pietertje Ormsby Mercedes and Spring Brook Bess Burke. His sire has more 1,000-lb. daughters than any other sire in the world and his dam is the only 1,000-lb. cow having three 1,000-lb. daughters.

Twenty daughters of "41st" have been sold at public sale during the past year at an average of over $2,000. They were all out of either low record or untested dams.

We have for sale several young sons of "41st" from yearly record daughters and granddaughters of Sir Pietertje Ormsby Mercedes at prices that you can afford to pay. Write us for pedigrees.

E. C. SCHROEDER FARMS
Moorhead - - - Minnesota
(Federal Accredited Herd)

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.
Address correspondence to Axel Hansen, formerly with John B. Irwin.

Holstein-Friesian Bulls

sired by
"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

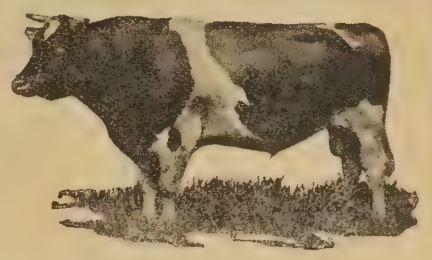
"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich.

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Just About Ready for Service—$500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams. For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of
Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.
(A Federal Accredited Herd)

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

For Sale

Minnesota bred Ormsbys; Fresh Cows, Heifers and Young Bulls, by two of the best bred, year record Sires in Service. From A. R. O. dams.

M. L. Enright, East Grand Forks, Minn.

You Want

a bull calf from a healthy herd. You want him to be from a young dam that has not reached her maximum production. You want him sired by a high record bull with yearly record backing. If you get a splendid individual, to boot, you have no kick coming. We have just what you want. Come and get it or send for our bull list right now.

Flecks Farms - - Faribault, Minn.



Purebred Holstein Cattle For Profit

"Both milk and fat are produced at lowest rate in general by the cows consuming the MOST FOOD". This conclusion reached by Prof. H. H. Wing, Professor of dairy husbandry at Cornell, after a year's observation of the herd at the University experiment station. Holsteins are large and healthy, capable of converting large quantities of coarse feed into the best of milk suitable for all purposes, particularly in demand for infant feeding and for cheese making.

If you are keeping cows for profit, investigate Holsteins.

Send for Free Illustrated Booklets. They contain valuable information for any Dairyman.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

Missouri's Sensational Guaranty Sale of Pure-bred Holstein-Friesian Cattle

representing some of the richest blood lines of the breed

100 head of selected pure-bred Holstein-Friesian cattle taken from the well-known A. J. King herd of Grandview, Missouri.

Sale to be held at the Farm adjoining the little City of
Grandview, Mo., a suburb of Kansas City
Tuesday, November 9, 1920

Special Attractions of the Sale:

10 Daughters of King Segis Pontiac.

5 Daughters of Joe Calamo Hengerveld, the great show bull.

25 Heifers of good lines of breeding selected for this sale on account of their superior individuality.

All the above bred to the senior herd sire Imperial Rag Apple, whose dam was the world record heifer Albina Josie.

30 Cows either fresh or heavy springers, many with A. R. O. records.

20 Heifer calves, daughters of Imperial Rag Apple.

10 Young bulls of outstanding individuality by the senior herd sire. All ready for service.

Bear in Mind — Sale at the farm at Grandview a short drive out from Kansas City. Sale headquarters at the Dixon Hotel, Kansas City. All parties coming from a distance come to hotel where conveyance will be provided to farm. Come early. First auto bus will leave at 8 a. m.

All cattle tuberculin tested and sold with a 90-day retest privilege.

Write today for catalog to A. J. King, 12 East 9th St., Kansas City, Missouri.

W. H. Mott, Sales Manager, Herington, Kansas
A. J. KING, Owner, Kansas City, Mo.

This Son of King Pietertje Ormsby Piebe

is one of the best herd sire prospects ever offered at public sale. His dam, a 25.58-lb. 4-year-old, made 1,045 lbs. butter from 19,173 lbs. milk at the same age. His two nearest dams average 1,217 lbs. butter from 24,701 lbs. milk,—both of them as 4-year-olds.

King Pietertje Ormsby Piebe 22nd will suit you if you want individuality and long distance production.

He and 9 good females, most of them heavy in calf to K. P. O. P., will be sold in the **Iowa Breeders' Guaranty Sale Nov. 16-17** at Des Moines.

We will gladly send you further information.

Hargrove & Arnold Holstein Co., Norwalk, Ia.

Ormsby Bulls—

The 30-lb. — 1000-lb. Kind

If you want one of that kind — a real individual — write for our sale catalog.



We have left just a few sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, from cows with 7-day records up to 40 lbs. and that have made or are making year records.

Have also a few splendid grandsons of S. P. O. M. from the same kind of dams.

MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA
Address all correspondence to Garden Court Apts.

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21, 465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA



$250 Buys This Bull

Born Dec. 19, 1919.

Dam — A. R. O. 18.10, milk 406 lbs., age 23 months. Sire — A 32.74-lb. son of King Korndyke Sadie Vale. This bull is from a Federal Accredited herd. If interested apply for pedigree to

Michael Seberger - Schererville, Ind.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS, - - CADDOA, COL.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month,** Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address
The Purebred Live Stock Sales Company

Son of a 37-Lb. Ormsby Bul

Dam: three-fourths sister to an 870-lb. junior 2 year-old. Mostly white, $150. Herd under Federa Supervision.
BLUEBELL FARM, RICEVILLE, IOWA

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All ar registered, tuberculin tested and sound. Write or se "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, My

Two Big Sales

Illinois Hand-picked Holsteins

Dec. 1—Freeport, Ill.

Stephenson County Holstein Association

65 Head Real Good Dependable Cattle

Dec. 2—Effingham, Ill.

Effingham County Holstein Association

65 Head of Selected Well-bred Stuff

These cattle are carefully selected and tuberculin tested and will be sold subject to 60-90 day retest.

Under management

Illinois Holstein-Friesian Ass'n

R. N. THOMPSON, Field Secretary

130 North Wells St., Chicago, Ill.

Address us for information. Get the dates in your mind.

"SPOT"



Elf Aggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. **LISLE FARMS CO., LISLE, ILL.**

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57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

GEO. E. STEVENSON, Scranton, Penna.

Sexauer Stock Farm

For Sale: A bull born Oct. 22, 1919. Outstanding individual, evenly marked in color. From a 27-lb. cow, 624 lbs. milk. He is sired by Woodcrest Pietje Clyde (33 lbs.) whose daughters, so far tested, averaged 19.25 lbs. as junior 2-year-olds. Write for other information and price.

John Sexauer & Sons, Belvidere, Ill.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

Last Chance to Get a Son of Sir Veeman Hengerveld

Sir Veeman Hengerveld Dodo 299077, born Dec. 26, 1919. A large, well grown fellow, fine individual, in color a little more than half white.

Sire—Sir Veeman Hengerveld, who now has 120 A. R. O. daughters, 17 of them with records above 30 lbs., and for the opportunity that he had in his younger days he has proved himself to be the greatest sire of the breed.

Dam—King Segis Alcartra Dodo Jessie. A. R. O. at 2 yrs. 10 mos., butter 19.24, milk 389.80. She is a granddaughter of King Segis Pontiac Alcartra. She is in my herd at the present time and a prospect for a large record in the future.

This bull has been Federal tested. Price $500.

W. D. ROBENS, Poland, New York.

Complete Dispersion Sale

of W. W. Brundidge & Sons Official Record Herd on the Farm at

Zanesfield, Ohio

Tuesday, Nov. 16th

Parties coming over the T. & O. C. R. R. will get off at East Liberty or West Mansfield, Ohio. Machines will meet all trains at these points. Partes that arrive at Bellefontaine will go to Hotel Logan where arrangements will be made to get them to the sale.

75 Registered Holstein-Friesian Cattle

Consisting of

19 A. R. O. RECORD COWS with the following records: 14.64; 18.28; 18.85; 19.18; 19.91; 20.46; 21.47; 21.83; 22.92; 24.63; 24.93; 25.79; 29.41; 29.44; and 5 others that will have records by sale day. There are 20 females of all ages that have A. R. O. DAMS which include 3 with 36-lb. dams, 4 with 29-lb. dams, 3 with 25-lb. dams and 2 with 24-lb. dams and many other good ones.

10 Males With A. R. O. Dams

An 11 and 22 months bulls that have a 29.41-lb. dam.
A 2 and 13 months bulls with dam's record of 24.63.
A 10 and 24 months bulls with dam's record of 18.85.
A yearling with 21.47-lb. dam, 2-year-old with 19.17-lb. dam and a 7 months calf with a 22.88-lb dam.

A Majority of the Cows are Fresh or Springers

chance to secure some excellent blood lines backed by good records.

TERMS CASH OR GOOD BANKABLE NOTES FOR 6 to 12 months' time drawing 7% from date.

IF YOU ARE LOOKING FOR SOME GOOD ONES YOU CANNOT AFFORD TO MISS THIS SALE, CATALOG READY NOV. 1 AND MAILED ON APPLICATION TO

F. G. Johnston, Sale Mgr.

37 West Lane Avenue, Columbus, Ohio.

Col. Fred Andrews and Col. Jno. Baker, Auct.

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohi

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y

---

25 Holstein Cows For Sale

or exchange. 23 are high grades, 2 are registered. Also my herd bull, a grandson of K. S. P. A., the $50,000 bull. This bull is from a 27-lb. cow. Most of the cows are bred to him. All are young cows, well marked, heavy producers. Price, $200 per head if entire herd is purchased.

Will take 2 good teams of draft mares or mules as part payment or might consider a good used automobile as partial payment.

G. A. HIGGINBOTHAM, Rossville, Kas.



New Wisconsin Champion

Makes her record with

PINE TREE MILKER

EVERY day brings new triumphs to the wonderful Pine Tree Milker. The latest is the grand record of Prospect Johanna Posch, a junior 4-year-old Holstein owned by W. F. Braatz, of Maple Grove Stock Farm, Brandon, Wis. In a 365-day test completed Oct. 20th, she made 23415.4 pounds of milk and 958.1 pounds of butter—bettering the old Wisconsin record by 1561.2 pounds of milk and 51.04 pounds of butter.

The New Champion was milked 4 times a day through her entire year's test with the Pine Tree. Mr. Braatz says—

"Pine Tree shares the honors with Prospect Johanna Posch, for I feel that I could never have made this record by hand milking."

We have always said "Judge it by What it Does." Let the records Pine Tree is making for others, guide you in choosing a milker for your own herd. It is the surest way.

Get all the facts from your Pine Tree dealer. Let him show you local installations. Catch the enthusiasm of your neighboring Pine Tree users. Also write today for the "Book of Experience" in which 43 practical dairymen tell you how Pine Tree has cut expenses and increased production.



W. F. BRAATZ
Maple Grove Stock Farm
Brandon, Wis.

Maple Grove Stock Farm is one of the best known Holstein Breeding places in Fond du Lac County. As a successful breeder Mr. Braatz is one of the prominent men of the greatest dairy state of the Union. Mr. Braatz will be glad to answer any inquiries from readers of this paper who would like to have his direct opinion of the Pine Tree.

Pine Tree Milking Machine Co.
Dept. 2 58, 2843 W. 19th St., Chicago, Ill.
110 Montgomery St., Syracuse, N.Y. 325 Second Ave. S., Minneapolis, Minn.
346 Washington Street, San Francisco, Cal.

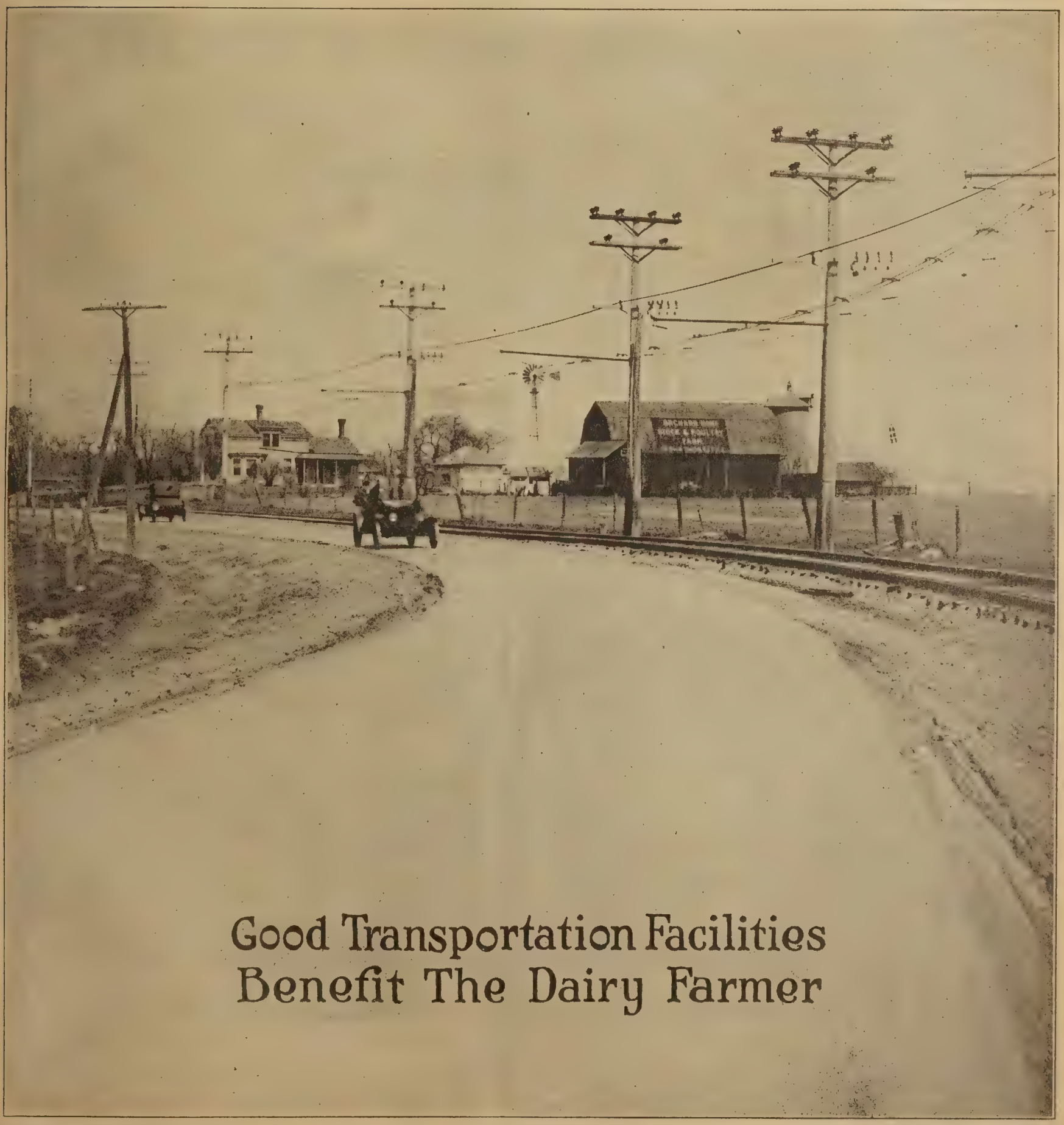


PINE TREE MILKER

Reading Room
Urbana Ill.
Agr.Bldg.

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Good Transportation Facilities Benefit The Dairy Farmer

Fort Atkinson, Wisconsin Volume LX, No. 17 November 12, 1920

Hoard's Dairyman

Fort Atkinson, Wisconsin

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FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Topdressing Helps to Grow Good Pastures

To keep pastures in good condition the application of acid phosphate and ground limestone is recommended by soil fertility specialists at the Ohio Experiment Station.

Where farmers have fields difficult to plow, it is possible to stimulate the growth of bluegrass and clover by an application of acid phosphate and limestone. The use of these materials has proven beneficial on the experiment farm in Meigs County.

Grass seed applied early in February or March helps to establish a permanent pasture, but acid phosphate may be spread over the land in the fall at the rate of 200 to 300 pounds per acre every two years.

Ground limestone may be used every 4 to 6 years at the rate of 2 tons per acre.—Weekly Press Bulletin, Ohio Experiment Station.

New Junior Two-year-old Jersey Champion of Virginia

Mannsfield Doris Finance 385829, by producing 10,548.6 pounds milk, 584.48 pounds fat, Class AA, becomes the junior two-year-old champion of Virginia. She was started on test at two years and two months.

Her record exceeds by seven pounds fat the former title holder, Fern's Oxford Cocotte 393069, which produced 577 pounds fat.

Doris was sired by Double Finance 117794; her dam is Mannsfield Dorothy Perkins 329709, a cow with two Register of Merit records, in Class AA, that average 10,383 pounds milk, 562 pounds fat. Dorothy has also carried off many ribbons in the show ring, linking type with production. Mannsfield Doris Finance was owned, bred, and tested by R. Conroy Vance. —American Jersey Cattle Club.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

The Holidays are Drawing Near

Bob always minds as quick as that!
When he is told to do a chore.
He has arithmetic down "pat";
And never litters up the floor.
It's "Yes, sir, dad", and "All right, maw".
Ah, what a pleasant little dear.
In his behavior, not one flaw!
The holidays are drawing near.

Wee Ethel, busy as a bee,
Seems strangely willing to abide
By all the rules that come to me,
Requests I make are not denied.
Her ribbons tied, her paddies clean,
The wash-rag rubbed from ear to ear.
It's "Dear old dad", and "Help you, maw?".
The holidays are drawing near.

In fact the wee ones and the grown,
Have changed an awful lot of late.
Such manners I have never known!
The bulk of work they do is great.
The wood is chopped—the cattle fed,
Their willingness is mighty queer.
"I'll help you, maw"—"Leave that to me!"
Ah! holidays are drawing near.

The Old Dairyman's Philosophy

Planting the seed of human kindness would be a lots easier if it wasn't for the fact there is so much land that needs cultivating.

Some cows have a lot more sense than some people, and there are times when I believe that all cows have more than most people.

There was a time when every time an artist drew a picture of a farmer he put a beard on his chin and a sprig of timothy between his teeth. Now they draw him driving a five-thousand-dollar car and looking like a banker.

"Milk cows need plenty of feed."

"Well, I've been givin' my prize Holstein so much of late that she hiccoughs so I can't milk her."

A New Profession

"What is Jeb doing these days?"

"Got the most important job on the farm."

"What's that?"

"He has to teach all the young calves how to walk and to eat dinner without gettin' milk on their shirt fronts."

The Little Lost Stream

Little lost stream of the summer time,
Born of the wood and the meadow way.
Where have you gone with your bubbling rhyme?
Where are the flowers of yesterday?
When it was June and the herd had gone,
Out to your brink, in a lazy line,
Sweet was your song at the early dawn,
Sparkling your depths as a jug o' wine.

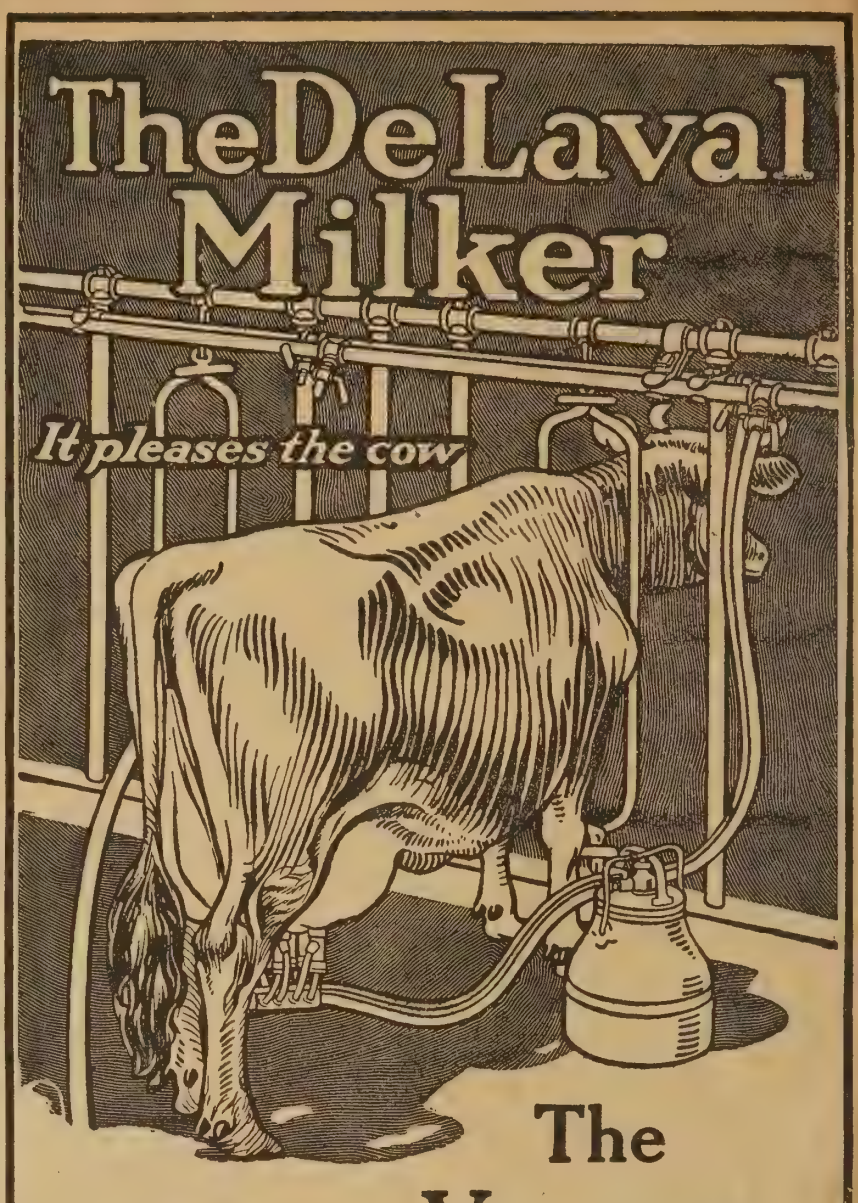
Little lost stream of the violets,
Mirrowing cows as they stopped a while,
Eddying river that fumes and frets,
Bursts into song for another smile.
Now that it's winter I've lost your course,
Under the pall of the wide, white snow.
Friend of the cow and the plow-tired horse;
Where do you go, where do you go?

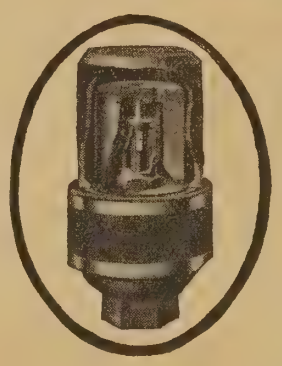
Little lost stream of the pasture land,
Winding along through the clover lanes.
Lovers have sung with you, hand in hand,
Yours is the realm of the golden grains.
Lost, in the mystery, still and bleak,
Buried away 'til another June.
Gone to the sea? Playing hide-and-seek?
Come, with your violets blooming—soon!

"The modern problem is overproduction, isn't it?"

"Yep. Most of the farm hands I know work too hard doing nothing."

The same fellow that refuses to donate anything to the good roads movement is the chap who spends most of his time pulling autos out of the mud and twenty-five dollars per pull.





The Vacuum Controller

(The Vacuum Controller is not shown in the part of the Milker installation pictured above. It is placed in a convenient place in the installation.)

The safety and success of a milking machine are largely dependent on the uniformity of the vacuum, and the De Laval Vacuum Controller is so constructed that correct and constant vacuum is maintained at all times.

The Vacuum Controller is scientifically designed for its purpose and fully covered by pending patents. No adjusting is necessary; the correctness of each Controller is determined and fixed at the factory and it cannot be adjusted, changed or tampered with.

The Vacuum Controller is entirely automatic and can be depended on to maintain a uniform vacuum in the system at all times. Experienced dairymen appreciate the importance of this strong De Laval feature.

The De Laval Milker has many other exclusive features distinct both in design and operation, which makes it positive and uniform in action from day to day; and faster, more economical and more reliable than any other method of milking. The sanitary features are of special importance and will be much appreciated by dairymen in their efforts to produce milk having the highest market value.

An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway NEW YORK
29 East Madison Street CHICAGO
61 Beale Street SAN FRANCISCO

SAVING HIS NOSE

S. A. PEAVY, NEW YORK

CARING for the aged bull is always a difficult problem and it becomes doubly so during the summer months. We make no claim of solving this problem with entire satisfaction but, everything considered, we have found the method of tethering the most satisfactory under our conditions and for this purpose have found the following device very convenient.

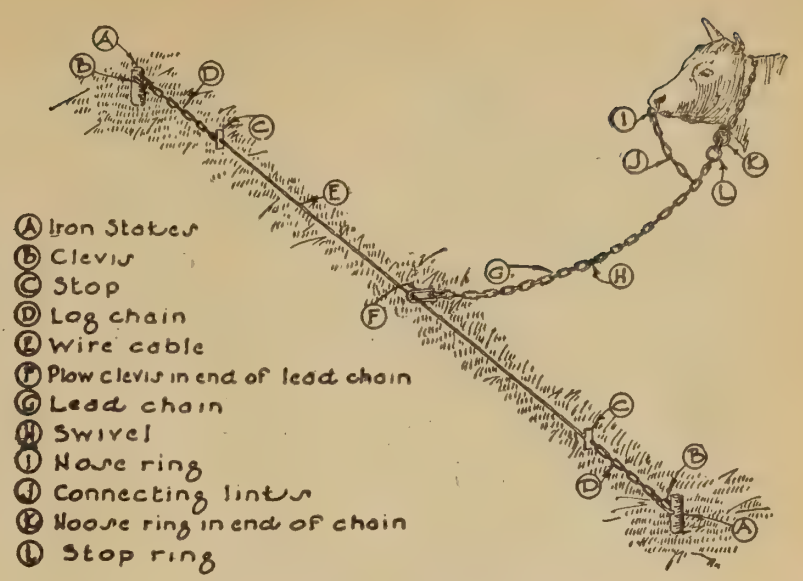
A piece of wire cable, about like that used to stay telephone poles and thirty feet or more in length, is attached at either end to an iron stake in such a manner that the cable will be stretched out full length upon the ground. These stakes are made from rods an inch or more in diameter, are pointed at one end, flattened a little in the middle, and bored through the flattened portion for a small clevis. It is to this clevis that the end of the cable is attached. These stakes are driven firmly into the ground with a maul. To the cable is now attached the end of the bull's tie chain by means of a small plow clevis with a threaded bolt. The clevis is slipped over the cable and the bolt is run through the end link and then screwed firmly into place.

I wish here to recommend this method of handling as being quite safe and reasonably easy to manipulate. An aged bull should never be trusted with any kind of spring snap fastening. It is also imperative that such a bull be provided with a strong nose ring. There is no other practical or safe way to handle him and it is therefore almost a calamity when a valuable bull is ring-torn. In such cases the ring may be inserted vertically but the tissues then pierced are too weak to afford a safe hold for any length of time. I have known splendid bulls to be sacrificed because their noses had become torn. The weight of the tie chain, surging at his fastenings when frightened or angry, and careless handling such as pulling behind wagons, are common causes of torn noses.

Because of unfortunate experiences, and because it is quite out of the question to tether an aged bull at all unless he has a good nose, we set about devising a tie that would be likely to prevent any trouble from this source. With this in view we secured fifteen feet of welded twisted link chain considerably heavier than ordinary halter chain, and wired a heavy ring securely to one end. Through this ring the chain was "slipping noosed" around the bull's neck and drawn up comfortably snug. To the chain below this ring was then wired a larger ring to prevent the noose from opening up and slipping over the bull's head. The chain was then stretched straight ahead under the bull's jaw and attached vertically to the nose ring by three or four extra links. In surging at the tether or pulling behind a wagon the strain all comes on the noose about the neck which has a considerable restraining effect, although there is no danger whatever from choking. If the bull tries to run off straight away the nose attachment becomes effective at once —the more so because he is not much used to that check and his nose is not calloused to it.

This tie is completed by welding a strong swivel into the chain a few feet from the head and placing the plow clevis in the end as already described. When this is attached to the tether cable, it slides from end to end, affording the bull a liberal radius for grazing and exercise. A stop should be placed at each end of the cable far enough from the stake to prevent the bull from reaching and becoming tangled around it. For this purpose the end of the cable can be passed through an old plow point or similar piece of iron and connected with the stake by a log chain. The tether is easily moved one stake at a time and there is no chance for the bull to escape while it is being done.

We have used this device for the last three years and it has proven very satisfactory.



A SAFE DEVICE FOR TETHERING THE BULL

THE FARMER AND HIS HIRED MAN

MANY of the troubles between a farmer and his hired man arise because neither clearly understands his obligations to the other. Some of these obligations are matters of law, others simply of duty and fair dealing man to man. These relationships are discussed as follows in a bulletin on farm labor by H. C. Taylor, and J. D. Black, formerly with the Wisconsin College of Agriculture.

Matters of Law

1. When one man hires out to another, the employer is boss, that is, he has the right to direct the work which he hires done. The workman sells this control over his activity when he sells his labor. The employer is also usually the owner of the property with which the employee works, and both law and custom give to the owner of property almost exclusive control over it.

2. No employee can be made to work for any employer a minute longer than he wants to, that is, "specific performance of a labor contract cannot be enforced." It makes no difference whether the laborer has agreed to work an hour, a day, or a year, if he wants to stop working, there is no power in a free country, except perhaps in war-time, which can make him work.

3. The laborer is entitled to full pay for all the time he works and can collect it in the courts, if necessary. If a laborer hires out for six months and is discharged or quits of his own free will in two months, he can draw two months' pay. Not all farm employers understand this and every little while some one tries to hold back some part of a hired man's wages and then refuses to pay it if he quits.

There are often, of course, some difficulties in the way of collecting full pay in the courts; for example, in many cases a man is discharged because he does not prove to be what he reported himself when the bargain was made. In such a case the court has to decide what the man actually earned and award him wages accordingly.

It will be evident that it is very foolish for either party to go to court to settle a matter of this kind. The sensible plan is for the farmer to discharge a man if he does not come up to his claims and promises, unless the man will make a new bargain, but to pay him the full amount for as long as he works under the terms of the bargain.

4. A laborer is liable for all the injury he does by quitting a job before his time is out. If a man hires out for a season and quits in the middle of haying and part of the crop is spoiled as a result, he can be sued for damages, unless he can prove sufficient cause for his quitting. Unfortunately, however, such a suit would ordinarily be useless, because a judgment against a hired man ordinarily has little value. It is also hard to prove that the employer himself has not violated the contract in some particular.

5. An employer cannot be made to employ a laborer longer than he wishes, but he is liable to an employee for all the damage he does by discharging him before his time is out. This damage, of course, cannot exceed the amount of the hire. This damage can usually be collected because the employer generally has property, and a laborer's claim is one of the first to be satisfied in case of foreclosure.

It would thus seem that normally employer and employee are on an equal footing. Neither can be forced to carry out the terms of a labor contract; the employer gets the services and the laborer gets his wages up to the time the contract is broken, and each is liable for all the damage he causes to the other. The employer is boss, but the employee does not have to work a day if he does not have fair treatment. He cannot

(Continued on page 750)

Granddaughter of Sophie 19th Produces 815 Lbs. Fat



SOPHIE'S DEBORAH

AT the age of two years and eight months Sophie's Deborah made her first appearance in the Register of Merit. Her record just completed is her third consecutive record. This test was begun at the age of five years and two months and she produced 14,310.6 pounds milk, 815 pounds fat. Her first record is 608.01 pounds fat in 10,361.7 pounds milk, and the second, at 4 years, is 787.59 pounds fat in 13,601.5 pounds milk.

The sire of Sophie's Deborah, Pogis 99th of Hood Farm, is one of the four bulls having the distinction of winning both gold and silver medals for ability to transmit extreme production to their offspring. He has 65 daughters and three sons in the Register of Merit.

The dam of Sophie's Deborah is Lass 66th of Hood Farm, champion three-year-old of the breed. Lass 66th has three official Register of Merit tests that average 15,000 pounds milk, 746 pounds fat.—AMERICAN JERSEY CATTLE CLUB.

EVERY GROWER RECEIVES THE SAME PRICE

How Crops Are Pooled in Co-operative Marketing Associations in California

HERMAN STEEN, ILLINOIS

EVERY co-operative marketing organization in California has for one of its fundamental features the plan of pooling the crops it handles. Under the pooling system, each kind and quality of product is kept separate, and the returns from the sale of the crop are divided among those who produced it. In other words, every farmer receives the same price as every other farmer for an equal quality of product.

For example, the California Prune and Apricot Growers, Inc., will handle around 250,000,000 pounds of prunes of the 1920 crop. These are divided into grades by sizes—those running from 20 to 30 to the pound are one grade, the 30 to 40's another grade, and so on up to the 90—100 size, in which grade the smallest prunes fall.

Farmers Get a Receipt

When the farmers bring in their prunes, the fruit is graded and sorted into sizes. Second-class fruit is kept separate from the first-class, and the various sizes are all packed separately. Each farmer's fruit is lost in the shuffle; all that Farmer Jones has is a receipt giving him credit for so many pounds of 20—30's, so many of 30—40's, and so on.

Let us consider the 20—30 size alone. Suppose there are 5,000,000 pounds of them in all. The association fixes a price of 25 cents per pound on this size, which is a luxury grade of prunes and much higher than any other grade. One million pounds sell at 25 cents per pound. The demand is usually strong, so the association raises the price to 28 cents per pound and sells another 1,000,000 pounds at that price. The heavy demand continues, so the price goes to 30 cents, and 1,000,000 pounds are disposed of at that price. Business slows up, perhaps, so the price of 20—30's falls to 27 cents, at which price the fourth 1,000,000 pounds go on the market. The remaining 1,000,000 pounds does not find a ready sale, and is finally disposed of at 22 cents late in the season.

Dividing the Proceeds

The association bookkeeper counts up his cash, and finds that the 5,000,000 pounds brought in a gross total of $1,320,000. Perhaps one wholesaler in Detroit went broke and left the association holding the sack to the tune of $20,000. That is subtracted.

The average cost of selling prunes this year, including agents, advertising, overhead, and everything, is two per cent, let us say. So two per cent is deducted from the $1,300,000, and the rest is ready to be paid to the growers. It leaves $1,274,000 to be divided. That figures out exactly 25.48 cents per pound for all the 5,000,000 pounds of prunes in the 20-30 pool this year.

Advancing Money to Growers

Now actually the growers were paid an advance of 15 cents per pound on all 20—30 prunes in September, when they delivered the crop to the association. The association borrowed the $750,000 necessary to pay this advance, giving its note at the bank. Suppose the first batch of 1,000,000 pounds of prunes was sold in October at 25 cents. The association immediately receives $250,000. That much of the loan is repaid. In November the second 1,000,000 pounds is sold at 28 cents and $280,000 comes into the treasury. Another slice of the note is taken up.

In December the 30 cent sale is made and $300,000 comes in. The rest of the note is taken up, and $80,000 is left in the treasury. There is not enough to divide at this time, and anyway there is interest to pay and general expenses to meet. The $80,000 is retained for the time being, though it belongs to the growers and will eventually be paid to them.

Dividing the Pool

In January the 1,000,000 pounds are sold at 27 cents, making the total amount in the treasury of the 20—30 pool $350,000 less the expense of selling. The directors on February 1 decide to pay five cents per pound on this pool, and the growers are soon in possession of checks. Then the last 1,000,000 pounds are sold bringing in $220,000 more. A few collections are slow, and the exact amount of the expense cannot be calculated until the end of the season, so it is necessary to keep a little on the safe side. A further payment of five cents is made on April 1, the growers by that time receiving a total of 25 cents per pound.

It takes time to wind up the business of the year, so it is August 1 before the 20—30 pool is ready to be finally closed. The books then show that a final payment of 48 cents per 100 pounds can be made, so the directors authorize the payment and closing of the pool. The money received for 20—30 prunes has all been paid to the growers, less only the expense of selling the crop.

How it Works

Farmer Jones had 5,000 pounds of 20—30 prunes, while Farmer Smith had 10,000 pounds. These prunes were delivered along in the fall, each man being paid 15 cents per pound at the time of delivery. On February 1, both Jones and Smith received five cents per pound. On April 1, they received another five cents per pound. On August 1, they received 48 cents per 100 pounds each.

Now Jones' and Smiths' prunes went into the packing house, and were packed along with thousands of pounds more prunes of the 20—30 size. They soon lost their identity and nobody could tell any of them from the others in that bin, because they were all of the same grade. Supposing, however, that the prunes Jones grew (they are no longer his, because the association obtained title to them when they were delivered) sold for 30 cents per pound finally, while the ones Smith grew brought only 22 cents per pound. Each man, however, is paid the same, as it was not Smith's fault that his prunes brought only 22 cents, and it was not to Jones' credit that his brought 30.

Our readers will understand, of course, that this is an imaginary case—that the actual handling of the pool is considerably more complicated than this example shows. This story illustrates exactly the method of operation and brings out clearly the general method of operating the pool. In practice, the fluctuation in prices would be much less—it is probable that it would not vary one cent per pound during the whole year.



A RAISIN-DRYING SCENE IN THE SAN JOAQUIN VALLEY

Used by Every Association

The pooling plan is used in every co-operative marketing association in California. The method of operation varies considerably in different associations. The prune and apricot, dried peach, almond, and raisin associations, as well as several others, employ the year-around pool. That is, there is only one general pool for each crop, and that pool is kept open until all of that crop is sold.

The egg-selling associations at Los Angeles and San Francisco, however, have a new pool each week. For example, the eggs of the week of October 17-23 are sold together and the proceeds divided. The eggs received by the association the week of October 24-30 make up another pool and so on.

The citrus growers have several kinds of pools, these varying to suit the local associations, which comprise the California Fruit Growers' Exchange. One local has one pool, which closes November 30. All oranges delivered between the beginning of the season and November 30 are in the early pool. This is sold separately from the pool which begins December 1 and includes all the rest of the season's crops. Some orange associations form a new pool every month, others have only one for the year. Nearly all of them operate a "Frost pool", which includes all fruit that has been frosted.

Pooling is Necessary

Managers and officers of the co-operative associations in California were united in saying that the pool is a necessary part of the machinery of their organizations. "Producers should never be competing against each other in the sale of their crops," said one leading co-operator. "Every man should receive for his No. 1 product the same price per pound as every other man in the association. The pool idea is absolutely fair, it is just, and it keeps one man from having an advantage over any other man within the marketing association."

The pooling idea has been used to some extent by farmers' marketing agencies in this part of the country. The most conspicuous example is the wool pools of the Central States which this year include 20,000,000 pounds or more of wool. This wool is all graded and sold by grade, every man getting the same price per pound for one grade of wool.

Used by Milk Producers

Several of the co-operative milk marketing agencies use the pooling plan. For example, the Twin City Milk Producers' Association of Minnesota usually sells the bulk of its milk to distributing companies in Minneapolis and St. Paul, and makes the rest up into cheese. The milk made into cheese may yield $1 per 100 pounds less than that sold as whole milk, but the proceeds from the sale of milk are divided equally among all milk producers. It makes no difference to a member of that association whether his milk goes into cheese or into quart bottles for city delivery. He gets the same price either way.

The Michigan Potato Growers' Exchange is another marketing association which employs the pooling plan. A daily pool has been devised, so that the returns on all potatoes of a given grade sold on one day are averaged up, and each grower receives the same price per bushel.

The pooling system is not as complicated as it sounds. As far as I could learn, it is one of the easiest parts of the co-operative system in California to operate, and, instead of being a source of trouble, it seems to be one of the best safeguards against trouble.—Copyright, 1920, by Standard Farm Papers, Inc.

In certain sections of the country the practice of "stuffing" a barrel, a box, or a bag with under-size and over-ripe specimens of fruits and vegetables is common. But no longer does this fool any one, say marketing experts of the Bureau of Markets, United States Department of Agriculture, for the buyers give slight consideration to the top of packages offered by these growers.

Uncle Sam's Hired Men Who Serve You

Colonel W. B. Greeley, the Government's Chief Forester Wants to Make the Nation's Forests Serve You Better

JOHN ANSON FORD

This is the eighth of a series of articles this publication is running, in co-operation with the United States Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITOR.

THE call of the wild and the influence of three men, two former Forest Service chiefs and a much beloved old uncle—these were the factors which started William B. Greeley on a path that has led to noteworthy national service and only recently has brought him, at the age of 41, to the position of chief of the Forest Service, one of the seventeen branches of the United States Department of Agriculture.

Greeley is a combination of the West and the East. Both sections of the country have shared in shaping him. He was born in Oswego, N. Y., and at the age of eleven moved with his parents to California. After seven years spent on a ranch in Santa Clara County, Greeley entered the University of California, where he remained for four years.

But in a very direct way the East influenced young Greeley. Back in Pennsylvania was an old uncle, William Buckhout, a close friend of early leaders in forest conservation in that state. Upon his advice, Greeley, after a year of teaching in Alameda (California) High School to replenish his bank account, entered Yale for two years of intensive technical study, in which he showed exceptional capacity and promise of leadership. While Greeley gives much credit to his old uncle for starting him in his profession, he also acknowledges a debt to Gifford Pinchot, then at the head of the government's fast-growing forestry work, who early recognized his worth and encouraged his ambition for a life of valuable public service in this relatively new field.

In 1904 Greeley's connection with the Forest Service began. Little more than a year later he took charge of the Sierra National Forest in Southern California. On foot and on horseback he explored mountains and valleys, ascertaining the areas and boundaries of forested regions, locating streams and lakes, helping lay out new trails, sleeping at night in a settler's cabin or under the stars.

In the spring of 1908 Greeley was called to Washington to become assistant chief of the division of management, a task which put him directly in touch with much of the executive work of the organization. Less than a year later came another promotion through appointment as District Forester for District 1, with headquarters at Missoula, Mont. The administration today of the 29,000,000 acres of National Forests in Montana and Northern Idaho, which were under his supervision, still bear the impress of his organizing ability and wise management. In directing the fight on the great forest fires in District 1, which caused much damage in 1910, he did especially efficient work.

Appointed Assistant Forester

In 1911 Greeley was again called to Washington, this time to become assistant forester in charge of the branch of silviculture, which, through the district foresters, has supervision of the timber sales, timber and fire trespass cases, reforestation, and cooperative work with states and private owners in promoting fire protection. To this important assignment was shortly added oversight of the scientific investigations of the Forest Service, designed to secure new knowledge necessary for the better



WM. B. GREELEY

practice of forestry and better use of forest products.

There were still bigger experiences in store for the forester. Not long after the United States entered the great war, an urgent call came for forestry troops and the Forest Service was asked to recruit the needed men. It fell to Greeley to take charge of this. He was later sent to France where he eventually became chief of the forestry section in the American Expeditionary Forces, in charge of 21,000 forestry troops and 95 sawmills, succeeding Henry S. Graves, who returned to the United States af-

(Continued on page 754)

TOM'S NEW SUIT

DOROTHEA McDOWELL

"HOW do you like my new suit?" asked Tom Jenkins, as he met his old friend, Dr. Hudson, in the lobby of the best hotel in town.

"It looks very well," replied the doctor who, in his younger days, had worked a year or two in a first-class clothing store in Chicago and who had continued to keep posted on quality in cloth. "It looks very well, but I wouldn't like to guarantee that it will wear well."

"It ought to wear well," replied Tom, "I paid $50 for it."

"You paid too darned much," answered the old doctor as he examined the cloth more closely.

"Why, isn't it all wool?" asked Tom. "They guaranteed it to be all wool."

"Yes, it's all wool, all right, but it's also all shoddy," replied the doctor.

"Shoddy!" exclaimed Tom. "What do you mean by shoddy?"

"Why, I thought everybody knew the meaning of shoddy," answered the doctor. "Well, I'll explain. Briefly, a shoddy suit of clothes is one that is made, at least in part, of old rags. The ragman gathers up old rags, clean rags, filthy rags, all kinds of rags, at a few cents a pound and sells them to a dealer. The dealer sells them to a manufacturer. The manufacturer grinds them up, adds a little new wool to give strength to the fiber, and after a few more processes, cloth that looks as good as new is manufactured from a lot of old rags and a little wool. If the cloth is made of woolen rags it may be all wool but it hasn't the strength, it won't keep its shape, and it won't wear like cloth that is made of new wool. Besides, who likes to think that his new suit has already been worn by others?"

For a few moments Tom seemed lost in thought, then he asked: "Do you really think that the material in this suit has been worn by other people?"

"I don't think it," replied the doctor, "I know it."

The doctor had quite an imagination, and Tom listened with close attention as the doctor continued.

"In imagination, I see a part of your new suit on a sheep's back in 1912. In 1913 that pure white wool was mixed with other good wool, woven into cloth, and the cloth was made into a fine, new, and fashionable suit of clothes for a college president. You know, in those days college presidents and even college professors could afford good clothes.

After the college president had worn the suit for a year, it was getting a little shabby and his wife put it into a missionary box and sent it to a missionary in Kansas. The missionary wore the suit as long as it looked at all respectable, then it was sold to a colored man at a rummage sale."

"What," exclaimed Tom, "you don't mean to say that the material in my suit was once worn by a colored man?"

"I don't know, of course," answered the doctor. "It probably was, but you needn't look so sour about it."

"But," said Tom, "I can't get over the idea that my new suit may once have been worn by a colored man."

"Oh! Cheer up, the worst is yet to

(Continued on page 767)

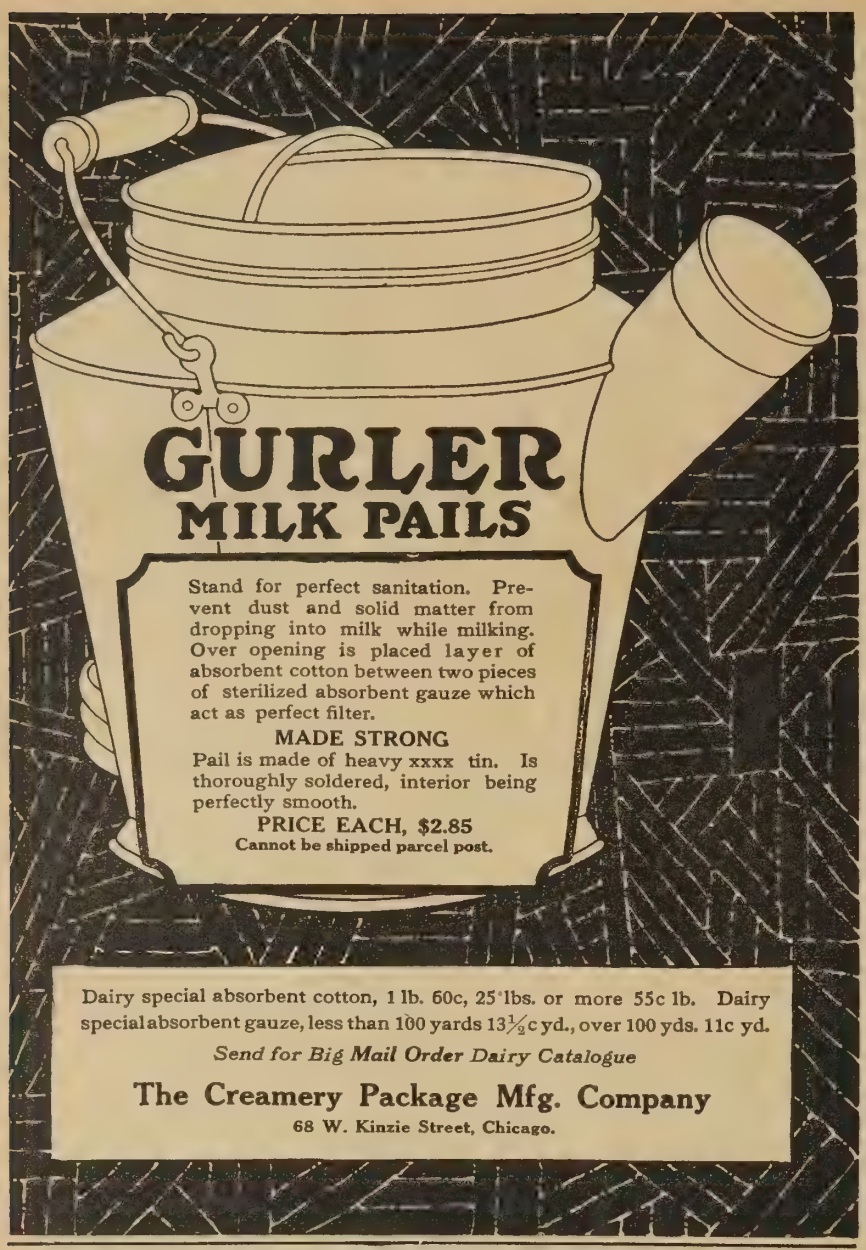


Three Guernsey cows which have lately completed high records. From left to right they are:

Brita of Beaver Ridge, bred by Beaver Ridge Farm, New York, and recently purchased by R. M. Lewis, Connecticut. She has completed a record of 9,710.7 pounds of milk, 548.48 pounds fat, in class FF, carrying a calf 275 days of her testing period. She thereby qualified for fifth place in the 2½-year-old division. She is large and well matured, has a fine yellow skin, good udder, and has great depth of body. In addition to making an exceedingly creditable record, she has dropped a beautiful heifer calf, and has increased in weight by over 300 pounds in one year.

Pearl of Pomeroy, owned by D. D. Tenney, Shorewood Farm, Minnesota. She has completed her third Advanced Register record of 15,804.5 pounds of milk, 777.16 pounds fat. She carried a calf 273 days of her testing period. Her initial record of 12,114.7 pounds of milk, 618.65 pounds fat was made in the senior three-year-old division. As a five-year-old she came back with 11,798.9 pounds of milk and 583.67 pounds of butterfat and carried twin calves 275 days of her testing period. Her total production in the three lactation periods is 39,718.1 pounds of milk and 1,979.48 pounds of butterfat, an average of 13,239.4 pounds of milk and 659.83 pounds of butterfat.

Ultra Celia, owned by Jules Breuchaud, New York. She now heads the list in class G of the Advanced Register with a record of 12,566.2 pounds of milk, 755.83 pounds fat. This production exceeds the record held by Langwater Phyllis, the previous leader in class G by 9.6 pounds fat, but falls short by more than 700 pounds of equalling the milk record made by the previous champion. Ultra Celia was bred by Burnside Farm, Maryland, and was dropped on February 20, 1917. Mr. Breuchaud purchased her for $3,500 at the second combination sale of Guernseys. The new champion comes from a long line of famous ancestry. She was sired by Ne Plus Ultra whose daughters have made exceptional production records, and at both private and public sales have commanded record prices. Her dam is Queen Celia, a cow that was sold at the first combination sale for $5,000.





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Washington, D. C., Weekly News

[Special to Hoard's Dairyman]

Washington, October 28.—B. H. Rawl, chief of the Dairy Division, has taken prompt steps since his return from the National Dairy Show to make preliminary inquiries of the State Department as to the formalities to be observed in sounding out foreign sentiment as to the project for holding the International Dairy Congress in this country in 1922. Prospects seem very favorable, but the preliminary work includes the action of Congress which must still be secured. The preliminary announcement issued by Dean VanNorman, president of the National Dairy Show, and summarizing the preliminary action taken at Chicago, was received by interested officials here this week and has made a very favorable impression.

⚜

"Eat More Cheese" bids fair to be as forceful and as necessary a slogan as the "Buy a bale of cotton", in the troublesome days of 1915 and '16. With condenseries closing in the big milk producing districts, the re-opening of cheese factories has become absolutely essential, and reports reaching the Dairy Division indicate that hundreds of factories have started up in New York, Ohio, Illinois, Wisconsin, and elsewhere. Cheese is a product which lends itself to parcels post delivery within the first three or four zones, without sufficient increase in cost to wipe out the difference between the prices the actual co-operative producers are willing to sell for and present executive retail prices which include, as is necessary, store and delivery costs. Numerous factories in Western New York are advertising wholesale prices on parcels post deliveries, and the idea seems to bid fair to make a hit. Small cheese bought this way and shared between two to four families is a welcome and inexpensive article of valuable food.

⚜

The reorganization of the Maryland—Virginia Milk Producers' Federation was perfected at the annual meeting held in this city recently. By-laws of the new association were adopted, after it was announced by T. E. McLaughlin, the manager, that the incorporation papers had been filed and the organization perfected. Officers chosen include: President, Dallas Berry, Virginia; vice-president, J. B. Thompson, Maryland; treasurer, Y. E. Booker, Washington, D. C.; secretary and manager, T. E. McLaughlin, Maryland. Practically the entire milk supply of the capital now comes from the members of this association, and the bulk of the supply is sold on the basis of 44 cents per gallon for 3.5% milk, delivered in Washington.

Some trouble exists between the association and one or two dealers who are buying at country plants, and who refuse to pay the association price. These dealers are endeavoring to secure a supply in New York State, where there are three sections with fair direct rail communications into Washington, namely around Elmira, around Olean, and in the extreme west end of the state. Opposing this is the requirement of the District of Columbia health officials that all milk sold in Washington must come from tuberculosis-free herds. Legal action is threatened to restrain Health Officer Fowler from enforcing this rule.

⚜

Manager Warber, of the National Milk Producers' Federation, is back from a western trip which included a stay at the Dairy Show, and is busy getting out the reports of the Chicago convention of the Milk Producers' Federation. He has issued a statement of the resolutions adopted there, and the text of the strong address on general dairy conditions made by President Campbell. Mr. Warber is making an analysis of the points of similarity and dissimilarity of the various individual producers' organizations affiliated with the Federation, of whose work detailed reports were made at Chicago. This bids fair to be a most interesting study, and will undoubtedly be used as the basis of the drive for new organizations which is planned, and for which a special committee is to hold an early meeting in Detroit to make plans. A general and comprehensive study is also being made of the condensery situation, and the actual effect the recent closing of many plants has had on the fluid milk situation. The results of this study are greatly needed just at this time.

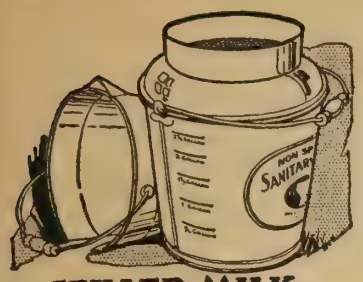


CARNATION KING DE KOL GOES TO SOUTH AMERICA

This son of Carnation King Sylvia was recently sold to Julio F. Genoud, Buenos Aires, Argentine. Carnation Stock Farms have also recently sold a son of Avon Pontiac Echo to M. Z. Arteta, Quito, Ecuador, thus placing one sire on the Atlantic coast of South America and one on the Pacific coast.

Bran Still Too High

HOARD'S DAIRYMAN:—Bran and shorts are still above a parity with other feedstuffs. Dairymen, who consume the bulk of the bran produced in the country, and hog producers, the principal buyers of brown and gray shorts, are hesitant because of the price disparity to accumulate their fall and winter needs of the wheat offal feed. Bran at $29 a ton and shorts at $32 a ton on the same market where corn is selling around $27 to $28 a ton, and for the same



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JAS. SCULLY, Box 109, Pomeroy, Pa.

shipment, reflect an abnormal condition which tends to discourage consumers of mill feed from accumulating stocks. Seldom in market annals have bran and shorts sold above corn, pound for pound, at least not in recent years. And bran and shorts are selling too high compared with many other feeds, including cottonseed cake and meal, alfalfa hay, and mixed feeds.

In view of the relative position of prices, any sharp upturns in bran and shorts are improbable, yet the supply situation does not warrant any bearishness over the market outlook. Flour mills of the United States are operating at less than half capacity. Flour trade has been far below normal thus far on the crop, and the prospects are not particularly encouraging for any sharp improvement. Observers of the flour situation, in fact, do not anticipate an extended period of full capacity operations by mills of the country, due largely to the exceedingly light sales being made for foreign shipment. There is sufficient demand for bran and shorts in the country to absorb much of the output of mills in mixed cars with flour, and such trade has been stimulated by the fact that buyers, lacking credit, show a preference for the mixed cars which involve considerable less capital than straight cars of flour and feed. The liberal percentage of mixed car business tends to reduce the available supply of mill feed on markets.

Another influence which demands attention from the standpoint of supplies is the small amount of feed which has gone into storage the past month or two months. Normally during the summer months and in the early fall season, when pastures provide a bountiful source of feed and demand for bran and shorts is at its low ebb, jobbers and other speculative operators store large quantities to take care of the enlarged demand for winter and spring, in which seasons mill production is usually below normal. Because of the extremely erratic action of prices, the uncertainty of trade generally, and the inability of operators to finance large purchases to hold in store, only an insignificant amount of mill feed has been accumulated. Markets will doubtless feel the effect of the absence of such feed from the consuming channels of the country, but there is a possibility that any scarcity will be made up by the abundance of other feeds, thus tending to check bullishness in prices.

In many sections of the country comparatively high prices for bran will cause dairymen to substitute other feeds which are on a cheaper basis. As a whole, however, this cannot be practiced except in a small way; at least, it has not thus far been demonstrated on markets. There are a great many feeders who will buy the offal irrespective of its price, as was the case when values were around $60 a ton in the spring months this year. Demand, it seems, was keener at that time than on the present market.

Missouri. SANDERS SOSLAND.

To Dr. S. M. Babcock on His 77th Birthday

Not selfishness has ruled your life, philosopher and sage,
Not gain and luxury of wealth, have been your aim and wage;
But service rich, of head and heart, in love for all mankind.
You've freely, fully, gladly given, with never self in mind.

Such service has its sure reward, unlooked for though it be,
Not told in titles, 'graved on stone or paid in golden fee;
In your own heart there is the joy of noble work well done.
And in the heart of all the world, deathless esteem you've won.

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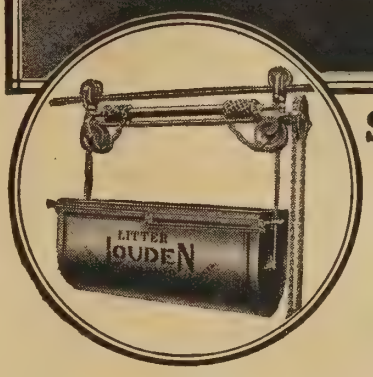




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California Distributor: Edwin F. Merry, San Francisco, Cal

$850 to Missouri Juniors

Eight hundred and fifty dollars in cash prizes and trophies will be awarded to the successful competitors in the Junior Live Stock Judging Contest to be held at Columbia, Mo., on November 12. The Kansas City Weekly Star offers a trophy cup valued at $250 to the winning team on all classes. The Journal of Agriculture offers a beautiful trophy cup to the individual making the highest total score. The Kansas City Chamber of Commerce will give a cup to the individual making the best score on all classes besides $50 in cash to be distributed among the first seven on all classes. The Doty Publishing Company has given a trophy cup to the team making the highest score in swine judging. In addition to the trophies offered above the American Shorthorn Cattle Breeders' Association offers $75 to be distributed in cash prizes; the American Hereford Cattle Breeders' Association, $75; the Missouri Live Stock Producers' Association, $50; the Horse Association of America, $75; Missouri Dairy Council, $65; and the Leitch Sheep Co., $10.

The contest will be held at the College of Agriculture, University of Missouri. It will be open to teams of three from the agricultural high schools and boys' and girls' clubs of the state. At the present there are some seventy-three vocational agricultural high schools in operation in which nearly 2,000 of the future farmers and live stock men of this state are receiving instruction in agriculture. It is expected that the majority of these schools will be represented in the contest and, judging by the interest shown and the preparations being made, competition will be very keen on November 12.

Ten classes of live stock will be judged, two of beef cattle, two of hogs, two of sheep, two of dairy cattle, one of draft horses, and one of mules. The boys will be allowed fifteen minutes to place each class and two minutes in which to give oral reasons on this class.

The object in this contest is to stimulate interest in live stock production and to afford practical experience in judging. The winning team in this contest at Columbia will be designated to represent the state of Missouri in the International Junior Live Stock Judging Contest to be held in Chicago on November 26.

Missouri. R. E. MILLER.

Texas Cows to Germany

HOARD'S DAIRYMAN:—Arrangements have been made for exporting of 35,000 head of Texas cows to Germany for the purpose of rehabilitating the depleted dairy herds of that country. The shipment of this lot of cows may be followed by other large purchases and shipments it is stated. The work of buying these cattle and their exportation is in the hands of Dr. August Mueller of Berlin, representing the German Government. The matter was taken up with the United States Bureau of Animal Industry and the necessary permission for the exportation of the animals was obtained. It is stated that all cattle will be dipped according to federal regulations and that in this and other respects the requirements of the government will be complied with. The cows will be gathered from the farms and ranches of the state; no effort will be made to purchase only blooded animals as it is necessary that the animals be assembled and exported as quickly as possible. Mr. Mueller is now in Texas looking after the matters connected with the transaction. The inspection of the cows will be under the direction of Dr. C. E. Palmer, inspector for the Bureau of Animal Industry, with headquarters in Houston.

Texas. WM. D. HORNADAY.



More Income This Winter

will be the result where stock is properly protected by thorough sanitation before the indoor season begins. With your herd and flock thus guarded there will not be the considerable death losses to charge to expense, or so many disease-infected, louse-covered, mite-ridden weaklings to feed. This and the all-around improvement in production from comfortable animals will mean a higher excess of income over outgo for the year.

CARBOLA
The Disinfecting White Paint

prevents contagious disease germs, lice, mites, etc., from ravaging your stock. A white paint in powder form, combined with a disinfectant many times stronger than pure carbolic acid, Carbola paints sunshine into dark corners and makes every surface, crack and crevice proof against lodgment and growth of the germs of roup, white diarrhoea, cholera, glanders, contagious abortion, etc., and kills lice, mites, and fly-eggs, permitting stock to be healthier, more comfortable and more productive.

Carbola makes it easier to do work that must be done. Being both paint and disinfectant, it saves one operation entirely. It is mixed with water and ready to use in less than five minutes—no straining or waiting—much quicker than whitewash. Flows smoothly—does not clog the sprayer—saving more time. Does not spoil if left standing. Does not peel or flake. Retains its germicidal strength on the wall. Non-poisonous and non-caustic—will not harm the smallest chick or stock that licks a painted surface.

Use Carbola Instead of Whitewash and Disinfectants

In stables, hog pens, poultry houses, creameries, kennels, out-buildings, cellars, garages, etc. Apply it with brush or sprayer to wood, stone, brick, cement or other surfaces, or over whitewash. A gallon (a pound of the powder) covers 200 square feet. Used and endorsed by thousands of farms, large and small, and by leading agricultural colleges and experiment stations.

Your hardware, paint, drug, or seed dealer has Carbola or can get it. If not, order direct—prompt shipment by parcel post or express. Satisfaction, or money back.

10 lbs. (10 gals.) $1.25 and postage. 20 lbs. (20 gals.) $2.50 delivered. 50 lbs. (50 gals.) $5.00 delivered.

Add 25% for Texas and Rocky Mountain States
Trial package and interesting booklet 30c postpaid

CARBOLA CHEMICAL CO., Inc., Dept. H, 7 E. 42d Street, New York

When Writing to Advertisers, Mention Hoard's Dairyman

Jersey Yearling "Comes Back"



LUCKY FARCE

BY completing a year's test with a production of 18,014 pounds milk, 938.75 pounds fat, the Jersey cow, Lucky Farce, proves it is possible for a cow to make high records at an early age without affecting her usefulness as a producer in later years. Lucky Farce was at one time the yearling champion of the Jersey breed with a record of 14,260 pounds milk, 635.7 pounds fat. In her second official test she produced 14,184.8 pounds milk, 708.5 pounds fat, as a junior three-year-old. Both of these are double letter records, as she carried a calf more than 155 days in each.

After making these two records Lucky Farce's career has been somewhat checkered. In the nine years of her existence she has been owned by seven different breeders, which made it almost impossible to give her further opportunities at official testing. However, her present owner, A. W. Murphy of Ohio, believed her capable of making a good record, and at the age of eight years and three months Lucky Farce was again placed on test. In the record she has just completed, she produced 938.75 pounds fat. This record is the best ever made by a Jersey owned and tested in the state of Ohio.—AMERICAN JERSEY CATTLE NOTES.

Iowa Dairy Council at the Fairs

During the past season the Iowa Dairy Council has taken advantage of the county and district fairs, as well as the state fair and the Dairy Cattle Congress, in promoting the consumption of dairy products. Through the home demonstration agents, county agents, and county nurses, the largest of the county fairs were placarded with posters on dairy products. "The Magic of Milk", "Ice Cream a Nourishing Food", and the milk bottle poster were very popular for these purposes. In all, over fifty county and district fairs were supplied with these posters and other material covering the same work.

At the Iowa State Fair and the Dairy Cattle Congress large replicas of a milk bottle, a pound of butter, a brick of ice cream, and a slice of cheese were displayed. On each of these was printed, briefly, information on the food value of the product. The milk bottle, eight feet tall, was set up and slowly rotated. The wording of the milk story on the bottle was arranged so that it could be read progressively as the bottle revolved. Surrounding the cream line on the bottle were many pictures of healthy children. Below them were printed the words "The Healthy Child is the Cream Line of a Nation." Other short phrases descriptive of milk's value were printed on the bottle. This bottle proved to be a great attraction to women and children alike and put over a story that would have otherwise been difficult to accomplish.

The replicas of butter, ice cream, and cheese were in proportionate size to the bottle and each carried short statements as "Butter, the vitalizing spread for bread," "Butter is a wholesome, palatable, and absolutely essential food," "Ice Cream, the nourishing food desert," "A Dish of Ice Cream every day will mean greater health, strength, and vitality", "Cheese, the meat of milk", "Of all the muscle building foods, cheese is the most economical."

A small screen was hung in the booth and motion pictures thrown upon it during the afternoon and evening. The film used was one provided by the National Dairy Council which portrays the milk fairy play. This play tells of Johnny, a young lad, too busy with his play to eat sufficiently and especially so when milk was offered him. When mother's back was turned the milk generally went to the cat via the breakfast food bowl. Later Johnny is seen playing vigorously but he soon tires and returns home for lunch. Lying down for a few minutes' rest Johnny falls to sleep. In his dreams he sees before him all the virtues of milk in fairy forms. The sugar fairies, the lime and phosphorus fairies, the water fairy, protein fairies, and so on, each of them telling Johnny just what they will do for him if he will but allow them to do so by drinking plenty of milk. When Johnny awakens he has this story so firmly fixed in his mind that he immediately sits down and drinks a whole quart of milk which he finds on the back porch! A very instructive film and one which can be obtained for use by dairymen from the national or state dairy councils.

Iowa. W. A. WENTWORTH.

Cow Waters Herself



and Increases Milk Yield 15% to 20%

That's what happens when the cow has a Libbey Automatic WATER BOWL within reach.

Milk is 87% water, and milch cows must have an abundance of water—whenever they want it, day and night—if they are to yield as much milk as they are capable of yielding. Cows that are watered at a trough two or three times a day never drink as much as they need, and the lack of water cuts down the milk supply. This is especially true in the winter, when a supply of water outdoors is so cold that the cows will not drink nearly as much as they need. In many herds, the cows produce only a small quantity of milk because they do not drink enough water.

Every farmer who has installed Libbey Automatic Water Bowls in his stable, and reported accurate comparisons, before and afterward, has proven that they actually increase the milk supply from 15% to 20%. Some cows have shown an increase of as much as four pounds of milk per day.

Libbey Automatic Water Bowls

The Libbey Bowl is a wonderful improvement over all float tank systems. It is a new invention, having been on the market only a few years, but in that time 75,000 Libbey Bowls have been sold.

Each Libbey Bowl is automatic—that is, it controls its own water supply and is operated entirely by the cow.
No float tank is required, and bowl operates perfectly under any pressure.
Bowls may be placed at different heights and in any kind of stall or pen.
They cannot overflow and cannot get out of order.
No water is left in bowl to become stagnant or for animal to splash out and wet the stall.
No water can pass from one bowl to another, preventing the spread of contagious diseases.
It is the **only** automatic bowl that has a **dirt strainer protection for its valve,** which absolutely prevents any dirt in the water from hindering operation of valve.
It is the easiest to install, and costs the least of any bowl made.



WHAT THE FARMERS SAY:

11 Cows Gain 40 Pounds of Milk
Robert J. Plenty, Rice Lake, Wisconsin, wrote: "The Libbey Automatic Water Bowls are a money-maker and time and labor-saver. My 11 cows gained 40 pounds of milk in one day, after installing bowls. I would not be without the bowls for a good deal."

Libbey Bowl is Very Superior
Guy D. Power & Son, Pankhurst Farm, Auburn, N. Y., wrote: "The water bowls purchased of you in January are giving good satisfaction watering our herd of 54 milk Ayrshires and Holsteins. The Libbey Automatic Water bowl is a very superior one and is of valuable aid to dairy farmers in increasing their milk yield."

Best He Has Ever Seen
Alphonse LaBelle, Harris, Michigan, wrote: "I have been using the Libbey Bowls and the Libbey Stanchions for some time, and they are the best that I have seen. The Water Bowls keep up the milk yield of the cows and the Stanchions are mighty comfortable on the cow's neck and handy for us to use, so I consider them both good, valable equipments for any barn, and would not sell them for twice what I paid for them if I could not get more like them."

How the Cow Operates

A little water always remains in bottom of bowl. When the animal is thirsty, it attempts to reach this water and pushes lever to one side, which opens the valve and lets in fresh water about as fast as the animal can drink. When the animal has had enough, it will raise its head, and this lever will swing back to its mid-position in the bowl and the valve will close, shutting off the water.

Libbey Litter Carriers and Stanchions

Libbey Litter Carriers are simple, strong and easily stand the hard knocks without getting out of order. "Lock" and "trip" always on the job. Made to fit any size or style of stable. Save manure; your farm needs it.
If interested in Carriers or Sanitary Steel Stanchions or Stalls, ask for General Catalog.
If interested in Water Bowls, ask for Water Bowl Book, also **free Daily Milk and Feed Record.**

C. A. LIBBEY COMPANY

201 Marion Street - - Oshkosh, Wisconsin

C. A. LIBBEY CO.,
201 Marion St., Oshkosh, Wis.

Please send me full information on subjects checked below:

Water Bowls..... Carriers..... Stanchions.....

Name.....
(7)

Town..... State.....

Handling Stray Bulls

HOARD'S DAIRYMAN:—The writer has just finished reading your article in last issue entitled "A Question" and asking if any one was ever recompensed and how for the services of a scrub bull when he has violated a line fence treaty.

I wish to say that I never was exactly recompensed but I sure got satisfaction. I had a bunch of 20 pure-bred heifers running in a pasture and my neighbor, who did not have a bull, bought a little scrawny Penn-royal bull which was about all head and put in the adjoining pasture.

I knew that the fence was weak (his fence) so I went to the gate which was 80 rods away from the heifers and called them. They came to me like a flock of chickens and when they were about half way to me I heard a crash and here came that bull like a quarter horse a bellowing every jump.

I opened the gate, turned the heifers through and into another lot and when Mr. Bull came I ran him in a double corn crib where there was a wagon loaded with grain. I called my man, got a rope, and in some way we hog-tied that fellow and when we turned him out in the road he was harmless. I expected to hear from my neighbor in no uncertain terms about it but to my disappointment he never mentioned the subject and neither did I, but I was never bothered again by his bull.

Now I have promised myself that I shall always follow this rule no matter how good the bull.

I never allow a bull to run in a pasture and think there should be a law passed in every state carrying a heavy penalty for any man to do so. This would not only safeguard the pure-bred herds but it would cause a terrible shortage in scrubs for every one knows it would not pay to keep one if you had to keep him up.

Illinois. R. F. JOHNSON.



The "STAY THERE"
Aluminum Ear Markers
are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalog and prices mailed free. Ask for them.
Address Wilcox & Harvey Mfg. Co., 568 W. Randolph St., Chicago, Ill.

Alfalfa Hay
The Choice Dairy Kind

We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.
W. A. Ferson Hay Company, Kansas City, Mo.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

1847 ROGERS BROS.
SILVERWARE



"It's the best, of course!"

Pride in the family silver is natural. It is more than justified when the silverplate bears the trade mark in which buyers have had complete confidence for more than seventy years.

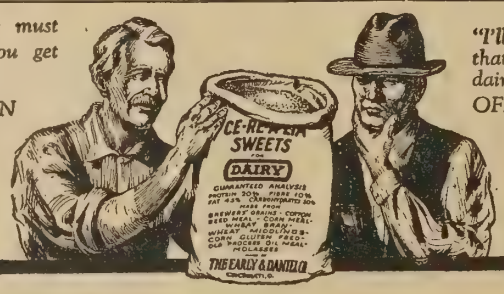
This absolute test—the test of time—is largely responsible for the ever-increasing number of families in which "1847 Rogers Bros." is the one silverplate which is used, cherished, admired, and handed down to the next generation. The Spoons, Knives, and Forks can always be matched in pattern by Tea and Coffee Sets, Vegetable and Meat Dishes, etc.—all guaranteed without qualification.

Ask your dealer for this fine silverplate by its FULL name—"1847 Rogers Bros." Write for booklet Y-76-A, illustrating other patterns, to International Silver Company, Meriden, Conn.

The Family Plate for Seventy Years

INTERNATIONAL SILVER CO.

Ce-re-a-lia Sweets must make good or you get your money back.
EARLY DAN



"I'll take 'em up on that," says the shrewd dairyman. . . . READ OFFER BELOW.

Four Weeks' Trial at Our Risk

Feed Ce-re-a-lia Sweets to one cow, good or bad, for four weeks. If you don't get more or better milk and if you don't find that the change *pays* you in dollars and cents, you get every penny back. This offer holds, no matter what feed you're using now—home-grown, ready-mixed, high-priced or low-priced. Write for details.

THE EARLY & DANIEL CO., 301 Carew Bldg., Cincinnati, Ohio

A highly digestible 20% Protein feed. It's sweet. Cows like it, thrive on it.

Ce-re-a-lia Sweets

Mfrs. of Tuxedo Chop, Ce-re-a-lia Eggmash, Tuxedo Scratch, Tuxedo Hog Ration.

MOLINE

has no rival in economy and long life. Burns kerosene, cheapest fuel, 36 hours one filling; handy valve controls heat for small tanks or mild weather; flame can't blow out; no ashes, smoke, sparks; heavy rust proof boiler iron insures steady heat; no rivets under water; dependable; lasts years; fits any tank; pays for itself quickly.



Moline Hog Waterers
Guaranteed heavy galvanized steel; non-freezing; sanitary; cool in summer; long burning lamp, three styles. Write for prices.

Farmers who owned ordinary tank heaters are the men who buy and stick by the "MOLINE" Costs no more than the inefficient kind.

Get literature, Price Today! Immediate shipment. direct from factory. Write.

Moline Tank Heater Co.
117 Oak Street, MOLINE, ILL.

Jones & McKerrow Sale Averages $1,024

Jones & McKerrow of Waukesha County, Wisconsin, set a new record for Guernsey sales in the state on October 26 when they sold 38 animals for an average of just over $1,024.

It was featured in their advertising as their First Quality Sale and proved to be that, in fact, including as it did practically all members of their 1920 show herd in addition to 15 or 20 others of similar quality.

Mildred II of Les Godaines, undefeated grand champion of the entire circuit, upheld her reputation here by topping the sale at $13,500, the third highest price ever paid for a Guernsey female at public auction and the highest price ever paid at a Wisconsin sale. She was purchased by Frank E. Swan of Wisconsin with Lovell Gable of Pennsylvania bidding for Geo. W. St. Amant of Massachusetts, the last contending bidder. Before the sale was over, the cow was owned by Mr. St. Amant at an advance in price.

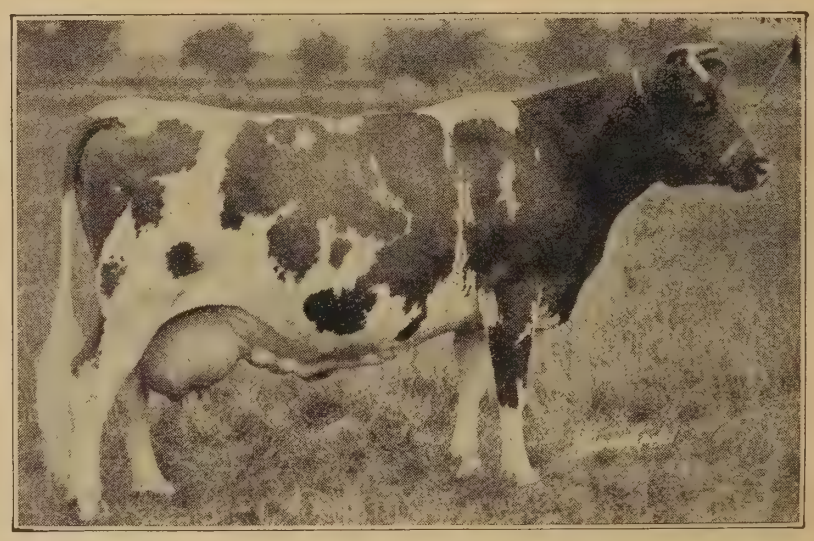
"Mildred", it will be remembered, was purchased at the Dupee sale in July for $2,700 by Jones & McKerrow.

times but the few bulls that were entered did not, in all cases, bring as much as they were worth. Bonny Boy of Riverdale, a proven sire and one that stood well up in the money at the shows this fall, was purchased for $425 by L. O. Jacob of Minnesota.

Love, Benjamin, and Jones did the selling with Chas. L. Hill reading the pedigrees.

Following is a list of all animals bringing $500 or more and buyers:

Geo. W. St. Amant, Massachusetts	
Eidelweiss of Edgemoor	$2,100
Spring Maid of Edgemoor	1,550
Frank E. Swan, Wisconsin	
Mildred II of Les Godaines	$13,500
Century Girl of Edgemoor	4,500
Radisson Farm, Minnesota	
Ultra Rosie	$750
Ultra Elizabeth Beauty	650
Dancing Girl of Edgemoor	1,000
Chene King's Northern Lady	600
Evangeline of Aurelian Farms	850
Kate of Aurelian Farms	825
C. A. Tuttle, Wisconsin	
Belva King	$500
M. S. & C. A. Skaar, Minnesota	
Topsy Ultra Lily	$600
H. A. Kurtz, Wisconsin	
Ultra's Governess Chene	$1,000
Victor Stiehl, Minnesota	
Dora's Beauty Pride	$500



IMP. MILDRED II OF LES GODAINES, GUERNSEY COW SOLD IN THE JONES AND McKERROW SALE FOR $13,500. SHE WAS UNDEFEATED ON THE 1920 SHOW CIRCUIT

Nor was that the only honor going to the aged matron at the sale. Her daughter, Century Girl of Edgemoor, by Dairymaid's Nonpariel of Iowa, and an undefeated two-year-old this year, stood second in the price list, going to Mr. Swan for $4,500.

The female offering sold well throughout with brisk bidding at all

Bratmoher & Brandt, Minnesota	
Imp. Governor of Myrtle Place II's Nelly	$500
Imp. McKerrow's Olinda	500
T. H. & J. R. Marsden, Wisconsin	
Daisy's Yeksa of Sunny Valley	$500
W. E. Fisher, Wisconsin	
Imp. McKerrow's Governess Carteret	$725
W. D. James, Wisconsin	
Silver Gem of Cedar Home	$1,475
T. A. Erickson, Minnesota	
Daisy Sark's Heirloom	$585

Guernsey Breeders Organize

Guernsey breeders of Marathon County, Wisconsin, at Wausau October 21 organized the County Guernsey Breeders' Association and went on record favoring calf club work and an intensive drive against scrub bulls.

A carload of dried sugar beet pulp was subscribed for by breeders living about Wausau, Elderon breeders already having ordered a carload.

County Agent F. G. Swoboda suggested more Advanced Registry testing, calf club work, pushing of a vigorous pure-bred bull drive, and cow testing association work. G. R. Ingalls of Eau Claire, spoke briefly on the advantages of the 305-day semi-official testing period.

A. G. Burg in his talk "The High Spots in Guernseydom" told of the progress made by the breed in the county during the past year. He reported more high class sires being brought into the county than during any previous year. He stated that more men are doing advanced registry work than ever before.

R. K. McDonald in his address, "Boosting Guernseys", advised honesty and square dealing in all transactions and recommending having animals as represented and not selling culls to prospective breeders.

J. F. Thomas, representing the Wisconsin Dairy Council, emphasized the importance of supporting the dairy farmer's own business by consuming dairy products and by helping to advertise it. Any slight surplus in butter or cheese would readily be taken care of if farmers used butter entirely instead of consuming oleo as liberally as many farmers' families do. He referred to one instance where the director of a co-operative creamery boasted that he had saved $30 by using oleo in his household. What he saved by eating oleo he lost many times over on the price of butter because he and his neighbors and farmers too generally everywhere were doing as he had done.

Wisconsin. F. G. SWOBODA.

No matter how modern the farm machinery, it isn't a modern farm if the house hasn't modern conveniences.

1920 National Dairymen's Sale

In spite of the fact that Sale Manager E. M. Hastings did everything possible to insure its success, the 1920 National Dairymen's Sale was not entirely satisfactory. The entries were in the main outstanding good ones; the crowd was a good representative one most of the time, but the sale dragged and prices on many entries were far from high. "Tight money" perhaps explains this in part, but uncertainty regarding the cattle market for the coming year is a more logical explanation.

On the other hand, it was far from an unsuccessful sale. With 126 animals selling for $92,980, an average of $738; 28 going for $1,000 or more, 6 for $2,000 or more, and 1 for $6,600, to buyers from 16 different states and Canada, one would be far from wrong to call it a poor sale. It was not, but neither was it quite up to the consignors' expectations.

The Bridgeford Holding Co. of California paid the top price, $6,600, for S. P. O. M. 43rd, a son of S. P. O. M. and that famous cow, Aaggie Wayne Peep. 43rd was formerly the property of the Toyon Farms, also of California.

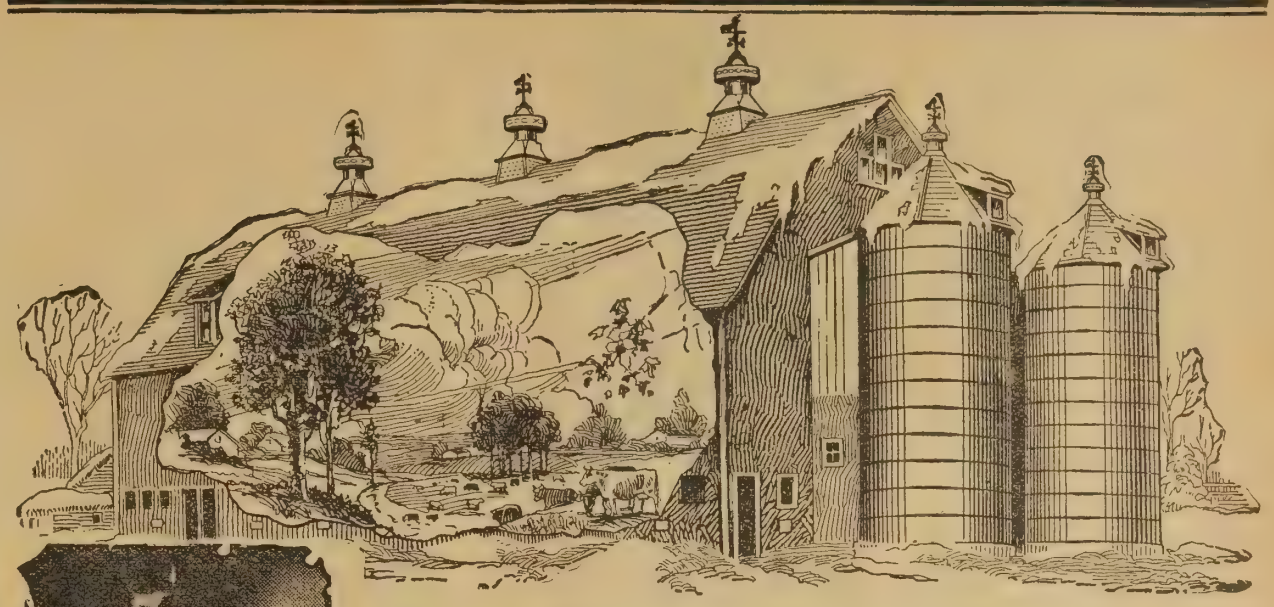
Carnation Stock Farms of Wisconsin and Washington purchased the highest priced female, Spring Farm Pontiac Maid 2d, a 6-year-old cow for $4,200.

Kelly, Hager and Mack did the selling, with S. T. Wood in the box and E. M. Hastings sale manager.

Following is a list of all animals selling for $750 or more and buyers:

J. B. Irwin, Minnesota	
Aaggie Echo Kalmuck	$1,210
Fairmont Posch Segis De Kol	1,400
Mountain View Farm, Maryland	
Josephine Johanna Oak De Kol	$3,150
Princess Beauty Calamo	800
Inka Calamo Beauty	775
Burke De Kol Rag Apple	900
Jennie Jewel Model	1,425
Canary Ormsby Butter Girl	1,300
R. P. Lamont, Colorado	
Aldemoor De Kol Pietje	$500
Segis Veeman Walker	825
I. F. Berkheimer, Michigan	
Veeman Spofford Homestead	$1,000
Maaikenshof, New York	
Iren Sarcastic De Kol	$3,100
Plumbago Canary Mercedes 2d	1,050
Schilling Colantha Langtry	1,800
Diehl & Lanus, Illinois	
Home Farm Johanna King	$825
Elmwood & Nelson, Illinois	
Peldora Koa Pontiac K. K. S. V.	$1,000
J. C. Pontries, Oklahoma	
King Valdessa Pontiac Artis	$770
Mineral Spgs. Stk. Farm, Minnesota	
R. C. Sir Pontiac Count Perfection	$1,175
Albert C. Craig, Pennsylvania	
Ashburn Aaggie Wayne Peep	$775
Bridgeford Holding Co., California	
Sir Pietertje Ormsby Mercedes 43rd	$6,600
Carnation Stk. Farm, Wisconsin	
Miss Konigen Pontiac Prilly	$1,300
Spring Farm Pontiac Maid 2d	4,200
Garnside Stalpher & Schalen, Wisconsin	
Count Konigen Pontiac Prilly	$2,200
F. B. Green, Wisconsin	
King Posch	$1,000
Long Lake Stk. Farm, Minnesota	
Cascade Pauline Mercedes	$2,650
Cascade Daisy	1,300
Jessie Hengerveld Johanna 3d	1,850
Bess Johanna Ruberta 2d	1,850
N. Finley, California	
Miss Mattaline Walker	$1,100
R. E. Ansted, Ohio	
King Korndyke Abbekerk Prilly	$1,120
W. C. Leitsch, Wisconsin	
Ormsby Korndyke Dawn	$1,500
Dudley E. Waters, Michigan	
Changeling Queen 2d	$1,050
Iowana Farms, Iowa	
De Kol Butter Boy Belle 3d	$1,500
E. E. Muirhead, Ontario	
King Echo Posch Liona	$900
J. M. Hackney, Minnesota	
Hollywood Glen Alex Segis	$1,100
Harvest Farms, Wisconsin	
Imperial Hamlin De Kol	$800
S. A. Santhoote, Wisconsin	
Ragapple Korndyke Boon Niva	$1,050
J. A. Bell, Jr., Pennsylvania	
Madanis Pauline Sylvia	$1,200

The grower who is scrupulously honest, filling his packages with equal quality fruit or vegetables throughout, finds a ready market for his produce. The buyers know precisely what to expect, and can always rely upon him.





The King Aerator drawing moisture out of a building—the steam can be easily seen in cold weather.
King Systems consist of the Aerators for the roof, the **Foul-Air Flues** leading from the stock room to the Aerators, and the **Fresh-Air Intakes.** These units are designed and placed according to the requirements of the building.

KING VENTILATING CO. SOLE MANUFACTURERS
KING AERATOR
KING
SANITARY VENTILATING SYSTEM
OWATONNA MINNESOTA

For your protection be sure this diamond King trade mark is on the ventilating system you buy.

Keep Summer Conditions in Your Barn all Winter

YOUR herd goes into winter quarters in the best of condition after the summer in pasture. But what condition is it in when it goes back to pasture in the spring? The answer depends very largely upon your barn. A poorly ventilated, damp, insanitary barn will lower the vitality of the healthiest herd. Lack of fresh air is indirectly responsible for much tuberculosis. Often disease sets in and spreads before the owner is aware of it. The best preventive is plenty of fresh air. Dampness in a farm building is a thief that is constantly robbing the owner of a valuable property and profits on his investment. It rots the timbers of the building and hastens the depreciation of everything in it.

With a King System of ventilation installed fresh air is kept circulating through every part of the stock room without drafts. Your stock gets plenty of oxygen, and as the temperature of the barn is better regulated your stock is kept more comfortable, and excessive moisture is carried out of the building.

There is no guesswork about a King System. When we accept your order for a King System we realize more than you do what responsibility we have undertaken to ventilate your building. Your ventilating troubles are over; our problem just begins. Our first move is to study the conditions in the building, then we plan a system to fit the building.

Send for Our Free Book on Barn Ventilation

Do not let this winter pass without giving your stock the benefits of proper ventilation. We can put in a King System at any time—whether the building is old or new, and whether or not the mow is full of hay. If you are going to build a new barn, hog house or poultry house send us the plans of the building or tell us about what you will need, and let us plan a King System to be installed while the building is being constructed. That is the best time to install it.

KING VENTILATING COMPANY, 1162 Cedar St., OWATONNA, MINN.

Ventilating Engineers for Farm Buildings and Creameries

KING SYSTEM OF VENTILATION

"Make Good Barns Better"

CONE-SHAPE GRINDERS

It PAYS to GRIND ALL GRAINS

Look to the Grinders. They do the work! Bowsher's Cone-Shape grinders are the correct principle in Feed Mill construction. They mean larger grinding surface close to center of Shaft; thus More Capacity, Lighter Draft, Longer Life.

"Desire to express my appreciation of the long-lasting, trouble-proof Bowsher. Have used a No. 4 ten years with less than One Dollar per year for repairs." *R. W. Watt, Jacobsburg, O.*

10 sizes; 2 to 25 H. P. Write for free catalogue.

N. P. D. BOWSHER CO., SOUTH BEND, IND.

Increase Your Milk Flow



Use Acorn Water Bowls

AUTOMATIC CONTROL—FRESH SUPPLY AT EVERY DRINK

Write for Circular and Prices

For Sale by Dealers Everywhere

JOHN W. LADD CO. Detroit—Cleveland



The Pioneer Gambrel Roof

Attractive Design. Strongly Built. Adjustable Top for filling. Easy to put on. Sizes to fit any Silo. Price will Surprise you. Can fill orders promptly. We also manufacture Silo Chute. Very strong. Easy to put on.

PIONEER MFG. CO. MIDDLEBURY, IND.

WITTE

$54.95 F.O.B. K.C. 2 H-P. PULLS 2

Direct from Factory to You

ALL SIZES AND STYLES

2, 3, 4, 6, 8, 12, 16, 22 and 30 H-P.

at proportionately Low Prices. Above price for 2 H-P. is for engine complete on skids ready to use. From Pittsburgh add $5. Quick shipment. Write or wire for Big New Engine Catalog FREE.

WITTE ENGINE WORKS

1646 Oakland Ave. KANSAS CITY, MO.
1646 Empire Bldg. PITTSBURGH, PA.

KING SEGIS PATENT LOCK

Ear Tags, Bull Staff and Rings. Description and prices sent on application. 300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business.



H. A. Moyer, Syracuse, N. Y.

Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field

Send for catalog No. 6

W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

PERFECT EAR TAG

Insure Against Loss

You can't afford to lose one of your valuable dairy cows by neglecting to mark your herd with Perfect Ear Tags.

They are made of light weight aluminum, non-poisonous and non-corrosive. Easy to attach in single operation.

For cattle, sheep and hogs.

SALT LAKE STAMP CO.
65 W. Broadway
Salt Lake City, Utah

Send for Free Samples

Without obligation to me, please send FREE Samples of PERFECT EAR TAGS and Price List.

Name _____

Address _____ H.D

"On Time"

When your train roars in "on time," it means that every part of a great organization has worked with precision and fidelity to a schedule.

That is the sort of unfailing accuracy we have come to expect of railroad men. And that is what they, in turn, expect of the watches they carry.

The tremendous popularity of Hamilton Watches among railroad men is due to unfaltering accuracy and long life.



Regulations require that Conductor and Engineer compare time before the start of each run. That's what Engineer E. T. Reed and Conductor J. County, who together run the same Erie train, are shown doing. Both men carry Hamilton Watches, and both have a reputation for precise and punctual service.

Hamilton Watch

"The Railroad Timekeeper of America"



Aren't these the qualities *you* want in a watch? Time never was so precious on the farm as now. A Hamilton would help you divide up your day's work — would save minutes that quickly run into hours.

A Hamilton Watch makes an appropriate gift on any occasion — a splendid, lasting token of regard.

There's a model for everyone in the Hamilton line, with prices from $40 to $200. Hamilton movements alone, $22 (in Canada $27) and up. At your jeweler's.

Send for "The Timekeeper"— an interesting little book that tells about the manufacture and care of fine watches. The different Hamiltons are shown with prices.

HAMILTON WATCH COMPANY
Lancaster, Pennsylvania

STERILAC Sterilizes Deodorizes Cleanses

45 Times More Germicidal than Pure Carbolic Acid
(BY U. S. HYGIENIC LABORATORY METHOD)

Sterilac is powerful, permanent, non-poisonous, and non-caustic, making it the ideal germ-destroyer and deodorizer. It sterilizes utensils, dishes and hands; protects against and destroys bacteria. More economical and effective than other disinfectants.

For Cream Separators, Milking Machines and All Dairy Utensils, Sterilac is a Daily Necessity

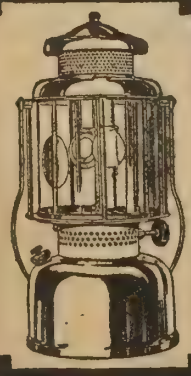
Because of its unusual strength, simplicity and safety, Sterilac should be used on every farm where dairy products are handled. Comes in the form of a powder, which quickly dissolves in water. It delays souring of milk, reduces the bacterial count and prevents spoilage and loss. It leaves no odor.

Sterilac also is ideal for cleansing and sterilizing glassware, earthenware and cooking utensils, for removing offensive odors in refrigerators, for "sweetening" foul-smelling drains and for killing typhoid and other germs in drinking water. Every farm home should have a supply on hand at all times. If your dairy supply dealer or druggist does not have it, send $3.00 for large bottle, containing sufficient for 250 gallons of solution. Write for free booklet, "How to Keep the Dairy Clean."

Abbott products are well known and recommended by physicians, veterinarians and druggists throughout America. DEALERS FOR STERILAC WANTED.

THE ABBOTT LABORATORIES, 4752 Ravenswood Av., Chicago

Coleman Quick-Lite



JUST the thing for lighting up your night work in the barn, feed-lots, milking sheds, tool houses, cellar or garage. Finest light known for night hauling, ploughing and harvesting, repair work, fruit packing, building, ditching, road-grading, camping, auto touring. Can't blow out in the wildest wind. Rain-proof and Bug-proof. Brilliant white light 800 Candle Power. Makes and burns its own gas. Lights with matches—no torch needed. No wicks to trim—no chimneys to wash.

Can't Spill or Explode Even If Tipped Over!

Inspected, tested and guaranteed. Will last for years. Pays for itself in fuel saved. Costs only trifle over a cent a night to use.

Take this advertisement to your dealer today. If he hasn't Quick-Lites on sale yet, he'll order one for you on approval. Send at once for interesting free book. Address Dept. 14

THE COLEMAN LAMP COMPANY,
WICHITA ST. PAUL TOLEDO DALLAS
LOS ANGELES ATLANTA CHICAGO

FREE BOOK Write Today

Dairying Thirty Years Ago

The importance of developing our home market for cheese can be seen in the fact that the industry is making rapid strides in the far, fair, and almost winterless south sea islands and that the product is being poured into the British market. Australia all lies between south latitude 10 and 40 and one of the New Zealand isles all north of 40, south latitude.

Only six years ago the New Zealand government offered a large premium to the factory that first made and shipped fifty tons of cheese to London, made within the year. Now there are some fifty factories that make an annual output of sixty tons each. This shows plainly that the dairy farmers of those British Isles are after our great foreign market for cheese.

If the American people would eat one ounce of cheese each per day, it would take four times as many cows as are now used to furnish milk for cheesemaking, to supply the home market. It is the cheapest and best animal food in all this land.

⚜

In every vocation there are all degrees of skill and in those pursuing them there are all degrees of natural capacity and fitness. It is not in the nature of things that all sorts of men, much less every man, should make a marked success in his vocation. First class men are very scarce; second and third class men are none too plenty, while of the men whose qualities in this comparison are denoted by higher figures, there is a great abundance. Now, these very men themselves, in speaking of other men, recognize this grade of ability, yet too many of them refuse to accept patiently their own place in the line. But they must learn and have to learn that there are no first class places for fifth class men. No amount of laws, however cunningly framed (and the cunning is generally on the wrong side), is going to change the situation. Farming is a good, safe, reputable, and pleasant business for good farmers. It has its disadvantages as well as its advantages—and in this respect it differs nothing from other ways of getting a living. Its superiority, so far as it has any, is in the greater personal freedom and in the chance a man has to grow. The intelligent, industrious farmer becomes a better farmer every year, and to men who are men this is the greatest commendation of farm life. Every recurring season the farmer has a chance to correct his mistakes and amend his plans. He is not, as a rule, subject to irrevocable disasters. He can "pick his flint and try again". In short, it is a good enough business for a good enough man.—BUCEPHALUS BROWN, in Rural New Yorker.

⚜

"Wanted, a thoroughly methodical farmer, of practical experience, to superintend a highly cultivated, neatly kept farm of several hundred acres. Must be skilled in cultivating grass crops and fattening cattle. Personal references will be required as to character and experience." The above literal copy from a New York agricultural newspaper is a good gauge of the character of farmers to be of value on good farms. He must be methodical, which means order, regularity, promptitude. He must have a practical experience, which means no mere theory, no half formed notions, no crudities. He must be skilled in cultivating grass, which means that he must fully feel the point that grass is the foundation of extensive farming. He must understand fattening cattle, which means that he must know when grass is fit to feed, what cattle are fit to feed grass to, what grain to feed, how much, how often, when to feed it, and as preparatory to feeding he must know how to prepare soil to grow cattle feed, how to manure crops, how to harvest, to house, and to make his whole energies turn into fat cattle of the finest kind. It is a small advertisement, but covers much more than the "several hundred acres" alluded to. Such positions offered to farmers who know how, but have not the capital to fully employ their capabilities, are grand openings to good men and encouragement to induce other farmers to qualify themselves to fill such positions. Character is a sin-qua-non.—Germantown (Pa.) Telegraph.



HOLSTEINS AND THE AIRPLANE

All is harmonious in a green pasture near Council Bluffs, Iowa, where a herd of Holsteins graze and from which an airplane flies daily. The cows don't seem to care whether men fly or not, but the pilot needs to exercise considerable care in his landing. Pilot Nielsen was a preacher before he took up flying, and the owner of the cows is Robert McIntyre, who is a producer of market milk.—G. R. HARRISON, Iowa.

Dairy Markets

Elgin, Nov. 3—Market firm. Butter, Call Board Sales 193 at 27c.

Oct. 27, 1890, butter sold at 25@25½c. Nov. 4, 1889, 24½@25c. Nov. 5, 1888, 27c. Nov. 7, 1887, 28c.

Chicago, Nov. 3—Full cream Cheddars choice 8—8½; Twins, choice 8½—8¾; Twins fair to good 7—8; Young America 9—9¼; Sharp cheese 5—7; Skims 3—5; New Swiss 9—11; Brick 10½—11.

There is Little Loss From Sorghum Poisoning

HOARD'S DAIRYMAN:—The sudden death of animals pasturing on sweet sorghums, grain sorghums, or sudan grass, when they encounter forage containing poison, has overemphasized the actual amount of loss sustained. Quite a number of stockmen in the Southwest have for 30 years each season grown a field of sowed sorghum of one variety or another and grazed it off without loss, turning on when the crop is as high as the steers' backs.

Over ten thousand farmers in Kansas grew sudan grass and pastured it

either all season or after removing one hay crop in 1919. Only three were known by the experiment station to have lost any animals from poison. The station is very apt to hear of such loss if any occurs. In addition to over 50 county agents, operating in as many counties, there are over a dozen extension specialists on various lines who visit all parts of the state. Had any large number of losses occurred they would have been reported and sudan grass would not be so popular as it now is.

This forage poisoning is due to the presence of prussic acid in the leaves of the growing plants. It is never present in silage that has cured for a week or two, or in dry, cured forage. It is apparently produced in a short time when the plants are stunted as by drouth, chinch bug injury, cutting the crop, and a subsequent slow growth of suckers or frost. Since sudan grass is naturally sending up new shoots at all times, growth is not slackened either by cutting or continued grazing as in the other sorghums. Hence we can not anticipate as frequent presence of poison if it is entirely due to a slackened growth.

The poison is so deadly and quick acting that animals driven across a strip of cane a hundred yards wide that contains the poison may nip off enough in crossing to kill them. Cattle that are poisoned fall to the ground and usually die in thirty minutes. If they are found in time they can be saved by drenching each animal with a quart of any kind of syrup warmed sufficient to make it run. It is said that sweet milk administered in the same way will prevent death.

The only known losses from sudan poison in Kansas in 1919 were as follows: A dairyman near Abilene lost two Holstein cows on pasture. The herd was turned on second growth after a crop of hay was removed. At the same time the experiment station at Manhattan, not over 40 miles away, was pasturing six pure-bred Holsteins on sudan grass. They were on the pasture day and night. Chemical analysis of samples taken of the crop at this time revealed enough poison to cause death, yet none of these cows ever showed symptoms of illness. This leads one to think that possibly a condition of immunity may be built up in animals continually grazing on this crop.

Another similar case was that of a farmer near Delia in northeast Kansas. He had five acres of sudan grass on which he pastured horses, mules, hogs, and his milk cows. None of his cows were ill. Yet a neighbor's cow which broke through the fence and grazed on the pasture was dead within the hour.

The third case of loss was with a farmer in Harvey County, near Halstead. His milk cows were turned on second growth sudan grass after a hay crop was removed. Two of them died from poison within a few hours. These are the only known cases of loss in the state in 1919. There were undoubtedly others but they were few. Up to the present time none have been reported for 1920.

Considering the large number of cattle at present pastured on sudan grass these losses are so small and infrequent as to be negligible. Loss has never been known to occur in a herd on sudan grass after the first day on the crop. Careful watching and administration of antidotes can prevent any loss in that short time. It seems probable, from evidence at hand, that the danger can be averted by such attention for a week at most after turning on.

Sudan grass has proven to be especially valuable for dairymen. It furnishes succulent feed at any time in the summer when other pasture is short. Its use for this purpose has become extensive in states other than the Southwest and will without doubt grow larger.

Kentucky. RALPH KENNEY.

TEXACO MOTOR OIL ★ THUBAN COMPOUND ★ HARVESTER OIL ★ AXLE GREASE



When the temperature drops, use a lighter oil

TEXACO

Tractol—*for Tractors*

Winter is coming on. Your tractor will be chilled. A change of oil will be needed, for, while the terrific heats and long grind of summer require a heavy oil, in winter you need one which will not thicken in the cold. Oil must flow freely. It must not be sluggish in the lubricating system and it must permit easy cranking.

There are three grades of TEXACO TRACTOL—"B", "C", "D"—these will take care of all tractor engines—large or small—in summer or winter. Grade "B" is intended for large engines in severe summer conditions. Grade "C" for large engines in winter. By winter, frost temperature (about 40°F) is understood. For smaller engines Grade "C" is used in summer, while Grade "D" is recommended for winter use.

TEXACO TRACTOL is shipped in 55 and 33-gallon steel drums, wooden barrels and half-barrels, and five-gallon cans. Try it. "You'll see a difference"—*now* in power, and *later* in your bearings.

Sold everywhere at this sign—the Texaco Red Star and the Green T

THE TEXAS COMPANY, *Petroleum and Its Products*

General Offices: Houston, Texas. Offices in Principal Cities. District Office: Chicago, Ill., McCormick Bldg.

"There is a Texaco Lubricant for Every Purpose"

October Condensery Prices

Prices paid producers for 3.5% milk delivered at factories during October are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms operating approximately 54% of the total factories in the United States.*

The wholesale prices given below are based on reports made by manufacturers covering actual sales of condensed and evaporated milk for September delivered to jobbers, wholesale grocers, and similar buyers at manufacturers' distributing points on basis of cash or short time credit. Foreign prices are given as f. o. b. or f. a. s. points of export in section in which sales were made.

Geographic sections	No. of firms reporting prices*	Price per cwt. Range	Ave.
New England	3	$3.89—$4.04	$3.96
Middle Atlantic	44	2.32— 4.01	3.49
South Atlantic	4	2.60— 3.57	3.06
E. North Central	97	2.21— 3.80	2.70
W. North Central	6	2.50— 2.91	2.70
South Central			
North Western	22	2.30— 3.73	2.55
South Western	12	2.32— 2.91	2.56
United States	188	2.21— 4.04	2.88

*In addition to these firms others report as follows: Forty-one no price as yet determined; 29 temporarily closed; 7 handling milk for patrons' account; 5 out of business.

Geographic sections	Sweetened condensed per case* 14 oz. cans		Unsweetened evaporated per case* 16 oz. cans		Sweetened condensed bulk per cwt.		Unsweetened evaporated bulk per cwt.	
	Domestic	Foreign	Domestic	Foreign	Unskimmed	Skimmed	Unskimmed	Skimmed
New England	$10.29	$10.38	$6.26	$7.00	$18.32	$12.21	$13.43	
Middle Atlantic	9.46	9.45	6.28	6.38	19.50	10.54	13.61	$8.08
South Atlantic	10.54	10.35	6.39	7.00	18.03	14.07	12.00	5.25
E. N. Central	10.30	10.35	6.22	7.00	17.77	12.30	11.36	7.72
W. N. Central	10.13	10.35	6.24	7.00	18.27	14.71	10.14	
So. Central	10.17	10.35	6.37	7.00	19.70	13.03		7.00
No. Western	10.33	10.35	6.14	7.00	17.65	13.21		7.00
So. Western	10.33	10.35	6.21	7.00	19.70	15.13	11.24	
United States	10.10	10.10	6.26	6.86	18.47	12.65	12.41	7.52

*Case contains 48 cans.



Empire Oil-Burning Tank Heater

Greatest improvement ever made in tank heaters. Fits any tank. Burns from 14 to 16 hours on one gallon of kerosene. Any child can operate it with safety; no sparks, ashes or smoke. The heating chamber is entirely under water; no heat wasted. Guaranteed. Saves feed—pays for itself repeatedly.

Empire Non-FreezableHogWaterer

Made of heavy galvanized iron — large capacity (70 gal.); drinking trough on outside where hogs can reach it; oil burner directly under trough—guaranteed not to freeze. Keeps water warm at a small cost. An abundance of fresh, clean water at right temperature. Keeps hogs healthy—fatten faster on the same feed.



FARMER AGENTS

Special offer to farmers willing to show our Heater and Waterer to prospective buyers. Write at once for price and special offer. Buy direct from factory.

Empire Tank Heater Co. 109N. 7th Street Washington Iowa

EDITORIAL COMMENT



SORGHUM POISONING

It is a well known fact that many of the plants belonging to the sorghum family develop hydrocyanic acid, a deadly poison to live stock under certain conditions.

Sudan grass belongs to the sorghum family, and it has been found that in a number of instances cattle that have eaten freely of this grass have died. As near as we are able to determine, fatalities have occurred when cattle were permitted to eat freely of sudan grass and were not accustomed to it.

Professor J. B. Fitch of the Kansas Experiment Station says: "Last summer we had six Holstein cows on sudan grass pasture and we took a great number of samples of this grass and tested them for hydrocyanic acid. We found hydrocyanic acid in large amounts each time we took samples, but in spite of that fact we had no objectionable results. I have heard of three or four cases already this year where animals were turned on sudan grass and fatal results followed. In each case investigated, the animals had been turned on for the first time and had been allowed to stay long enough to get filled up on the grass. Where the animals are accustomed to the sudan grass pasture there is evidently not so much difficulty from poisoning. While we generally recommend that the grass should not be pastured after frost, we had six cows on sudan grass pasture last year until after frost and did not notice any ill effects."

Elsewhere in this issue will be found an article discussing the danger of cattle being poisoned and permitted to graze on sorghums, methods of avoiding it, and remedies, should the owner find the cattle suffering from the effects of hydrocyanic acid.

LIMITING PRODUCTION

To increase prices of farm products, there are those who would limit production. This body of men takes exceptions to those who advocate increased production, holding that large crops do not bring as good returns as small ones to the farmer. It is well to know that when there is a large supply, prices fall, and, when short, they rise. Years may be recalled when short crops returned more to the farmers than when there was a large production. This is a principle that needs no argument for it has been recognized by economists for years. This principle, however, cannot be applied to the individual farmer, for it is well known that the farmers whose acres produce the largest crops, whose cows produce good flows of milk, are the ones making the most money. We do not mean farmers who hoe their corn by hand or use unusual methods of caring for and feeding their cows, because such practices may cost more than the increased production will return. What we do mean is, the farmer who handles his land well, fertilizes it; the man who breeds good cows, feeds and cares for them properly, is the one receiving the largest returns. Farmers cannot hope to make profit by limiting production of the individual cow or acre. There are certain fixed charges on every farm which must be met—investment in the land, the cows, equipment; and the largest profit is made by having the fields and the live stock work efficiently.

If we are to limit the production of agricultural products, it must come by operating less land. We have seen no necessity of the United States government expending large sums to bring under cultivation the arid lands of the West, stump lands, etc. We believe some work in this direction should be constantly carried on and these lands brought gradually under cultivation as the demand for food products increases, but to carry on the work on the scale desired by some would be a mistake. There are thousands of farms in this country now that are not being operated, largely because they are low in production; notwithstanding this, more than enough farm products have been produced to feed and clothe the people of this nation; in fact, we export millions of bushels of wheat and considerable quantities of meat products.

It would seem a mistake for any farmer to feel that he could make a larger profit by permitting his acres to produce low yields or to handle his cows in such manner that they would give smaller quantities of milk. Reduce the acres, reduce the cows, especially eliminate the poor ones rather than follow the practice of low production per farm. The true farmer will make his acres and his cows produce maximum yields without forcing them with extra care and labor.

IMPORTANCE OF VENTILATION

The barns in which the National Dairy Show cattle were kept this year, where demonstrations were held, and the judging of cattle took place, need to be ventilated. It is nothing short of a crime to place valuable dairy animals in an atmosphere like that found at this year's Dairy Show. Few people seem to be concerned about this matter, although before the end of the show five valuable animals had died and several more were in the hospital, some of which were not expected to live. One of the cows that died was valued at $10,000. An offer of that amount had been made for her. It is probably a conservative statement that the animals lost at this year's Dairy Show would pay for the expense of ventilating all the buildings used for exhibition purposes.

We have been astonished at the indifference of those in charge of the buildings in which the Dairy Show has been held in regard to ventilation. This year, the weather being warm and not much air stirring on the outside, there was created such a condition within the buildings that even the most indifferent person could appreciate the necessity of expending some money to ventilate them. Opening the windows would be the way some would overcome this difficulty, but drafts are not a good thing, especially on show animals or cows producing milk.

There is a way to install a ventilating system which will purify the air of these stables without creating drafts and which will provide a wholesome atmosphere for both man and beast. We trust that the Dairy Show officials will protest most vigorously and demand of the owners that the buildings be properly ventilated before next year's Dairy Show.

STICK TO THE LEAGUE

The New York Dairymen's League is weighing its members in the balance. If they prove up, the future holds promise of better things for the milk producer; if they fail, the milk producer goes back to the old order of things in which he had no voice in the sale of his milk and he will only need to read the posted notice to find what the buyer of his milk has decided to give him.

To make itself effective, the League proposes to pool milk that members shall share alike in returns regardless of the price each man's product may bring. It is taking a lesson from every successful co-operative organization, from the small, co-operative creamery to the prospering fruit growers' associations of California. To insure against the cupidity of any members who might be tempted to sell their product elsewhere, the League provides a contract which has "teeth in it". Fifty thousand of the eighty-five thousand members must sign this contract, agreeing thereby to stick to the League, before the pooling provision is put into operation.

The present League is the result of years of organization work. It is the producer's expression of his constant need for organization. It was formed because of conditions which were very unfavorable to the milk producer. If it has failed to do everything, it has at least brought a large measure of relief. No better scheme for protecting the producer's interests has been evolved. At present it constitutes his only hope that he will continue to have a hand in selling the product of his herd.

If there are faults in the contract as it now reads, why not take steps to remedy them—and not refuse the backing the League needs now? If the officers have failed to render full service, as some of these balky horse breeching strainers aver, let that difficulty be corrected within the League rather than endanger the future of the producer by refusing support at this time. If the ship's officers are not satisfying, it is a poor plan to jump overboard into a rough sea. Some pooling system seems to be necessary if the League is to accomplish results. The present scheme may need modifying. But the member who holds back because the contract is made water tight is the one who would desert at a crucial time without its binding clauses.

At the worst the pool and its contract seem safer than the uncharted course of men without an organization. It is surely safer to rely on the recommendations of the paid servants of the League than the bought attacks of proved falsifiers who take advantage of this time to attack the farmers' own organization. The danger of loss through the pool is not worse than the alternative of "catch as catch can" selling without its aid.

The League needs loyal support now. If it fails, the producer slips back a dozen years; if it succeeds, there is promise of better things through its work.

FIXING PRICES

It is not always easy to arrive at the price to be paid for a particular product. In the past the purchasers of farmers' products have set the prices which have been governed to a large extent by supply and demand, but there have been too many instances where these men have attempted to defeat the law of supply and demand and have brought the producers of farm products to believe that they should have something to say about the prices their products should sell for.

This condition has not been accepted in every quarter, and it is held by some that the farmer is exceeding his rights and interfering with trade and privileges that rightfully belong to others. It seems to us that the person who produces a thing is wholly within his rights when he places himself in position to obtain full market prices for his products, in fact, to demand market price.

Professor Hunziker, in his new book entitled "Condensed Milk and Milk Powder" states on page 44: "The midwest milk manufacturers, representing the milk dealers, market milk plants, and the condenseries in the Chicago district and in the middle western states, confer on the price to be paid for milk for the succeeding month toward the close of the preceding month and announce these prices for the coming month. Generally speaking, prices in Illinois are subject to the prices of fresh milk distributed in Chicago and St. Louis. Prices in New York and Pennsylvania are subject to the influence of the New York Dairymen's League and the price of the milk for distribution in the city of New York. The Wisconsin price is most largely influenced by butter and cheese prices."

It should be observed that since the organization of the Chicago Milk Producers' Association and the Dairymen's League these associations have had a part in arriving at what was a fair price for milk. Those who have not yet appreciated the service which these organizations are rendering the milk producers should consider the part they are playing at the present time in arriving at the price to be paid for milk. There should be no serious differences between those who purchase the milk and those who produce it, although we recognize that the producer desires to get all he can for his product and the purchaser desires to buy it as cheaply as possible. However, there are ways and means of determining the supply and demand and what the market will pay, and each party must be willing to accept market conditions.

Bordeaux Mixture

Please give me the combination for preparing the Bordeaux mixture.

Mount Vernon, Wash. E. R. K.

The most common method of preparing the Bordeaux mixture in small quantities is as follows:

A. Put twenty-five gallons of water in a barrel. Tie five pounds (or whatever amount is to be used) of copper sulphate in a bag and suspend in the water near the surface until dissolved.

B. Slake five pounds of lime slowly in a small amount of water and then add enough water to make 25 gallons.

C. Pour the two together slowly, and stir thoroughly or pour one into the other. Strain and apply as soon as possible. The mixture spoils if allowed to stand.

The best mixtures are made at a temperature of about 50 degrees F.

Wages for Buttermakers

Can you give us an idea what salary A-1 buttermakers and creamery men get?

Michigan. W. W.

The demand for good buttermakers and creamery men is still brisk. The wages paid competent men in this line of work have increased during the past year, and some of the best buttermakers of the state are getting over $200 per month at the present time.

We have found it somewhat difficult to keep our small force of creamery men at the dairy school during the past summer because the owners and managers of large creameries would visit us and hire the help we had about as fast as we could employ new men.

One large manufacturer of dairy products in this state informed me during the summer that he was paying $135 a month for can washers. I do not think this is the price all can washers received in such plants, but when these are located in towns where a great deal of machinery is made and high priced mechanics are employed, the creamery men, ice cream men, and city milk dealers have to pay their help higher wages than is the case where a dairy manufacturing plant is located in a different town or in the country.

There are but few creamery buttermakers, who have the responsibility of the successful operation of a small plant, who receive less than $150 per month even in a small country town where living expenses are not so high as they are in the city. I think, therefore, that the wages paid will depend a good deal on the demand for skilled mechanics and the cost of living in a given locality.

I believe the reorganized buttermakers' association of this state considers $150 per month as the minimum wage to be paid a man who takes the responsibility of operating a creamery and the scale of wages advances from this figure to a considerably higher one depending on the amount of butter made. E. H. FARRINGTON.

Wisconsin College of Agriculture.

Cleaning Test Bottles

HOARD'S DAIRYMAN:—I believe I can improve considerably on Mr. Rogers' method of emptying and washing test bottles. At the time I was doing official testing, I employed the following method:

As soon as all the samples were read, I put on a pair of canvass gloves and took six bottles in each hand. I emptied these on the pile of ashes usually found in the farmer's backyard or in a small hole I had spaded up for that purpose. The hotter the bottles, the better I liked it. In cool weather, I placed the bottles back in the warm tester after reading so as to keep them warm until all had been read, when I took them out to be emptied.

In washing the bottles, I placed them in a zinc or granite pan. I then took a small baking powder can and bent a lip on the upper rim so as to make it easy to pour from. I first filled this can with hot water which I poured into the test bottles. After emptying the bottles again, I mixed up a strong solution of some good washing powder, poured it into the test bottles, and shook them thoroughly before emptying. The bottles were rinsed again with clean, hot water. I used the canvass gloves throughout the entire operation.

Care should be taken in emptying the acid residue from the test bottles in order that none of the acid gets on the gloves or on the clothes. After I got used to testing one pair of canvass gloves lasted me a whole winter and I never burned acid holes in my clothes or in the cloth apron I used. I have seen many testers whose clothes were full of acid holes after they had tested for only a week. Not only that, but there would be acid tests all over the testing room in which they worked. I see absolutely no excuse for this and a man should not be considered a competent tester until he can avoid such carelessness. Further, there is no excuse for a tester to leave crocks of acid residue or bottles of unlabled acid standing around after he leaves the place, because some one else has to do this work for him. Not only that, but many people have been severely burned, and especially children, by coming in contact with left-over acids.

Northport, Mich. H. W.

Moving Pea Vine Silage

Would pea vine silage be spoiled for keeping if two or three wagon loads were transferred from silage stack to small pit silo?

Hartford, Wis. J. P. D.

We are advised by men who have tried this system that there is likely to be a considerable amount of spoilage when as small a quantity as this is moved at one time. It is possible that, if this is fed within two or three days, the spoilage would not be sufficient to represent any considerable loss or damage.

We have reports from some pea cannery sections that this silage can be moved from the stack in rather large quantities and then ensiled, particular care being exercised to see that the silage is evenly distributed and well compacted. We would be somewhat sceptical about the success of this system of handling but it has been reported to us as proving fairly satisfactory. It would appeal to us as being most satisfactory to merely haul enough of this silage for use for not over two to three days, and preferably hauling daily.

The Storage of Manure

HOARD'S DAIRYMAN:—Theoretically the daily removal of manure is the most effective manner in which to handle barn wastes in order to conserve the fertilizing elements which these contain. Practically, however, it is often impossible to live up to one's good intentions in this regard. Inclement weather, condition of the fields, press of farm work, sickness, shortage of help, and other things operate to hinder one from going afield with the spreader each and every day. To offset these hampering circumstances, and to make possible the temporary storage of manure during such periods as these, some sort of provision must be made for holding the manure under conditions in which a minimum of deterioration shall occur.

The writer has made considerable study in four states of the means and methods employed by farmers in meeting this situation. As a result of his observations he is compelled to state, first of all, that comparatively few farmers anywhere in his field of study have equipment of this sort, although in communities where dairying is the chief industry it is more common than elsewhere to find that such provisions have been made. It is his belief that farmers handle their barn wastes much more understandingly as a rule than they did ten years ago, but the number who have built pits or shelters of any kind are few in comparison with the total number who farm the extensive acreage of the states with which he has had a personal acquaintance.

A rough classification of the various means which he found employed for temporarily storing manure is: pits, either covered or uncovered, and with or without cisterns; and manure sheds and houses or simple roof coverings either with or without concrete floors. Some of these have been quite elaborate; others very simple and inexpensive. Several of them have furnished an enlightening commentary upon man's lack of persistence in following out his good intentions, for in certain of these pits and shelters have been seen manure that was quite as badly "burned", or "fire-fanged", as though it had received no protection whatever. All of which indicates, perhaps, that no matter what sort of manure storage is provided one must use brains in operating it.

Pits and shelters are designed to serve two, and only two, purposes. One is to protect waste against leaching; the other is to prevent it from heating. It is in one of these two ways that manure deteriorates during the period that elapses between the time it is produced and the time it is distributed over the fields. Any sort of a pit or shelter will accomplish the end first indicated. Furthermore, it will do it automatically. A pit or concrete receptacle of any sort will retain liquids that seep from the waste. But the prevention of leaching is only half the problem—and perhaps the easiest half. To prevent heating, manure must be kept moist in order to drive out the air from which the bacteria of a manure pile derive the oxygen necessary for their activity. The open pit was designed with the idea that the usual rainfall would accomplish this automatically also. Sometimes it does; sometimes it does not. The upper part of manure held in a pit will dry out fully as easily as if piled on the ground, provided precipitation is below normal. Consequently, no matter how manure is held, it must be watched with some degree of care and if need be moistened enough to prevent bacterial action from getting under way at such times as the temperature is favorable.

Most of the larger and more elaborate pits which the writer has seen are equipped with underground cisterns for holding seepage. In some cases pumps are installed by means of which the contents of the cistern can be used for wetting down the manure in the pit. This, of course, is preferable to using ordinary water as the last only adds to the amount of liquid which must be handled and distributed later on. With labor so scarce and high in price there are other more profitable ways of using it than in the additional sprinkling required to distribute the diluted liquid manure. This is one of the chief objections to the uncovered pit equipped with a cistern. One must assume the responsibility of distributing, along with the liquid content of the barn waste, such rain as falls into the pit. To the writer's way of viewing it, the separation of liquid manure in this way necessitates so much additional equipment in the way of sprinkler cart, tank, pump, and so on as to make this form of manure storage impractical on all but large size dairy farms. Even here it is questionable whether the same ends may not be served in other ways at less expense and trouble.

In considering any sort of a manure container the problem of unloading it is one to be given serious thought. Pits of extremely large size are so made, as a rule, that a team can be driven directly into them and the spreader loaded without much trouble by working in from the side and maintaining an open space of flooring on which to operate the shovels. With smaller pits one must dig down from the top and throw the waste over the side into the wagon box. This is sometimes a difficult piece of work and if the manure is very moist it is a disagreeable one as well. There are more pleasant tasks than working in hip boots in a mass of soft, yielding manure. Taken all in all the writer inclines to the opinion that of the two the manure house or shelter offers the same advantages and fewer disadvantages than either the covered or the uncovered pit.

As regards the different types of shelters, in which a pit or receptacle forms no part, there are, of course, many ways of clothing the idea. In some instances the manure shed is made large enough to hold the spreader which stands under the end of the litter carrier track so that the waste can be emptied directly into it. Such a shelter can be equipped with doors and window coverings by means of which through the summer the breeding of flies may be considerably reduced. There are circumstances, of course, where this item does not bulk large, especially if the barn is at some distance from the house and if dairying is not extensively followed. There will be no more flies than usual if it is possible to keep even with the daily accumulation of waste through the summer. Consequently the simple roof covering will often answer full as well as the more elaborate and more expensive manure house.

As simple and practical a shelter as the writer has ever happened across consisted only of an attractively designed roof which sheltered three manure spreaders The litter carrier deposited its load directly into any one of the three. The accumulation of manure on this particular farm seldom exceeded the holding capacity of the three spreaders. If for any reason it over ran, the excess was dumped on the concrete floor with which the shelter was provided.

The psychological effect of the small pit or shelter is one point in its favor. The urge to empty it is greater and the accumulations at any one time are not large enough to appear staggering. Somewhat of the same feeling springs from a constantly growing pile of manure that the old darkey found in the pile of wood which needed sawing. Whenever he looked at it he experienced a "hesitatin' feelin'". The handling of the manure, while an important item in farm practice, is by no means one of the pleasantest tasks involved in farming. The chief aim in any system of handling it should be to keep the accumulations down at all times to the lowest point. As little of it should be handled twice as is possible. To do this, of course, means extra labor that in these days can be utilized elsewhere with more profit.

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Victor Talking Machine Co., Camden, N. J.

Washington Dairy Notes

HOARD'S DAIRYMAN:—Condenseries operated by the Canyon Milk Products Company at Enumclaw and Issaquah have closed down and it is reported that the concern is in the hands of receivers. The Carnation Milk Products Company has closed its plant at Kent and is practically confining its operations to the manufacture of butter in other Northwestern plants. The closing of these plants and the use of the milk of these districts for the manufacture of butter has effected a sharp decline in the butter market, the price dropping seven cents per pound during the week ending October 24th. On October 15th condenseries announced a decline in the price to be paid for fresh milk delivered at the plants from $2.50 per hundred pounds for milk testing 3.8% butterfat to $2.25 per hundred for milk of the same test.

⚜

A cow testing association is being organized in Thurston County and it is hoped to have 600 cows signed up at $2.50 per head in a short time. Failing to obtain the necessary number, it is planned to include several Grays Harbor County herds in order to fill the quota of 600.

⚜

A campaign to make Lummi Island, Whatcom County, a restricted district regarding the tuberculin test is meeting with excellent results. During August ninety-eight per cent of the dairy cattle were tested.

The campaign being carried on by the Whatcom County Farm Bureau to get 10,000 dairy cattle tested for tuberculosis will be discontinued for this year on account of the fact that the state appropriation to pay owners an indemnity for reactors has been exhausted. 4,500 head of dairy cattle have been tested thus far and applications for 1,000 more are on file at the office of the commissioner of dairying and live stock.

A milk testing demonstration was given at a request of the Enterprise Community Farm Bureau Dairy Committee after which a community milk testing club was organized and samples will be tested once each month. This community is carrying on daily milk record work as a farm bureau project.

⚜

The Walla Walla Pure-bred Jersey Bull Association has been reorganized for another year. A Holstein bull association is in the process of organization at Burbank in Walla Walla County.

⚜

Jay Finlayson of Yakima reports that he obtained sixty tons of sunflower ensilage from two acres of land this year and he is very well pleased with the experiment. "The raising of sunflowers for ensilage will be done on a large scale next year if that plant comes up to expectations as a stock feed," he says.

⚜

In Pierce County four communities have held special demonstrations for dairy stock improvement work under the auspices of the respective farm bureaus. One of the bureaus is conducting a campaign for the eradication of the scrub bull from all herds in the district.

⚜

On Lopez Island in San Juan County farmers are interested in Guernsey cattle and a canvas is being conducted in an effort to have them purchase a carload of pure-bred Guernsey heifers.

In the same county, on Orcas Island, a cow testing club is being organized and the county farm bureau has adopted as a project the testing of all cattle on the island for tuberculosis.

⚜

Arrangements for an excursion of several Pacific County dairymen into Oregon for the purpose of purchasing pure-bred animals have been completed. With 404 cows signed up in twenty-seven herds the Southwestern Washington Cow Testing Association is reorganized, with only five herds in the district covered by the association not signed up. Local banks contributed $100 each for the furtherance of the work of the association.

⚜

The Dairy Marketing Association now has over seventy-five per cent of the market milk in the Spokane district signed up for a period of five years in unbreakable contracts; while the Inland Empire has been divided up into seven districts, each district having its own member on the board of directors.

⚜

Out of a total of 614 cattle tested for tuberculosis in Island County only one reactor was found. The Island County Cow Testing Club has completed the first year of work and is planning to continue for another year.

⚜

In Cowlitz County farmers are planning to purchase registered



ADVERTISING THE GUERNSEY

Float used at county fair by breeders of the Juneau County, Wis., Guernsey Breeders' Association as a novel way of advertising the merits of the Guernsey cow. The first prize Guernsey cow, Imp. Busy Bee of Sarnia, was placed upon a hay rack neatly decorated and driven about the grounds. Some fifty gallons of milk were served to the people free of charge. This is the first year the dairy breeds have been organized in this county and considerable friendly rivalry was shown by the different associations to make the best showing. Guernseys led the other breeds in numbers with 57 head and carried away the coveted prize of Dominant Herd.

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Guernsey heifers with a view of building up herds of registered stock. Two pure-bred bulls have recently been located in the county.

⚜

A preliminary meeting of four of the leading Holstein breeders of Kitsap County was recently held and arrangements made to call a general meeting at a later date of all those interested in promoting the Holstein breed in the county. Dairy Husbandman Kehrlie of the United States Department of Agriculture spent two days in the county working on the organization of a bull club.

⚜

In Klickitat County plans are being formulated for the organization of two bull associations. Three pure-bred Holstein bulls will be placed in as many herds in one association, while the other association favors a milking strain of Shorthorns.

⚜

A cow testing association is being organized in Snohomish County and 540 cows have been signed up at $2.50 per head. A total of 600 will soon be obtained.

Bull associations have been formed in the Silvana and East Stanwood districts where it is proposed to purchase Guernsey animals.

⚜

A summary of the live stock project work in Grays Harbor County for this year shows that through the efforts of the farm bureau twenty-two pure-bred bulls and twenty-one cows have been placed in addition to thirteen bulls and ten cows purchased by farmers independently of the bureau.

Washington. ALTON D. HURLEY.

Tainted Milk

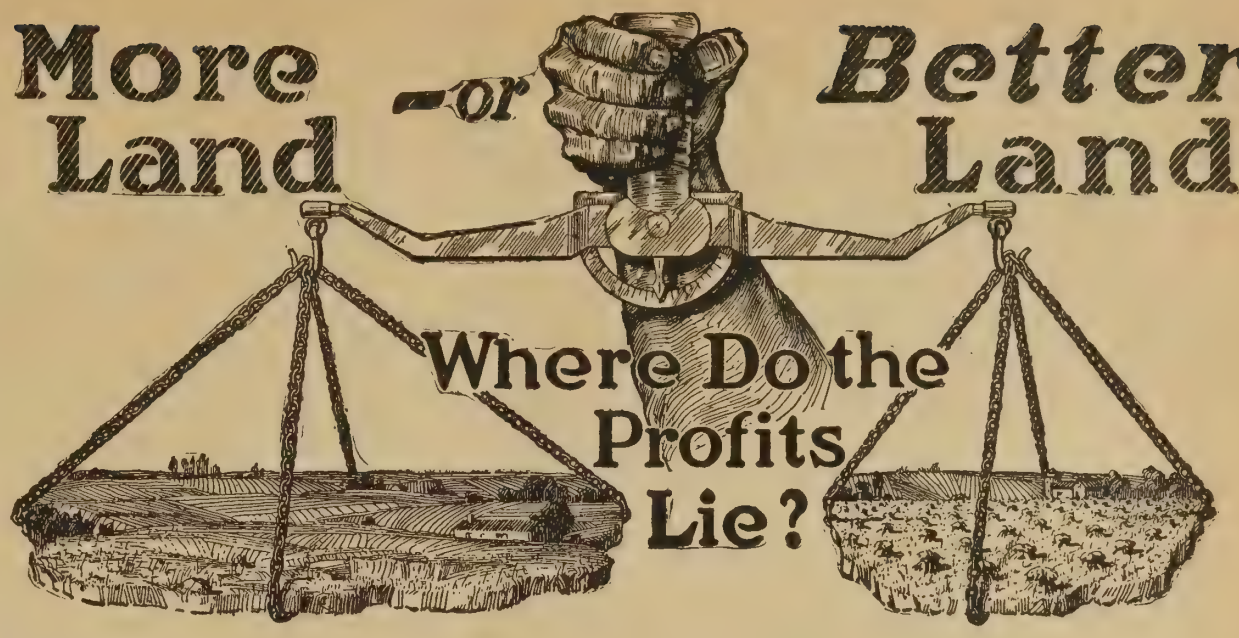
About this time every year numerous complaints are received from consumers and milk dealers in relation to milk having bad flavors and odors, in other words, tainted milk. As a general rule the keeping qualities of the milk are not affected but the general quality of such milk certainly is not up to standard. A careful study by experts employed by the government has shown that for the most part these bad flavors and odors can be avoided by the use of proper precautions.

One of the causes of tainted milk is the failure to properly clean and ventilate the cans. It is impossible to completely sterilize every milk can that enters a receiving station or milk depot. The germ life which is living in the so-called "sterilized" cans starts decomposition or rotting of any small particles of material which may have become lodged in the can. Unless the covers are taken off soon after the can is returned it will shortly have a very noticeable and disagreeable smell. All this trouble and annoyance can be avoided by placing the cans in an inverted position on stakes or a rack, with the covers off. Cans having rust spots in them or open seams harbor dirt. For this reason, such cans are condemned as being insanitary.

Warm milk will absorb any and all odors which it comes in contact with. It is very easy to see why milk stored in an ill smelling milk house or in a stable will have a "cowy" or "off" odor. Keep the milk can away from the stable at all times. Each pail of milk should be removed from the stable immediately after it is drawn from the cow.

The presence of dirt, manure, etc., in milk will also give it an off flavor. This can be avoided by following out a very simple but important precaution—wipe the cows' udders and flanks with a damp cloth each time before milking. Too much emphasis cannot be placed on this important duty.

During the fall season milk having a disagreeable bitter taste is received from certain localized districts. This is the result of the improper feeding of sugar beet tops or the like. It has been found that by feeding tops *after* milking that much of this trouble is avoided. A safe rule to follow is to avoid a sudden change of *any* feed. These sudden changes are sure to produce ill effects which are noticeable in the milk. It is a wise precaution to feed some other roughage with beet tops. Don't allow the cows to gorge themselves on beet tops at any time.—Flint, Michigan, Health Department.



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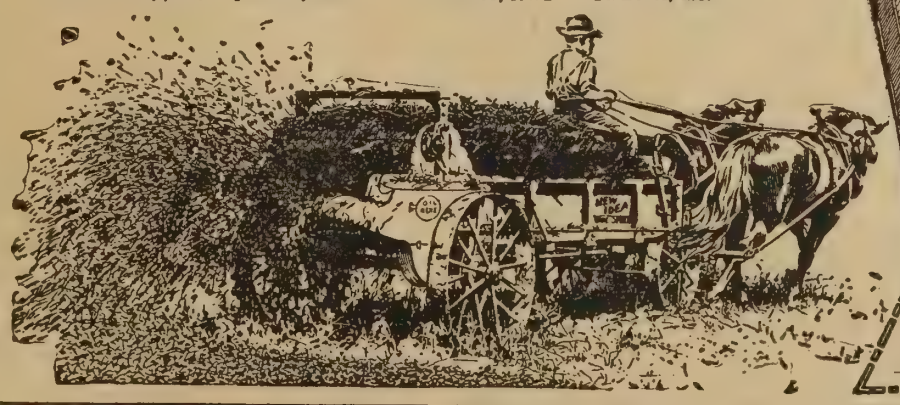
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The Farmer and His Hired Man

(Continued from page 735)

even be sued successfully if he quits under such circumstances. The equality, however, is not actual in many cases, because on the one hand the laborer often cannot quit because he must have a job, and because on the other hand the punishment for breaking a contract does not reach a laborer except in the rare cases where he has unexempted property. These two inequalities need providing for in some way before the labor problem can be said to be solved from a legal point of view. If not, when labor is growing scarce, as in agriculture at present, laborers will be free to quit when the fancy takes them, and during hard times they will have to cling to their jobs no matter what injustice is done them.

Farmers and other employers nowadays frequently try to arrange for payment of the damages in advance in case a laborer quits before his time is out. One method is to pay the laborer a bonus if he stays out his time, or one wage if he stays part of his time and a larger wage if he stays full time. Such bargains have good legal standing. Another bargain frequently made provides a certain wage "if the laborer stays until his time is out," and nothing is said as to what he will get if he does not stay. Such bargains are bad, because the laborer is entitled to the going wage for what time he does put in under such a bargain, and, furthermore, the courts will give it to him. Such a bargain amounts to no wage having been agreed upon in advance in case a laborer quits.

Matters of Duty

If farmer and hired man are to prosper together, they must do much more than live up to the letter of the law. They have duties to each other as brother men.

1. Hired men must use with justice their right to quit a job when they will, and farmers similarly their right to discharge a man when they will. "I have seen a hundred men fired," said one hired man, "and never one of them was given more than time enough to pack up his clothes and git." Freedom of action presupposes common sense and justice in using it, and if men do not seem to possess it, the only remedy lies in more laws and more restrictions.

2. Hired men and farmers are in duty bound to consider each other's welfare. The farmer should be interested in the hired man's future. He should help him to save his money, to become a first-class farmer, and to get started for himself as soon as possible. The hired man, on the other hand, should be willing to work as hard to save a load of hay as his employer.

3. The farmer will find it best to treat his hired man as an equal. All men are not equal in many ways, in intelligence, in knowledge, in wealth, and in experience. Consequently laws sometimes have to be made to protect the weaker members of society. But meeting as man to man in the everyday affairs of life, on the street as preacher, bricklayer or merchant, on the farm as farmer and hired man, they all expect to have their rights and their personalities respected. No matter how unfortunate in their lives, few persons are without some spark of pride of self. Those things which make up their own selves they hold sacred, and no man shall trample on them and not be cursed for it. The employer who so misuses an employee need not expect his good will and co-operation.

Fair Dealing

An important rule for dealing with hired men is to be careful not to hurt their self-respect. This rules out such practices as these:

Swearing at hired men or calling them abusive names.

Ridiculing them. Sarcasm cuts deepest of all.

Dictating to them on all occasions, instead of leaving as much as possible to their judgment. Instructions must be given respectfully, and the fewer orders given the better. The main job of the manager is to lay out the work for the day and then assign to each workman the part which he is to do.

Talking about their faults and mistakes with the neighbors.

Letting the women folks help do the bossing.

Giving the hired men all the menial or unpleasant tasks, such as waiting upon members of the family. The time is far past when a farmer can safely sit in the house in nasty weather while the hired man husks corn or splits wood. The farmer who plays fair, however, usually finds hired men willing to do their share of anything.

"Calling them down" for their mistakes, instead of explaining to them what is wanted. A good man is sensitive about his mistakes, and a wise employer respects his feelings. Cor-



OAK PARK VENUS, JERSEY COW OWNED BY UNIVERSITY OF BRITISH COLUMBIA

As a 4-year-old she produced 12,579 lbs. milk, 630 lbs. fat. This gives her rating as the second highest producing Jersey of that age in Canada.

rections should be made quietly and in the form of off-hand suggestions, if possible.

Making them live in servant quarters, kitchens, or the like.

Patronizing them. This is unconscious most of the time. When an employer feels himself of superior clay, he can hardly keep it out of his manner and his voice. Others patronize by trying too hard to please the hired man, making too much fuss over him, all of which makes him decidedly uncomfortable. All that is needed is a simple, frank, natural manner, like that of two neighbors talking over crops together.

A Reasonable Farm Day

Many farmers are today managing on an 11½-hour workday in summer and a 10-hour day in winter. Still more are getting along on 12 hours in summer and 10½ hours in winter. Few people who understand farm conditions will object to 11½ hours or even 12 hours in summer.

Following is the way in which one farmer breaks up 11½ hours of work in summer:

5:00— 6:30	Milking and chores.
6:30— 7:30	Breakfast.
7:00—12:00	Field work.
12:00— 1:00	Dinner and "nooning".
1:00— 5:00	Field work.
5:00— 6:00	Milking and chores.
6:00— 6:30	Supper.

This division of the day gives 9 hours for field work, 2½ hours for chores, and 2 hours for meals. Milking comes at the same time night and morning. It gives 2½ hours in the evening for rest and recreation and allows 8 hours sleep before 5 o'clock the next morning. The 9 hours for field work will seem short to many farmers, and undoubtedly the teams ought to work longer hours at busy periods. Chores and milking are done in less time on many farms, and on others the teams are kept in the field 9½ hours a day by having family help do more of the chores. Many things are to be said in favor of milking before supper, although it is not the usual practice.

Pacific International Has Record Entries

HOARD'S DAIRYMAN:—The outstanding division of the Pacific International Livestock Exposition to be held at North Portland November 13—20, will be the big dairy section in which there will be nearly a thousand animals in the various breeds. Definite assurances that the coming show will be the largest and most important event of its kind ever staged west of Chicago are given by the official entry books which closed with an average of 60 per cent over last year in all breeding classes. In the dairy division the increase runs even higher.

The leading section of the dairy division will be that of the Jersey classes, in which 325 head from the finest herds throughout Western Canada, the Pacific Slope, and Intermountain states, have been listed. Few fairs have been able to report Jersey sections of this size, and the Pacific International's showing will probably be one of the largest ever assembled anywhere in the United States.

The Holstein breed will have almost equally as large a showing as the Jerseys, 280 animals in this class having been entered, including a goodly number of world champions and entries from Holstein herds nationally famous. The Northwestern states will make a strong showing in this breed, although there will be competition from California and British Columbia.

The increasing popularity of the Guernsey breed in the west is indicated by the substantial showing of entries in this breed, totalling 153. Washington and California will give Oregon strong competition in this section.

The Ayrshire breed, which was represented by only three or four animals last year has come to the front with exhibits, and this section will include some very fine entries. In addition to the dairy breeds, there will be upward of 60 milking Shorthorns and a considerable number of Red Polls, these dual-purpose breeds, however, being properly listed with the beef breeds.

"We are going to have a notable dairy department this year," said Mr. Plummer the other day. "The dairy division will really be a show within a show. Taken in its entirety, the tenth annual Pacific International will be a record-breaker, and in each section there has been a remarkable growth since last year. We are particularly gratified by the splendid showing in the dairy division."

Oregon E. K. HILL.

Much soil fertility is lost every winter by soil washing or erosion. Put a stop to it by keeping the hilly lands in sod, planting a cover crop, providing underdrainage, filling the gullies with brush, etc.

Examine Armour's Dairy Feed at your dealer's, or write us for a sample and state in what quantities you usually buy. The Armour dealer will gladly supply you with Armour's Stock Feed and Armour's Hog Feed also.



A Secret of Feeding Dairy Cattle

"How many buckets of milk will we carry out for each bag of feed carried in?" men ask when considering Armour's Dairy Feed.

And it's a fair question. On it hinges the secret of successful feeding.

The secret is: Good feed goes the furthest, keeps the cows in the best health and returns the most milk for the money invested. Just as highest grade gasoline gives the most miles per gallon.

Armour's Dairy Feed is complete and may be fed alone as a concentrate with silage and roughage. Or it may be used in mixtures.

It gets the results because every element needed in milk production is present. Few dairymen who use it ever change. A test will convince you.

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CHICAGO, U.S.A.



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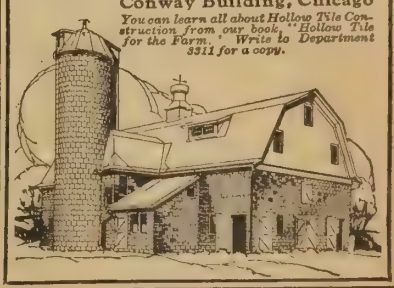
Every consideration favors Hollow Tile as a building material for homes and all farm buildings. It is fire resistive and enduring—will last as long as the farm—and never requires painting. Made of burned clay, it will not decay. Buildings keep their value.

Hollow Tile is quickly and economically erected. The large units are easy to handle and lay. The first cost, which is relatively the same as good frame construction, is the last cost.

The air cells keep out dampness, protect your supplies, and insulate against the heat of summer and the cold of winter. To build of Hollow Tile will not only save you money but will increase the profits from your farm.

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You can learn all about Hollow Tile Construction from our book, "Hollow Tile for the Farm." Write to Department 3311 for a copy.



An Answer to Pooling Objections

H. H. LYON, NEW YORK

THE so-called pooling contract, whereby New York dairy farmers hope to provide a method of obtaining fair prices without resort to the "strike", is a strong contract. If it were not it would be useless. It has been assailed by two parties commonly, those with ulterior motives and those who have not gone into it with a real desire to know what it means and provides. To the former class we have nothing to say. There are, however, honest people who object conscientiously. No one can compel these to get in real touch with the facts but some facts can be made known and conscientious people can be urged to fully consider.

So far as the writer knows there are but two points where honest objection is made. One of these is in relation to a clause which blocks any obstructionist from tying up the finances of the organization by means of injunctions "except in case of fraud". Remember that any fraudulent act opens the way for injunctions and an accounting at once. Our experience with certain dealers causes suspicion that bribery might be used to influence some farmer to get the injunction. Under the contract this will be difficult to accomplish. At the same time the state law compels an accounting by an actuary at frequent intervals. Safety is thus maintained.

The other item of criticism that is made much of by those without sufficient vision to take a fair look into the real merits of the plan is that of members liability. No one can do business without assuming risks, or at least should not be allowed to. Suppose that a stock company were formed as was the case when our farmers purchased the creamery in our town. Some of the farmers took stock to the extent of five hundred dollars at least. Should there be serious mismanagement in the affairs of this company, or even in the affairs of a bank or other corporation, as an illustration, the stockholders might lose the money thus invested. This is sound business form. In addition to that loss, in the case of a bank an additional sum equal to the stock held can be called for and collected. No one has doubt of the soundness of this plan.

Under the membership corporation where co-operators form the company there is no stock at all and liability is secured in another way, for liability there must be. Suppose that a farmer has twenty cows and that he sells 100,000 pounds of milk a year or an average of 8,500 pounds a month. This might bring $250 a month or $500 for two months. The pay for this milk would go to the co-operative headquarters and be apportioned from all dairymen to the members in proportion to the milk furnished and according to its quality. Payments are to be made on the 25th of each month for the previous month as is now commonly done. Scarcely $500 could be held by the association at any time from our twenty-cow farmer.

The next necessary step in proving heavy losses would be to place, by hook or crook, in control of the management a board of twenty-four directors, the biggest lunkheads in all creation or the same number of the smartest crooks that this world affords. No half way board of either sort can wreck the institution without being found out long before any material damage could be accomplished. The board of directors is chosen by farmers themselves by direct vote from their own number, and if you could see together the delegates of the several Leagues you would be ready to bet your bottom dollar that they will not get any such men in the directorate. They vote in county units for the men whom they know and trust and they are as cautious in selecting the men to handle their property as you are in selecting directors or a cashier of your bank. It is also one man, one vote proposition and a little group of stockholders cannot elect directors. It takes many men, not much money to do it.

But if the blockheads get a-going as directors and wreck the whole institution and none of the 87,000 farmers who did the electing get wise to the incompetency of their representatives in time to call a halt and things go to tobogganing to "bungy", what about our farmer with $500 in the hands of the bonded representatives? Whether it be from foolishness or trickery the bonding company must make up the loss to the extent of double the amount of money handled. It is difficult to imagine a condition where that $500 could be jeopardized. The writer is no lawyer and can be trapped in legal phraseology, but it seems impossible to get a different view of this situation. It is the safest and sanest proposition going.

Let us imagine that there is some way by which that $500 can be held. The farmer loses it, how it can be done one cannot guess. Then says the extremest, he is liable for all else that he has. How so? It is provided that if he breaks his contract he forfeits ten dollars a cow for the first month. That is $200. Do you imagine that the forfeiture can be collected under the fraudulent transaction that brings the above mentioned destruction of the organization? If so, then there is a possible $3 a month more that can be collected perhaps for six months. The whole thing might amount to a thousand dollars just as though he had $500 in stock in the bank that went to pieces with nothing to collect from the wreckage. It would be serious and the wrecking of a bank would also. But it looks far less likely to happen in the case of the co-operative than in the case of a national bank, and certainly less so than in the case of a railroad or a manufacturing or mercantile business. Very little is done except to distribute the proceeds of the sale of milk although there are certain few things that the directors are expected to do in addition. Not, however, to the extent of investing or directing the whole amount of money collected. Most of the whole proposition is purely clerical.

Then we are told that this organization which we control is going about to buy or erect and equip plants all over the country and it will mean an enormous investment and will have to be paid for from the general fund. Well, if you think so, you read the dealer's propaganda closer than your own, and that is something very few men did. If you did it I am ashamed of you. Plants there will be and the more the better if necessary. When a locality wants one they go at it and raise the money just as the farmers in our town did in July, 1918. No difference there. It will be local money that procures local plants and the more of these the better for organization if they are properly placed and economically acquired.

Yes, there is one exception to this. In some locality there is need of a condensery or some other manufacturing plant in order to take care of surplus milk and provide relief for the whole membership, with a certain number of these there will be no surplus of milk on the fluid market. These are for the benefit of the whole organization and they cost heavily. In this case the local people raise what is needed for the usual sort of a plant and the general membership will help with the remainder. One cannot say just what that amount can be but for the 87,000 dairymen it is not large. A million dollars could hardly exceed three or five cents a hundred on the milk for a year. All this you get back in interest bearing certificates due within five years.

Minnesota Holstein Breeders Hold Successful Sale

The Minnesota Holstein Breeders' Second Foundation Breeders' Sale was held at the State Fair grounds October 28-29, at a time when pessimism seemed to rule the Holstein market.

In the face of such an unfavorable condition the breeders went ahead with their sale, consigned good cattle and advertised extensively. The results, 113 animals sold for a $595 average, justified their efforts. It was, we believe, the most successful sale this fall and while those same 113 head might have brought more than $67,260 a year ago, it was in the main a sale with fair prices and certainly one with very satisfied buyers.

The E. C. Schroeder consignment of 9 head averaged $1,136 with Mr. Hackney's much larger consignment, 35 animals, in second place at an $870 average. Eight head from Arden Farms sired by either "Count" or "Piebe" averaged well over $1,000.

To these same two breeders belong the honor of consigning the highest priced bull and female. Colonel Glen Ormsby, a 2-month-old son of S. P. O. M. 41st and from Glen Canary De Kol, 34-lb. cow, topped the sale at $2,600. He was consigned by the E. C. Schroeder Farms and purchased by R. M. Jenks of Wisconsin. Hurd's Princess Korndyke, a 30-lb. granddaughter of Sir Veeman Hengerveld in calf to King Segis Pontiac Count, was the highest priced female at $2,500. She was consigned by J. M. Hackney and purchased by L. J. Smith of Iowa.

Mack, Krause, and Gue did the selling with Sec. B. D. Scott in the box. The sale was under the management of the state association.

Following is a list of all animals, selling for $500 or more, and buyers of the same:

A. B. Rayburn, Minnesota	
Harriett Pauline Segis	$1,200
J. B. Irwin, Minnesota	
Segis Pontiac Johanna Ormsby	$750
Queen Piebe Korndyke Ormsby	1,325
A. T. Boutin, Wisconsin	
Netherland Homestead Johanna	$1,000
Gracia Johanna Segis of Cedarside	600
Piebe Johanna Homestead	785
Grace Homestead De Kol Burke 2d	820
Lady Elenore Pontiac	510
Sir Ormsby Akkreummer Hengerveld 2d	1,025
Emblagaard Colantha Cloverdale 2d	565
Gage & Kurtz, South Dakota	
Piebe De Kol Homestead	$700
Aaggie Wayne Pauline De Kol 2d	1,025
King Johanna Fayne Homestead	550
Harry G. Cox, Minnesota	
Eureka Segis Burton De Kol	$1,000
Eureka Segis Corabel	675
Ormsby Langtry Segis Korndyke	1,190
Ida Beets Segis Johanna	775
Sir Veeman Wayne Homestead	1,375
Jenny Wren Colantha Ormsby	1,400
H. C. Johnson, Minnesota	
Miss Johanna Ormsby Hengerveld	$800
North Star Prilly Oak	550
Reka Korndyke of Springdale	500
R. M. Jenks, Wisconsin	
Queen Homestead Pontiac Segis	$1,200
Novelty Beauty	575
Colonel Glen Ormsby	2,600
W. E. Cook, Wisconsin	
Johanna Segis Homestead	$1,100
Madison Elizabeth 2d	700
Oak De Kol Walker	705
Miss Ormsby Akkrummer Haidee	1,225
Mercedes Zora Johanna	2,000
E. T. Winship, Minnesota	
Eureka Buckeye Segis	$600
Miss Inka Ormsby Natsey	500
J. D. Salisbury, Minnesota	
King Korndyke Pontiac Lass Ina	$1,200
King Korndyke Pontiac Lass Flora	925
Jean Du Luth Farms, Minnesota	
Bonheur Posch Champion	$825
Dr. H. P. Fischer, Minnesota	
Edenvale Nellie Ormsby 2d	$1,500
L. J. Smith, Iowa	
Hurd's Princess Korndyke	$2,500
Gruel & Nolte, Indiana	
Sir Veeman Pontiac Korndyke	$2,050
B. D. Scott, Minnesota	
Sir Veeman Walker Pontiac Segis	$780
Chris. Peterson, Minnesota	
Rose Clothilde Elsie De Kol 2d	$575
Winona Tryntje De Kol 2d	510
Lilith Korndyke Walker	500
Wm. W. Swoden, Minnesota	
Lady Rhoda Korndyke Cornucopia	$800
Grahamholm Colantha Elcey Aaggie	500
J. T. Peltz, Minnesota	
Nannetto Pontiac Ormsby	$700
Lady Artis Glenna Jessie	900
Mustinka Beauty Ormsby	1,340
H. E. Bailey, Wisconsin	
Bess Ormsby	$1,300
T. H. Skrei, Minnesota	
Jenny Wren Pietertje 2d	$1,000
St. Olaf College, Minnesota	
Isabella Pietje Segis	$600
Wisconsin State Normal, Wisconsin	
Highland Pietertje Clothilde	$610
N. C. Johnson, Minnesota	
De Kol Akkrummer Ormsby	$540

Wisconsin Holstein Breeders to Meet

Wisconsin Holstein breeders are asked to meet at luncheon Nov. 26 at the Republican Hotel, Milwaukee, to discuss county sales, county activities in the future, state association memberships and activities, and the state sale. County association presidents and secretaries, sale managers, and all interested breeders should plan to be there. Luncheon reservations should be secured from the secretary's office at Madison.

L. L. OLDHAM, Sec.

CONTENTS

Top Dressing Helps to Grow Good Pastures 734
New Junior Two-year-old Jersey Champion of Virginia - - - - - - 734
The Dairy Optimist - - - - - - 734
Saving His Nose - - - - - - 735
The Farmer and His Hired Man - - 735
Every Grower Receives the Same Price - 736
Uncle Sam's Hired Men Who Serve You - 737
Tom's New Suit - - - - - - 737
Washington, D. C., Weekly News - - 738
Bran Still too High - - - - - - 738
To Dr. S. M. Babcock on His 77th Birthday - - - - - - - - 739
$850 to Missouri Juniors - - - - 740
Texas Cows to Germany - - - - - 740
Jersey Yearling "Comes Back" - - - 740
Iowa Dairy Council at the Fairs - 741
Handling Stray Bulls - - - - 741
Jones & McKerrow Sale Averages $1,024 742
Guernsey Breeders Organize - - 742
1920 National Dairymen's Sale - - 743
Dairying Thirty Years Ago - - - 744
There is Little Loss from Sorghum Poisoning - - - - - - - - 744
October Condensery Prices - - - 745
Sorghum Poisoning - - - 746
Limiting Production - - - 746
Importance of Ventilation - - - 746
Stick to the League - - - - 746
Fixing Prices - - - - - - 746
Bordeaux Mixture - - - - - 747
Wages for Buttermakers - - - - 747
Cleaning Test Bottles - - - - 747
Moving Pea Vine Silage - - - - 747
The Storage of Manure - - - - 747
Washington Dairy Notes - - - 748
Tainted Milk - - - 749
Pacific International Has Record Entries 751
An Answer to Pooling Objections - - 752
Minnesota Holstein Breeders Hold Successful Sale - - - - - - - 752
Wisconsin Holstein Breeders Meet - - 752
Dairy Clouds in Canada - - - - 753
Anti-League Propaganda - - - - 753
Ayrshire Advanced Registry - - - 754
They Step Across the County Line - - 756
Current Feed and Hay Prices - - 756
Hunziker Revises Book - - - - 756
Pea Growers Busy - - - - - 756
Farmers Disagree at Conference - - - 760
Butter Recovers Sharply from Recent Slump - - - - - - - 760
Butter Prices for October - - - 760
Holstein Campaign in New England - - 761
Illinois Holsteins Sell Well in Lake Co. Sale 761
Mrs. Green Manages Texas Jersey Sale - - 761
Cheese Prices for October - - - - 761
Broadening Out - - - - - - 762
Junior Letters - - - - - - - 763
Price Reductions Expected on Cheese Markets - - - - - - - 765
Veterinary—Pygometra—Worms—Swelling 766
The Disciplined Life - - - 766
Hog Cholera Fakery - - - 768
Illinois Holstein-Friesian Association Officers - - - - - - - 768
Leaves Aid in Garden Fertility - - 769
New York Butter Market - - - 772
Bulletins of the Week - - - 773

Coming Events

Farmers' National Congress, November 16 to 19, at Columbus, Ohio. A. P. Sandles, Sec., Columbus, Ohio.

Dec. 9-11, 1920—International Farm Congress meets at Kansas City, Mo.

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

Dairy Clouds in Canada

HOARD'S DAIRYMAN:—When last I wrote to Hoard's Dairyman a few short weeks ago there were no clouds on the dairymen's horizon. Now there is not much of anything else. Developments here have been similar to those in the United States. In my last notes I mentioned that the Toronto producers had contracted their winter milk at $3.25 per eight gallon can (80 lbs.). The new price was already in effect when our Board of Commerce, now practically defunct, stepped in and demanded that the price revert to the August level till the Board could investigate. Through representations of the National Dairy Council of Canada, this order was withdrawn but an investigation was conducted. At the hearing the producers had the advantage of the results of a survey just completed in the territory from which the bulk of the Toronto milk supply comes. This evidence, presented by Mr. E. S. Archibald of the Ontario Milk Commission, fully justified the price asked and the Board agreed to let the producers alone till the end of the present year. The producers won a great victory through having a strong organization and dependable evidence.

And then, like a bolt from the blue, came the announcement that the powdered milk factories in Western Ontario would not accept any more milk for powdering after September 18. This is an important industry and with just four days' notice the patrons have good cause for complaint. The company was willing to accept all milk brought to them and make it into butter at a charge of five cents a pound. During the last half of September the farmers got $2.16 per cwt. for 3.5 milk on this basis. They also got the skimmilk, but as few of these farmers have hogs the skimmilk was almost valueless to them. Following on this one large Borden condensery at Huntingdon, Quebec, closed and the other condenseries all over the country announced a decrease in output of 20 per cent. At the same time the cheese and butter markets, due to the fall in value of English exchange and weakness at New York where some of our best butter had been going, further weakened the milk market. The powder factories are located in territory that is easily reached from Toronto and this surplus of milk endangered the Toronto market.

The Toronto producers have just held a meeting (Oct. 28) and unanimously decided to reduce the price of November milk from $3.25 a can to $2.90 a can. This action will go far to convince the consuming public that the producers desire to be fair. It will also stabilize the market for a time at least. In the meantime the farmers are coming to recognize that better organization is needed and that they made a mistake in allowing their cheese factories to go out of business when the powdered milk factories and condenseries came in. The value of an alternative market in the control of the farmer himself was never so well demonstrated.

The bright side of the picture is the falling quotations on feeds. Bran has dropped $16 a ton in the month. Oats are selling around 70 cents and other home grown grains in like proportion. Corn is selling lower than for years at $1.16 on track, Toronto. The fly in the ointment for many producers is that when the city milk prices were set in August, they went ahead and laid in large supplies of feed at the prices that then prevailed. They also argue, and with justice, that winter prices for some years past have been set on a rising market and they were "in the hole" before spring. Now, when the market favors them, they feel that they should be given the advantage of it. It is questionable, however, if the market could have been sustained in view of the surplus of milk in the country. At Montreal, on the other hand, where there are no powder factories in the district, the winter producers are largely city shippers and there has been no move as yet to reduce the price.

The British Ministry of Food has cabled an offer of 47 cents a pound for best creamery butter. This is several cents below our quotations but the offer has weakened the market. Were the surplus on hand cleared away there would be an improved tone all round. In the meantime the producers are wondering what will come next. They are wondering, too, when the prices of other commodities are going to commence to decline in proportion to their own.

Ontario. F. E. ELLIS.

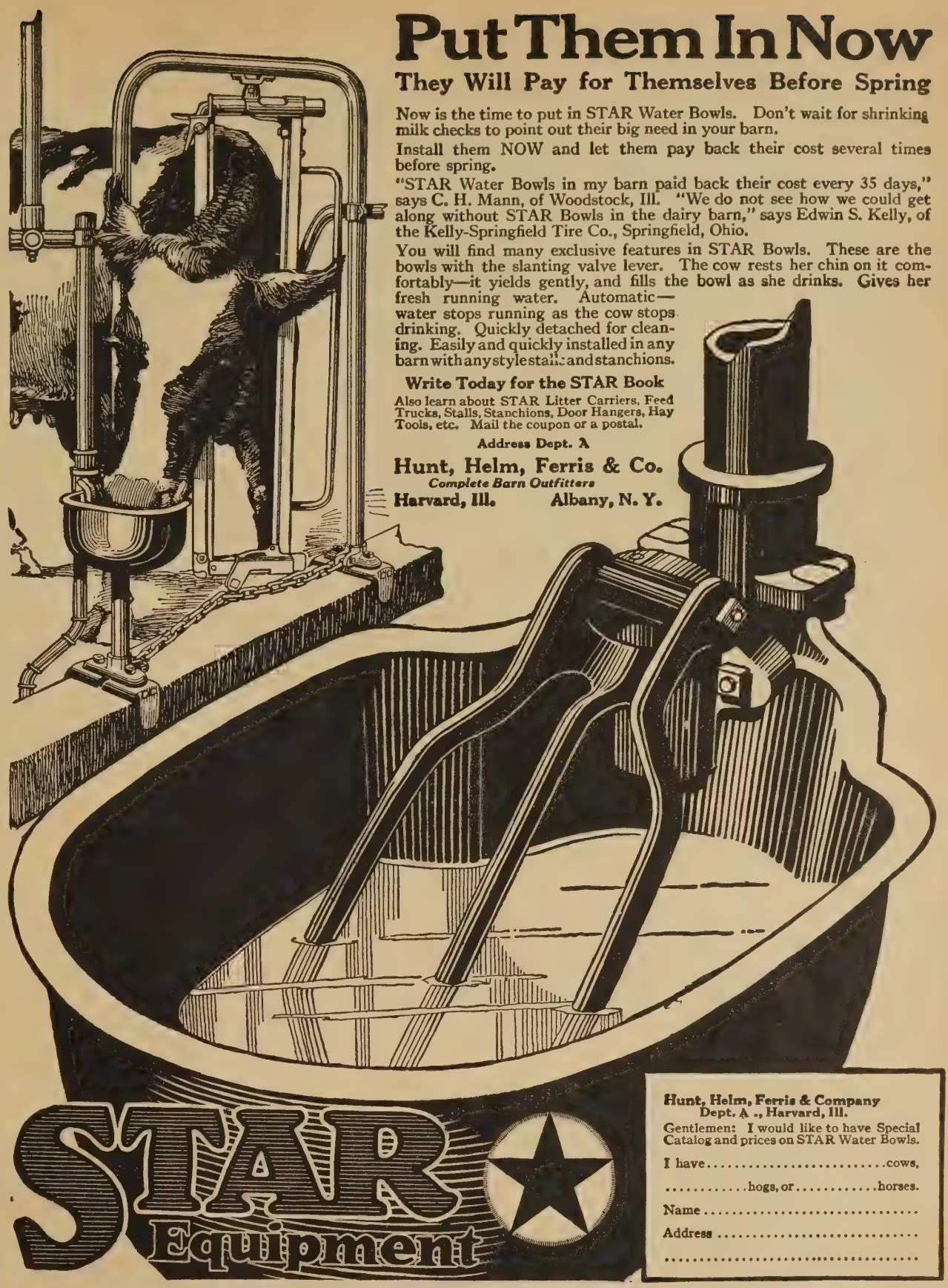
Anti-league Propaganda

HOARD'S DAIRYMAN:—Volumes of literature are being circulated by the New York milk dealers and advertisements are carried in local and agricultural papers at great expense. It is propaganda to prevent the securing of signatures to the pooling contracts for the co-operative association that the League has under promotion. It seems to have little direct influence on farmers. Those who read and think are little affected by it except to be annoyed and made more antagonistic to the dealers.

It has seemed to me that this is doing no real harm, but we find that indirectly it may be. Townspeople are getting the dealer's side of the matter and by talk they seem to be influencing some of our farmers. Possibly that has been the intent all along, for banks and dealers have had the same dope and some in addition. We find that some local merchants are taking up the misrepresentation by the milk dealers and spreading it among the farmers. This is unfortunate.

New York. H. H. LYON.

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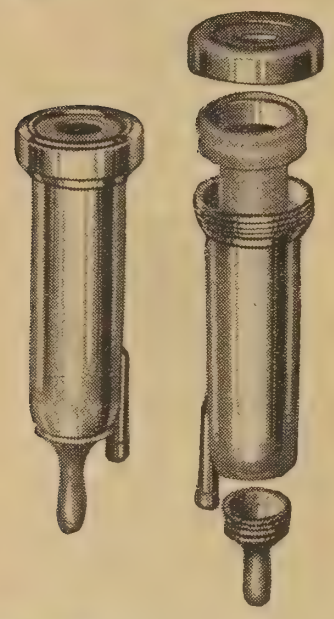
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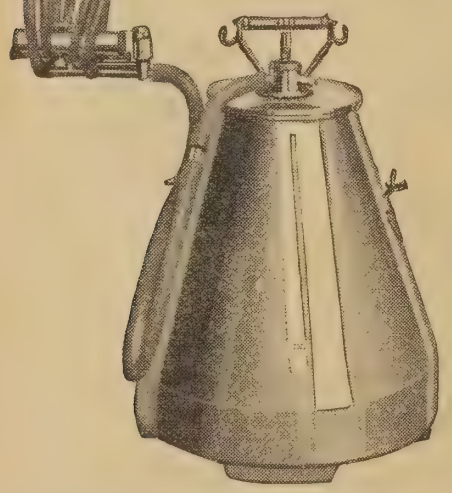
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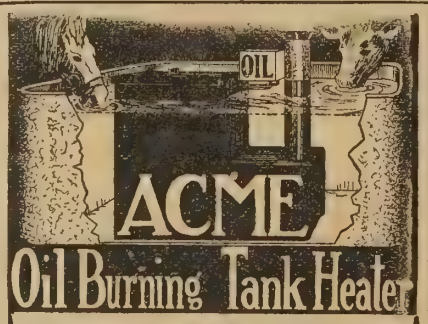
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Extensively developed dairy cattle and hog farm. Twenty-five miles from Chicago loop. Fully stocked with fine quality, popularly bred cattle and hogs. Completely equipped with new, modern buildings for raising of pure-bred stock. If interested, write E. A. W., Room 804, 111 W. Monroe St., Chicago.

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The tank heater with the **Improved Burner.** Different from others. **New Features.** No sparks, no smoke, no ashes, no danger from fire, no heat wasted. All heating space under water. Compact convenient and easily handled. Keeps water at even temperature in coldest weather. Made of heavy steel. All seams welded. Fits any wood, steel or concrete tank. Pays for itself first year. Don't buy until you get the facts and price of the Acme. **It's Guaranteed.**

ACME NON-FREEZE Hog Waterers



Made of galvanized iron. Three different styles to choose from. All guaranteed not to freeze. **Live Farmer Agents Wanted.** Write today.

ACME CO., 120 Main St., Washington, Ia.

When writing advertisers please mention Hoard's Dairyman.

Uncle Sam's Hired Men Who Serve You

(Continued from page 737)

ter serving on the general staff abroad.

Greeley's work was performed with distinction, and for it France made him a chevalier of the Legion of Honor, and England awarded him the Distinguished Service Order. After a little more than two years in the army, Greeley returned to take charge of the branch of forest management in the Forest Service, and with the resignation of Colonel Graves as forester in April, 1920, was appointed to succeed him.

Greeley's Duties

The national forests contain 154,658,373 acres of government-owned land and are for the most part in the Rocky Mountains and in the far western states, but there are two in Arkansas, two in Minnesota, one in Florida, and one in Michigan, and a number are being created through land purchases in the White Mountains and Southern Appalachians. One of the things in which Colonel Greeley is deeply interested is to make the recreational features of these forests better known and fully available to the people generally, though, of course, the proper utilization of their timber, ranges, water power, and other material resources bulks larger from a business standpoint. Another task is keeping down the fire losses—heroic work which each summer puts the whole organization, from chief forester to the last ranger and forest guard, to its greatest test.

It is also the duty of the Forest Service to make sure that the grazing facilities of the forests are properly utilized. Today the forests furnish range for approximately 2,375,000 cattle and horses and 8,500,000 sheep and goats. Then, too, there are the watersheds for some 1,200 cities and towns which lie largely or wholly within the national forests and which must be guarded against contamination or despoilation. A further duty is that of scientific research to find out how to make better use of all our forests and of the timber and other forest products which they yield.

Appalling Timber Consumption

Even more important, in many respects, is the timber business of the forests. The total saw timber stand on these tracts is estimated at 500 billion board feet, and the yearly cut for all purposes is over 800 million board feet. As the ripe timber is harvested new growth takes its place, and if protected from fire will in due time furnish another harvest. But this is not true of our privately owned forests. The cut of government owned timber is trifling in comparison with the average annual cut and loss, estimated at 26 billion cubic feet, for the entire country.

This condition justifies the utmost concern on the part of all whose interests will be affected by timber scarcity, and that means the whole nation. Only one-fifth of our original virgin forest area is left in this country, while on all our forest lands, private and public, we are growing less than one-fourth the amount of timber annually consumed.

"I want to make the national forests of greater national service," is the way Colonel Greeley sums up his task. "I have seen how these great tracts can serve both material and recreational needs, and I want to raise this service to the maximum. At the same time we propose in every way possible to bring home to the people the need for a sane conservation policy with respect to private forests, for if the nation fails to call a halt on forest devastation, it will pay a terrible price!"

Ayrshire Advanced Registry

During the past quarter year one hundred and eighteen Ayrshire Advanced Registry records have been completed averaging 10,779 lbs. milk, 432.01 lbs. fat. Forty-six of these are by mature cows and average 11,897 lbs. milk, 472.72 lbs. fat.

The highest record is that of 21,123 lbs. milk, 741.91 lbs. fat, completed by Voca 5th of Avon owned by W. P. Schanck of New York. In the Roll of Honor Division 15 cows and heifers completed 300-day records of 9,964 lbs. milk, 404.92 lbs. fat. Athalee of Pataskala, owned by W. A. Stalter of Ohio, led this class with 13,470 lbs. milk, 561.12 lbs. fat.

Uncle Ab says: "I always try to keep my work in front of me; when it gets behind and begins to push me, it gets me worried."



MILK

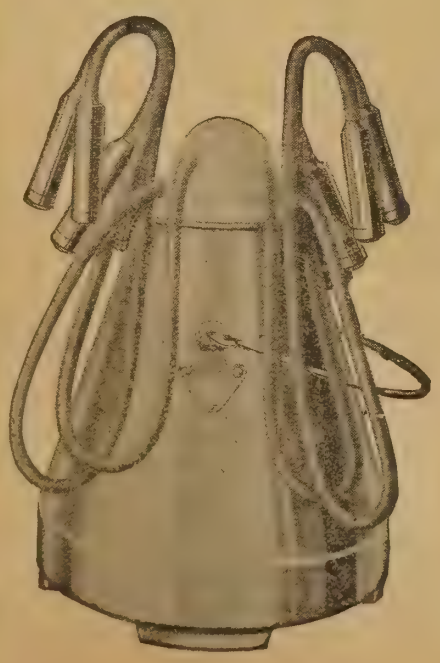
Increasing In Favor As a Beverage

Men are patronizing the soda fountains in increasing numbers since prohibition went into effect. Their preference, in many instances, is for milk.

This greater demand for milk spells greater "opportunity" for the dairyman—absolute assurance that the market will take every quart he produces.

Dairymen, awake to their own interests, are increasing their herds and adding milking machines to their equipment.

The milking machine enables one person to milk three times as many cows as he can milk by hand. Milking machines that assure the highest grade of milk are equipped with



WEAR-EVER ALUMINUM TRADE MARK



The ear for the bail on the "Wear-Ever" Pail is so constructed that the bail cannot possibly fall flat against the side of the pail. As a result the bail is always held about an inch away from the side insuring a quick and easy grip.

"Wear-Ever"

Aluminum Milk Pails

The **"Wear-Ever"** pail is made *Seamless* from solid sheet aluminum. No crevices in which bacteria can lodge. *Cannot Rust*—cannot chip.

"Wear-Ever" Aluminum Pails ars easy to keep clean, are light in weight, durable; need no tinning.

Made of the same metal and in the same factory and bear the same trademark as the millions of **"Wear-Ever"** aluminum cooking utensils used in American homes.

The Aluminum Cooking Utensil Company
New Kensington, Pa.

In Canada **"Wear-Ever"** utensils are made by Northern Aluminum Company, Limited, Toronto, Ont.

They Step Across the County Line

A. J. CRAMER, WISCONSIN

ON October 1 and 2, 1920, a group of thirty-five dairymen representing the Avoca, Barneveld, and Dodgeville Cow Testing Associations in Iowa County, Wisconsin, made an auto tour through Green County. The purpose of the tour was to learn what members in the Monticello Cow Testing Association are doing in the way of care, feeding, and management of their dairy cattle and farms.

The Baltz Hoesley Holstein Farm was first visited, where Professor G. C. Humphrey of the College of Agriculture conducted a dairy cow judging demonstration. Each visitor made his choice of three animals from the group of seven cows. Professor Humphrey then chose the three outstanding individuals in the group giving his reasons for making the choice. Mr. Harold Schindel, field secretary for the Green County Holstein-Friesian Breeders' Association, led the way to the Stauffacker Bros. Holstein Farm, their herd numbering 75 milking cows, the largest milking herd in the Monticello Association. The milk truck on this farm hauls on an average of a ton of milk to the condensery each day.

The largest Brown Swiss herd in the Middle West, owned by Jake Voegli & Sons, was an interesting sight. Mr. Jake Voegli, Sr., explained what kindness means in a dairy herd. Each animal could be approached and handled out in the open pasture.

On the Pierce Bros. farm we saw the Holstein bull that won the grand champion prize at the Green County Fair this fall. The largest Holstein cow in Green County, weighing 1,700 pounds, was on exhibit at the Fred Marty farm. The largest number of A. R. O. cows on any single farm in the county is owned by Roscoe Smith who told how he began his first official testing last winter. We were escourted by Mrs. Ezra Blumer through her modernly furnished farm home. At this farm we saw a number of uniformly marked calves.

After leaving this farm, we drove to Monroe where a banquet supper was served at one of the leading hotels. Mr. Schindel acted as toastmaster with brief talks by Professor Humphrey; Phil Hudson, the Avoca Banker; Harry Noble, Iowa County's new county agent; and A. J. Cramer, supervisor of cow testing associations.

On Saturday morning we visited the Marty and Gempler combination cheese factory and creamery where several thousand tons of cheese were in storage. An ideal type of show cow was seen on the Herman Gempler Farm. Mr. Henry Barbler showed us his $20,000 Holstein sire. Mr. Fred Schoete favored us by showing his herd of 140 head of Ayrshires, fifty of which were placed on auction sale a few days later.

Following this, we visited the lime demonstration plots on the Green County Farm. Here, Professor L. F. Graber, an alfalfa authority, explained the needs of a soil before alfalfa can be successfully grown on it. An acre field for the first cutting showed a ton more of alfalfa harvested on limed soil as compared with the unlimed plot. After lunch, the visitors started for Iowa County feeling that the visit was well worth their time, and that Green County can no longer be classed as one of the three places where the Babcock is not known, but instead it is growing to be one of the leading dairy cattle counties in the state.



A GROUP OF ENTHUSIASTIC IOWA COUNTY, WISCONSIN, DAIRYMEN VISITING GREEN COUNTY

Current Feed and Hay Prices

Feed and hay prices did not recoup during the week ending October 30, despite the cold weather. The reduction of the differential between flour and wheat for export from 25c to 5c per hundred lbs. caused the re-opening of Nebraska mills, and this with other conditions indicates a large supply of mill feeds.

Quotations on bran are: $30 in Minneapolis, $33 in Chicago, $29 in Kansas City, $39 in Atlanta, and $40 in Baltimore, Philadelphia, and New York. Middlings range from $29 in Minneapolis to $40 in New York.

Cottonseed meal (41 per cent) is quoted at $43 in St. Louis, $47 in Chicago, $48 in Minneapolis and Philadelphia. The 36 per cent meal carries a quotation of $2 to $4 under these prices.

Northeastern markets continue to quote linseed meal at $50 f. o. b. mill. While prices of other feeds have declined 40 to 66% within the last five months, linseed meal has shown a decline of only 18%. Quotations are: $54 in Minneapolis, $56 in Chicago, $60 in St. Louis, and $54 in New York.

Prices of gluten feed at the principal markets range from $42 to $44. Hominy feed declined to $32 in St. Louis, with Chicago quoting $34 and Philadelphia, $41. Domestic beet pulp is quoted unchanged at $52 in northeastern markets, with $41 at Los Angeles, $44 at Chicago, and $48 at Minneapolis.

San Francisco quotes alfalfa meal at $38, rice bran at $36, and cocoanut meal at $30. Brewers dried grains are offered at $45 in Milwaukee.

Reports of the hay market show practically no change from last week. The market is dull and receipts are light. Trend of prices on timothy are generally lower, although some markets showed advances due to light receipts. No. 1 timothy is quoted as follows: $23 in Minneapolis, $31 in Chicago, $35 in Atlanta, $33 in Philadelphia, and $40 in New York. Mixed timothy and clover is from $2 to $6 lower in price, with straight clover about the same.

Alfalfa advanced a dollar a ton in the more important markets, but this was largely due to light receipts. No. 1 alfalfa is quoted at $26 in Kansas City, $22 in Omaha, $30 in Chicago, and $33 in Atlanta.

Hunziker Revises Book

"Condensed Milk and Milk Powder," which has been the standard work on this topic for several years, has just been revised and brought up to date by its author, Professor O. F. Hunziker. Individuals interested in the manufacture of these products or who desire to secure information on them will find this book of the greatest service. The name of the author is in itself sufficient guarantee of its value, and a perusal of the book bears out his reputation as a scientist and practical manufacturing specialist.

The revised edition, the third to be published, represents an entirely new book that contains all that the other contained and much recent information on such subjects as: new methods for cooling and sterilizing, viscosity tests, and further details on the manufacture of powdered milk by different processes. Old processes of manufacture have been modified or superseded, improved equipment has been invented, and the industry has undergone an important evolution.

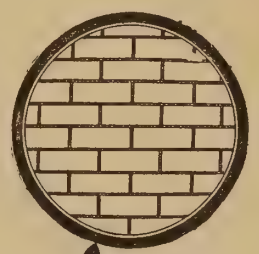
Hoard's Dairyman commends this book to those interested in the subject and will be pleased to supply it upon receipt of its regular price, $5.75.

Pea Growers Busy

At the meeting of pea growers held by the Dodge County, Wisconsin, Farm Bureau at Juneau, Oct. 23rd, it was decided to send a committee of five representative growers to represent the interests of Dodge County farmers at the statewide meeting of pea growers to be held at Madison by the Wisconsin Farm Bureau Federation and the Division of Markets, in the near future. The selection of this committee is to be made by the Dodge County Farm Bureau which will finance the delegation. The growers present, about one hundred strong, from every township in the county, went on record as favoring a State Pea Growers' Association.

Much dissatisfaction was apparent among the growers present, particularly as to prices paid, and grading, time of cutting, quality of seed furnished, and other provisions of the contract, which is drawn in such a way as to protect the canning companies, and letting the growers assume all risks.—Dodge County Farm Bureau.

How Does Your Dairy Score?



Smooth glazed inner wall of Natco Dairy Barn — strictly sanitary

DOES your dairy get a score to be proud of when the inspector calls at your farm? Do you get those *extra* profits awarded for strictly sanitary milk? You *can* get them if your barn is built right—built with

Natco Hollow Tile

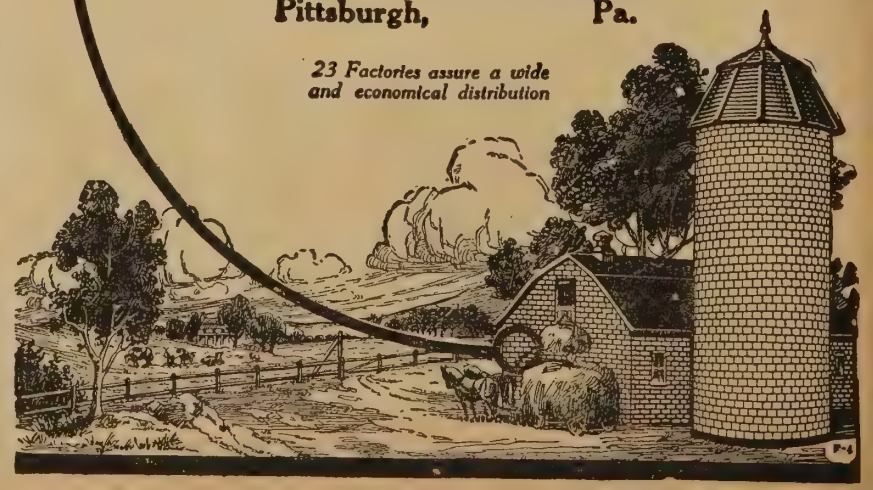
The smooth glazed surface is as easy to keep clean as the household crockery. Germs and vermin find no place to hide; foul odors and filth cannot penetrate. It is easy to produce clean, wholesome milk in Natco Dairy Barns and Milk Houses.

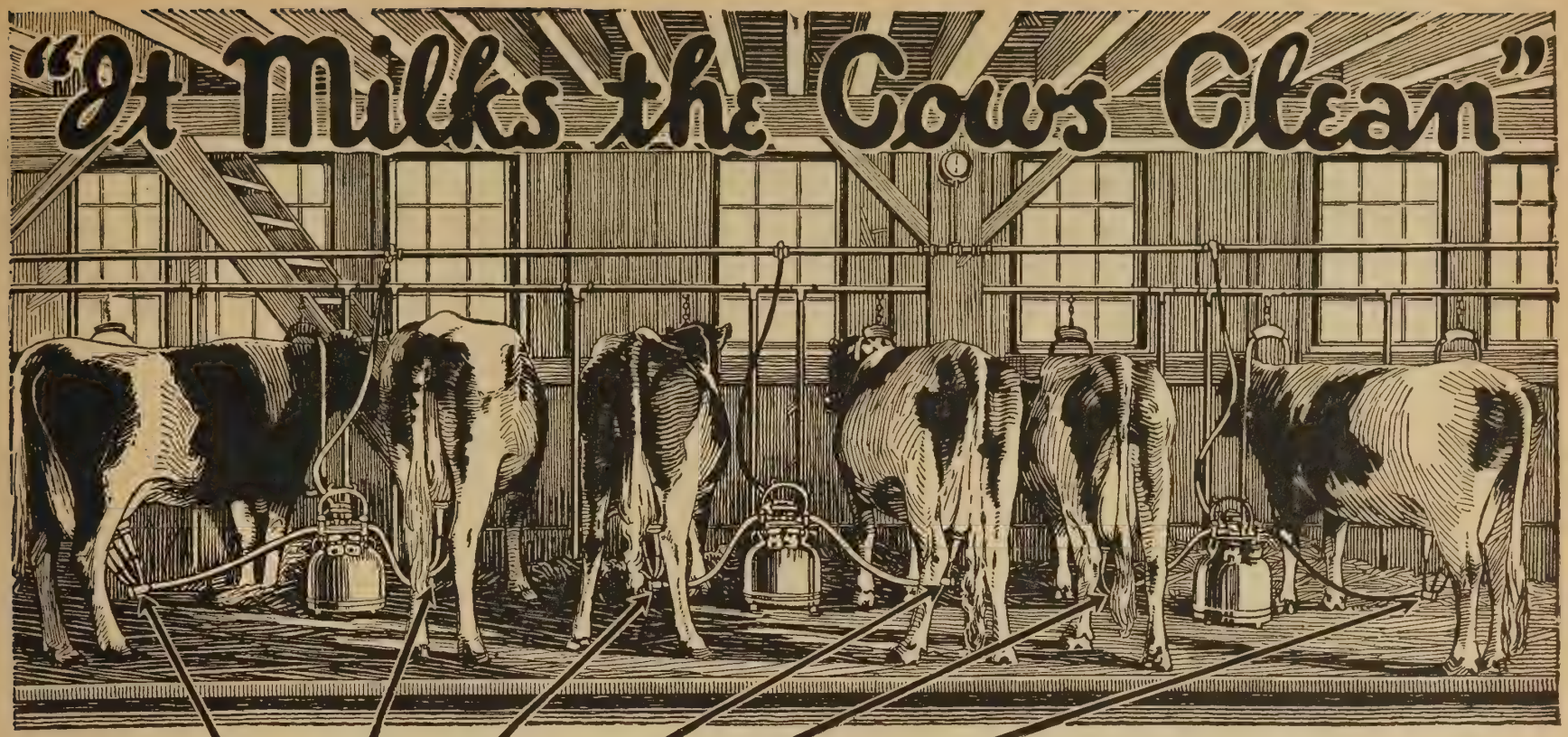
Natco buildings are economical. Once up, they stand for generations, never needing paint and seldom any repairs. First cost is *last* cost.

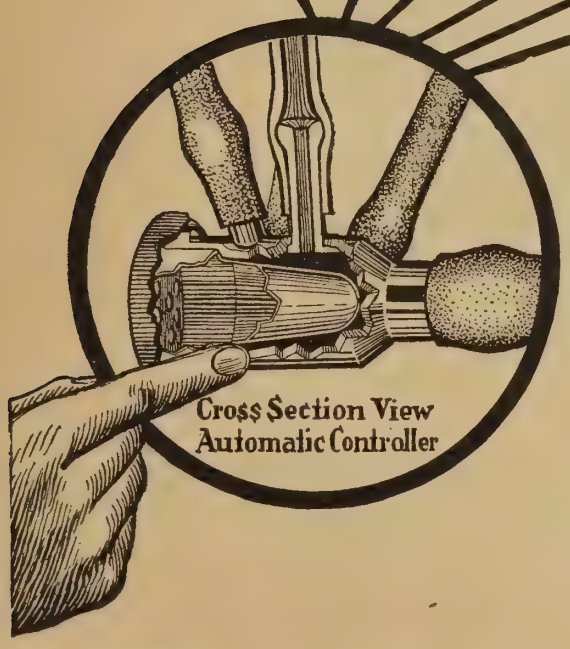
Ask your building supply dealer to figure with you on buildings of Natco Hollow Tile. Write us for free book of suggestions, "Natco on the Farm."

National Fire Proofing Company
1044 Fulton Building
Pittsburgh, Pa.

23 Factories assure a wide and economical distribution







Hard and Easy Milkers Are All the Same to the Burrell

THE Burrell Milker maintains a definite relation between the amount of milk flowing and the amount of suction in the teat cups. With any easy milker or during the main part of the milking, when the milk is flowing freely, the amount of suction is automatically decreased. With a hard milker or at the end of the milking, when milk is flowing less freely, the amount of suction is automatically increased.

The Burrell Automatic Controller is an exclusive Burrell feature. It adapts the strength of the vacuum suck to the needs of the individual cow. By means of its constant air relief, the Automatic Controller regulates the vacuum suck so that when milk is flowing freely there is less suck on the teat and when milk is flowing less freely there is more suck on the teat.

This feature of the Burrell explains why "*It Milks the Cows Clean.*" There are many other advantages which you should know about — among them the Burrell Universal Teat Cup, the Burrell Positive Relief Pulsator, and the Burrell Moisture Trap. All are exclusive Burrell features.

Write today for complete information about the Burrell Milker. Tell us how many cows you have and why you are not already milking by machine. Use the coupon below.

D. H. BURRELL & CO. INC.
Little Falls **New York**

TRADE MARK

BURRELL B-L-K MILKER

(Clip Coupon Here)

D. H. BURRELL & CO., INC., LITTLE FALLS, N. Y.

Gentlemen: I have_____ (number) milking cows. I am not now milking by machine because_____

I want you to send me your booklet and complete information about the Burrell Milker and tell me why "*It Milks the Cows Clean.*" 10

Name_____ P. O._____ State_____

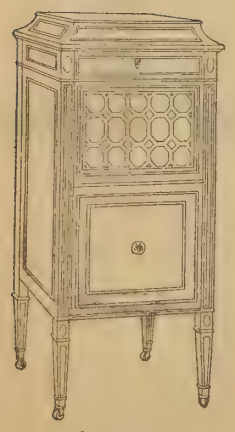


Furniture Making in the days of Queen Elizabeth

Out of the golden

THE search led back across the Atlantic, into the manor-houses of England, the chateaux of France, and the castles of Italy. Here they came to light—the true originals of the period-furniture styles. And Mr. Edison's designers adapted seventeen of these masterpieces for the modern American home.

* * * * * *



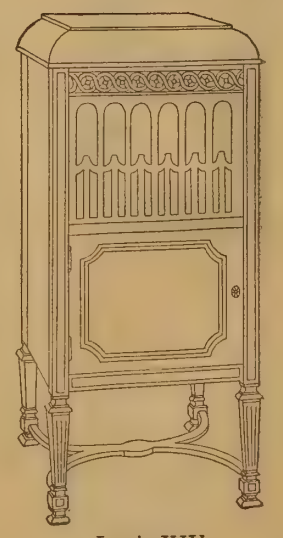
Sheraton

PERIOD FURNITURE is a heritage of the 16th, 17th, and 18th Centuries. The Georges reigned in England, and the Louis ruled in France.

Fine living was the ideal of the day. Men of artistic genius were lionized by fair ladies, and made wealthy through the lavish patronage of kings. Architects conjured up monumental palaces. Landscape artists set them in fairy grounds. Painters illumined their walls with imperishable canvases. Unparalleled designers and craftsmen furnished their interiors.

This era of luxury produced Chippendale, Sheraton, and other masters of the English, French and Italian schools. It brought the cabinet-maker's art to its most exquisite development. It was aptly named "THE GOLDEN AGE OF FURNITURE."

TWO CENTURIES later came a momentous development in music.



Louis XIV

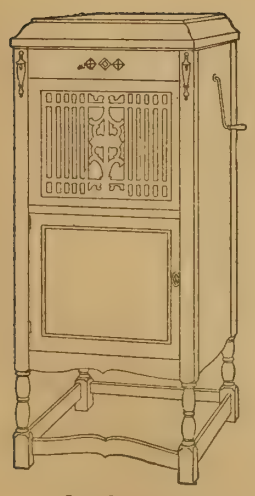
The NEW EDISON *in 17 period cabinets*



The Elizabethan Cabinet adapted by Mr. Edison

age of furniture

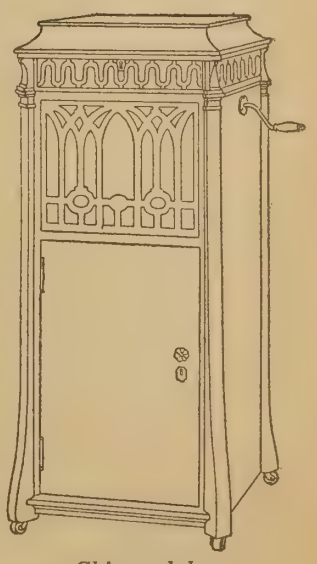
EDISON, the thinker, conceived the vision of an America, whose every home would be blessed with great music,—through a phonograph of SUPREME REALISM. Edison, the inventor, gave three millions of his money and seven years of his time to an exhaustive research—out of which the New Edison was finally evolved. Then commenced those startling tests, by which he proved, through direct comparison, that the New Edison RE-CREATES an artist's performance exactly as the artist himself gives it. More than 4,000 such tests were made with over fifty vocalists and instrumentalists. More than four million people heard them. No one was able to tell the living performance from its RE-CREATION by the New Edison.



Jacobean

THE FAMILY that has an ear for the finer things in music is the family that has an eye for the finer things in furniture. Mr. Edison decided that Edison Cabinets should be patterned after the most exquisite furniture the world has known.

And so the search led back across the Atlantic, into the manor-houses of England, the chateaux of France, and the castles of Italy. Mr. Edison's designers made every Edison Cabinet a period cabinet out of the Golden Age of Furniture.



Chippendale

THOMAS A. EDISON, INC., Orange, N. J.

the phonograph with a soul The NEW EDISON

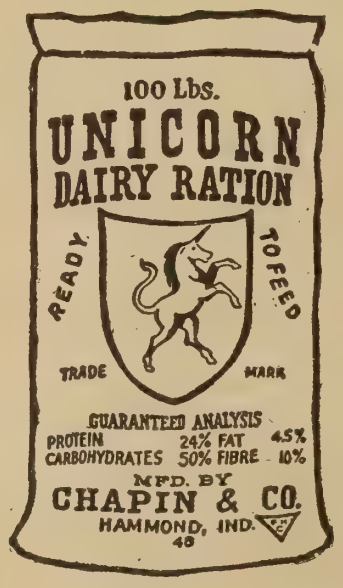
Beef Your Poor Cows Now

Your good cows have been paying the keep of your boarders long enough.

Beef the boarders. Your reduced herd, fed Unicorn, can produce as much as the whole herd did before.

At less cost for feed and roughage.

When your cows freshen, start right by feeding Unicorn. They will maintain a maximum production for a longer lactation period than ever before.



Traverse City (Mich.) State Hospital herd of 78 milking cows, fed Unicorn, averaged 13,669 lbs. during 1919

Good cows, fed Unicorn, always make a profit.

CHAPIN & COMPANY
Chicago

Farmers Disagree at Conference

The second session of the farmers' conference on prices and credits was held on Thursday and Friday last. A committee report was adopted recommending the immediate revival of the War Finance Corporation, the withholding of crops from markets until prices recovered to give producers cost of production, the appointment of committees to urge Congress to probe the banking and credit system, and pass amendments to the Federal Reserve system to legalize classification, long time, and low rates for agricultural loans, and another committee to include representatives of consumers' leagues and labor unions to recommend better and more direct marketing methods. Prior to adjournment the chairman, Charles S. Barrett, issued a statement urging farmers everywhere to hold crops until prices would pay costs of production, and this feature of the meeting was featured in all the newspapers.

The meeting, however, was not unanimous, as Ben S. Marsh, who appeared at the first session accompanied by representatives of several union labor organizations, objected to the action taken and asked that the session unite with union labor in an appeal to the president for the immediate extension of government credits, and for the immediate return of railroads to government operation, for he said that the big payments from the treasury to the railroads was the cause of the credit shortage. Marsh represents the National Farmers' Council.

T. C. Atkeson, representing the National Grange, also withdrew from the conference after declining to sit with the committee after the first day's session and refusing to sign the committee report. Later he issued a statement in which he stated that their diagnosis of the trouble was wrong, and hence their remedies were wrong. "Lack of credits", said this statement, "is not the cause of the present trouble, but a part of a result, and does not lie near the cause. The present price readjustment is an inevitable result of conditions due to war. What should be done," he continued, "is to seek to prevent if humanly possible the long period of depression such as followed the Civil War. This can not be accomplished by creating credits to hold products back from consumption while other products are being grown. It can be done, if at all, only by increasing consumption." The only suggestion made by the conference which he approved was to use every possible government agency to develop new markets for American farm products.—Special Report to Hoard's Dairyman.

Butter Recovers Sharply From Recent Slump

(Report by U. S Bureau of Markets)

The steadier tone and rather sharp price reaction which occurred late the previous week in the butter market developed into a full recovery during the week ending October 30. For a day or two immediately following the reaction there was some uncertainty, because after such a severe decline and weak market as has marked the past several weeks it always takes buyers some little time to regain confidence. Once the trend of the market became evident active buying developed.

Of course undergrade stocks had accumulated and at first the firmness was confined almost entirely to top grades, but later in the week the very low prices prevailing on undergrades attracted attention and the improvement was general on practically all scores. Very poor undergrades may still be bought cheaply enough, and even 89 to 90 score butter may be had for less money than it cost before the decline.

Advances Opposed

There was some opposition to the advance because the retail dealers had just lowered their prices and a more lasting improvement in consumptive trade would have been the result if prices had remained at a lower level for some time. However, the fact that jobbers, wholesale grocers, and retailers had permitted their stocks to become low brought about such a demand for butter that it was impossible to keep the markets in check. Chicago especially cleaned up very well. While prices were at their lowest a good many large holdings of both storage and fresh butter changed hands at prices representing heavy losses to the sellers. Some of this butter was picked up by speculators who hope to make a turn on the advance. This is still a factor to be considered on the market.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending October 30, 1290, and corresponding week last year, were as follows:

	Week ending October 30 1920	1919
	cents	cents
New York	60.3	69.6
Chicago	58.6	65.5
Philadelphia	60.1	69.3
Boston	57.7	67.0
San Francisco	53.5	62.5

The receipts of butter at these markets were 7,062,005 lbs. as compared with 8,096,560 for the corresponding week last year and 7,681,167 lbs. for last week.

Butter Prices For October

From the daily quotations of the U. S. Bureau of Markets, we have compiled the following table giving the monthly averages of the daily wholesale prices for October, 1920 and 1919, on 92 score butter (extras) in the four principal markets, together with the total receipts of butter at these markets:

	Av. price Oct. 1920	Oct. 1919	Receipts Oct. 1920	Oct. 1919
	cents	cents	tubs	tubs
Chicago	57.19	64.11	152,222	143,444
New York	60.38	67.54	161,055	216,218
Boston	59.08	64.46	58,293	51,297
Philadelphia	59.76	67.66	50,284	45,494
Total			421,854	456,453

That other factors than the supply of butter are responsible for lower prices is indicated by the fact that the receipts at these markets for October are nearly five thousand tubs less than for October last year. This conclusion is further reinforced by the fact that for the first ten months of this year the total receipts of butter at these same markets were a million tubs less than during the corresponding period of last year. This is a decrease of over 15 per cent, while the storage holdings are 10 per cent less now than a year ago. Indeed, the decrease in receipts at just these four markets is greater than the combined total of the exports of butter for 1919 and the imports of butter so far during the present year.

Ninety score butter averaged 51.42 cents for October on the Chicago market, with centralized butter at this market selling for 51.59 cents. Jobber's prices on extras sold to retailers during October averaged 58.73 cents in Chicago and 63.2 cents in New York.

It is still advisable to preach the gospel of the clean plate. The wasteful helping boosts the cost of living.

Holstein Campaign in New England

New England conservatism is an obsolete term as far as furthering their own interests is concerned. The campaign for the employment of a field secretary to represent New England Holstein interests began at Bellows Falls, Vt., and Brattleboro, on October 20th. A total of eighteen meetings has been held up to November 1st, covering Vermont and New Hampshire and completing these states. The quotas for these sections were easily reached, the breeders everywhere showing the same enthusiasm for the cause as in the West. Many of the meetings were held in inclement weather and often followed a day or so after farm bureau organization campaigns. Nevertheless practically a one hundred per cent membership was obtained at every meeting.

The work of organizing the New England group as a unit is being done under the direction of the Extension Service of the National Association. The breeders are being awakened to their opportunities. As a unit New England stands third in the number of Holstein cattle owned and in the number of members belonging to the National Association, being exceeded only by Wisconsin and New York. They are convinced that organization will help to increase the value of their surplus pure-breds and grades in the same manner that it has benefited the states now organized.

The grade men are showing as much enthusiasm as the pure-bred men. They feel that a field secretary will give them necessary help in getting on a pure-bred basis and assisting in other ways.

The Maine campaign opened with a meeting at Norway and Auburn, November 4th and will close after ten meetings in the state, at Houlton, November 13th. This will leave only Connecticut, Massachusetts, and Rhode Island.—Fred A. Koenig, Holstein-Friesian Association of America.

Illinois Holsteins Sell Well in Lake County Sale

The Lake County (Ill.) Holstein Association Sale at Libertyville, October 18th, went over in very good shape. The consignments were well selected and showed a good deal of quality. All of the female stuff was taken readily and at very fair prices. The 40 head of females in the sale averaged $404. In this number were five senior heifer calves, averaging $261 per head, nine yearling heifers averaging $357 per head, and eleven two-year-old heifers averaging $534.50 per head. The 52 head sold were selected from eighteen herds and they went on sale to twenty different buyers, there being only three of the consignors whose names appear in the list of buyers. One of the very satisfactory features of the sale was the fact that there were several men who were starting into the pure-bred business in Lake County at this sale.

Among the largest buyers of the sale were St. Mary's Training School, Mr. A. S. Benson (Gagemere Farm), Lloyd Ritzenthaler, William H. Peterson, Frank Siljestrom, and Cleveland and Holmes, all of Illinois.

The bull calves, it might be said, probably did not bring their full value, selling for the most part from $100 to $200 per head, but the breeders seemed to be supplied with herd bulls and these nice young calves were taken by dairymen. The prices on the bulls might have been affected by the fact that only two days prior to the sale, Lake County breeders had just held a bull sale for the benefit of local dairymen at which some 32 head were sold, these being young bull calves.

Mrs. Green Manages Texas Jersey Sale

HOARD'S DAIRYMAN:—Mrs. J. Riley Green of Texas, secretary of the Texas Jersey Cattle Club, managed and conducted the pure-bred Jersey sale which was held at Dallas while the Texas State Fair was in progress there the latter part of October. Mrs. Green, together with her husband who is in the live stock business, owns a herd of Jersey cattle numbering between 75 and 100 head on what she has named the Red Roof Stock Farm. At the auction sale there were 57 head of Jerseys sold, netting an average of $362 each. The highest price paid for any one animal was $1,300 paid by Brown Bros., to McDonald & Brown for Sultana's Lady Oxford. The second highest price paid was $575.

All of the animals handled through the sale were pure-bred, registered Jerseys, selected and passed upon by a special committee. The cattle were consigned by nineteen of the best Jersey breeders in Texas, each consignor being a member of the Texas Jersey Cattle Club. Every detail of the sale was handled entirely by Mrs. Green. She engaged the auctioneer, Colonel D. L. Perry of Ohio, and employed all other assistants.

Texas. W. D. HORNADAY.

Cheese Prices For October

October showed a decline of nearly 2 cents in the price of cheese on the Wisconsin boards and in Chicago, with the New York market showing no loss. For the ten months ending October 31 the total receipts of American cheese at Chicago, New York, Boston, and Philadelphia amounted to 134,202,411 lbs. as compared with 160,589,261 lbs. during the corresponding ten months of 1919. This represents a decrease in receipts of over 26 million pounds less than last year, the month of October increasing the amount of decrease by six million pounds. Thus far, at least, cheese receipts have not been increased by condenseries turning to the manufacture of cheese. The cold storage holdings at the markets mentioned are also eight million pounds less than at this time last year.

The daily quotations of the U. S. Bureau of Markets show the following average quotations on cheese (style Twins) for three large markets in October, 1920 and 1919:

	Average price October 1920	October 1919
	Cents	Cents
Wisconsin Boards	24.62	28.86
Chicago	24.36	29.00
New York	27.20	30.50

Longhorns averaged 25.39 cents on the Wisconsin boards for October as compared with 27.64 cents for September.

MARKETS

CHICAGO, Nov. 4—Butter—Creamery, extras, 61c; standards, 54c; dairy, firsts, 47@59c; seconds, 40@43c.

Eggs—Ordinary, 56@58c; firsts, 64@67c.

Cheese—Twins, 26c; Young Americas, 22½c.

MILWAUKEE, Wis., Nov. 4—Butter—Creamery, tubs, 59c; prints, 60c; extra firsts, 55@56c; firsts, 53@54c.

Eggs—Fresh firsts, recandled for city trade, 60@61c; current receipts, country candled; 55@56c; checks, 37@41c; dirties, 41@44c.

Cheese—Twins, 21⅝c; Daisies, 21½c; Longhorns, 23c; fancy, 22c; Limburger, 1 lb., 21c; 2 lbs., 22c.

NEW YORK, Nov. 4—Cheese—Firm; state milk; common to specials, 20@28c; skims, common to specials, 10@20c.

Butter—Firmer; receipts, 9,697 pkgs.; creamery, extras, 63c; state dairy, tubs, 37@63c; imitation creamery prints, nominal.

Eggs—Quiet; receipts, 15 880 cases; nearby white fancy, 94@96c; nearby mixed fancy, 62@85c; fresh firsts, 60@77c.

Carnation Stock Farms

are consigning to the

Waukesha County Sale
Waukesha, Wis., Nov. 22, '20

The Bull

Carnation King Ormsby Mercedes

A Show bull; son of Carnation King Sylvia, out of a 34-pound daughter of Sir Pietertje Ormsby Mercedes.

The Heifer

Korndyke Bess Pietertje Vale

A Show heifer, popularly bred and from a show cow.

Jefferson County Sale, Lake Mills, Wis., November 19

The Bull

King Segis Korndyke De Kol

A bull faultless in conformation, and of excellent breeding.

The Heifer

Beauty Pietertje Prince Segis

Closely related to the new world's record, long distance cow and in calf to Avon Pontiac Echo, the son of world's record May Echo Sylvia.

Watertown Breeders' Sale, Watertown, Wis., Nov. 23-24

The Bull

Duke Matador Piebe

Eleven months old, weighing 1,000 pounds. Splendid conformation with good yearly records surrounding him.

The Heifer

Carnation McKinley Korndyke Wayne Segis

Her sire's two nearest dams average 34.61 lbs. butter in 7 days. Her dam is a 19-pound 2-year old.

Attend These Sales!

For Further Information Write

Eastern Office:
1111 Consumers Bldg.,
Chicago, Ill.

Western Office:
1111 Stuart Bldg.,
Seattle, Wash.

Carnation Stock Farms

'Home of Contented Cows'

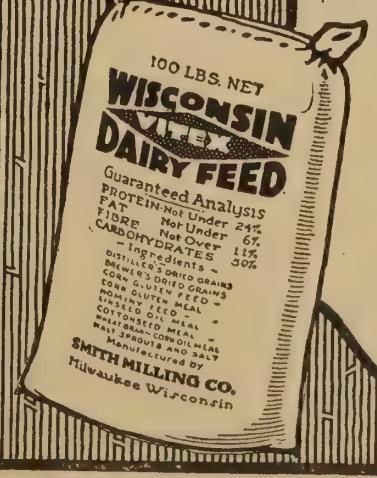
FARMS
Western Farm,
Near Seattle, Wash.
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WISCONSIN VITEX DAIRY FEED

Feed 4-All to live stock other than dairy cows. Keeps horses in condition and fattens meat animals at low cost.

GRAIN rations cost too much. Besides they don't give your dairy cows enough protein to secure high milk production.

Vitex Dairy Feed is a scientific combination of wholesome milk producing ingredients, oil meals and glutens. It is 24% protein and contains the correct proportions of fat, fibre and carbohydrates to keep your cows in prime condition and make them heavy milkers.



Vitex is all feed and no waste. Every dollar of its cost comes back to you many times over in the milk check. You can gauge your feeding accurately as our special mixing process makes every sack uniform. This uniformity permits the use of Vitex with mixed herds.

Ask your dealer for Vitex and 4-All. If he does not handle them, write us.

Smith Milling Co.
36th and Lincoln Aves., Milwaukee, Wis

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Broadening Out

[Continued]

Jimmy demonstrated to Bob's satisfaction that one drink of moonshine could not put him under. The car crept along slowly over the rough places and sped along where the roads were at all good with all the life that any Ford can muster. But to Bob, his driving was not without criticism. So cautiously at one time did he approach what appeared to be a bad stretch of mud, that he found by the time he was well into it, the car was fast losing its power. And there they were, stuck quite fast.

"Now you just keep your shirt on," he commanded Bob, "until I size up the situation and, besides, you'd better not get out in that mud until you have to. I think I can make her go through by backing out of it and then plunge her through on a full head of steam. It's not so bad if you've got plenty of power."

But it was not so easy getting out of it, in fact following repeated attempts he gave it up as a bad job. Again he went forward, but only to stop, and he found that the more he tried, the deeper the car was digging itself in. "Well, there's one comfort, old kid," he said to Bob. "We won't have to spend any time digging her grave; she's doing that about as fast as she can with the life she has left. You might just as well laugh with me, Bob, and agree that this has been our Jonah day."

"Listen," said Bob, "isn't somebody coming? Thought I heard talking."

"Guess you did," he answered, looking out of the back window of the car. "Looks like help, too, he added somewhat relieved. "I'll bet they heard us speeding the motor and guessed we were in trouble. Any way they're coming our way and we'll ask them to give us a lift. They look big enough to lift the whole thing right out and set it down on dry land."

" 'Smattah, boys?" inquired the first of the group of four as he stepped up and peered in at them. "Stuck?"

"Oh, no," responded Jimmy quickly. "Just out looking for a place to bury this ornery Liz. She's acting like your southern mules. Thinks she's done a day's work and it's time to quit."

"Well, we don't want her dead ca'cass 'round here," he haw-hawed, "so I guess 'sup to us to give you a running start out of this territory. Come on, boys, give them a lift."

"What you fellahs doing up here in these diggin's anyway?" asked another of the group. "Yeh hain't some of them gov-ment gents looking for moonshiners, be yeh?"

"I should say not," laughed Jimmy outright. "If I knew you had some of that stuff, I'd just ask for a friendly drink," he said diplomatically.

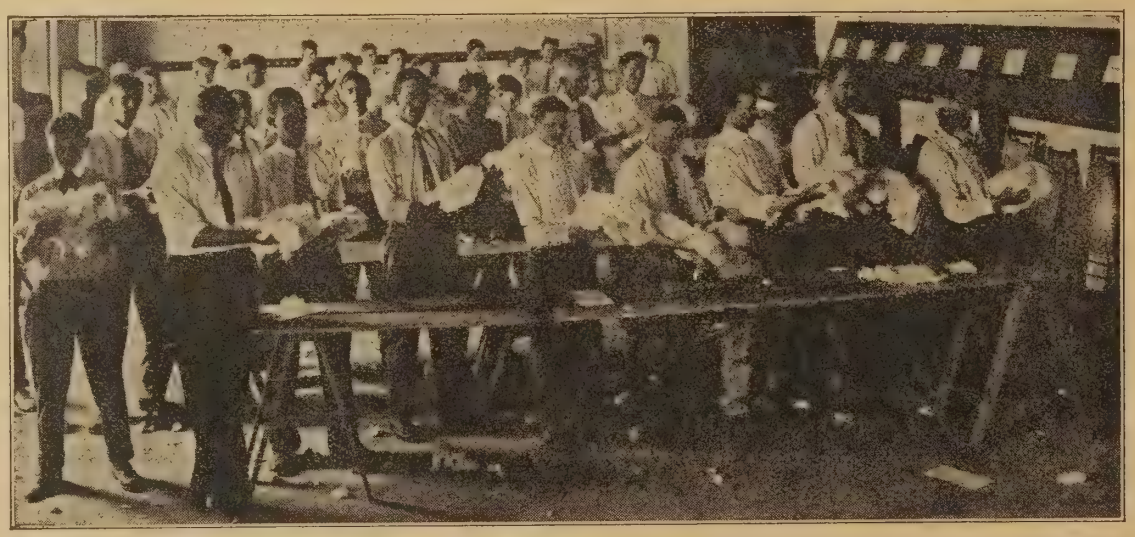
"Naw," said the first to speak, "they're all right, just didn't know any bettah than to land in this Gawd-forsaken place; that's all."

"Set off the motah, boys, so's to give us a show and you'll be out of here in less time than it took you to get in," said the fourth one of the group who had maintained a steady silence up to this time. "I've helped put more than one mule where he didn't want to go," he boasted with simple pride.

"Allow us to thank you before we start," said Bob, "because we may be so far away when we stop again that we won't have the chance to."

"Don't mind the thanks, Buddy," came from the last to speak. "We're only doing it 'cause we know it's the right thing to do; the Good Book says so." And as the big quartette put their shoulders against the quaking Lizzie, the boys found themselves moving slowly out of their predicament and, with Jimmy feeding the gas, it is safe to guess that they soon landed high and dry, nor did they make a stop until the sight of a cross road store convinced Jimmy that it was about time to feed his face.

"Got anything fit to eat?" he asked the lifeless proprietor, as the two dashed across the worn threshold.



BOB AND JIMMY WERE INTERESTED IN OTHER AGRICULTURAL SCHOOLS. HERE IS A CLASS THEY VISITED WHICH IS LEARNING TO JUDGE COTTON

"Mebbe," drawled the answer. "Whatcha all want?"

"All," said Jimmy, looking about for enough to make what he would call all. "There's only us two," he returned, "if that's what you mean."

"Exactly what I mean," he replied. "Guess you two be Yanks, eh? Not 'customed to our talk; 'sthat the idee?"

"Oh, we understand well enough to get along pretty well," Jimmy sarcastically replied, "and we always knew that we were a real pair, but this is the first time we've had the compliment paid us by someone else," he joked. "How about the eats?" he inquired further.

"Sa'dines, gingah snaps, crackahs, and baked poak and beans; that's the lot. Sound good enough?"

"Jiminy crickets, yes," snapped Jimmy. "Anything'll do; a slice off that old razor back out there 'll do if you think there's that much on her," he said, as he pointed to a much starved hog wobbling about the front of the store. "Where's the pork in these beans?" he asked as the opened can was shoved in front of him. "I thought you said baked pork and beans," as he shoved his finger to the bottom of the can. "No pork here, 'cepting this," as he drew forth one piece of hog skin, holding it by the few black hairs which someone had forgotten to remove. "Seems that beans and pork would be a more appropriate way of referring to this hash," placing emphasis on the bean part, he ended dryly.

"Are we headed in the right direction to get to Guntersville?" he asked of the crowd of Saturday afternoon loafers who were hanging about the car. All tried to answer at once, with the result that the boys had things pretty well laid out, at least for the remainder of that day's trip.

"What's the W stand fur on that liscence number?" asked a little, wizzened up old man with a Yankee accent.

"Wisconsin," quickly returned Bob.

"What'd I tell yer?" said the little old man to the rest of the crowd. "I knowed that W couldn't stand fur Washin'ton and Wyoming, too." Then, turning to the boys, he said: "Great state, that Wisconsin. I cum from thar, too."

"Yes, and she's getting greater each year," boasted Jimmy. "Say, Mr.," he addressed the little old man, "why didn't you stay in a good place when you were once there?"

" 'Cause the girl I married cum frum the South, but, by cracky, if I had it to do over again," and here he halted. "Well, the truth is, sonny, she just got hum-sick for the old place, and here I've been ever since; never got enough together to take us back again," his eyes dimming with tears he tried to hide.

"Nice, hospitable lot," Jimmy remarked to Bob when they had got beyond hearing distance of the crowd. "But I'd like it better if they showed more life; they act as if they were too near the grave to suit me."

"Don't be so critical, Red," answered Bob. "They are mighty fine and it's just their way of acting like that. It's a safe guess that it's a golden rule to allow for other people's peculiarities. And, besides, you musn't think that these old mountaineers are typical of the southern people."

They finally reached Guntersville and after making sure of the way to Gadsden they proceeded with all the speed they dared to travel with. They reached Gadsden safely that night, and from now on they began to count the days when they would arrive in Thomasville, Ga., the place they had selected through the advice of those who ought to know, as the one place in a progressive agricultural section. The one thing for which they were thankful while travelling through Georgia was the improvement in the highways compared to those in Alabama which they had passed over. For those who have never been in Georgia, it would be difficult to attempt a description of certain conditions which would be appreciated. One travels through miles of territory where the soil is so ed that it looks as though the surface of the roads had been painted. When dry they are smooth and hard, but when wet they couldn't be more slippery if they were smeared with grease. And the boys found both kinds, but, notwithstanding that, they made good time and on Sunday night they pulled into Atlanta, the Chicago of the South.

"No, sir," said the policeman to Jimmy. "You've come to a mighty poor town for Sunday amusements. No picture shows and theaters open here on Sundays. We don't make many laws down here, but them we do make, we enforce. Better go to church, boys, 'twill do you more real good, anyway."

"Nothing doing, Bob," said Jimmy as he turned to where he had left him while he went to ask the policeman about amusements. And after relating the conversation he had had, he ended by saying, "Let's take his advice, Bob. I liked the way he talked. At least it sounded good coming from him. It kind a gives one a little more respect for those fellows." It was not a difficult matter to persuade Bob to go to church and so the two went to the First Presbyterian church where they listened to a scathing sermon on the liquor question.

"What did you think of it?" asked Bob as they were returning to the hotel. "Aren't you sorry that you broke your record when you took that little snit of moonshine?"

"Not a bit, Mr. Perfect Man," Jimmy answered. "It didn't hurt me and now I know what's meant when they talk about moonshine. I'm the kind of a guy who will try anything once," he added with his usual amount of Irish bluster. "Besides, we only learn by doing and so I'm at least one point wiser than you right now. I've found out that I don't like liquor from this one experience, so that's the end as well as the beginning, and I don't think you stand any higher in the opinion of the Almighty right now than I do. So there you are; that's the way I feel about what doesn't happen to be your business, anyway."

"You've squelched me, Red, so there'll be no argument on that question tonight," said Bob good naturedly.

"I guess a day and a half from now will land us in Thomasville," remarked Bob as he studied the map the next morning, "and I'll not be sorry, either, will you?"

"No, I won't be sorry," answered Jimmy, "but on the whole it has been lots of fun in spite of the trouble we have had. Anyway, it's lots pleasant-

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

er than pitching manure all day, and that's what I'd be doing if I were at home right now," he added with satisfaction. "Poor old Jerry, I know that's what he's doing. I'll never forget the wistful look on that kid's face, Bob, the morning you and I pulled out of the yard and the grip he gave my hand when he said good-bye. He envied me so much. I could have just cried outright and I guess I would if I had been a girl," and Bob noticed him trying to slyly get rid of the tear which at that moment had fallen upon his freckled cheek.

"If there ever was a faithful boy lived on this old earth," he continued, "Jerry's that boy. It makes me ashamed of myself every time I think of him. Always unselfish and always on the job. Takes after my mother's side of the family. Surely isn't a Greene, for they are all homely like me and selfish as the very old d———. You bet I'll see that he has his inning when I get through college. They say that nothing's too good for the Irish. And that's true for the Irish like Jerry. Wish I had his looks. Oh, there I go again," he caught himself, "looking at the selfish side of things. But I know it must be difficult for people to look at me."

"You mustn't under-estimate your worth, Red," interrupted Bob. "You are both good fellows, and I agree with you that Jerry is one boy in a hundred who would put up with what he has to. But, never mind, things will turn out all right for him, too. The unexpected has happened for you, and I think between the two of us, we will fix things for Jerry's future, too."

"This is getting interesting," said Jimmy as he viewed the landscape on either side of the road. "Suppose these are the pine forests of Georgia, from which we get all of the Georgia pine lumber. Think of it, Bob, here we are right in the midst of the very place from which the lumber came that we used in our house for finishing. Funny how things do get distributed about since man decided to work with Nature.

And the pine forests to which Jimmy referred are beautiful. These forests are places where one sees Nature at its best. Acres of giant pines, straight as an arrow without a branch to mar their straightness and stretching their feathery heads toward the heavens as if to breathe the purest of the atmosphere. It would almost seem that Nature has been too lavish with some things, so much so that man no longer appreciates her beauties as such, but only turns his attention to them to seek some financial return. This is certainly the case here. The majority of these fine forests have suffered underneath the swing of the axe and the cut of the saw, until now there remains nothing but the second growth of timber and underbrush, both of which go to make the rural sections forlorn and lonesome looking. But, no doubt, the day is not far distant when this must all give way to fine farms, just as the hard wood forests of the North have done.

"Paint on the farm buildings down here is about as scarce as hen's teeth," remarked Jimmy. "I should think that they would pep up a little and fix things so that they would look as if someone lived in them."

"Don't forget, Red, that a lot of this land is owned by the niggers, and they are a shiftless lot. Maybe they are not to blame, either, when one stops to think that they are not very far removed from the wilds of Africa as far as time is concerned. This will all change some day, though, with the great interest that is being attached to agricultural development all over the country."

"There's one thing, Bob, about which I am disappointed, and that is the corn fields that we have seen so far. The best field that I have seen wouldn't compare with what you and your dad used to laugh about on our farm before dad paid attention to better methods in growing corn, after I taught him how as a result of being in the corn acre contest that year as a club member. I thought we'd find corn at its best down here where they have such a long growing season with plenty of rain and where they can grow the large varieties. I can't understand why they plant so many beans with the corn," he said expecting that Bob could offer some explanation.

"Those are velvet beans, Red, and they grow them with the corn for fodder, I suppose. But they must have a job when they go to harvesting them. Surely they can't use a corn binder in that tangled mass of stuff. Well, maybe we'll find out why they do this when we inquire into it. But one thing I believe now that we have always heard about the soil down here. These corn crops are proof enough. The soil is so worn from growing cotton year after year, that a great deal of it is no longer productive. This, together with the ignorance about suitable crop rotations and the lack of farm stock to provide manure, has brought this condition about."

"Look out for that razorback, Bob," called Jimmy reaching for the wheel. But it was too late. The car ran over it, leaving it struggling in the road. "I'm sorry," said Bob, "but I guess the poor thing didn't have strength enough to get out of the way."

"Or maybe it wanted to commit suicide," chuckled Jimmy. "Stop, Bob; I think we have a flat tire. I'll bet the razor in the back of that hog did it. I thought surely we had one," he added as they climbed back after finding all tires full. "Any way it might have happened," he said.

"Look at that one with the three sticks fastened about its neck. Who ever heard of putting a polk on a hog! Suppose they figure that with that outfit around the neck, it will make a hog think that there are fences where they really don't exist. They couldn't go very far, anyway; they're too weak for that. Bob, these must be the real razorbacks that we heard about in our animal husbandry class last year. Guess they come about as near to being like a wild hog as anything that walks on four legs today. Strange that people can't see the folly of spending time on raising such scrub stuff."

"We'll learn all about them when we get to Thomasville," Bob answered, "and a lot of other things, too. I am pretty well impressed with the possibilities this country shows up, Jim, to tell you the honest truth. Why, here we are," he exclaimed in astonishment, "right on the edge of Thomasville, now," and Jimmy started to hum, "How Dry I Am".

[To be continued]

Junior Letter

Hoard's Dairyman Juniors:—I received my fob, creed, and button and was much pleased with them.

This is my first letter to the juniors.

My father has taken the Hoard's Dairyman for almost two years. I always read the junior letters and like the stories of Jim Greene and Bob Ramsay.

We live on a farm of 160 acres. All of it is under cultivation. We have two silos on the farm. I think silos are a good thing to have.

I am thirteen years old and in the eighth grade at school. Our teacher's name is Miss Noble.

I have a brother. He is nine years old. We have a Shetland pony and a grade Durham calf. We each own a yearling heifer which are twins and each own an old pig and young one.

We are all through threshing and are filling silos here today. We will finish tomorrow.

If any of the juniors want to write to me my address is R. R. 1, Plainview, Minn.

Lloyd Melendy.



Does Mrs. Housewife Demand Your Butter?

She is the judge of butter value. *She knows* sweet, clean butter must be protected from dirt, dust and bad odors.

And *she is only too glad* to pay extra for good butter wrapped or covered with

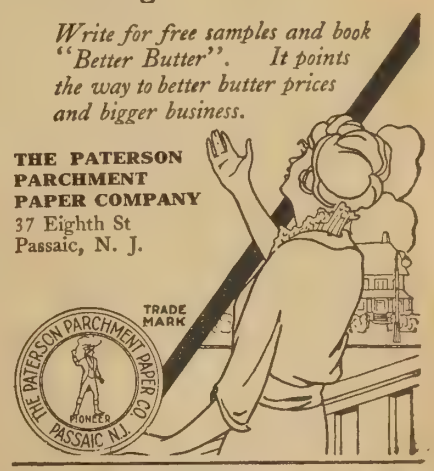
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Perth Amboy Chemical Works
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For bedding most convenient, serviceable and sanitary. Write for prices.

Defnet & Jagerson Supply Co., Neenah, Wis.



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

High grade Holstein cows due to freshen in September and October. Pure-bred bulls serviceable age. JOHN GATES, Fort Atkinson, Wis. 3*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three nearest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

125 extra good springing high grade Holstein cows and heifers for sale. ENSIGN & DERBY, Cameron, Missouri. 19*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Jee Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Good, registered Holstein cows and serviceable bulls for sale. Information on request. G. E. VOLLAND, Bridgman, Berrien County, Mich. 15-spl

We need the room and are pricing to move quickly, real Holstein bulls from 6 weeks old up to serviceable age. Best of individuality and breeding. All are from heavy producing dams and sired by one of the best bred bulls in the state. BEECHTON STOCK FARM, Cataract, Ind. 15-3

High grade Holstein heifer calves from high producing dams, $25.00 each, satisfaction guaranteed, C. O. D. WHITE HILL FARM, Cambridge, Wis. 15-6

Carload grade Holstein springers, all young. Two registered bulls 8 months old. Price, $100. JOHN ZENTNER, Kilbourn, Wisconsin. 16-2

If you want the very best bred, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves, $25.00 each, I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 16-4

High grade Holstein heifer calves, 2 to 8 weeks old. O. M. KISER, Lake Mills, Wisconsin. 16-2

Brinkman's 3rd annual fall sale at Sheldon, Iowa, November 30. 65 head of pure-bred Holsteins. 25 young cows and heifers in milk. 5 young bulls, all nicely marked. Balance young heifers and calves. 12 daughters of King Segis Pontiac and 10 granddaughters by a 37-lb. son of this famous sire. Send for catalog. D. H. BRINKMAN, Sheldon, Iowa. 16-2

Registered Holstein heifer calves. N. W. PARKER, Granville, N. Y. 16-2

Our greatest Holstein offer in calves. 3 weeks—$22.00. Why pay more? Ask about them. Satisfaction guaranteed. MAPLE LAWN FARM, Elkhorn, Wisconsin. 16-4

Grade Holsteins—Open heifers, bred heifers, cows to freshen this fall and early winter. W. J. PESTER, Whitewater, Wisconsin. 16-2

For Sale—10 head choice high grade Holstein heifers to freshen from November first to fifteenth. All my own breeding and raising. These heifers from one of the best herd of cows in Lee County. Also a registered Morgan stallion, 7 years old, sound. Has never been beaten in the show ring. A. H. BOSWORTH, Dixon, Ill. 16-3

Holstein bull ready for service, grandson of Wisconsin's only 40-lb. butter cow, 782 lbs. milk in 7 days. $200. ROY HARRIMAN, Appleton, Wis. 17-4

My Holstein herd for sale. Leaving farm December first and will sell at low figure. Seven pure-bred cows, heavy milkers; four yearling heifers; two young bulls; two heifer calves. Also three grade cows and yearling heifer. These animals mostly Ormsby breeding—straight, healthy, and first-class. Priced to sell. F. W. SCHULZ, Oconomowoc, Wisconsin.

For Sale—9 head registered Holsteins, 6 from 3 to 8 years old, five due to freshen this fall, one unbred, now milking. Price, $1,350. Three calves, 8 to 10 months old, price, $325.00. Well bred, large size, good individuals. For pedigree, etc., write W. EARL AKLEY, De Kalb Jct., N. Y. 17-2

Holsteins. Yearling bulls, sire from a 30-pound daughter, Pontiac Korndyke, $150.00 up. DEWEY PIERSEN, Metamora, Michigan. 17*

Holstein—Registered and high grade heifer and bull calves, 2 to 5 weeks old, crated, $25.00 up. GRAND VIEW FARM, Solon Mills, Illinois. 17-2

Pure-bred Holstein calves, three weeks old, best breeding. Heifers $80.00, bulls $37.00. Shipped C. O. D. subject to inspection. YOHN STOCK FARM, Watertown, Wisconsin. 17-2

STOCK FOR SALE

For Sale—Two yearling registered Holstein bulls from a proven sire and yearly record dams. Price, $150 each. CHAUTAUQUA STOCK FARM, Mayville, New York.

Fifty head of Holsteins, all fall cows, at public auction, November 23, 1920. LOUIS BENSON, North Kansas City, Mo.

Keep your money until you see my calves. Beautifully marked high grade Holstein heifer calves at farmers' prices. Registered bull calves, $40. I ship C. O. D. and guarantee safe delivery and satisfaction. J. M. McFARLAND, Watertown, Wis. 17-3

Bull for Sale—Nearly two years old. Dam has eighteen-pound seven-day and 555-pound yearly record as senior yearling. Sire, a son of Pontiac Korndyke. GEORGE CURTIS, Stockton, Ill. 17-2

Registered Holstein cows, heifers to freshen early winter. Open heifers, heifer calves. Priced to sell. Send for catalog. WOODLAWN FARM, Sterling, Ill. 17-2

For Sale—Pure-bred Holstein heifers and bull calves. Two bulls ready for service. RED CEDAR STOCK FARM, Milton Junction, Wisconsin.

Holstein heifer and bull calves, pure-bred and high grades, from 3 weeks to one year old. Price from $30 to $75, everything guaranteed. BURGESS & PECOY, Bonair, Iowa. 17-2

For Sale—30 head of large, heavy producing Holstein cows. Also two registered sires. H. F. McNUTT & SON, Oxford, Wisconsin. 17-4

Holstein bull—Serviceable age. Half white, nice individual. Sired by Segis King Johanna. Dam, daughter of Johanna McKinley Segis. Has 40-lb. breeding on both sides of his pedigree. Price, $100. N. HOUSLET, Oxford, Wisconsin. 17-2

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

For Sale—A few choice Guernsey bulls of serviceable age. Excellent breeding. Prices very reasonable. TARBELL FARMS, Smithville Flats, N. Y. 14-4

Serviceable grandsons of Langwater Rosie. A. R. sire and dams. C. M. McCONNELL, West Salem, Ohio. 15-spl.

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-3

Registered Guernsey bulls. All ages. FAIRVIEW FARM, Brodhead, Green County, Wisconsin. 15-4

Thirty registered Guernsey bulls on hand. Must sell at once to make room. HARRY GRISWOLD, West Salem, Wisconsin. 15-4

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. Will take note for 90 days. HOMER RUNDELL, Livingston, Wis. 15*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—High grade Guernsey heifers. Beauties. SUMMIT FARM, Blue Ridge Summit, Pa. 16-2

For Sale—Good grade Guernsey bull and heifer calves, four to six weeks old, bred for production of milk and cream. $30.00 a piece delivered to any express station. THOMAS HAGERTY, Knapp, Dunn Co., Wisconsin. 16*

Registered Guernseys—Males and females. Herd under Federal Supervision and free from disease. Satisfaction guaranteed. CLOVERNOOK FARM, Milwaukee County, Wisconsin. 16-4

For Sale—Young registered Guernsey bulls. Sons and grandsons of Bell Buoy of Linda Vista who has 17 A. R. daughters with large records. Out of A. R. dams with records as high as 615 pounds fat in class A. A. Write for sale list. O. R. SCHWALEN, Roberts, Wisconsin. 16*

15 grade Guernsey cows and heifers, some to freshen in November and December. Tested accredited herd plan. GEORGE HANSEN, South Valley, Otsego, New York. 17-2

Guernseys for sale—Registered bulls old enough for service. Nice ones. RISING SUN STOCK FARM, Samuel Hertel, Prop., Van Wert, Ohio. 17-2

For Sale—My herd of fifty Guernseys. Herd bulls—son of Ne Plus Ultra and Langwater Warrior. The most popular strains represented in the herd. JAMES H. SEAMAN, Glens Falls, N. Y. 17-2

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Head your herd with a choice May Rose bull that is bred for production, with dam's records up to 700 pounds fat in B. B. KUHTZ BROS., Waukesha, Wis.

In order to make room for registered stock will sell 15 choice grade Guernsey young cows and bred heifers all sired by and bred to registered bull with A. R. backing. Good milkers from heavy milking dams. QUINEILO FARMS, 297 East Water, Milwaukee. 17-2

STOCK FOR SALE

3 Guernsey bulls of serviceable age. Priced right. Dam of one has 600-lb. record. O. R. WILKINS, Platteville, Wisconsin.

For Sale—Registered Guernsey bulls and females, with Advanced Registry breeding, at moderate prices. Herd is Federally inspected. Write for list. HELENDALE FARM, Athens, Wis. 17-spl

For Sale—My herd of high grade Guernseys consisting of six cows due soon, seven bred heifers and three yearlings, $1,275 for the lot. MILBURN SURATO, Holt, Michigan. 17-2

For Sale—The bull, Bob Rilma's Superior, 7 years old. His first four daughters sold, brought $610 each in the sale ring. For particulars write EDGEMOOR FARM, Milton, Wisconsin.

20 registered Guernsey heifers, from nine to eighteen months old. More than ordinarily well bred and uniformly good individuals. LOWELL GABLE, Paoli, Pennsylvania.

For Sale—Fine, large Jersey bull, born December 1st, 1919. For pedigree and further particulars write J. C. BIGLER, Route 5, Stevens Point, Wis. 15-3

For Sale—30 heavy springer cows, grade Jerseys. J. ARCHIE BELL, Shelbyville, Ky.

Your choice of twenty, out of herd of forty-four registered, tuberculin tested, Ayrshire cows and heifers. Freshen in January and February. Herd bull Zobart of Finlayston. Price one hundred fifty dollars each. L. G. WILLSON, Cattaraugus, N. Y. 16-2

For Sale—Several Ayrshire bull calves and yearlings from Advanced Registry cows. Priced right. RAY FELTON, Dwight, Kansas. 16-2

For Sale—Chief's Burn Brae Juan 155182. Dropped January 12, 1917. Fine individual, priced reasonable. C. P. MARKHAM, Eyota, Minn. 16-2

STOCK WANTED

Wanted—15 head A-1 grade Guernseys to freshen December, January and February. Do not reply unless cows can give seven thousand pounds of milk per year. Must not be over four years old, and must be bred to a good bull. Address BOX 441, care Hoard's Dairyman. 16-2

Wanted to purchase—One to ten high grade Guernsey heifers that have freshened since September 1st or will freshen before December 31st. Tuberculin tested and guaranteed free from contagious abortion. Reply giving price and breeding to VILLAGE FARM, Grass Lake, Michigan. 17-2

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

DOGS

German Shepherd, Collies, Old English Shepherd and Airedale dogs, trained farm helpers; puppies; Poland China and Duroc boars. Holstein bulls. Good young cockerels, Rabbits. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 17*

SWINE

Choice spring Hampshire boars sired by junior champion Indiana State Fair 1919 and out of choicely bred sows. Prices $50 to $100 apiece as long as they last. WOODLAWN FARM, Sterling, Illinois. 17-2

Hampshires. Growthy, good type boars from State Fair winners. Also females. EDGAR BUZZELL, Delavan, Wisconsin. 14-4

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS, De Graff, Ohio. 14-8

Pure-bred, big type, Chester White boars. Excellent breeding. LLOYD NESBIT, Barron, Wis. 15-3

RABBITS

Rabbits, Pet Stock—Read the Rabbit Journal. Two years $1, sample 10c. FISHER BROS., St. Francis, Wis. 15*

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

Pure-bred S. C. Brown Leghorn cockerels, $1.50 each. J. AMOS KENNEDY, Rochester, Minn. 17-2

HORSES

Registered Percheron mares for sale. A fine pair of blacks, were three years old September 1. Weight about 3,000 lbs. DWIGHT H. BAILEY, Mansfield, Pennsylvania. 17-2

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

Choice honey for sale in 30- and 60-lb. cans at 30 cents per pound. E. NASON, Isle, Minn. 16-2

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

DAIRIES

Dairy for Sale—40 milch cows, one bull, delivery car, 2 horse wagon, boiler, sterilizer, bottle washer, bottles, cans and everything needed in a dairy. 18 months' lease on 125 acres. 50 acres in cultivation, rest in pasture. Six-room house. Three miles from Wichita Falls, Texas, 50,000 population, and the oil center of Texas. Give possession at once. Milk $1.00 per gallon, 25 cents per quart. Price, $7,000; $4,000 cash, balance in small monthly payments. E. A. DEBUS, Wichita Falls, Texas. 15-4

For sale or will trade a small well equipped dairy, or will rent on shares or would hire a good man to run it. Everything new and up-to-date, milking machine, automatic water, 2 silos. Located right in town close to high school. BOX 296, Piper City, Ill. 16-2

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

FARMS FOR SALE

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11*

For Sale—Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. Farm 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres, 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

For Sale by Owner—420-acre farm in Lake County, Illinois. Best of soil. Good set of buildings including house, two barns and silo. Two miles from town. Price for quick sale $120 an acre. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-6

For Sale—Superb Washington Co., N. Y. home and farm, 86 acres. With dairy, stock and implements, $16,000. Address BOX 407, care Hoard's Dairyman. 14-4

Farms for Sale—In Trumbull County, Ohio. Any size by a farmer who has had twenty-four years' experience in this section and knows farm values. Write for descriptions. NEAL DUCK, North Bloomfield, Trumbull County, Ohio. 15-4

Farms—Improved farms and muck land on good roads, close to markets. PONTIUS & HAMMOND, 602 Western Reserve Bldg., Warren, Ohio. 15*

New York farms for sale—Excellent soil, climate, water. 112 acres, $6,500; alfalfa land, two houses, two barns, running water in buildings. 76 acres, alfalfa land, large good house. $3,500, only $1,500 down. Others. GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 15-4

If interested in dairying on the Pacific Coast, where climatic conditions are right, communicate with Pacific Real Estate, Chehalis, Washington. 16-2

Free Maps of Mississippi, showing views and describing the famous Black Prairie alfalfa, corn, clover, stock and dairy belt in northeastern Mississippi, where Lincoln Harbold, the largest hog feeder in the world, has located. Good water, schools, hard roads, creameries, healthy climate. Best general farming and stock section in the south. WISHART REALTY CO., Aberdeen, Mississippi. 16-2

For Sale—Our Leader—160 acres level productive soil, three crop country, 15 miles from Mobile, 50 acres in cultivation, balance can easily be put in shape for cultivation. Farms no better, near this, clearing themselves each year. Well improved, convenient to shipping facilities. Price, $12,000.00. A bargain. For particulars regarding this and other lands we have for sale in a healthy and prosperous country. References exchanged. Address THOMPSON-NEELY REALTY CO., 65 St. Francis Street, Mobile, Ala. 16-2

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

Would you like $1,000 monthly milk check from 230-acre farm, modern buildings, priced $10,000? Come East! Write NEW YORK FARM AGENCY, Westfield, New York. 9-spl

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin.

20-acre farm, modern house, silo, stock, personal property; 2 miles from Oshkosh; $9,000.00. Also other farms any size. FRANK R. VAN KEUREN, 7 Church Street, Oshkosh, Wisconsin. 17-2

Ideal farm for stock raising, one thousand acres bottom, table, hill, timber land with perennial streams of water. Address J. R. BINGHAM, Carrollton, Miss.

Owner obliged to go to another state offers fully equipped 200-acre dairy farm, convenient to best schools, colleges and university, with two good houses, at big sacrifice if taken now—with or without cattle and equipment. WILLIAM B. HATCH, Ypsilanti, Michigan.

Three hundred-acre farm near Glens Falls, N. Y. Sixty acres woodland. Excellent water supply. Large homestead with modern conveniences. Tenant house. Large barns and out buildings. For particulars write JAMES H. SEAMAN, Glens Falls, N. Y. 17-2

For Sale—New York State farm, 205 acres, 4 miles from the metropolis, Delaware County, 75 acres tillable, lays good, basement barn, tie up for 35 head; nine-room house, running water, 33 head cattle, 3 horses, all machinery, 70 tons hay, thousand dollars in standing saw timber. Price for all $8,000.00, with $2,800 cash down. H. M. ROBINSON, Walton, N. Y.

208-acre farm with 32 cattle, 5 horses, equipment. Leading farming section, near R. R. town; 125 acres tillage; 40-cow wire-fenced spring-watered pasture; large quantity wood and timber; variety fruit; 10-room house, good cement floor cellar, running water; 9-room tenant house; 110-ft. barn, 2 silos; owner unable occupy, includes with this big profitable farm 5 horses, 32 cattle, poultry, wagons, machinery, tools, milking machine, gas engine, dairy utensils and lot fitted stovewood; all for $12,500, part cash, balance easy terms. Details this and big equipped farm only $3,000 cash required, page 22 Strout's Big New Illustrated Catalog Farm Bargains, 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

350 acres diversified farm near Spokane. 55 acres broken meadow, real peat soil. 50 upland cultivated, balance pasture all fenced. Write MAX HOPP, Tyler, Washington.

230-acre dairy farm, Southern Wisconsin. Better land and crops not possible. Fine opportunity to one wanting large farm. No trading unless small place. Easy terms. Address OWNER, BOX 449, care Hoard's Dairyman.

Write today for our bargain farm and land lists. R. R. FORWARD, Duluth, Minn. 17-3

Fine dairy and other farms for sale. Write TRENTCONNER REALTY COMPANY, Fayetteville, Ark. 17-2

Farm for Sale—One of the very best and best improved corn and alfalfa dairy farms in Northern Illinois. 36 miles N. W. from Chicago, on the State cement road. 185 acres. ARTHUR L. STANFORD, Owner, Round Lake, Ill.

158-acre dairy farm, rich soil, well drained, good buildings. One hour from Milwaukee. 80 acres, 12 miles from Milwaukee, with cattle, horses, machinery. These are bargains. DELWIN UTTER, Lake Beulah, Wisconsin.

FARMS FOR RENT

Wish to correspond with party who would be interested in a share proposition in raising pure-bred Durocs and Holsteins. I have all the necessary buildings, feed, etc. Can furnish part of the stock if desired. R. F. JOHNSON, Assumption, Ill. 16-3

Tenants Wanted—We want young farmers with some experience in handling dairy cows to rent farms in Pope County, Minnesota, on joint stock lease. Good land, improvements, water, schools and churches. Not much capital required. NORRIS LAND CO., Glenwood, Minnesota.

EXCHANGE

Would you be interested in an apartment building in Milwaukee's most exclusive residential district? This building is modern in every respect. The income, while good, can be greatly increased, as apartments in the immediate vicinity are renting for a great deal more. The owner would exchange for a farm suitable for fancy stock raising. For details, GEO. W. ADAMS CO., 230 Caswell Block, Milwaukee, Wisconsin.

Will exchange $6,000 land contract on 400 acres in Alcona County, Michigan, for registered or high grade Holstein cows. Farm sold for $12,000, $6,000 paid. Address M. L. RAMSEYER, Box 25, Elkton, Mich.

SILOS

Big saving, new 14x30 redwood silo with roof. 10x24 new pine silo. 12x40 tile silo with steel roof. Convenient terms. DELWIN UTTER, Lake Beulah, Wis.

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale—Two-unit Sharples Milker for 28-cow herd, used only short while. Price, $100.00. S. P. SHERMAN, 26 N. Lake St., Aurora, Illinois.

Wanted—A second-hand De Laval milking machine with single unit. E. W. CONNELL, Nashville, Tenn.

For Sale—At a bargain. My entirely new Ann Arbor Fly Wheel Silo Filler complete with Blower and Distributor Pipe (never used). Cost me $485, will sell for $325 to move quick. Address BOX 102, Fond du Lac, Wisconsin. 17-6

For Sale—No. 4 Sharples Suction-feed Separator, $75.00. Guaranteed perfect condition. E. G. BAILEY, Sturgeon Bay, Wisconsin.

Empire Milker Wanted—State size, condition, age and price. MERLE DENNE, Wiota, Iowa.

For Sale—1 No. 22 De Laval Cream Separator. In first-class condition. A bargain. Have no use for it. H. D. WRIGHT, New Vienna, Ohio.

FEED BAGS

Bags—We buy second-hand bags; pay freight on 200 or more. LINCOLN BAG CO., Springfield, Ill. 3-spl

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

On lots of 500 or more used bags we pay freight. CATLIN BAG & BURLAP CO., Catlin, Illinois.



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

Experienced man for general dairy farm work. $60.00 to start. LEE P. GRANT, Bloomville, N. Y. 12*

Wanted—Herdsman to take full charge of registered Jersey herd. 30 cows on test. Must be experienced. Married man with no children preferred. Best of terms, is a fine opportunity for the right man. SOUTH PARK FARM, Box 386, Fargo, North Dakota. 14-4

Wanted—Good, reliable men in barn and bottling room in southern dairy. Winter resort town. Address J. S. DUNLOP, Pinehurst, N. C. 15-3

Wanted—Protestant, single man, for general farm work and assist with milking, on modern farm near Chicago. Scotchman preferred. Good wages to competent man. C. A. ERICSON, 226 W. Adams St., Chicago, Ill. 15-3

Wanted—Two or three good farmers and milkers. Hollanders preferred. Am operating 240 acres of land and 50 A. R. O. Holsteins. Must be reliable and dependable. State wages, etc. in first letter. Will offer a partnership after two years' faithful service. C. A. PARKS, Assumption, Illinois. 16-3

Wanted—Experienced test feeder and milker in Holstein herd. Married or single. State ability, reference and wages first letter. MAPLE LAWN FARM, Assumption, Illinois. C. A. Parks, Mgr. 16-3

Wanted—Holstein herdsman. Applicant must have made 30 lbs. as well as yearly records, come well recommended, good calf raiser, fitter for shows. Herd of 168 of which 80 are in milk. PONTIAC STATE HOSPITAL, E. H. Halsey, Steward, Pontiac, Mich. 16-2

Wanted—At Thorn Hill School which cares for boys who are wards of the Juvenile Court of Allegheny County, Pennsylvania, married couples preferably without dependent children to take charge of cottages, in which about twenty of these boys live, and care for and train them for good citizenship. Compensation $75 to $90 per month for the couple with furnished quarters, food, fuel and lights thus relieving them from any outlay for rent, food, fuel and lighting and all other items of household expense. Only people of recognized character and interested in helping boys desired. Send three letters of reference with answer. Address SUPT. THORN HILL SCHOOL, Warrendale, Penna. 16-2

Married herdsman for small herd registered Holsteins. Experienced in A. R. O., calf raising and fitting for shows. Salary and percentage. H. H. SISSON, Willits, Calif. 16-2

Wanted—At once, young married man to work a good dairy farm on shares. Everything furnished, and a 50-50 proposition. References required. GEO. H. METCALFE, Cortland, N. Y.

Wanted—Testers for Cow Testing Association. Associations in Iowa. $75.00 at least to start with, also including board, room and transportation furnished. Desire men with dairy farm experience. Short special training given for this work at Iowa State College. Apply C. L. BLACKMAN, Extension Department, Ames, Iowa.

Wanted—A girl or middle aged woman to help with general housework on farm. Must be good cook. References exchanged. Wages $10.00 per week. JAS. H. REGAN, Route 1, Hollandale, Wisconsin.

Wanted—private secretary. Owner of two factories, centrally located, also a small plantation at the edge of large southern city which has on it a herd of registered Jersey cattle, wants a live man who has an agricultural and business training, must be capable of auditing farm and real estate accounts, operating a typewriter and possessing initiative and energy. Address with full particulars, including salary in first letter BOX NO. 451, care Hoard's Dairyman.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

Alfalfa hay for sale. A. B. CAPLE, Route 3, Perrysburg, Ohio. 17-4

For Sale—80 tons timothy and clover hay, A-1 condition. T. W. CLARK, Poplar, Wisconsin. 17-3

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

SEEDS

Genuine Grimm Alfalfa seed. Pedigreed selection No. 162. 60 cents pound. SAM BOBER, Newell, South Dakota.

MISCELLANEOUS

U. S. Government wants Railway Mail Clerks. $135 month. Particulars free. FRANKLIN INSTITUTE, Dept. E121, Rochester, N. Y. 16-4

HELP WANTED

Wanted—Single man for barn and dairy work, good dry-hand milker, willing worker and with good habits. Give name and address of recent employers, also experience, and salary desired with board and wash of work clothes. State when you can begin work. Address BOX 453, care Hoard's Dairyman.

Wanted—Several maids at once at Wisconsin School for the Blind. J. T. HOOPER, Supt., Janesville, Wisconsin. 17-3

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Wanted—Position as manager of large modern farm or estate January 1, 1921. Married, no children, Protestant, ten years in last position as manager on one of the most modern farms and estates in Ohio. Well versed in the production of high classed milk, poultry, gardening, lawns and shrubbery. Only up-to-date, modern place or new place about to be started where you wish things done systematically. Address BOX 440, care Hoard's Dairyman. 16-2

Experienced farm manager and superintendent. Having recently sold my farm and herd of registered Holsteins, am open for connection with large farm and breeding establishment. Proposition must be large enough to insure liberal compensation from results. Thoroughly understand practical general farming and all stock, specializing in developing, buying, selling and all details of registered cattle from all angles. Will consider taking high class establishment on shares. Am young married man starting from the ground up. Can furnish unquestionable bank and character references. If you are looking for such a man and desire personal interview, address BOX 444, care Hoard's Dairyman.

Wanted—Position as housekeeper for widower or well-to-do bachelor. I am 24 years old, neat, energetic, educated, experienced, and a woman of good character. Best of references. Address BOX 447, care Hoard's Dairyman.

Wanted at once—Clerical work in railroad office by young lady. High school graduate; quick at figures. Can handle typewriter, also adding machine. Best of references. Address BOX 446, care Hoard's Dairyman.

Position wanted—As veterinarian to breeding establishment or large dairy herd. Have specialized in cattle diseases and sterility. Address BOX 445, care Hoard's Dairyman.

Wanted—By young energetic dairyman, position on dairy farm. Fully experienced in that line. State wages in first letter. Address BOX 443, care Hoard's Dairyman.

Married man, age 28, with proven ability wishes position as manager or herdsman. Broad experience with registered cattle. Experienced in both official and semi-official work. Best of references. Prefer position in Iowa, Minnesota or Wisconsin. Kindly state conditions and salary in your first letter. Address BOX NO. 177, Sta. A., Brookings, S. Dak. 17-4

Position Wanted—Single, middle aged man, 30 years old. Experience as feeder and calf raiser, also certified milk. State best proposition with board. M. L. RILEY, Barrington, Illinois.

Position wanted—By experienced dairyman and farmer, prefer share proposition. Age 33, married, dry hand milker. Address BOX 450, care Hoard's Dairyman.

Wanted—Position on large modern dairy or fruit farm by clean, reliable American. Life time experience. HAROLD D. BURLEY, R. D., Fitchburg, Massachusetts.

Manager—Desires position on high class dairy farm or estate. Married, small family, middle age, college trained, life experience. Advanced Registry work, and breeding high class dairy cattle a specialty. Address BOX 454, care Hoard's Dairyman. 17*

Wanted—Position as farm manager by married American. Agricultural college man. Life time practical experience. Pure-bred live stock, all farm crops. Certified milk. Executive ability. References. Kindly give full particulars. Address BOX 452, Hoard's Dairyman.

A middle-aged, single man wants position as foreman on a dairy farm, or as herdsman. Have no bad habits. Address BOX 448, care Hoard's Dairyman.

Wanted—Management dairy farm or estate warranting salary $3,000. Ample experience, ability, references. Address BOX 455, care Hoard's Dairyman.

Price Readjustments Expected on Cheese Markets

Reaction Follows Recent Declines—More Confident Feeling in Evidence—Growing Demand for Held Cheese

[Report by U. S. Bureau of Markets.]

The unsettled condition of cheese markets as revealed by trading during the past month gave way to a much stronger feeling during the week ending October 30. Business was on a more confident basis, and while price advances did not follow the reaction, an early recovery which will readjust values is generally anticipated. Country markets in Wisconsin opened with prices reduced in line with lower costs, and offerings of dealers showed a considerable range, based upon individual ideas of what turn the market was likely to take. Toward the middle of the week trading began to take on a firmer tone and dealers who had quoted low prices found it difficult in some cases to handle all orders on account of having oversold their stocks. This situation, together with a generally firm feeling and more active demand, has caused many dealers to look for slightly higher prices than have prevailed recently.

Confidence in Distributing Markets

Reports from distributing centers beat out this idea, as markets, especially at Chicago, ruled steady to firm following the early-in-the-week declines. After being adjusted somewhat to the country markets basis, prices asked generally held firm and were easily obtained. The tendency of buyers was to shop the market, but they were looking for goods. Although on the whole the amount of trading between dealers locally was far below normal, a fair volume of business was transacted, especially on styles which happened to be greatest in demand. The bulk of the sales were for small-sized lots and were mostly from out-of-town buyers. A great many hurry-up orders were received from jobbers and retailers who had allowed their stocks to get low on the falling market and who began to buy as soon as bottom prices seemed to have been reached. The continued talk regarding heavier receipts later on from districts where condenseries have recently closed is still causing dealers in eastern markets to hold off in their purchases of new cheese. The condensed milk market is in a weak condition and the possibility of condensing being resumed in the immediate future is not a probability. Large quantities of milk, however, are going into butter instead of cheese.

Interest in held cheese grows each week, partly because of seasonal demands, but more largely because of the facts that the quality of new cheese is none too dependable and that jobbers have been using their storage stocks the past few weeks and have accustomed their trade to cheese of this type. As a matter of fact, the proportion of really fine cheese is comparatively small and many dealers have expressed a great deal of confidence in cheese markets during the coming months for this reason. In their opinion the only cheese which it will be unprofitable to handle is that of questionable quality which even now does not share fully in the firmer condition of the markets. Export trade is slow as prices offered are still too low to result in orders being filled.

The average wholesale prices on American cheese (style Twins) for the week ending October 30, 1920, and for the corresponding week last year, were as follows:

	Week ending October 30 1920	1919
	Cents	Cents
New York	27.5	31.7
Chicago	23.4	30.9
Boston	26.4	32.7
San Francisco	23.6	30.7
Wisconsin	23.3	30.9

The total receipts of American cheese at these markets were 2,570,001 lbs. as compared with 4,332,687 lbs. for the corresponding week last year and 3,025,667 lbs. for last week.

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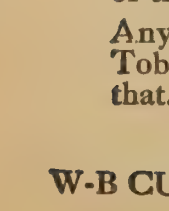
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R. F. D. No. 1, Germantown, Ill.

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VETERINARY

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Pyometra

The word pyo prefixed to another word or term means pus. Pyometra means an accumulation of pus in the uterus (womb). Take as other examples, pyorrhea, a discharge of pus from the sockets of the teeth; pyothorax, a collection of pus in the chest cavity, more commonly called empyemia. Another term which should be understood in this connection is pyemia, meaning infection by pus germs causing abscess formation. A good illustration is, pyemic arthritis, or abscesses containing pus and characteristic of navel and joint disease of calves, foals, and other young animals.

Pyometra is preceded by infection from germ invasion and usually follows retention of the placental membrane, or secundine, commonly called the afterbirth or "cleanings". In acute cases the cow may be thriftless, thin, and listless; in most cases there is no apparent disturbance of health. A discharge from the vagina usually is seen, but it may be scant. In other cases it is profuse purulent (pus containing) and may show slight blood-staining or have a foul odor. The latter conditions are common shortly after calving and retention of the afterbirth. At such times, too, the discharge contains particles of decomposing tissue of the retained membranes. The affected cow does not, as a rule, come in heat, but there are exceptional cases where periods occur, but the cow fails to conceive when bred.

The trained specialist can determine correctly and positively the presence of pus by handling (manipulating) the womb through the walls of the rectum. It takes experience and fine sense of touch to differentiate between the pregnant condition and presence of pus. This determination must perfectly be made before treatment dare be given. Interference with the womb is about certain to cause abortion, if pregnancy happens to be present. There are several indications which enable the specialist to correctly determine pregnancy. Non-experts should let the womb alone, but may give vaginal injections if an abnormal discharge is seen.

When pyometra has been diagnosed the veterinarian proceeds to drain the pus from the womb by means of a rubber catheter. He does not consider it safe to use a metal return-flow catheter, as the walls of the affected womb may have been rendered so soft or friable as to be readily punctured. Should that accident occur the cow will be about certain to die of septic peritonitis. The rubber catheter is also worked into the horns of the uterus to draw off pus, the veterinarian meanwhile manipulating the womb by way of the rectum to facilitate the process. Flushing out by means of the catheter is done with normal salt solution. Strong antiseptic solutions are harmful and some of them may cause poisoning by absorption. The cleansing is done once a week, and antiseptic solutions may be used as normal conditions of the womb result. If taken in time treatment may so restore normal conditions that the cow conceives when bred. Chronic cases usually prove incurable, so far as barrenness is concerned.

Worms

Please advise what to give a horse for intestinal worms.
Sanquoit, N. Y. A. E. M.

Mix together two parts of table salt and one part each, by weight, of flowers of sulphur and dried sulphate of iron (powdered copperas) and of this mix one tablespoonful in dampened feed night and morning for a week; then stop for 10 days and then give the powders for another week. Omit iron for a pregnant mare and increase sulphur. Colts take less doses in accordance with age and size. The medicine kills the worms and they are digested, so do not look for them in the feces.

Swelling

Not long since I noticed an enlargement just in front of the udder of one of my cows. Upon examination I found it to be quite soft and from what I have read I am quite certain the bunch is caused by rupture. It is now about six inches in diameter, but causes the cow no inconvenience. She will freshen about Nov. 10th. Is there any remedy for this condition?
Muscoda, Wis. B. E. S.

If a rupture is present you will find it possible to work the bowel back into the abdominal cavity by manipulating the mass with the fingers. If that can be done strips of porus plaster or surgeon's tape should be placed upon the part, layer on layer, to build a strong truss; then pass a bandage around the body and fasten it to the truss by means of pitch. This may help, until the cow calves; then an operation will be in order, if that is thought worth while by the veterinarian. We suspect, however, that a dropsical swelling may be present and that should subside if the cow is made to take exercise, is less heavily fed, and the part is well massaged two or three times daily.

The Disciplined Life

There is widely advocated in the world today a doctrine of relaxed endeavor. It places the enjoyment of life very high—I think too high. It sets enjoyment as the goal of our desires. In this, I am sure that it is wrong. It is not given to men and women to make enjoyment their goal. Furthermore, it teaches that the good things are ours of right, that we may take them and enjoy them, without the hardy effort of acqusition and without the virtue of deserving. You will find this doctrine taught everywhere today—in the novel, in the drama, in social reform, in political revolution. With all the conviction that I possess I warn you from it. In its place I urge upon you the Doctrine of the Disciplined Life, the hope of rewards fairly and arduously won, the necessity of sacrifice. There are no darlings of fortune.—DAVID P. BARROWS, President University of California.

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Seeing your friends and having them join in for a club of subscribers.

Sale Announcements

Nov. 13—Holsteins. Richard Boehlke's Dispersion at Little Rapids, Wis. F. H. Everson, Sale Mgr., Lake Mills, Wis.
Nov. 15—Holsteins. Walworth County Holstein Breeders' Sale at Elkhorn, Wis. Ben Bachhuber, Mgr.
Nov. 16—Holsteins. W. W. Brundedge & Sons Dispersion at Zanesfield, Ohio. F. G. Johnston, Columbus, O., Sale Mgr.
November 16-17—Holsteins. Iowa Holstein Breeders' Association, Second Guaranty Sale at Des Moines, Iowa.
Nov. 17—Jerseys. "Golden Rule Jersey Sale" at Pacific International Live Stock Exposition, Portland, Oregon.
Nov. 17—Guernseys. Waukesha County Guernsey Breeders' Ass'n. Seventeenth and Semi-annual Consignment Sale of registered Guernseys at Waukesha. F. E. Fox, Sec'y., Waukesha, Wis.
Nov. 18—Holsteins. Katterjohn & Hickerson at Blue Bell Farm, Boonville, Ind.
Nov. 18—Guernseys. Fond du Lac and Winnebago Counties Guernsey Breeders' Ass'ns., Fond du Lac, Wis. Chas. L. Hill, Rosendale, Wis., Sale Mgr.
Nov. 19—Guernseys. Guernsey Cattle Club of Van Wert Co., Ohio. M. S. Myers, Secretary, Van Wert, Ohio.
Nov. 19—Holsteins. Skaalen's Home for the Aged, B. J. Larson, Supt., Stoughton, Wis.
Nov. 19—Holsteins. Jefferson County Holstein Breeders' Consignment Sale at Lake Mills, Wis. A. F. Gafke, Jefferson, Wis., Sec'y.
Nov. 20—Holsteins. Sheboygan County Sale at Plymouth, Wis.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 22—Holsteins. Leavenworth County Breeders' Herington, Kansas. W. H. Mott, Sales Manager.
Nov. 23—Guernseys. J. Harlan Frantz, Waynesboro, Pa.
Nov. 23—Guernseys. Mankato, Minn. Dr. M. B. Wood, Sale Mgr.
Nov. 23—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Nov. 23—Holsteins. Dr. Blackburn's Sixth Annual Consignment Sale at Cuba, Ohio.
Nov. 24—Holsteins. Waupaca County Holstein Sale, Weyauwega, Wis. James H. Dance, Sale Mgr., Waupaca, Wis.
Nov. 26—Holsteins. Macoupin County Breeders' Sale, Shipman, Ill.
Dec. 1—Holsteins. Stephenson Co. Hol. Ass'n. Sale at Freeport, Ill. R. N. Thompson, 130 N. Wells St., Chicago, Ill., Field Sec'y.
Dec. 2—Holsteins. Effingham Co. Hol. Ass'n. Sale at Effingham, Ill. R. N. Thompson, 130 N. Wells St., Chicago, Ill., Sec'y.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Dec. 7—Holsteins. D. V. Whiteleather Dispersion at Columbia City, Ind. F. G. Johnston, Columbus, O., Sale Mgr.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Tom's New Suit

(Continued from page 737)

come," continued the doctor. "The colored man was, perhaps, clean and respectable. Finally he wore the suit out completely. One day a ragman came along calling, 'rags, rags, any rags, highest price for old rags.' Well, that ragman bought that suit as old rags, paying a few cents for it. He threw the clothes into his rickety old wagon among all kinds of filthy rags and rubbish, and next we see the cloth ground up with other woolen rags from everywhere. All were ground up together, and from the mixture your new suit is made."

"My new suit made of old rags," mused Tom.

"Yes," returned the doctor, "but the materials were put through a process that killed all the germs and then the materials were scoured until they were supposed to be clean. As a physician, I think I can affirm that such cloth is usually free from disease germs and actual filth, but as a man who knows something of the clothing business, I can also affirm that such cloth sells on the market today for much more than it is worth."

"I should say it does," remarked Tom, who was thinking of the $50.

"Then," continued the doctor, "it offers the best opportunity possible for profiteering in clothing. You paid $50 for a shoddy suit. It is made of rags worth, after they are scoured, about twenty cents a pound. The twenty-cent woolen rags are mixed with a little wool worth $1.50 a pound and the cloth is made into a suit that sells to you for $50. Why, you ought to be able to get a new woolen suit fresh from the backs of healthy sheep for less than that."

"Well, what can we do about it?" asked Tom. "Most of us don't know cloth as you do. It looks to me as though we would have to keep on paying for new wool and get nothing but shoddy clothes in return for our hard earned cash."

"Not necessarily," answered the doctor, "there is a way out if we will all get busy and see to it that Congress passes the French-Capper Truth-in-fabric Bill. That bill would require manufacturers to stamp in the selvage the various kinds of materials that enter into the composition of the cloth. When the truth-in-fabric bill is passed and the law rigidly enforced, shoddy cloth will not sell as readily as it does today. That bill should be followed by another bill that will require that all ready made clothing shall carry a label telling exactly what it is made of.

The truth-in-fabric bill and the correct-label bill should be passed at once. These bills should be actively supported by the purchasing public, and they should have the active backing of wool growers everywhere. If you and I and everybody else will pull for the passage of these bills, Congress will take action now. If we take no interest, the bills may fail, and we will then keep on buying new suits that are all wool and all shoddy."

"Well," answered Tom, "I will write to my congressman urging him to vote and to vote for the passage of these bills."

"That's right, Tom," replied the doctor. "We must act at once or the wool growers will be ruined and then no new wool will be produced. The wool growers cannot compete with the ragman as long as the fraudulent article sells for the genuine. Therefore, in fairness to the wool growers, in fairness to ourselves, and in the interests of right and justice, we should urge every congressman and every senator to support bills that will make cheating in the quality of clothes next to impossible."



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Lastly, but just as important is it—it contains Laxatives and Diuretics that cause the kidneys to filtrate and the bowels to operate regularly, so as to throw off and carry off the waste material. There is no clogging of the system where Dr. Hess Stock Tonic is fed.



Good alike for cattle, horses, hogs and sheep. It keeps animals healthy, the whole herd thrifty. It expels worms. Always condition your cows for calving with a course of Dr. Hess Stock Tonic before freshing.

Dr. Hess Stock Tonic is compounded strictly on scientific lines. You buy it according to the size of your herd. Tell your dealer how many cows you have. He has a package to suit. We guarantee good results in the milk pail.

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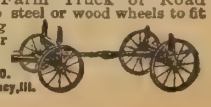
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ANTI-COW-KICKER

Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.



Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.



Electric Wheel Co.
31 Elm St., Quincy, Ill.

FAIRBANKS SCALES

Never before so essential as today

THERE WAS NEVER A TIME when you have had a greater need of a wagon and stock scale than today.

The high price of feed makes it even more essential that your stock should bring the best possible returns.

Because of the high prices of live stock you *must* watch carefully the weights of your animals. You also must know their weights when you take them to market.

To be absolutely sure that your weights are correct you should weigh your feed and stock on a dependable scale. The Fairbanks Scale for Wagon and Stock use has been the world's standard for 90 years and today fixes the standard of weight in any neighborhood.

In these times of high prices a dependable Fairbanks Scale often is the deciding factor between profit and loss in farming.



Fairbanks, Morse & Co.
INCORPORATED CHICAGO
The Canadian Fairbanks-Morse Co., Ltd., Montreal

Harvest 20 to 45 Bushel to Acre Wheat in WESTERN CANADA



Think what that means to you in good hard dollars with the great demand for wheat at high prices. Many farmers in Western Canada have paid for their land from a single crop. The same success may still be yours, for you can buy on easy terms.

Farm Land at $15 to $30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows **20 to 45 bushels of wheat to the acre.** Good grazing lands at low prices convenient to your grain farm enable you to reap the **profits from stock raising and dairying.**

Learn the Facts About Western Canada

—low taxation (none on improvements), healthful climate, good schools, churches, pleasant social relationships, a prosperous and industrious people.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., write Department of Immigration, Ottawa, Canada, or

George A. Hall, 123 Second St., Milwaukee, Wis.

Canadian Government Agent.

WESTERN CANADA
Farm Lands at Low Prices
The Wheat Belt of America

Hog Cholera Fakery

There are always certain men who seek to profit through calamity and among these are the vendors of certain hog cholera "cures". These cures are not only of no value, but the men who handle them will discourage some farmers who might otherwise protect their herds by the use of hog cholera serum and virus. Certain sections of Wisconsin are having an outbreak of the disease and the following warning from the Wisconsin Department of Agriculture applies to other states as well as Wisconsin:

"Don't put your faith in irresponsible vendors of hog remedies. Accept the assurance of all responsible authorities and of all progressive experienced swine breeders, that there is no cure for hog cholera, and that there is no preventive for it except hog cholera serum, properly prepared and properly administered.

"The department is informed that agents for hog remedies are working in infected territories and that they have made the following statements:

"1. That it is not advisable to vaccinate against hog cholera because it lasts only 60 days.

"2. That it spreads hog cholera.

"3. That feeding their remedy will prevent cholera.

"4. That they are representatives of the state veterinarian and will work free. All you need to pay for is the remedy.

"5. We are also told that they are carrying around specimens which are believed to have died in that territory from hog cholera.

"Dr. Purcell, in charge of the work for the department, advises hog raisers to accept the assurance of the Wisconsin College of Agriculture, of the U. S. Bureau of Animal Industry, of the Wisconsin Department of Agriculture, and of every progressive hog breeder in the country who has had experience with hog cholera that there is no truth in any of the above first four statements.

"Also that it is advisable and necessary to vaccinate against hog cholera, and that vaccination lasts during the life of the animal.

"It does not spread hog cholera.

"Hogs of any weight, age, or condition, and upon any kind of feed or tonic will contract hog cholera if exposed to this infection unless they have been immunized by the administering of hog cholera serum. Therefore the claim that stock food or tonics will protect against it is false."

Illinois H.-F. Association Officers

The third annual meeting of the Illinois Holstein-Friesian Association was held October 12. The business transacted included the report of the treasurer. Amendments were made to the constitution, adapting it better to meet the rapidly developing condition of the association. The state was divided into five districts, on the basis of cow population, and one vice-president and three directors were elected from each district, who should constitute a committee for the district.

The officers elected for the ensuing year were: President, George A. Fox; secretary-treasurer, R. N. Thompson.

Arrangements were begun to make the next state sale, about March 10 and 11, 1921, a better one than the last. In competition with Chicago, the cities of Aurora, Wheaton, Dixon, and Sterling have formally entered bids for the next sale.

Illinois. R. N. THOMPSON.

The Scotch have a proverb that good feeding is necessary for milk production. They say "it is by the head the cow gives milk".

SWINE



Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of
Epochal Berkshires

Get a Herd Sire or a Foundation Trio

From the herd that has won more first prizes and more championships at the biggest shows this year than all its competitors put together.

Some statement, but it's true!

The Epochal Herd won 62 firsts out of a possible 106 and 23 championships out of a possible 42 at the 1920 Missouri, Illinois, Iowa, Indiana, and New York State Fairs, the Eastern States Exposition at Springfield, Mass., and the National Swine Show.

The Epochal herd won in 1919 and 1920, 429 prizes; 140 firsts, 44 championships, and 14 grand championships. This is more prizes, more firsts, more championships, and more grand championships than were ever before won in two consecutive years by any one Berkshire herd in the world.

Young boars that are herd sire prospects of the kind that lift strains to the top, $200 each and up. Trios of six months old pigs carefully and properly mated—a real foundation—$300 to $2,500.

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Epochal Berkshires are the deepest and smoothest big-type hogs.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES

DUROC BOARS

of Pathfinder, Colonel, Orion Cherry King breeding. They are the big long kind that will grow out and make good. They are priced to sell.

Let us tell you about one on our guarantee to satisfy.

BERTLEY FARMS
Glenwood, Illinois Post Office Box 1

Pure-bred Duroc Jersey Boars For Sale

We have good spring boars by the great Cherry King's Jack
at $60.00 each

Ercell E. Tyler, Care People's Natl. Bank
Warrensburg, Mo.

DUROCS

Sired by Peerless Sensation
Great Orion Sensation
Brookdale Orion Sensation
—OUT OF—
King of Orions—Pathfinder
and Brookdale High Orion Dams
Ready for Service Boars
Spring Gilts—Bred Sows
Secretary Duroc Record Association will, at no expense to you, make selection if desired.
We Guarantee Satisfaction
H. I. CASE, Manager **Robin's Nest Farms** M. M. BAKER, Proprietor
PEORIA, ILLINOIS

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Leaves Aid in Garden Fertility

Leaves are valuable for increasing the humus and plant food content of garden soil, according to the department of soils at the Ohio Experiment Station.

To burn leaves results in the loss of nitrogen, the most expensive fertilizing element, whereas garden soil could be much improved through the application of the leaves, particularly where it is impossible to get stable manure for garden use.

Where it is possible to secure leaves by the wagon-load from city streets the addition of acid phosphate further increases the value of leaves as a fertilizer.

Leaves serve their best purpose when piled on the garden in the fall and worked into the ground with spring plowing or spading.—Weekly Press Bulletin, Ohio Experiment Station.

BROWN SWISS



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.

RA INMA N, Secretary Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Brown Swiss Bull

Federally tested. Official records back of him. Ready for service. Write for pedigree and price.

Thos. W. Coby - Union City, Ind.

Brown Swiss Cattle
Stock For Sale

Correspondence Solicited

HULL BROS., Painesville, Ohio

JERSEYS

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY. BLACK EARTH, WIS.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion. Address: J. Q. Emery & Son, Edgerton, Wis.

Jersey Bull For Sale

dropped February 4, 1920. Sired by McKay's Noble Fox No. 164786 and from McKay's Pauline No. 385951. This calf is the best for his age of any I have seen. Will sell at $125. Is easily worth $300. Write

J. F. Schmidt, Whitehall, Michigan

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

Jersey Bulls

If you want to breed size, type, large production and improve the breeding on and up qualities of your herd, write us for prices and descriptions of some herd improving bulls we have for sale.

HOOD FARM, INC.
Lowell, Mass.

N. B. Price list of Forty females on request.

FOR SALE

a few choice bred
Jersey Heifers and Cows

Murdale Farms

A. W. Murphy, Owner

1360 West 3d St., Cleveland, Ohio

Cedar Crest Farms
Offer Jersey Bull

A fine individual, Nation's Raleigh, (185639), dropped August 14th, 1919. His grandsire Imp. Hauteville Fairy Boy (90952) had twenty daughters in Register of Merit, his dam, Nation (256031) entered Register of Merit at seven years, producing 8,850.7 lbs. milk, 503.64 lbs. butterfat. Also a few first class Jersey cows.

J. K. Dering, Owner, Lake Villa, Ill.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS

W. A. BREWERTON, Owner L. A. BENT, Mgr.

JERSEYS

The Sure Bulls

THERE are more Jersey bulls owned by co-operative bull clubs than all other breeds combined.

Why?

Because Jersey *cows* have completed more yearly Register of Merit records than all other breeds combined. These *fair* tests, based on a full milking period, give the breeder and farmer a wider and safer choice in selecting bulls out of proven stock.

Because for two centuries, on the Island of Jersey and in America, the world's greatest breeders of cattle have worked to make Jerseys the best and surest reproducers.

Because Jersey bulls save you many years in building a profitable dairy herd.

The Jersey Information Bureau will be glad to send you the facts about Jersey bulls—how they breed true to type and increase production. Address



The American Jersey Cattle Club
324-E West 23rd St., New York

An Institution for the Benefit of Every Jersey Owner

MERIDALE JERSEYS



Interested Prince 2d 95708

Sire of 27 Register of Merit cows, including Interested Jap's Santa, 15,569 lbs. milk, 1,007 lbs. 85% butter.

His pedigree blends the blood of those conspicuously prepotent cows, Interest and Sayda.

He has 50% the same blood as five Gold Medal cows in the Meridale Herd. A few of his sons are for sale, out of excellent Register of Merit cows.

AYER & McKINNEY
300 Chestnut Street, Philadelphia, Pa.

158 R. O. M. records made by
AYREDALE JERSEY COWS

Average 10,503.6 lbs. milk, 582.5 lbs. fat.

We offer bulls and bull calves from these cows, sired by

CARRY-ON of AYREDALE (164012). His dam and two grandams average 17,151.2 lbs. milk, 928.4 lbs. fat.

SOPHIE GILSLAND TORMENTOR (123584). Dam made as a 4-year-old 15,952 lbs. milk, 888 lbs. fat.

SOPHIE 19TH GRANDSON (165221). Dam made 15,578.7 lbs. milk, 809.5 lbs. fat.

The bulls we offer are close up to the World's Champion producer Sophie 19th of Hood Farm. Correspondence solicited. We would appreciate information about your herd, so as to price you bulls calculated to add size, type and increased production.

Write F. W. AYER
AYREDALE STOCK FARM, Bangor, Maine

Jersey Day
Portland, Oregon
Wed., Nov. 17, 1920

The Jersey Show at the Pacific International will be the greatest gathering of Jerseys ever shown west of the Rocky Mountains. There are 330 entered in classes, representing the leading breeders. The management of the Show have assured us that they will have all awards placed in the classes by Wednesday, the day of the

Golden Rule Jersey Sale

This sale is under the auspices of the Oregon Jersey Cattle Club. The consignors include many of the leading breeders of the Northwest. The requirements are rigid, every cow must have a large R. of M record, every heifer must be from a R. of M. dam, every animal sound, (an ideal time to secure the best in the west). Among the bulls we find:

A son of Poppy's Dortha, 994 lbs. fat, World's record, three-year-old.

A full brother to Lulu Alphea of Ashburn, 800.08 lbs fat. World's record senior yearling.

A son of Old Man's Darling 2nd, 983 lbs. fat. Mona Loa of Waikiki, grand champion, Spokane Fair 1920, and winner of many other prizes.

Plan to be at the great Pacific International on Wednesday, November 17.

Catalog giving details of offering and consignors will be published...Send to Sale Manager for one.

Sale Committee—C. N. McArthur, Ed. Cary, C. C. Dickson.

Auctioneer: Col. J. W. Hughes.

E. A. Rhoten, Sale Mgr., Salem, Ore.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors

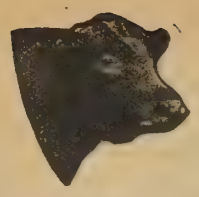
ULSTERDORP FARMS Highland, N. Y.

POLLED JERSEYS

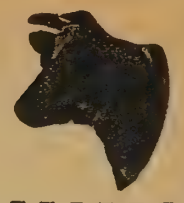
Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

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Economy in Production ← GUERNSEYS → Quality of Products



How can your community obtain pure-bred Guernseys? This question is answered by one who during the past three years has purchased hundreds of pure-bred Guernseys for local associations. Let us tell you what he says.

THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 95, PETERBORO, N. H.

Appletree Point Farms



APPLETREE POINT'S DOLLY DIMPLE

Pencoyd's Secret Marose, the sire of the above calf, won first prize, senior and grand championships, at the New England Fair, Connecticut and New York State Fairs. His "get" (4-month-old calves) were first at the Eastern States Exposition and fourth at the National Dairy Show with thirteen "gets" shown. His heifer calf, Appletree Point's Dolly Dimple, was Junior Champion at New England Fair, Eastern States Exposition and was Grand Champion at Connecticut State Fair. His bull calf was unbeaten in all eastern shows and won at Waterloo and National Dairy Show. Write for prices on May Rose calves that combine type and production.

U. A. Woodbury, II, Burlington, Vt.

Dispersal Sale of Small Herd of Guernseys

Included in the list are two daughters of Langwater Rival (14194) out of Endymion's Primrose (23795) who has a record in class A of 845 lbs. butterfat. Langwater Rival was third prize at the National Dairy Show in 1912 and has eleven A. R. daughters.

One A. R. daughter of Bob Rilma (16141) and several daughters of Uncle Sam of Linda Vista (26894). Uncle Sam is a son of Langwater Stars and Stripes and out of a daughter of Jethro's May King of Linda Vista.

For prices and further particulars address

William B. Tousey, Jordan, New York

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

We Bred and Developed

The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.8 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection

OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

A Great Sire

IS

FALCON'S PROUD WARRIOR

considered by many to be

The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.

35 Registered and Grade Guernseys

All cows and heifers including two entire herds

Will be Offered For Sale on

November 19, 1920

by the

Guernsey Cattle Club of Van Wert County, Ohio

Catalogues after Nov. 10

M. S. Myers, Sec'y, Van Wert, Ohio

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by

RADISSON FARM, ANOKA, MINN.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

For Sale

Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.

Federal Tuberculosis Free Accredited Herd.

Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

May Rose on both sides. Dams in A. R or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

Attention—

Guernsey Breeders or Prospective Breeders!

We have for sale some very high class cows that would make a great foundation for prospective Breeders, or they would make a very valuable addition to any herd.

Most of the cows have splendid A. R. records, or records in the making.

If you are looking for something of the highest quality in Guernsey breeding you cannot do better than write us.

We also have several young bull calves sired by the great bull, "Cherub's Prince", whose progeny won all the highest honors at the 1920 National Dairy Show.

Address all inquiries to Percy Jones, Farm Superintendent, Iowa Dairy Separator Company.

W. W. Marsh - - Waterloo, Iowa

40 Guernseys

At Mankato, Minn., Nov. 23, 1920

At 1:30 in the New Sale Pavilion

The entire herd of Jens Arnbal of Albert Lea, Minn. May Rose Governor of Jean Duluth, a son of May King of Linda Vista, together with 15 of his daughters, will be a leading feature of the sale. The herd is on the Federal Accredited List.

Auctioneers: O. S. Johnson, A. C. Gray

Write to the sale manager for catalogue.

Dr. M. B. Wood, Mankato, Manager of Sale

First Nat'l Bank of Mankato, Clerk of Sale

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

May Rose Guernseys for Sale

Bull Calves and Heifers from A. R. Bulls and A. R. Cows

Sweet Springs Farm
Troy, Ohio

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 360 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 35903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS

James H. Murphy, Mgr., Delavan, Wisconsin.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

When writing advertisers please mention Hoard's Dairyman.

Store squash and pumpkins in a dry, warm place not far from the furnace in the cellar or near the chimney in the attic.

"The farm is the best home of the family, the main source of national wealth, the foundation of civilized society."

GUERNSEYS

Stop! Look! Listen!

And you'll not be missin'
Your choice of 25 females
(We're telling no tales),
Of popular May Rose lines.
Fine type, and great dairy signs.
Also 2 males, one 18 months,—
The other still bunts.
$250 takes the older.
For the rest, send for folder.

Forestdale Farm, Richard D. De Forest, Amsterdam, N. Y.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

BIRCHWOOD GUERNSEYS

Young bulls for sale sired by Sunkistson No. 45371 who has thirteen dams in the first four generations that have A. R. records that average 582 lbs. fat, and out of officiallly tested dams.

M. L. Welles, Rosendale, Wis.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

Young Bulls 6-10 Months Old

From tested dams or dams now on test making from 450 to 750 lbs. fat. They are sired by excellent bulls of May Rose, Clara Sequel, and other breeding as good. Price $100 to $500. Write for more complete information.

CORIUM FARM, F. J. Rueping, Owner, Fond du Lac, Wisconsin

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.

Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - - WAUKESHA, WISCONSIN

For Sale



CONTENT'S MERRY BOY OF PROSPECT (64022)
Dropped December 23, 1919
SIRE—Anton's King Confidence (43517). DAM—Content of Prospect (54491) A. R. 5960

A solidly built calf that well represents the famous animals in both sides of his pedigree. He is deep bodied, has a good heart girth and is very well developed in every way.

His sire has six May Rose crosses and is one of the best individuals we have ever owned. The dam of Anton's King Confidence made 764.65 lbs. of fat as a junior four-year-old.

The get of A. K. C. are really wonderful individuals. Next week in this space we will show a group of his young heifers. Look them over and figure for yourself how one of their half brothers would help your herd.

Content of Prospect is a good producing cow and made 312 lbs. of fat as a two-year-old on herd rations and only twice a day milking.

If you want this young fellow write us immediately.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

LAST CALL

to the

Fond du Lac and Winnebago Counties Guernsey Breeders'

Third Semi-Annual Sale

Nov. 18th, Fond du Lac, Wis.

62 Registered Females — 8 Registered Bulls

It will also include — The entire herd of E. V. Maltby, Midlothian, Ill.

Some very good consignments from the herds of F. J. Reuping, B. F. Sheridan, E. P. Sawyer, Chas. L. Hill & Son, H. W. Lewis, Ingalls Farm Co., Wichern Bros., Wm. Illian, and W. G. Jamison & Sons.

The cows are bred to some of the very best of sires such as Kenilworth Gold, Admiral of Edgemoor, Superb of Edgemoor Beauty Mar, Pencoyd Crackerjack, Pine Blossom's Cherub, and Lone Pine Illustrator.

Every animal sold subject to a 60-day retest.

If you want good ones, be there.

Your catalog is ready

Chas. L. Hill, Sale Manager, Rosendale, Wis.

Registered Guernseys

17th and Semi-Annual Consignment Sale Waukesha County Guernsey Breeders' Ass'n

November 17, Waukesha, Wis.

We have a very fine lot of individuals catalogued for our annual offering, and feel sure they will please the prospective purchasers. The following are a few choice consignments:

Two choice daughters of Marshall Ma Charmante (26615), who is by Imp. Ma Charmante's Hero A. R. and out of a 595.47-lb. dam.

Belva of Aurelian Farm A. R., milk 8,179.5 lbs., butterfat 443.72 lbs., Class GG.

Shoreland Lily A. R., milk 9,281.5 lbs., butterfat 397.5 lbs. at 2 years.

Hilaria A. R., milk 11,157.40 lbs. butterfat 513.36 lbs., Class C.

Beauty of Lynnhurst A. R., milk 8,950.5 lbs., butterfat 572.88 lbs., Class B.

Rex of Broad Ripple (61960), sired by Rex of Rich Neck A. R. and out of Marietta of Maple Hill A. R., 797.7 lbs. butterfat.

Auctioneers: Love, Benjamin and Jones

For catalogue, address

F. E. Fox, Secretary, Waukesha, Wisconsin

REMEMBER the sale of Registered Guernseys at Fond du Lac, November 18, 1920. C. L. Hill, Mgr.



A good bull is more than half the herd
A scrub bull is mighty near all of it.
Start right - put an
AYRSHIRE BULL
at the head of your herd
No class of cow is in as great a demand to day as a
GRADE AYRSHIRE

BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULLS last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!
Start right – put an
AYRSHIRE BULL
at the head of your herd





We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager. ROSEMONT, PENNSYLVANIA

Middlesex Meadows Ayrshires

No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.

We offer Nona's Chancellor of Middlesex, the six month's grandson of a champion out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.

A. Henry Higginson

SOUTH LINCOLN, MASS.

Addington's Champion

No. 19561

Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk

FOR SALE—Sons and Daughters from high milking dams.

Tuberculin Free Herd

BLACKBURN FARM Sewickly, Pa.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

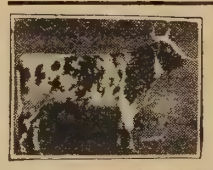
Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.



Milking Cows

Fresh and Bred Heifers
and Sons of
Ringmaster's B. B. Diplomat
For Sale

DUNCRAGGAN, WESTFORD, MASS.

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Ayrshires

We are offering 20 cows and heifers, most of them due to freshen in November. The lot includes 9 A. R. cows. They are all straight, sound, young animals. 15 are sired by a son of Rena Ross 3rd with 3 A. R. records. All are bred to a bull combining Nox'emall and Finlayston blood. Must sell to provide room for young stock.

Colebrook Farms
A. W. Eno, Prop., Honesdale, Pa.

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

For Sale

8 head of two-year-old Ayrshire heifers. Some of them will freshen in two months. They are all nicely marked and of the large type and from heavy milking cows. Priced to sell.

E. N. MANLEY & SONS, Lyons, Nebr.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL, Wellington, Ohio

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis

FOUR BULLS 15 to 18 Months Old

They are in pink of condition and ready for immediate service. They are from choice stock. Priced reasonable.

FRED TSCHUDY & SONS, Monroe, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

New York Butter Market

NEW YORK CITY, NOVEMBER 1:—The situation in the butter market has improved considerably and receivers are less pessimistic than at this time last week. The change can be attributed largely to the change in weather conditions as temperatures have fallen materially during the last few days. It is very probable that jobbers and retailers allowed their stocks to become depleted as they became free buyers at the outset last week. Another factor which undoubtedly served to cause a better feeling was the report from Denmark that the Danish delegation to London had negotiated with British authorities for butter deliveries during the month of November. The agreement is that Danish exporters shall deliver to England a minimum of 5,000 casks of butter weekly. There is no limit placed on the quantity of butter that the importers may ship to England, as that country is eager to purchase all the Danish butter that can be secured. The agreement with England necessarily will reduce to the minimum shipments of Danish butter to other countries as the greater part of the present production, aside from that consumed domestically, will be needed to fill the English orders. That means that importation of Danish butter in this country will practically cease for a month at least. That should give our merchants sufficient time to dispose of their stocks of domestic butter that have accumulated.

The demand in this market for the last several weeks has been confined principally to butter that will score 92 points or above. With the awakened activity of last week, there came considerable demand for high quality firsts and there were some inquiries and a few sales of a few lots of undergrade butter. While there are vast stocks of such butter in stores yet, the condition as compared with that of the last few weeks is greatly improved. Receivers see possibilities of clearing their accumulations with less losses than they had anticipated. Centralized butter is in more demand than it has been of late and higher prices are being asked. Reports are current that some of the large centralizers have been forced to close their doors because of their large losses during the past few weeks. It is hoped that in the future more stress will be laid on quality by the centralizers and less on quantity in order that the average quality of American butter may be improved.

The quality of the butter being received shows little improvement as yet. It is estimated that less than 2% of the butter being received can be classed as fancy. Why that condition should be more pronounced this year than heretofore is a conundrum. Many creameries which for many years have made practically no butter that would class below the grade of an extra are now shipping butter of variable quality, ranging from an occasional churning of extras down to low firsts and seconds. Buyers are extremely suspicious of all butter under present conditions and are much more critical than ever before.

On Monday of last week, the market early showed evidences of a quickened demand and the quotation on extras advanced 1c. Each succeeding day until Saturday witnessed a similar advance. On Saturday, there was a slackening in activity and the quotation did not change. The same condition obtained today. One encouraging feature of improved market is the fact that prices of undergrades have advanced with those of extras and higher scoring butter. The range in quotations is the widest ever known as there is a difference of 22c between the selling price of an extra and a low second. Established quotations today are: Extras (92 score), 61½@62c; higher scoring than extras (93 score or higher), 62½@63c; firsts (90—91) score, 54@60c; firsts (88—89 score), 47@53c; and seconds (83—87 score), 40@45c.

W. B. LIVERANCE.

A half-day's time will probably suffice to see that all the farm buildings are tight and snug for the winter. It will be a half-day well spent.

Patient bossy may be willing, but she cannot do her neighbor's bit. Each must stand or fall by herself—and some should fall by the butcher's axe!

Bulletins of the Week

Planning the Farmstead, by M. C. Betts and W. R. Humphries. Farmers' Bulletin 1132, U. S. Dept. of Agriculture, Washington, D. C.

Vetches, by C. V. Piper and R. McKee and a chapter on Vetch Seed and Its Impurities by F. H. Hillman. Farmers' Bulletin 515, U. S. Dept. of Agriculture, Washington, D. C.

Cocklebur, by A. A. Hansen. Circular 109, U. S. Dept. of Agriculture, Washington, D. C.

Common Poultry Diseases, by D. M. Green. Farmers' Bulletin 1114, U. S. Dept. of Agriculture, Washington, D. C.

HOLSTEINS



Oak Dale Segis Pontiac

Our Junior Herd Sire

He is a full brother to our herd sire, the famous, King Oak Segis Pontiac, son of the "marvel of all sires", King Segis Pontiac Count, whose daughters have broken full over 100 world records. His dam is a daughter of Oak De Kol Ollie Homestead, grand champion at the National Dairy Farm Show in 1916.

Oak Dale Segis Pontiac was 15 months old when the above picture was taken and weighed 1,200 pounds. He will have tested daughters at three years of age. We are not holding Oak Dale Segis Pontiac for breeding to the daughters of King Oak, but to help him in developing the Oak Dale Herd.

Oak Dale Segis Pontiac will be used on about 50% of our foundation cows and will help to bring out the wonderful transmitting qualities of the families we are developing.

If you are looking for some real foundation stock, come to Oak Dale Farms, or write us and tell us your wants. Our herd is always open to inspection.

OAK DALE FARMS

INCORPORATED

BREEDERS of HOLSTEIN FRIESIANS

Austin Minnesota

19 Registered Holsteins

From Accredited Herd

To be sold Nov. 19

Most of these are by our noted herd sire, King Walker Pietertje Segis 6th, and from very good dams.

Sale will be held on the farm 2 miles north of Stoughton, Wis., at 1 p. m. Morning trains will be met on sale day.

Send for catalogs

Skaalen's Home for the Aged

B. J. Larsen, Supt.

Stoughton, Wisconsin

L. E. Pennewell, Auctioneer. Park Ames in the Box

Service Bulls For Sale

Sired by 30-lb. grandson of Sir Pietertje Ormsby Mercedes and Pontiac Aaggie Korndyke, from A. R. O. cows with records up to 23 lbs. Individuality excellent.

Homer R. Dopp, Oconomowoc, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

I Now Offer A Grand Son

of two of the greatest sires of the breed. King Pontiac Jane Veeman No. 316983, born Feb. 11, 1920. Color evenly marked, well grown, good individual.

His sire—King Pontiac Mona Veeman, being a promising son of King of the Pontiacs. His first twelve daughters to freshen have records from 16 lbs. to 21 lbs. as 2-year-olds.

His dam—Craig Manor Jane Veeman, A. R. O. record of butter 26.60 lbs., milk 510.1 lbs. Believe she is capable of improving her record at next freshening. She is a daughter of Sir Veeman Hengerveld who now has 125 A. R. O. daughters, 17 with records above 30 lbs. and three with yearly records above 1,000 lbs. of butter, 24,000 lbs. of milk. $300 buys this fellow if taken soon.

Herd under Federal Supervision.

W. D. Robens, Poland, N. Y.

Holstein Bull For Sale

Born Feb. 11, 1920; nearly all white, fine individual, well grown. Sire—a 29.9-lb. proven son of King of the Pontiacs. Dam—a 22.6-lb. cow of splendid dairy type that has produced 80 lbs. of milk a day. Price $200 F. O. B. Sherburne. Inspection invited.

Edwin P. Smith, Sherburne, N. Y.

A Rare Opportunity

to buy a Federal Accredited Herd.

15—A. R. O. cows in calf to a double 30-lb. son of King Segis Pontiac Alcartra, freshen fall and early winter.

1 — 20-month-old son of King Lyons, out of Julia Lyons Pontiac, ¾ white, seven nearest dams average 30.10, alone worth $1,000. Not related to any of the females.

These 20 head for $5,000, delivered free east of the Mississippi.

Henry J. Karpinski, R. 7, Oswego, N. Y.

M & P HEALTHY HOLSTEINS

Herd tuberculin tested under Federal Supervision.

An exceptionally fine bull calf, born Dec. 7, 1919, beautifully marked, weighs 500 lbs. His dam has produced 11,684 lbs. of milk since freshening. Sire is a grandson of Pontiac Korndyke, whose dam has a 23-lb. 3-yr.-old record.

PRICE $225.00

MARKHAM & PUFFER, AVON, N. Y.

Double King Segis Breeding

Here is a show bull born in March, whose sire is a son of *King Lyons*, out of a 35-lb. daughter of *King Segis*. His dam is by a son of *King Segis Pontiac Alcartra*, who combines in the closest degree the blood of all the great foundation bulls.

We also have two heifers born in June whose sire is by a son of *King Segis Pontiac Alcartra*.

Write for prices and pedigrees.

G. BURLINGAME, - - CAZENOVIA, N. Y

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,

Box 253. Cortland, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK.

Judge Your Next Herd Sire——

—By Individuality (That Satisfies)

—By Production (That Determines Value)

Bell Farm Offers a Select Five—for Your Choice

The demand for our young bulls has been very brisk and we are listing below five of the oldest ones we have. We are offering these at atttractive prices that we might place them previous to the winter season. They are all bulls of the very highest order and which we are willing should leave Bell Farm as representatives of its herd.

No. 1 King Valdessa Pontiac Veeman (born Dec. 20, 1919). Sire: King Valdessa Pontiac (our former herd sire — son of Mabel Segis Korndyke, former world champion 40-lb. four-year-old). Dam: K. V. P. H. Colantha with a senior three-year-old record of 30.07 lbs. butter for 560 lbs. milk, also a senior two-year-old record of 22.48 lbs. butter from 432 lbs. milk. She is by King Veeman Pontiac Hengerveld — by King Segis Pontiac Alcartra from a 29-lb. daughter of Sir Veeman Hengerveld. Her dam, a 27-lb. cow with four A. R. O. daughters, is from a 31-lb. ten-year-old that is dam also of a 36-lb. senior three-year-old. "Colantha" is one of the heaviest producing cows in the Bell herd. The six nearest dams of this bull average 33.45 lbs. butter from 607 lbs. milk.

No. 2 King Valdessa Pontiac Cornucopia (born Jan. 8, 1920). Sire: King Valdessa Pontiac (see above — his three nearest dams are three of the breed's first 40-lb. cows). Dam: Von Holigen Cornucopia Johanna with two records above 30 lbs.

At 7 years:
Butter.....30.12
Milk.....559.4

She also has a 30-day record of 116.07 lbs. butter. She is sired by a son of Aaggie Cornucopia Johanna Lad from a granddaughter of De Kol Burke. The two nearest dams of this bull average over 35 lbs. butter.

No. 3 King Valdessa Pontiac Clothilde (born February 10, 1920). Sire: King Valdessa Pontiac (see above — sire of Echo King Sylvia that heads our herd). Dam: Miss Aaggie Clothilde Korndyke with a junior two-year-old record of 15.57 lbs. butter from almost 400 lbs. milk. She is sired by a son of Oak De Kol Ollie Homestead, twice grand champion at the National, her dam a 22-lb. cow from a 19-lb. dam. Five nearest dams of this bull average 28.90 lbs. butter from 565.90 lbs. milk.

No. 4 King Valdessa Pontiac Pietje (born February 13, 1920). Sire: King Valdessa Pontiac (see above — 40 of his daughters in the Bell herd for development). Dam: Avon Pontiac Sara Pietje. At 25 months:

Butter.....22.64
Milk.....404.9
Average % fat.....4.49

She is by Woodcrest Sir Clyde, whose two nearest dams are both 31-lb. cows, his own dam with almost 1,000 lbs. in a year. Her dam is a 19-lb. two-year-old daughter of King Pontiac Artis Canada. Splendid breeding all the way back. A very choice bull.

No. 5 King Valdessa Pontiac Mercedes (born March 6, 1920). Sire: King Valdessa Pontiac (see above — combines in the very closest degree the blood of three of the breed's first 40-lb. cows — son of Mabel Segis Korndyke). Dam: Colantha Algretta Pontiac with 33.07 lbs. butter from 657 lbs. milk and a 30-day record of 123 lbs. butter from 2,645 lbs. milk. Her dam also has a 32-lb. record from almost 600 lbs. milk.

We suggest interested parties communicate with us immediately regarding any of the above calves. We will be glad to send more detailed description, together with pedigrees of any of them. However, in communicating, be good enough to indicate a second choice, for there is a possibility of the one you prefer having been selected by some one else.

Remember the Bell herd was built upon type. Therefore, we feel these animals will go out and make good for their buyers — also that the herd is under State and Federal supervision.

Bell Farm

HOME OF ECHO KING SYLVIA

"The Utmost in Quality Holsteins"

CORAOPOLIS, PA.

Sheboygan County Holstein Breeders' Consignment Sale

Plymouth, Wisconsin, Saturday, November 20, 1920

60 Head — Tuberculin Tested

This sale should interest all Holstein enthusiasts looking for something good. Probably the highest record bunch of cattle sold in public sale in Wisconsin since last state sale.

Selected by a committee of breeders for both breeding and fine individuality.

Bred to 31-, 34-, 37-, and 38-lb. sires, one of them a son, another a brother of Pabst Korndyke Cornflower.

A wonderful list of two-year-olds with records.

Five 20-lb. two-year-olds, including Clearland Hengerveld, with 24.47 lbs. as a junior two-year-old. Two of them are bred to King Pabst Pontiac Hengerveld; three of them to Harvest Tyranena Agatha; one of them to Sir Ormsby Beauty Pontiac Segis; and two of them to Pabst Pontiac Adonis. Of these last two, one has finished her yearly work with 595.37 lbs. butter and 15,007 lbs. milk. The other is on yearly work now and has made 446.7 lbs. butter and 10,285.3 lbs. milk in 7 mos., 10 days.



CLEARLAND HENGERVELD, 24.47-LB. JUNIOR 2-YEAR-OLD
CONSIGNED BY D. E. VANDERHOOF, WALDO, WIS.

Year Record Cows

A thirty-one-pound six-year-old will have between 1,000 and 1,100 lbs. for the year, and bred to Pabst Pontiac Adonis, son of Cornflower.

A year record cow bred to Sir Ormsby Beauty Pontiac Segis. Has 748.97 lbs. butter and 20,407 lbs. milk. All ready to go on test again.

An excellent individual, bred to Pabst Korndyke Cornflower. Has 26.36 lbs. butter, 521 lbs. milk in 7 days. Will make close to 1,100 lbs. butter and 23,000 lbs. milk.

Other excellent entries include — A 26.95-lb. cow bred to Johanna Clothilde Pontiac De Kol; a daughter of a 27.67-lb. cow, and bred to a son of the 37-lb. Ormsby bull; dandy heifers sired by King Veeman Pontiac Alcartra and Sir Longfield Pearl Spofford.

Males

There will be a bull whose nine nearest dams average 1,000 lbs. and whose eleven nearest dams average 30 lbs.

A son of Neith Admiral Witteen Walker, and whose dam is on yearly test, has made over 1,000 lbs. butter in 328 days, and will finish with about 1,100 lbs. butter and 25,000 lbs. milk as a senior 4-year-old.

A son of Sir Longfield Pearl Spofford, whose dam is now making 1,000 lbs. butter for the year.

Several sons of Adonis, a son of the $30,000 cow. One is from Mountain Ash Belle, who recently sold for $1,250. She is on yearly test, and has made over 300 lbs. butter in 6 months. Her dam is on yearly test also and making fine record.

Let's All Be There

Auctioneers: Mack and Laux **Sale Manager: F. H. Everson**

Sale will be held at the Fair Grounds at Plymouth, Wis., 11 a. m. sharp. Plymouth is on the C. M. & St. Paul, the C. & N. W. and on the Interurban from Sheboygan to Plymouth.

Macoupin County Holstein Breeders' 2nd Annual Sale

65 Head Quality Holsteins —10 a. m. sharp, November 26th at Shipman, Ill.

Macoupin County Breeders are putting some of their best into this sale. They will rest their reputation on their entries. The entries have been picked by a committee for individuality and soundness.

A 60-day Guarantee given for Tuberculosis

Among the entries:—Cows with records close to 30 lbs.

Sons and daughters of, and cows and heifers bred to bulls with 7-day records up to 37 lbs., and 1,300 lbs. yearly.

Four yearly record sires with records of 1,058, 1,146, 1,149 and 1,313 lbs., are in active service in this county and are represented by offerings in the sale.

Easily accessible, sale tent within block of depot.

Notes Accepted where Suitable Bank References can be Given

Send for catalog

W. E. French, Sale Manager **Shipman, Ill.**

The Stephenson County Breeders' Ass'n Sale

Freeport, Ill., December 1, 1920

of good Illinois Holsteins, Hand-picked for their Individuality and Breeding, as evidenced by records of production and in the Show Ring.

CONSIGNORS:

Ernest Welz, McConnell	John E. Foss, Dakota
E. H. Dirksen, German Valley	E. P. Schleich, Freeport
L. M. Swanzey & Son, Ridott	Geo. Maurer, Freeport
Hammond & Reiland, Stockton	H. A. Hugelshofer, Dakota
Bert Irwin, Mt. Carroll	George Bustle, Dakota
W. R. Angle, Dakota	Clay B. Bridge, Orangeville
Chas. Foss, Freeport	O. W. Wolfe, Winslow
Wm. F. Brown, Freeport	Quincy P. Howe, Winslow
Morriz Zurbriggen, Freeport	

These men are consigning animals that they would not think of selling you privately. Their consignments are guaranteed and subject to 60-90 retest.

Under management of the

Illinois Holstein-Friesian Association

130 North Wells St., R. N. Thompson, Field Secretary, Chicago, Illinois.

Watch next issue for particulars.

When Writing to Advertisers, Mention Hoard's Dairyman

Now is the Time to Buy—

You can do it at your Own price while the other fellow is selling.

The Walworth County Holstein Sale

November 15, at Elkhorn, Wis.

Offers you your choice of over 60 top notch registered Holsteins from the best herds in the county.

The sale includes—A son of Iowana Sir Ollie and a very good A. R. O. cow bred to him.

A son and daughter of King Pontiac of Brothertown whose 6 nearest dams average over 30 lbs. in 7 days.
5 yearling daughters of Sir Pietje Ormsby.

Several show ring winners and others as good.

Every animal sold subject to a 60-day retest.

Sale held in comfortable quarters on the fair grounds.

Catalogs now ready.

Walworth County Holstein Breeders' Ass'n

Ben Bachhuber, Elkhorn, Wis.

Auctioneers: Mack and Beaumont **J. G. Voss in the Box**

Your Choice of **50** Young Bulls

They Are Out of Yearly Record Dams And Sired By—

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his grandams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow—the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms

Winterthur - - - Delaware

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Dodge County Wisconsin

80% of our cattle are either pure-bred or high grade Holsteins.

We have 30 bulls in service whose dams have records ranging from 900 lbs. butter in 365 days to 46 lbs. in seven days.

Come and look us over.

DODGE COUNTY HOLSTEIN BREEDERS' ASSOCIATION, JUNEAU, WISCONSIN.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. **S. A. BAIRD & SON, WAUKESHA, WIS.**

HARVEST FARMS COMPANY

Bulls of serviceable age for sale. Sons of King Agatha Pontiac, two nearest dams average 37.10 lbs. butter. King Agatha Pontiac Lass, four nearest dams, 36.54 lbs. Harvest Matador Segis, 2 nearest dams 33.39 lbs.

150 head in the herd—tested annually.

HARVEST FARMS CO., MAYVILLE, WIS.
J. P. RIORDAN, Mgr.

Rock River Stock Farm—Herd headed by Harvest Pet Ormsby King No. 222081. 4 nearest dams average over 33 lbs. For sale—3 bull calves, 3 mos. old, from 21-lb. 3-yr.-old. A 27-lb. cow, 662 lbs. of milk, and a 22-lb. cow with 711 lbs. of milk. Write for price.

OTTO F. BRANDT, - HORICON, WIS.

Meadow Brook Holsteins

Herd headed by Milford Meadow Oak De Kol No. 125263. His three nearest dams average 32.09 lbs. butter in 7 days. We offer for sale some splendid bulls, good individuals and well marked—out of dams with records from 20 to 32.21 lbs. butter in 7 days. Come and see them or will send extended pedigree and photo.

O. E. SETTE, - - - JUNEAU, WIS.

GET IN LINE

For Your Next Herd Sire

We can offer a few young bulls—7 to 8 months of age—for sale. Old fashioned breeding; from A. R. O. dams that have the right kind of individuality. We invite your inspection. Sire's dam is a 28-lb. daughter of Canary Paul. Priced to sell.

Ioka Farms, E. E. Randall & Son, R. 8, Watertown, Wis.

$75 Bull Bargain

5 weeks old bull calf. Light in color. His sire is a son of King Korndyke Sadie Vale, the only 40-lb. bull with a 40-lb. sister and a 40-lb. daughter. His dam is a fine individual A. R. O. cow. Check or bond takes him.

CHIC DAIRY FARM **Juneau, Wisconsin**

A Few Young Bulls

One from a 30-lb. dam and by a 30-lb. sire. One by a 28-lb. sire and from A. R. O. dam. 7 to 9 months old. Homestead Jr. De Kol breeding. Write at once.

W. E. BUSSEWITZ, - JUNEAU, WIS.

SPRING BROOK FARM COMPANY

OFFERS—Very choice grandsons of Sir P. O. M. and King of the Pontiacs.
Herd under State and Federal Supervision.

S. L. De Smidt, Manager. - - - - - - Burnett, Wisconsin.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - - WEST SALEM, WISCONSIN



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

Watertown, Wis. Holsteins — *They Satisfy*

Tuesday, November 23 — 85 Head





A sale of hand picked black and whites — a sale made up largely of springers selected from the choicest herds in Dodge and Jefferson Counties — a sale backed by the guarantee which always accompanies these semi-annual events conducted by the Watertown Holstein Sales Co.

The election is over, men, now is the time to buy before the so called slump vanishes. Vanish, it will because there can be no permanent depreciation in Holstein values. Milk is milk for all time and Holsteins give profusely of it — especially Watertown Holsteins. The intrinsic value of the Watertown Holstein has not diminished one iota. If you can buy them cheaper this fall than you could last spring, do so; it's your good fortune, but remember that our offerings are on a par with that of previous sales. Because we have rejected everything that would tend to lower the standard already attained, we feel justified in laying special emphasis on the above mentioned fact. We could not afford to assemble an array of inferiors and mar the good impression made on you heretofore. We want your approval — your good will — your patronage.

Our consignors, as well as their offers, will convince you; Carnation Farms, Oconomowoc, have selected a show bull from a 24-lb. dam now on yearly test, also a choice yearling heifer that will please you.

Harvest Farms, Mayville, are bringing one of their full aged bulls — a son of a 22-lb. two-year-old — second dam 30 lbs. This bull was surpassed only by Cedar Lawn Canary Paul at the Wisconsin State Fair. They also offer two choice heifers bred along the lines that are bringing Harvest Farms to the front rapidly.

Spring Brook Farms, Burnett, include in their consignment a gracefully outlined daughter of a 27-lb. cow, due sale day and bred to their son of Sir Piet. — also a half sister to Ormsby Korndyke Lad. This Spring Brook stuff will please you.

Fred Albrecht, Watertown, is offering two handsome, large framed cows, springing up and bred to their well-known $4,300.00 bull — also two yearling sons of this bull from splendid record dams.

Wuetrich Brothers, Doylestown, have a 25-lb. cow of real Holstein type — a good 20-lb. cow, an A. R. O. granddaughter of Canary Paul Fobes Homestead — others of equal merit — all bred to their herd sire — a son of that highest record daughter of "37th" and by Sir Pietertje Hengerveld Ormsby.



Ernest Kuehn, Horicon; a yearling son of a 27-lb. four-year-old — a son of a 23-lb. three-year-old, a choice heifer.

Andrew Frank, Fox Lake, will consign nineteen choice ones picked by one of our directors— mostly springers — daughters of his well-known 35-lb. sire in calf to his 37-lb. son of King Valdessa.

E. J. Goetsch, Watertown, a dandy yearling 29-lb. bull, with lots of pedigree.

Arthur Weihert, Watertown, a quality co wof rare individual merit. Then we have these well-known breeders who will have splendid cows, heifers and some yearling bulls, men whose cattle have always made good — whose cattle have raised our sales to the high position they hold in public esteem. Otto Brandt, Horicon; James Barstow, W. W. Bird, J. F. Schmidt, Randolph; F. G. Lehmann, F. Bartelt, W. Strauss, Watertown; Edwin Gibs, Fox Lake; H. Ryder, Hustisford.

Come to this sale — it's genuine.

And if you buy
they'll satisfy

Haeger, Mack, Wood **Write F. Darcey, Watertown, Wis. for Catalogs**

Cedar Lawn Farm

Headed by

General Ormsby Colanth

Both grandams of this young bull made abo 1,235 lbs. butter in 1 yr. 6 dams made abo 30 lbs. butter in 7 days. 5 dams above 33 lb butter in 7 days. 7 nearest dams avera 30.19 lbs. butter in 7 days. 15 nearest dar average 27.44 lbs. butter in 7 days. He is a d rect descendant of Miss Korndyke Maid Orm by, Bess Pietertje Ormsby Mercedes, Sprin Brook Bess Burke, Colantha 4th's Johan and Pietertje Maid Ormsby. Sons of this b out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, **West Bend, Wi**

Step Ahead

Advance your herd by a good sire. Sons of Iowana Sir Ollie have real quality and production too. We have a few youngsters from yearly record dams. Write

Walcowis Farms
Lake Geneva, Wis.

It will be for you a

Step Ahead

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 m old. Every one good individuals, healthy a thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wi

5-10 WELL BRED HEIFER

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The he ers are registered two-year-olds, bred to fres en this fall. The bulls, old enough for fall se vice, are from A. R. O. dams and by Sir Orm by Homestead Butter Boy, a 35-lb. bull. One by a 42-lb. grandson of S. P. O. M. Come a see them.

ANDREW FRANK, FOX LAKE, WI

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and Oct ber, 1919, and that many satisfied custome in that time. A life time experience raisi and selling live stock. Write or wire early f dates as they are going fast.

F. H. HEMBROOK **Chetek, Wisconsi**

Wayside Lawn Farm

offer

Three A. R. O. cows, two 2-year-old heife bred to King Mutual Korndyke 11th whose t nearest dams average butter 7 days 34.90, b ter 1 year 1,137.02. Bulls from tested da from 3 to 9 months old. Herd under feder supervision.

Walter Sorge, **Reedsburg, W**

MILLAR FARM

HOME OF

King Pietertje Ormsby Piebe 16th. Records of da and sire's dam average 1351.52 lbs. butter in one ye He is the $15,000 calf purchased at the Nation to breed on the daughters of Finderne Netherla Korndyke, son of former Champion Jr. 2-year-ol Finderne Pontiac Netherlands.

A few sons of the latter bull and out of A. R. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., **MENOMONIE, WI**

1000---HERD---1000

Quality Holstein

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifer Write for our pure-bred bull list.

Jefferson County Holstein-Friesia Breeders' Association,
A. F. Gafke, Secretary, **Jefferson, WI**

King Segis Johanna Ormsb

heads our herd of

Registered Holstein-Friesian

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSI

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lo Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son Piebe Laura Ollie Homestead King. Most of the are from good producing daughters of Joe Oak De K Fobes, a grandson of Homestead Junior De Kol. Pri $125 to $250.

Write us at once if you want one.

RANDALL BROS., **Lakeland, Min**

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

GEO. E. STEVENSON, Scranton, Penna.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month,** Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

$150 to $500 Buys a Serviceable Bull

Sired by a good yearly record son of Colantha Johanna Champion. They are out of tested and untested granddaughters of Pontiac Korndyke. Will also price a few good heifers up to a year old—the same breeding.

Ontonagon Co. Farm
Ontonagon, Michigan
T. G. Roberts, Herdsman. J. S. Netterauer, Sec.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

Dandy

Grandson of Colantha Sir Korndyke Clothilde, 30 A. R. O. daughters, ready for heavy service. His sire's dam, a 29-lb. four-year-old daughter of King of the Hengerveld. His dam, a 20-lb. daughter of Madison Jetske Sir Ormsby. Mostly white, straight kind, tuberculin tested, price $175.

H. T. Evans, Eau Claire, Mich.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Gustave Pabst's Hollyhock Farms

Consign this Son of

Sir Pietertje Ormsby Mercedes 41st

to the

Waukesha County Sale at Waukesha, Wis., Nov. 22nd

Summit Bonny Pietertje Ormsby

Born May 9, 1920



His Sire



SIR PIETERTJE ORMSBY MERCEDES 41ST

Sir P. O. M. 41st now has 13 A. R. O. daughters, one making 39.77 lbs. as a 4-year-old. He is better known as the $65,000 bull. He is the only son of Spring Brook Bess Burke, the only 1,000-lb. cow in the world to have three 1,000-lb. daughters. 41ST is the sire of the Grand Champion cow at the 1920 Waterloo Cattle Congress.

His Dam



BONNY JOHANNA MOOIE DE KOL

His dam, 7 days, butter 29.64 lbs., milk 518.9 lbs.; 305 days, 694.42 lbs. butter, 18,124.8 lbs. milk. She will be tested at next freshening and then will be put on yearly test. She is one of our best foundation cows and surely will increase her records.

Breeders should not overlook this opportunity of securing such a beautiful individual by so great a sire as Sir Pietertje Ormsby Mercedes 41st, and from one of our foundation cows that is sure to increase her records.

Gustave Pabst's Hollyhock Farms, Dousman, Wisconsin
F. J. Southcott, Manager

Female Holsteins for Sale

Pure-bred cows and heifers of choice breeding. Bred to our herd bull, "Sir Ormsby Segis Korndyke". Also fifty high grade cows and heifers, fresh and springers.

ISLAND PARK STOCK FARM,
Hanscom and Anderson, Props.,
R. F. D. 1. St. Cloud, Minnesota.

RELIANCE Holstein Stock Farm

Is offering 9 registered Holstein bulls for sale. Also some very fine heifer calves and cows.

Mrs. W. H. Ascott, Sparta, Wisconsin.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

Waupaca County Holstein Sale

MORE FEDERAL ACCREDITED HERDS THAN ANY OTHER COUNTY IN WISCONSIN

Fair Gounds, Weyauwega, Wis., Nov. 24th

Remember the date — Wednesday the 24th — the day before Thanksgiving

50 Choice Registered Holsteins

All animals over 6 months of age tested for tuberculosis

About thirty of the animals entered are choice cows, many with excellent A. R. O. records, and bred to high record bulls of the most popular breeding. Also a number of typy heifers of the best of breeding. Many of the cows and heifers due to freshen soon. Only A. R. O. bulls offered. If you want that famous 37th breeding you will attend this sale.

Waupaca County Holstein-Friesian Breeders' Association

Sale in Heated Pavilion
J. E. Mack, Auctioneer.

For information and catalog write
James H. Dance, Sale Mgr., Waupaca, Wis.

Weyauwega is on Soo Line
40 miles north of Oshkosh
F. H. Everson, in the Box.

Facts in BLACK & WHITE

Paid in milk for Purebred Holsteins

The Reveille, Bellingham, Wash., reports that the Pacific Condensery Co., sells high grade Holsteins to the ranchers at cost, taking payments in milk.

The company needs more milk and by introducing Holsteins expects to make dairying a profitable industry, thus increasing the acreage in dairy farms as well as the milk output per average cow. Just another instance of the standing of Holsteins among business men.

Send for free Illustrated Booklets. They contain valuable information for any Dairyman.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

Our Consignment
to the
Waukesha County Holstein Sale
Two of the famous Wellington Family

Daughters of Fairview Pontiac Beets Korndyke.
One of the very best sons of Pontiac Korndyke.

No. 1 — Princess Lyons Korndyke, 27.83-lb. cow (twice over 27 lbs.).

No. 2 — Wellington Lyons Korndyke 2d, a 17.26-lb. 2nd calf heifer.

Both are splendid individuals—sisters to Wellington Vashti Korndyke (twice over 30 lbs.) that was purchased by Gustave Pabst for $5,500 and now going at a 1,200-lb. clip.

Also a young daughter of No. 1, sired by Pabst Pontiac Hengerveld De Kol, a 33.8-lb. son of King Pontiac Champion.

We Will Also Offer

A senior yearling daughter of a 30.25-lb. 4-year-old. Due to freshen December 10th, by a son of Wellington Vashti Korndyke.

A splendid junior yearling bull, 3rd in a class of 10 at Wisconsin State Fair, sired by a 30-lb. grandson of Homestead Jr. De Kol, out of an A. R. O. daughter of Canary Fobes Bessie Homestead.

3 excellent heifer calves out of A. R. O. dams.

J. B. Johnston, Pewaukee, Wis.

Jefferson County Holsteins



AALTJE HENGERVELD TRITOMIA 3D
29.68 lbs. butter in 7 days

I am Consigning to the
Jefferson County Holstein Breeders' Sale
Lake Mills, Wis., Nov. 19

A 29.68-lb. cow due near sale time.

A 3-year-old sired by a 27-lb. son of Sir Ormsby Hengerveld De Kol.

Two 3-year-olds sired by Sir Korndyke Hengerveld Grouw, whose dam is a full sister to Pietertje Maid Ormsby, foundation Ormsby cow.

A bull sired by a ¾ brother to Sir Bess Ormsby Fobes, the $30,000 bull and out of a 20-lb. 2-year-old.

The females are bred to King Mutual Korndyke 6th, whose sire is a son of the world's record 2-year-old and whose dam has 31.67 lbs. in 7 days, 1020 lbs. in 365 days. King's dam and sire's dam average 1,120 lbs. in a year and his dam has three yearly records totaling 2,700 lbs. butter.

We have placed individuality and quality first. See us at the sale.

Fairview Stock Farm
W. G. Marshall, Owner Whitewater, Wisconsin

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Wayside Stock Farm
OFFERS
4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.
TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac
THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.
FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

ORMSBY BULL - Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Two Ormsby Bulls
Ready For Service

Both sired by Sir Ormsby Beauty Pontiac Segis, his sire the youngest son of Pietertje Maid Ormsby and his dam, Beauty Girl Pontiac Segis, the world record heifer with 1112 lbs. butter from 24,924 lbs. milk as a 3-year-old.

No. 1—Born Sept. 5, '19; ¾ white, very well grown, from a 17-lb. junior 2-year-old that has a good 305-day record and is by a 34-lb. sire. Price $500.

No. 2—Born Dec. '19; ¾ white, a good individual, from a 22.5-lb. junior 4-year-old now going strong for the year. Her dam an 808-lb. 3-year-old. Price $500.

Both tuberculin tested and guaranteed right.
Pinehurst Farms Co., Sheboygan Falls, Wis.

Waukesha County Holstein Breeders'

Twelfth Semi-Annual Sale

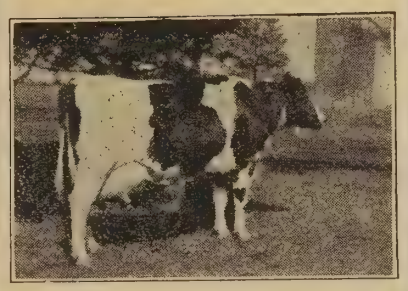
Monday, November 22nd

85 WAUKESHA COUNTY HOLSTEINS 85



WOODCROFT PERFECTION

His dam produced: At 5 years—37.41 lbs. of butter in 7 days, 1,046.12 lbs. of butter in 365 days, 27,008.40 lbs. of milk in 365 days. At 6 years —40.25 lbs. of butter in 7 days. Most of the Duke Burnell herd which is being dispersed is bred to him.



BONNY JOHANNA MOOIE DE KOL

29.64 lbs. butter, 518.9 lbs. milk in 7 days; 694.42 lbs. butter, 18,124.8 lbs. milk in 305 days. A 7-month-old son of this cow sired by S. P. O. M. 41st. A wonderful individual. Good enough for any herd.



(REFERENCE SIRE)
UNEEDA KORNDYKE ABIGAIL BOY

A 33-lb. grandson of Johanna McKinley Segis. Considered by Waukesha men as one of the best bulls in service.

Females there will be:—

A young 27-lb. sister to Wellington Vashti Korndyke, who is now making close to 1,200 lbs. of butter in a year.

Several daughters of Maplecrest King De Kol 2d, a 29-lb. grandson of King Pontiac Champion, Wisconsin's greatest sire.

A daughter of S. P. O. M. 43rd out of a 27-lb. cow.

Two daughters of Hillvale Sir Ormsby bred to Aaltje Salo Johanna Pontiac 2d.

A choice young cow heavy in calf to the great show bull, Bairdland Pontiac Champion.

Two 2-year-old daughters of Pabst Hengerveld Pontiac, the 34-lb. son of King Pontiac Champion and bred to Nockdair King Superba Supreme, whose dam has three records that average over 30 lbs. in seven days and is now on yearly test going at a 1,000-lb. rate.

A two-year-old daughter of Pietertje Kapijne Lad heavy in calf to Pabst Hengerveld Pontiac.

A daughter of Veeman Segis Pontiac heavy in calf to Hillvale Endymion, one of the good sons of King Pontiac Champion, out of one of the best daughters of King Ormsby.

A yearling daughter of Portage Pauline King out of Aaltje Salo Netherland De Kol Beets.

A two-year-old daughter of Daisy Johanna 5th bred to Hengerveld De Kol Beets 8th.

An A. R. O. daughter of Elm Lawn McKinley Segis, bred to Spring Farm Tweede Pontiac Cornucopia, whose two nearest dams average 40 lbs. of butter in seven days and whose dam also has a yearly record of 1,127 lbs. of butter.

A young 25-lb. daughter of Piebe Van Beers and sired by a son of Johanna McKinley Segis. She was the First Prize Three-Year-Old and also a member of the First Prize Dairy Herd at the Wisconsin State Fair in 1920. Bred to King Bess Johanna Ormsby.

An A. R. O. daughter of a 29-lb. cow with a yearly record of over 800 lbs. of butter, Jessie Fobes Pietertje De Kol, who is a granddaughter of Homestead Junior De Kol. This heifer was Second Prize Two-Year-Old at the Wisconsin State Fair in 1920.

A dispersion of the Duke Burnell herd, made up of choice young cows carefully selected and bred for a number of years. They are all large type cows of the milking type. Some of them with good official records, all of them capable of making official records, either on short or long time work. Most of them are heavy in calf, due to freshen early this winter to Woodcroft Perfection, Wisconsin's first forty-pound bull with a yearly record of over 1,000 lbs. Woodcroft Perfection is being used at the head of five of the largest herds in Waukesha County. We feel that this is an opportunity.

Three choice daughters of Sir Pontiac Piebe De Nijlander, a 24-lb. son of Sir Korndyke Hengerveld De Kol 8th.

Two choice daughters of Sir Ormsby Skylark Keepon, who not only is an excellent individual son of Sir Ormsby Skylark, but is transmitting some very good individual daughters.

Many others equally as good. If looking for the best cows to milk this winter and choice young stock do not miss this opportunity to buy them at your own price.

Bulls there will be:—

A son of Carnation King Sylvia, "the $106,000 bull", and out of a 35-lb. daughter of Sir Pietertje Ormsby Mercedes, who has three records above 30 lbs. and has a 290-day record of close to 20,000 lbs. of milk and 806 lbs. of butter. This bull represents a combination of the two greatest blood lines of Holstein-Friesian breed. He combines the blood of May Echo Sylvia and Sir Pietertje Ormsby Mercedes in the best possible manner. This is the first time that this combination of breeding has ever been offered for sale. He is a wonderful individual, good enough for any herd. WHAT IS HE WORTH?

A son of S. P. O. M. 41st out of Bonny Johanna Mooie De Kol who has 29.64 lbs. of butter in seven days, and 694 lbs. of butter and 18,000 lbs. of milk in 305 days. A wonderful calf that will grow into more money as his dam will have a better chance.

A son of S. P. O. M. 43rd, who is good enough for Tilly Alcartra to be bred to, and out of a 30-lb. cow, Ashburn Segis Maid, a good individual and nicely marked.

A yearling son of Longfield Paul Fobes Homestead and out of a 26-lb. cow who is sired by a full brother to Pietertje Maid Ormsby.

A son of Creator, whose three nearest dams average 1,048 lbs. of butter in 365 days, and out of a 22-lb. two-year-old daughter of King Pontiac Champion.

A ten months old bull out of a 26-lb. cow and sired by Sir Ormsby Skylark Keepon, perhaps the best individual son of Sir Ormsby Skylark.

A yearling son of Aaggie Nephele Hengerveld, Grand Champion Cow at the Waukesha Dairy Show in 1920. She has just finished a yearly record of over 1,000 lbs. of butter. His sire is Grahamholm Pontiac Segis Lad, a 30-lb. bull with a yearly record dam of close to 1,000 lbs. His top line is as straight as a string.

15 choice bulls selected from the herds of different Waukesha breeders, most of them sired by Waukesha's greatest sires and out of choice young cows with good records or capable of making good records. A great number of these bulls are bound to increase in value as most of the dams will be given an opportunity. If you are looking for producing blood at a reasonable price, don't miss them.



S. P. O. M. 43RD

You know him. One of his daughters out of a 27-lb. granddaughter of King Segis and one of his good sons from a 25-lb. dam consigned.

Each animal comes from a tuberculin tested herd. Animals over six months sold subject to a 60-day retest.

Write for information to

Waukesha County Holstein Breeders' Ass'n
Waukesha, Wisconsin

Sale held in heated Sale Pavilion, Waukesha

Sale commences at 10 a. m.



PABST HENGERVELD PONTIAC

Dam's record: 7 days, 34 lbs. butter, 652 lbs. milk; 365 days, 940 lbs. butter. One of his sons and two of his daughters consigned.

NOT A POOR INDIVIDUAL

Among the 60 Registered Females to be Sold at the

Jefferson County Holstein Breeders' Sale

November 19th, at Lake Mills, Wisconsin

Pavilion will be Heated



KING SEGIS PONTIAC 28TH

Consigned by J. L. Fisher. His 2 nearest dams average 1,146.66 lbs. in 1 year, 33.01 lbs. in 7 days. Sire, King Segis Pontiac. Dam, Queen Juliana Dirkje, first cow any age or breed to produce 1,000 lbs. butter in 1 year at less than 4½ years old.



AALTJE HENGERVELD TRITOMIA 3D

29-lb. cow consigned by W. G. Marshall of Whitewater. Three of her five daughters have good A. R. O. records. All will be tested. Bred to King Mutual Korndyke 6th, a splendid yearly record sire.



SIR BESS ORMSBY FOBES

The $30,000 son of "37th" now owned at the Gustave Pabst Farms. Two of his good two-year-old daughters and two serviceable sons to be sold.

This is Our First Sale. Attend it and *Judge for Yourself* of the Quality of Jefferson County Holsteins. We Know You Will be Suited With the 60 Females and 10 Bulls We Offer

12 Heifers, Yearlings or Younger — 26 Two-year-olds — 22 Over Two years old. Among them: —

Two daughters of Sir Bess Ormsby Fobes, the $30,000 son of S. P. O. M. 37th.

One heifer bred to Sir Bess Ormsby Fobes.

A wonderfully good 29-lb. cow bred to King Mutual Korndyke 6th, year record sire, 3 other good ones in calf to the same sire.

One excellent daughter of Beauty Pietertje Prince one of them safe in calf to Avon Pontiac Echo, the oldest son of May Echo Sylvia.

A daughter of Uneeda Polkadot Korndyke (31-lb. grandson of King Segis Pontiac) bred to Marathon Ormsby whose 2 nearest dams, both of them daughters of S. P. O. M., averaged 32.77 lbs. in 7 days, 1,185 lbs. in a year.

A 20-lb. cow and her two-year-old daughter.

A 26-lb. cow.

Several good heifers bred to a prize winning son of King Segis Pontiac.

A daughter of Sir Korndyke Bess Pietertje.

10 A. R. O. Bulls — Most of Them Ready for Service

Two sons of Sir Bess Ormsby Fobes.

A 24-lb. son of Dutchland Creamelle Denver Prince, he, a 36-lb. grandson of Colantha Johanna Lad.

A son of King Segis Pontiac and Queen Juliana Dirkje (former state record cow for 3-year production).

A 20-lb. son of Manor King Segis Korndyke. His dam also has a good yearly record.

A son of King Segis Pontiac Alcartra out of a 24-lb., 2-year-old daughter of a 35-lb. 3-year-old.

A 20-lb. grandson of S. P. O. M. 37th.

Remember every animal is sold subject to a 60-90 day retest.

Write for Catalogs

Jefferson County Holstein Breeders' Association

A. F. Gafke, Secretary, Jefferson, Wis.

Auctioneers: Mack and Haeger **F. H. Everson in the box**

Sale Commences at 10 A. M.

Remember — Jefferson County had one of the very best show herds in the state this fall

BLACKBURN'S Guarantee Consignment Sale

Nov. 23d, at Cuba, Ohio

75 HEAD—
Registered Holsteins

Fresh cows, heifers, service bulls and calves

Tuberculin tested and 60-day retest

Write for Catalog

Col. W. F. Andrews, Auctioneer

Dr. A. D. Blackburn, Sale Mgr., Cuba, Ohio

Just What You've Wanted—

A Daughter and A Son of

Sir Bess Ormsby Fobes



SIR BESS ORMSBY FOBES—$30,000 SON OF S. P. O. M. 37TH AND WISCONSIN FOBES—NOW HEADING THE GUSTAVE PABST HERD

They will be sold at your own price

Nov. 19, at Lake Mills, Wis.

In the Jefferson County Holstein Sale

The daughter — Linden Lawn Violet Ormsby — born Dec. 25, '18, is an excellent individual, well marked and very well grown. She is in calf to her great sire and due to freshen Dec. 8. She is from an A. R. O. dam.

The son — Linden Lawn Spofford Ormsby — is 14 months old and a dandy. He'll make you a real herd sire. His dam, a 22-lb. cow has a good year record made as a 2-year-old and is now being fitted for a real chance at full age.

Both the son and daughter were show ring winners this fall. This is the first daughter of "Sir Bess" we have ever offered. It's your opportunity.

Linden Lawn Stock Farm, R. 1, Jefferson, Wisconsin

B. W. Rabenhorst, Proprietor

Complete Dispersion Sale

of W. W. Brundidge & Sons Official Record Herd on the Farm at

Zanesfield, Ohio
Tuesday, Nov. 16th

Parties coming over the T. & O. C. R. R. will get off at East Liberty or West Mansfield, Ohio. Machines will meet all trains at these points. Partes that arrive at Bellefontaine will go to Hotel Logan where arrangements will be made to get them to the sale.

75 Registered Holstein-Friesian Cattle

Consisting of

19 A. R. O. RECORD COWS with the following records: 14.64; 18.28; 18.85; 19.18; 19.91; 20.46; 21.47; 21.83; 22.92; 24.63; 24.93; 25.79; 29.41; 29.44; and 5 others that will have records by sale day. There are 20 females of all ages that have A. R. O. DAMS which include 3 with 36-lb. dams, 4 with 29-lb. dams, 3 with 25-lb. dams and 2 with 24-lb. dams and many other good ones.

10 Males With A. R. O. Dams

An 11 and 22 months bulls that have a 29.41-lb. dam.
A 2 and 13 months bulls with dam's record of 24.63.
A 10 and 24 months bulls with dam's record of 18.85.
A yearling with 21.47-lb. dam, 2-year-old with 19.17-lb. dam and a 7 months calf with a 22.88-lb dam.

A Majority of the Cows are Fresh or Springers

A chance to secure some excellent blood lines backed by good records.

TERMS CASH OR GOOD BANKABLE NOTES FOR 6 to 12 months' time drawing 7% from date.

IF YOU ARE LOOKING FOR SOME GOOD ONES YOU CANNOT AFFORD TO MISS THIS SALE, CATALOG READY NOV. 1 AND MAILED ON APPLICATION TO

F. G. Johnston, Sale Mgr.

37 West Lane Avenue, Columbus, Ohio.

Col. Fred Andrews and Col. Jno. Baker, Auct.

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.

KITTLE BROS., Holland, Ohio.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

FerndaleFarm

Offers for $200.00

Grandson of Spring Farm Pontiac Cornucopia, born April 21, 1920. Four nearest dams have A. R. O. butter records th t average 26.55, average test 4.15. Calf is good individual and seven-eighths white. This is a bargain. If you want him act quick.

R. T. STEVENS, Shelby, Ohio.

Sexauer Stock Farm

For Sale: A bull born Oct. 22, 1919. Outstanding individual, evenly marked in color. From a 27-lb. cow, 624 lbs. milk. He is sired by Woodcrest Pietje Clyde (33 lbs.) whose daughters, so far tested, averaged 19.25 lbs. as junior 2-year-olds. Write for other information and price.

John Sexauer & Sons, Belvidere, Ill.

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Oklahoma

Ormsby bred bull calves, from untested heifers. Prices right. 90-day retest. Return privilege if not satisfied. Calves are from a 32-lb. 3-year-old bull.

Photos and pedigrees on application.

Bostwick & Son, Ardmore, Oklahoma

Last Call—

to the Iowa Holstein Breeders' Ass'n

Second State Sale

Nov. 16-17, Des Moines, Ia.

A sale of 85 Registered Holsteins selected from 17 of Iowa's best herds because of their individuality and breeding.

An opportunity to buy foundation females bred to such sires as King Pietertje Ormsby Piebe, King Piebe, Oak De Kol Ollie Homestead, Cloverland Johanna Piebe 50th, Woodcrest Sir Clyde, King Mutual Korndyke 9th, King Korndyke Pontiac Lass and Iowana Star Fayne.

Every animal sold subject to a 60-90-day retest.

Plan now to be at the Iowa State Fair Grounds November 16-17.

Your catalog is ready

Iowa Holstein Breeders' Ass'n

C. F. Jenness, Sec., **Waterloo, Ia.**

Leavenworth County Breeders'

Third Annual Sale

Registered Holstein-Friesian Cattle

At the New Sale Pavilion

Monday, November 22, 1920

10 Consignors have selected the good ones from their herds.
85 Head will sell

40 cows, a few fresh, many heavy springers, 30 coming two-year-old heifers bred to 30-lb. bulls. Among them are 7 sisters as handsome a lot as one ever saw.
10 heifer calves from record bulls.
5 bulls ready for service, from high record bulls and A. R. O. cows.
All cattle tuberculin tested and sold with 60-90 day retest privilege.
Come to this sale. A good place to buy.
Sale begins at 10 a. m.

Write today for catalog to

W. H. Mott, Sales Mgr., Herington, Kansas

---

25 Holstein Cows For Sale

or exchange. 23 are high grades, 2 are registered. Also my herd bull, a grandson of K. S. P. A., the $50,000 bull. This bull is from a 27-lb. cow. Most of the cows are bred to him. All are young cows, well marked, heavy producers. Price, $200 per head if entire herd is purchased.
Will take 2 good teams of draft mares or mules as part payment or might consider a good used automobile as partial payment.

G. A. HIGGINBOTHAM, Rossville, Kas.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr

---

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.

BLUEBELL FARM, RICEVILLE, IOWA.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Holstein Bull Calf For Sale

Born Dec. 31, 1919, a little more black than white. Sire, Hengerveld Springville Pietje No. 262747, whose sire, Prince Hengerveld Pietje No. 50582, has over 25 A. R. O. daughters including a 4-year-old with 36.31 lbs. butter and another with 36.12 lbs. in 7 days. Dam of calf is Jewett Maike Sarcastic No. 217824, with a record of 16.97 lbs. butter as a junior 2-year-old. Our herd is absolutely free from tuberculosis and abortion. Price $125 f. o. b. Iowa City. Write at once if you want him for he is going to sell.

Verne L. Eakes, R. 6, Iowa City, Iowa

365-Day Milk Production

Still Another One

The May bull has been sold, but we offer another grandson of Sir Pietertje Ormsby Mercedes out of a granddaughter of Colantha Johanna Lad, born July 30, 1920. A handsome calf and will grow into perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within the reach of the farmer or small breeder.

Cerro Gordo Farms, Mason City, Iowa

This Son of King Pietertje Ormsby Piebe

is one of the best herd sire prospects ever offered at public sale. His dam, a 25.58-lb. 4-year-old, made 1,045 lbs. butter from 19,173 lbs. milk at the same age. His two nearest dams average 1,217 lbs. butter from 24,701 lbs. milk,—both of them as 4-year-olds.

King Pietertje Ormsby Piebe 22nd will suit you if you want individuality and long distance production.

He and 9 good females, most of them heavy in calf to K. P. O. P., will be sold in the **Iowa Breeders' Guaranty Sale Nov. 16-17** at Des Moines.

We will gladly send you further information.

Hargrove & Arnold Holstein Co., Norwalk, Ia.

Ormsby Bulls—

The 30-lb.—1000-lb. Kind



If you want one of that kind—a real individual—write for our sale catalog.
We have left just a few sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, from cows with 7-day records up to 40 lbs. and that have made or are making year records.
Have also a few splendid grandsons of S. P. O. M. from the same kind of dams.

MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA
Address all correspondence to Garden Court Apts.

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA



$250 Buys This Bull

Born Dec. 19, 1919.
Dam—A. R. O. 18.10, milk 406 lbs., age 23 months.
Sire—A 32.74-lb. son of King Korndyke Sadie Vale.
This bull is from a Federal Accredited herd. If interested apply for pedigree to

Michael Seberger - Schererville, In.

Home Farm Korndyke Sir Clyde

a light colored son of Woodcrest Sir Clyde we offer, just a year old. His dam is a 16-lb. 2-year-old daughter of K. K. S. V. 24th. She will have over 525 lbs. butter for the year; second dam, an 18-lb. 2-year-old daughter of Sir Sadie Cornucopia. **He is given a federal certificate of health. Write today.**

W. B. Barney & Sons - - - Chapin, Iowa

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

Major Oliver S. Johnson

The Dairy Auctioneer

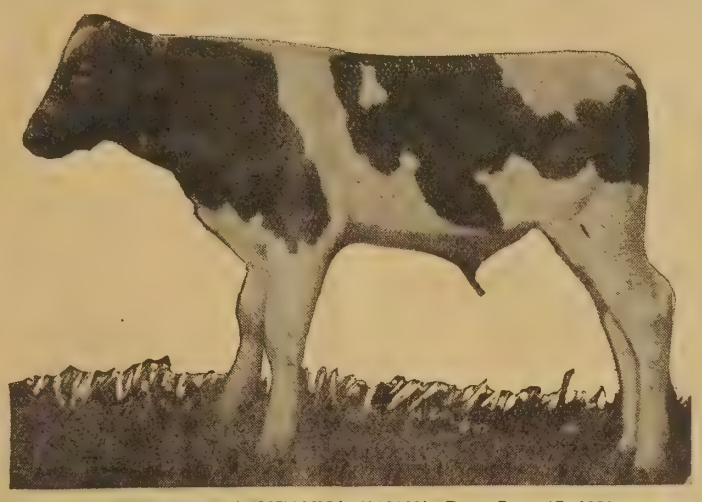
TIPTON, - - - IOWA

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

This Son of a 31-lb. Junior Three-Year-Old For Sale



KING ORMSBY ACMEANNA (313160), Born June 17, 1920

His two nearest dams average: Butter, 33.26 lbs. and milk, 663.30 lbs. in 7 days. He is a splendid individual, well grown and of a rugged type. He carries a splendid combination of breeding and will make some small breeder a real herd sire.

HIS DAM

LADY ACMEANNA ORMSBY DE KOL, is an outstanding individual. As a junior three-year-old she made 31.14 lbs. butter from 502.3 lbs. milk. Her sire is SIR MUTUAL ORMSBY DE KOL, a son of Duchess Ormsby Butter King and the 31-lb. cow, Maid Mutual De Kol. This cow is the dam of KING PONTIAC CHAMPION, the famous PABST FARM herd sire.

HIS SIRE

SIR COLLEGE CORNUCOPIA 2D, has a splendid list of A. R. O. daughters. His dam is College Belle Wayne, the famous South Dakota College producer. In 7 days she made 35.38 lbs. butter and 824.3 lbs. milk. She has a daughter with 989 lbs. butter for the year.

Price $1500.00

Guaranteed sound in every way. Will hold until six months of age and ship subject to 60- to 90-day retest

E. C. Schroeder Farms - Moorhead, Minnesota

Federal Accredited Herd

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Holstein-Friesian Bulls

sired by

"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

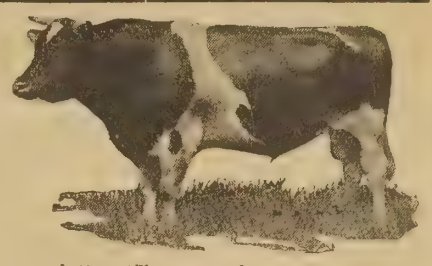
Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

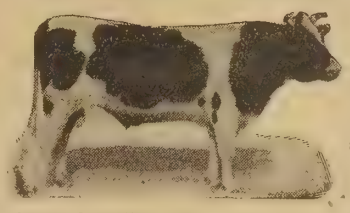
Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Just About Ready for Service — $500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

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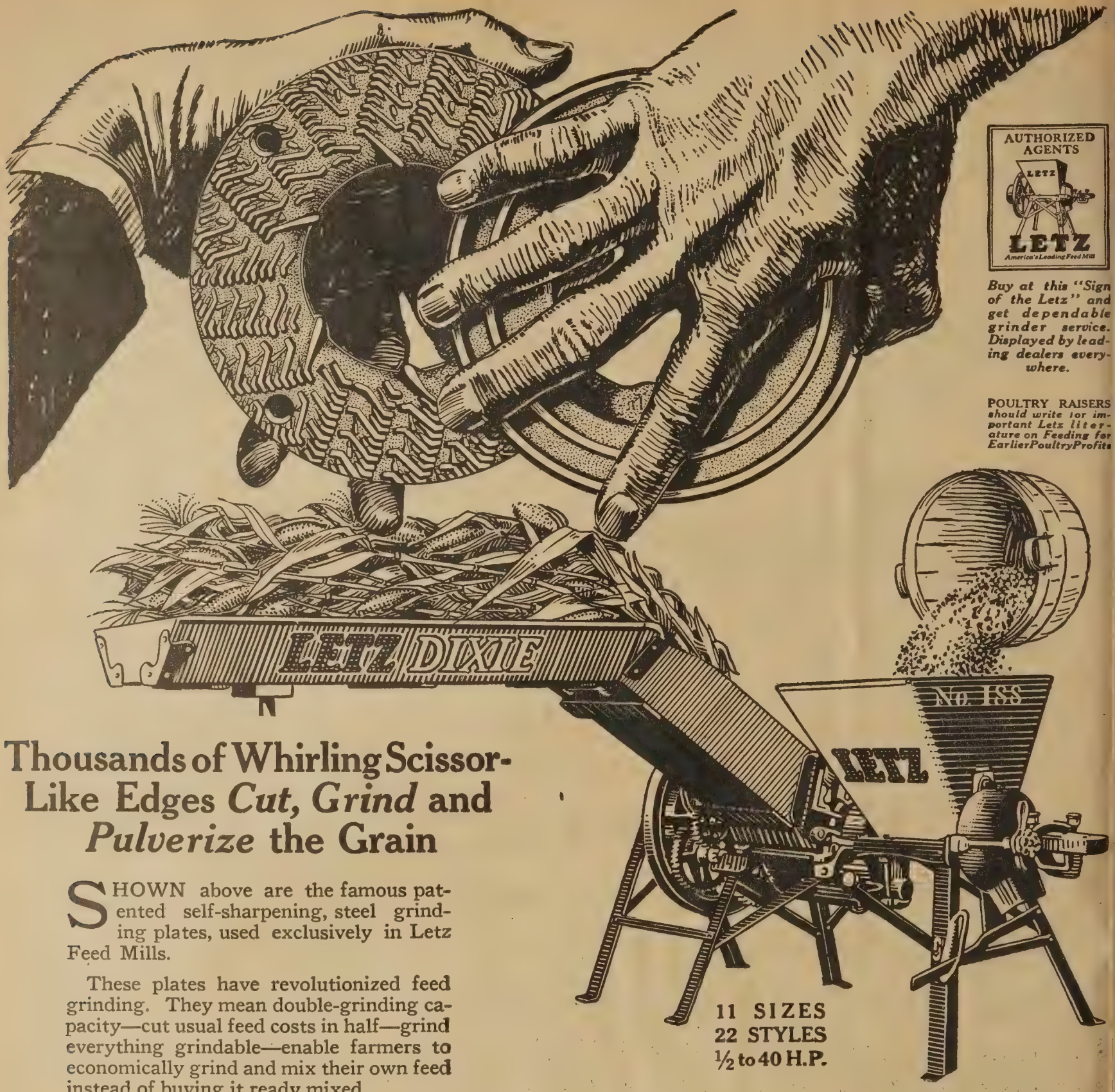
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HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., NOVEMBER 19, 1920. | Number 18

HEREDITY AND PRODUCTION

R. R. GRAVES, U. S. DAIRY DIVISION

THE selection of breeding animals is a most important question with dairy farmers, yet there is considerable disagreement as to what theory to accept and follow. Shall selection be based upon production records, upon type, or upon that intangible something that is said to enable the great breeder to pick a great sire by intuition, as it were?

These problems and other breeding problems were discussed before the Connecticut Breed Associations' meeting by Mr. R. R. Graves, who has charge of the experimental breeding work of the U. S. Dairy Division, which the editors of Hoard's Dairyman believe to be one of the most important lines of work ever undertaken by the Division. After going somewhat technically into the theories of inheritance and the transmission of production in dairy cattle, Mr. Graves said:

"The many experiments and demonstrations with various plants and animals which have proved that the factors governing hereditary characters are transmitted in the germ plasm, convince us that the producing ability of any heifer, granting that she is normally developed, depends upon the combination of factors governing production that she has derived from each of her parents. What the parents were able to transmit to this heifer depended upon the combination of factors that they, in turn, derived from their parents. Does it seem reasonable, if the producing ability of the ancestry of a heifer is unknown, that one can tell by looking at that heifer what the combination of factors governing production in her germ plasm holds forth for her as a producer? Can we tell by type? We can tell if she has a big, roomy barrel, a big heart girth, a pliable skin, a well hung, capacious udder, a level rump, and the general breed type. But do those points in her conformation prove to us that she has the combination of factors that will make her a big producer?

"We may grant that a cow in order to be a big producer must have the capacity to handle large amounts of feed and this means that she must have a large capacious barrel. In order to produce large amounts of milk, she must also have an udder with capacity. She must also have constitution, and we have been accustomed to looking at the heart girth for indications of this. Whether or not the heart girth indicates constitution, we need not discuss here. Our large producing cow must also have a large flow of blood to the udder, and we have looked to the milk wells and milk veins for indications of this. A few years back, I ligated the milk veins of a cow and she continued to produce normally, showing that the interior veins are capable of taking care of the flow of blood from the udder.

"Let us grant, however, that in heavy producing cows of all breeds these general points in conformation are found; but do these points change proportionately to the difference in production of various cows? Do we find a proportionately bigger barrel, a more capacious udder, on the 800-pounds-of-fat cow than on the 600-pounds-of-fat cow? In addition to these, in order to have *type* we must have a straight back, a level rump, a well balanced udder, well filled crops, pretty heads, and so on.

"Do not think from this that I do not like type. I like to see a typy cow as well as anyone, but we should consider carefully the extent to which type aids us in selecting production.

"It seems to me that type and production are for the most part two different things. A sloping rump is objectionable because we do not like its appearance, and therefore we want to select breeding animals with level rumps; not because it will affect the production of the animal, but because it is unpleasing to look at. It is questionable if many sway back cows have weak backs, but even though the sway back does not indicate weakness, it fails to present so pleasing an appearance as the level back. And these same things may be said of the homely heads, heavy horns, thick necks, hollow crops, and to a certain extent level udders. Perhaps the best balanced udder will be the most capacious, though we have all seen cows with low, pendulent udders that had capacity, but that were not desirable because of the udders' shape and liability to injury.

"Over in India and China the water buffalo is said to be a good dairy animal, having been known to produce as high as 270 pounds of fat under their conditions. The type of these animals would not appeal to us, however, with their sloping rumps and hump backs. A short time ago, I saw a rather noted producing cow that had a very noticeable dip in her back where the thoracic vertebrae and the lumbar vertebrae meet. I saw a daughter of this cow, also a splendid producer, that showed the same peculiarity in conformation. Three sons of this cow did not show the dip in the back themselves, but it was noticeable in the daughters of two of the sons and also in the granddaughters of one son. This dip in the back was a detriment to the appearance of these animals, but I question if it had any effect on their producing ability.

"We should breed the most beautiful animals that we can, and that means that we must by all means give consideration to type in the selection of our breeding animals. But in order to breed production, we must be guided by production records. The man who is able to breed great producing animals that also have fine type, has accomplished an infinitely more difficult achievement than he who breeds animals of fine type with ordinary production, or he who breeds animals of superior production with inferior type, for when the number of characters that we select for is increased, we greatly increase the difficulty of combining the desirable factors for those characters.



GUERNSEY COW, FIRST DAWN, AND HER 13TH CALF AND A FUTURE HERDSMAN
At 12 years of age this cow made 608 lbs. fat. She is now 15 years old and owned by Woodend Farm, Minnesota

The Question of Line Breeding

"With many breeders, the first consideration in selecting a bull is that he be related to the last sire that was used, or of the same family as that which predominates in the herd. If some relationship does not exist, the opinion prevails that the animals mat-

(Continued on page 798)

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

A Kansas Dairy Show

HOARD'S DAIRYMAN:—A dairy production contest will be one of the main features of a four days' dairy show, to be held at Paola, November 30 to December 3, by the Eastern Kansas Agricultural Association. A prize of $50 will be given for the cow producing the most butter-fat during seven days, and another prize will be given for the cow giving the most milk during the week. The tests will be carried on under the supervision of the dairy department of Kansas State Agricultural College, while the show is in progress. All tests will be official, and those for Holsteins will be accepted by the association as Advanced Registry tests. Individuals from each of the four main dairy breeds have been entered in the dairy cattle show. The show is open to all breeders and those from any section of the country may enter. All cattle must be tuberculin tested before they will be permitted to enter. Provision has been made for testing all animals free of charge before they are entered in the show. A good many herds, which have been entered, are already on the government accredited list, but these will be tested also.

A large number of Missouri and Kansas breeders are taking an interest in the show, and will have the best individuals from their herds entered. L. B. Smith, of Paola, secretary of the show, states that there is stall room for from 150 to 200 head of cattle in the sales pavilion, and that space can be furnished for additional entries. H. W. Cave, of the dairy department of Kansas State Agricultural College, will be the judge.

A dairy products show will be put on in connection with the dairy cattle show. Milk, butter, cheese, and other dairy products, may be entered in this.

Kansas. GEO. A. MONTGOMERY.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

"Willie, what is a dairy farm?"

"A place where they raise cows."

"Right, and now what is butter-fat?"

"It's the extra a farmer makes on his butter that he didn't expect to make."

⚜

At Thanksgiving time it is just as well to remember that one of the biggest reasons we have for it is the herd of fine cows back there in the barn.

⚜

"Has the length of a cow's tail anything to do with her pedigree?"

"Well, it puts her in the aristocrat class when it comes to killing flies."

⚜

Thanksgiving Day

Thanksgiving Day, Thanksgiving Day,
The time of prayer and grub and play.
The kitchen has an incense sweet,
And pies bedeck the window seat.
The good things cooking seem to whet
The awful appetite we get.
Give me some pumpkin and some mince,
And spread this buttered bread with quince!

Thanksgiving Day. Thanksgiving Day!
The plumes of celery are gay.
Cranberry sauce is glowing red,
The sun shines blessing on your head.
And from the oven comes a whiff
That makes each little tiker sniff.
Give me some white meat, if you please,
I'm busier than honey bees!

Thanksgiving Day! Thanksgiving Day!
It's fairer than the buds o' May.
Stewed onions, sweet potatoes plump,
A turkey perched on every stump.
When folks on farms decide to eat,
Believe me, it's a merry treat!
Give me a drum-stick—gravey, too,
And ma, I drink the health o' you!

⚜

In times like these, I'd rather be a silo, filled with rich ensilage, than the finest art gallery in town.

⚜

If

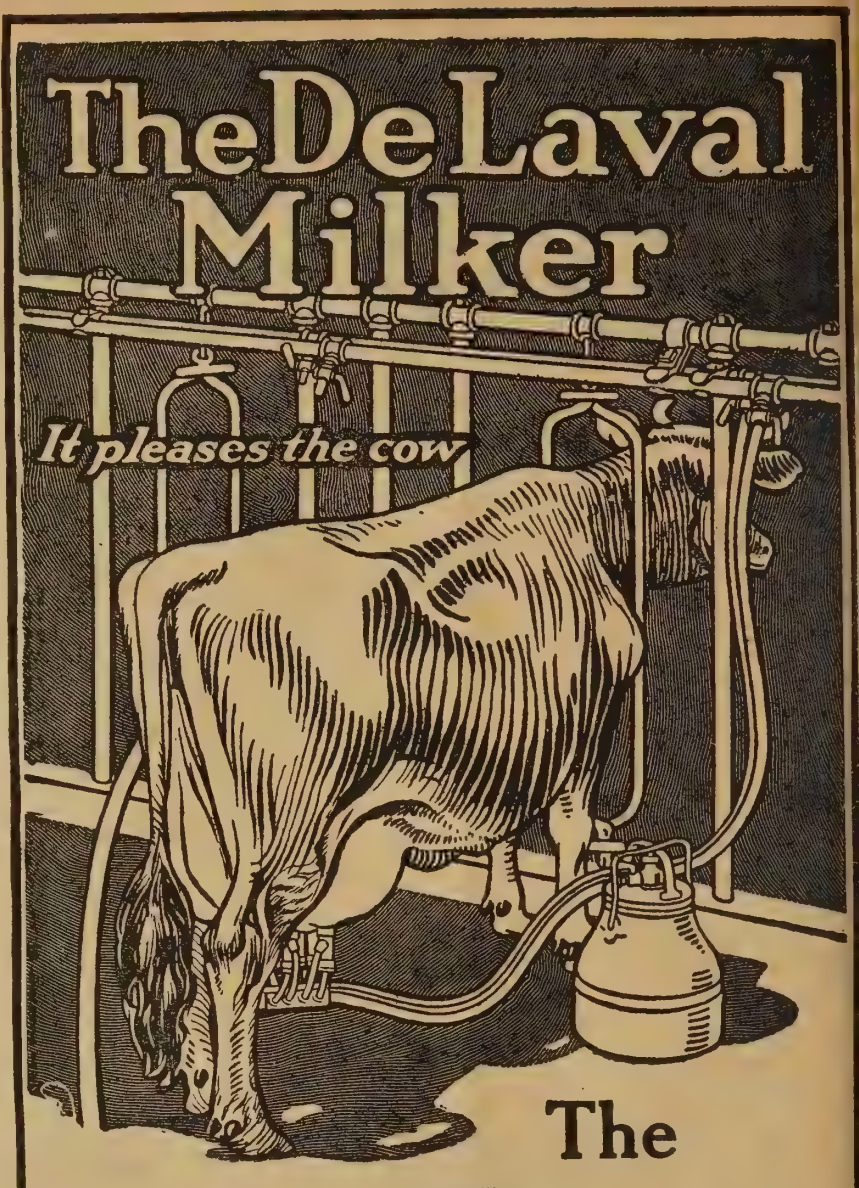
If you can keep your head when all about you
Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you,
But make allowance for their doubting too;
If you can wait and not be tired by waiting,
Or being lied about, don't deal in lies,
Or being hated, don't give way to hating,
And yet don't look too good nor talk too wise.

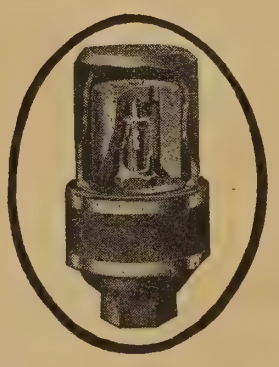
If you can dream and not make dreams your master;
If you can think—and not make thoughts your aim,
If you can meet with triumph and disaster
And treat those two imposters just the same,
If you can bear to hear the truth you've spoken
Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to, broken,
And stoop and build them up with worn-out tools:

If you can make one heap of all your winnings,
And risk it on one turn of pitch and toss,
And lose, and start again at your beginnings
And never breathe a word about your loss;
If you can force your heart and nerve and sinew
To serve your turn long after they are gone
And so hold on when there is nothing in you
Except the Will which says to them: "Hold on"!

If you can talk with crowds and keep your virtue,
Or walk with kings—nor lose the common touch,
If neither foes nor loving friends can hurt you,
If all men count with you yet none too much;
If you can fill the unforgiving minute
With sixty seconds worth of distance run,
Yours is the earth and everything that's in it,
And—which is more—you'll be a man, my son!

—Rudyard Kipling.





The Vacuum Controller

(The Vacuum Controller is not shown in the part of the Milker installation pictured above. It is placed in a convenient place in the installation.)

The safety and success of a milking machine are largely dependent on the uniformity of the vacuum, and the De Laval Vacuum Controller is so constructed that correct and constant vacuum is maintained at all times.

The Vacuum Controller is scientifically designed for its purpose and fully covered by pending patents. No adjusting is necessary; the correctness of each Controller is determined and fixed at the factory and it cannot be adjusted, changed or tampered with.

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An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway NEW YORK
29 East Madison Street CHICAGO
61 Beale Street SAN FRANCISCO

The Tie That Binds Producers Together

Crop Contracts Essential Feature of California Co-operation

HERMAN STEEN, ILLINOIS

WHEN a California farmer joins a co-operative marketing association, he signs a contract which requires him to deliver all of his crop to the association. This contract extends over a period of years, and provides that the grower shall pay damages to the association if he sells his crop to any outside dealer.

This binding crop is one of the essential features of every co-operative marketing association of consequence in California. This applies not only to the giant institutions which market the oranges, raisins, and prunes, but also to the little fellows which handle a few carloads of alfalfa or the honey produced by a small district.

The leaders in California co-operation borrowed this idea from Denmark, where it was used by the bacon and butter selling societies. The Danish co-operators regarded it as a fundamental feature, because it kept their rivals from breaking up the societies by temporarily paying higher prices for the products of the members. The California co-operators have found the contract as essential to their success as did the Danes, and have worked out many improvements over the Danish model.

Solves Financial Difficulties

Originally, the crop agreement was used only as a means of keeping the members of an association in line. It was regarded mostly in the light of safeguarding an association's supply of products. This, of course, is still the primary purpose of the crop agreement, but it has also been found to be the key which unlocks the financial difficulties of co-operative associations. Briefly stated, the crop agreements give the association title to the product when it is delivered, and this allows the association to borrow money to pay advances to the growers. The association can then market the crop at the most favorable time, which it could not do if the growers were constantly demanding money from the sale of their crops, as was the case before this plan of contract and finance was perfected.

Even a casual study of the history of co-operation in California reveals the fact that the crop contract is an absolute essential to success in co-operative marketing. Today there is not a single co-operative association in existence in California which does not employ the crop contract. There may be some small, local organizations which do not require such contracts, but I was unable to find any trace of such, and farm leaders on the Pacific Coast were unable to name any. Of all the many co-operative associations which have failed, only two or three employed the crop contract. These particular organizations failed, I am told, because their crop contracts were imperfect and could be evaded.

An Essential to Success

Every leader of co-operative thought and action with whom I talked recently when studying co-operative enterprises in the Far West sought to impress upon me that the crop contract is the second great essential to success in co-operative marketing, the first being organization by commodity. Even the leaders of the two opposing schools of co-operative thought are in harmony on this question. I refer to Aaron Sapiro of San Francisco and G. Harold Powell of Los Angeles, who have differed quite sharply at times in regard to the fundamental principles of co-operation.

There are different kinds of contracts in use by the co-operative organizations. The California Almond Growers' Exchange, for example, had no contract as such, but every member is required to sign the by-laws of the association, which provide that members must sell all their almonds through the organization. This, of course, has the same effect as a separate contract specifically requiring the same thing.

Different Kinds of Contracts

The egg associations likewise have simple contracts requiring the delivery of all eggs produced and stating the damages that may be collected by the association in case of violation of contract by the producer. The California Fruit Growers' Exchange (the citrus association) has three contracts, one between the central exchange and the district exchanges, one between the district exchanges and the local associations, and one between the local associations and the producers of citrus fruit. Each of these contracts specifically sets forth the things that each party is required to do.

The contract of the raisin growers, on the other hand, guarantees a minimum price to the growers of raisins. It provides also that in case the land is sold the new owner must fulfill the provisions of the contract. This latter provision has been the source of considerable trouble, and many good lawyers say that it would not be sustained in court, though it has never been tested.

What is probably the most complete contract between association and grower is the new prune and apricot crop agreement, which will soon go into effect between the California Prune and Apricot Growers, Inc., and its 8,000 members. It was drawn by Aaron Sapiro, attorney for the prune and apricot growers, and covers more contingencies than any other contract used in California. Nothing is left to verbal understanding and agreement—everything is put down in black and white, so that there is no possibility of misunderstanding. It is regarded as the most perfect contract of the sort ever devised.

Essential Points of Prune Contract

The prune and apricot contract contains close to 3,000 words and the membership agreement close to 5,000 more, so space forbids printing it in full. The salient feature, however, may be reviewed as follows:

1. The grower agrees to help carry out the express aims of the association, which are co-operative marketing, elimination of speculation and waste, and the stabilization of prune and apricot markets in the interest of growers and public alike.

2. The association agrees to buy and the grower agrees to sell all of the prunes and apricots produced by the grower during 1922, 1923, 1924, 1925, and at the option of the association during 1926, 1927, and 1928. (The present contract includes the crop of 1921.)

3. The grower agrees that the crop has not been contracted to anybody else.

4. The grower agrees to deliver all fruit as early as possible, but in no case later than September 15 for apricots and November 10 for prunes, and to abide by all rules of the association in regard to grading, packing, delivery, etc.

5. The association agrees to sell all fruit delivered to it, and to pay the grower the average price received for the grade he produced, minus the cost of operating the association. The grower agrees to accept this amount as payment in full.

7. The association agrees to pay a substantial advance to the grower at the time the crop is delivered, and to distribute proceeds as rapidly as possible through the year, but final payment shall be made not later than July 1 for apricots and October 1 for prunes. (These dates refer to the year following delivery.)

8. The association is allowed to sell the prunes and apricots when and where it deems fit, under such conditions as will serve the grower and the public.

9. The association's subsidiary (the warehousing corporation) capital stock is to be retired by profits made in mechanical handling of the prunes.

10. The grower is allowed to sell any or all of his fruit to dealers and shippers of fruit, provided he does not sell to any speculator who might interfere with the sale of the dried fruit handled by the association.

11. If a grower transfers his orchard of fruit to a relative, he shall be liable for damages in case the fruit is sold to an outside dealer.

12. This association recognizes crop mortgages if it is notified in advance concerning them.

13. It is agreed that all contracts between the association and growers shall be substantially alike.

14. If a grower violates his contract by selling dried fruit to outsiders, he agrees to pay to the association two cents per pound damages on prunes or four cents per pound damages on apricots, plus expense of collection. This is what puts teeth into the contract, and makes a man think twice before he tries to break it.

Under the provisions of the damage clause, practically every co-operative association in California has brought suit against growers for violation of contract. In every single case, so far as I was able to learn, the association has won and the growers were ordered by the courts to fulfill their contracts. The association does not usually sue for damages as much as it does for fulfillment of contract. One such case has recently been appealed to the Supreme Court of California, which has not yet announced a decision.

Importance of the Contract

Some of the important reasons why the binding contract is the cornerstone of co-operation are thus summarized by Attorney Sapiro:

1. It insures the association a definite acreage over a period of years, and from this the actual volume of business can be estimated quite closely. This stabilizes the association and permits it to operate to better advantage than would be possible otherwise.

2. It puts the association in a strategic position on the market. It gives the farmer a representative on the market, which he never has had heretofore. A commission man is often worse than no representative at all, and as often as not is secretly representing the man who buys from the farmer.

3. It eliminates competition in buying, and the association's business cannot be broken by speculators who are willing to pay high prices and lose money temporarily in order to accomplish that purpose.

4. It allows the association to put all of its efforts on efficient salesmanship, while the producer puts his efforts on efficient production. The man who is tempted by a cent a pound cannot seriously injure an association.

5. It provides a means of securing credit, so that crops may be moved and first payments made before they are actually sold. The fact that the association secures title to the crops when delivered allows it to borrow money and make first payments at that time. The contract has thus solved the financial question in co-operation to a large extent, for bankers lend money readily on the basis of the contracts.

Practically all of the co-operative associations in California are increasing the percentage of crop controlled. The success of the associations in securing renewal of these ironclad contracts is assurance that the growers recognize the justice of the crop contract and the necessity for its use.—Copyright, 1920, Standard Farm Papers.



LEMON PACKING HOUSE IN SOUTHERN CALIFORNIA

Co-operation is as good a thing in the home as anywhere else. Co-operation, you know, is only conducting yourself so others will find it easy to work with you and get along with you.

THE "MEIEREI"

GEORGE CECIL, FRANCE

STRICTLY speaking, the "meierei" is the dairy attached to a Swiss hotel, and to which those staying in the hotel repair at all hours of the day. Some frequent it because they are on a milk regimen, and others because they happen to like milk. Besides, 'tis pleasant to meander through the romantic dells and well-kept hotel grounds leading to the meierei, picking the varied wild flowers, devouring the inspiring view, and breathing the delicious pine-scented air preparatory to recruiting exhausted nature with a glass of frothy, creamy milk fresh-drawn from the sleek cow.

There are, of course, meiereis and meiereis. The very small hotel, for example, finds it far cheaper to deal with the itinerant dairyman than to pay for the upkeep of a cow, or cows. Occasionally the proprietors of two or three hotels share a meierei, dividing the expenses and the output. The arrangement, however, has its drawbacks, for the sharing may lead to disputes which can only be wiped out in something stronger than milk. Besides, the guests from the hotels may discuss, too freely, the terms they pay and the accommodation offered by mine hoost. "Eighteen francs a day, and your room looks on the stable? Why, I pay but sixteen francs, and I am surrounded by mountains—mountains covered with snow. Only one meat course? Ah, I get two, and often game as well." "Truly, I have been swindled. Tomorrow I leave for your sumptuous sixteen francs' worth."

Indeed, the commonwealth meierei has often resulted in strained relations between once friendly bonifaces. When this happens, the partners close the establishment and patronize the dairyman.

In some places the meierei is simply an open-air tea-shop situated at some distance from the town. Here, of an afternoon, all the world meets to sample the delicious little cakes and the admirable pastry for which Switzerland is famous. Or, if you prefer mountain honey, it is yours for the asking—and the paying. Milk, of course, is to be had in abundance, dashed with cream at a cost of a few extra centines. In fact, many of the habitues, after a substantial meal of coffee and cakes, call for a huge glass of milk. The bulky proprietor and all his staff smile with satisfaction when they hear the order. For does not each glass mean an addition to the dividends—and to the tip?



A TYPICAL MEIEREI SET AMIDST TYPICAL AND DELIGHTFUL SURROUNDINGS

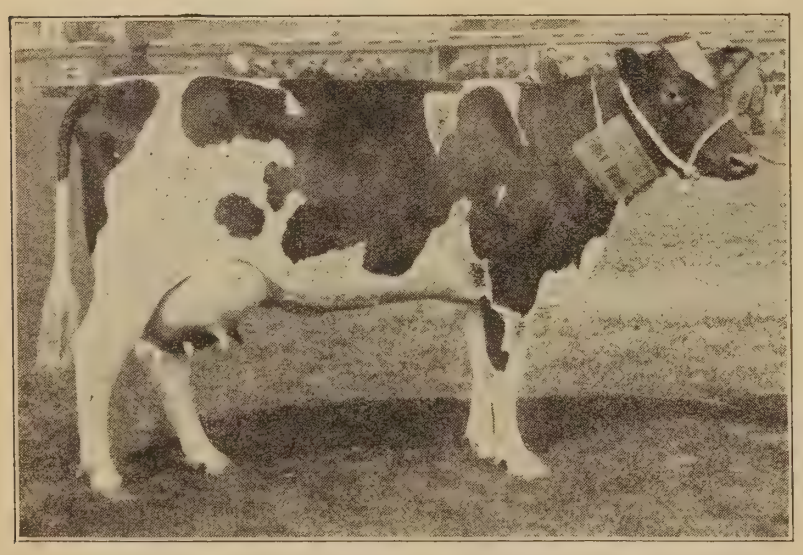
In cosmopolitan towns, such as St. Moritz, in the upper Engadine, the meierei is a large and important institution accommodating several hundred persons who hail from every country under the shining sun. French, Russians, Italians, Americans, English, Portuguese, Spaniards, Roumanians, Serbs, Greeks,—all foregather there and everyone unites in praising the enterprise of the proprietor. The meierei, in fact, is the club, the meeting-place, where social engagements are made and sight-seeing plans discussed.

The long, rambling building usually is divided into two or three tea rooms, in one of which are two or more long tables laden high with every imaginable—and unimaginable—dainty. But no one dreams of using the rooms when the weather is fine. Indeed, if it rains, the comparatively small space under the awning is crowded to the verge of suffocation by people who have not come to Switzerland to stay indoors. In short, so intrepid are some of them, that rather than sacrifice a single breath of fresh air, they take their milk under dripping umbrellas. "Mad! stark, staring mad," is the comment of the Swiss who, having as much open air as they want all the year round, cannot understand anyone who can af-

(Continued on page 799)

A DAIRY CATTLE SHOW IN SCOTLAND

Ayrshire and Holstein Winners at Glasgow



BRITISH FRIESAN COW, PAISLEY DAISY, WINNER OF 1ST PRIZE



CHAMPION BRITISH FRIESIAN HEIFER, LOCHLANDS NICOL



CHAMPION AYRSHIRE COW, MEIKLE KILMORY LADY BUTE III



AYRSHIRE COW, BRUCHAG PEARL 2D, 1ST PRIZE WINNER

From Forest Shades to Holstein Pastures

L. L. OLDHAM, Secretary Wisconsin Holstein Breeders' Association



AMONG THE STUMPS AND FALLEN TREES THEY FOUND US

NORTH of the Mason—Dixon Line in Wisconsin, which is another name for the tracks of the Green Bay and Western Railway which reaches from Green Bay to Winona, is a veritable empire of pasture lands and cropping fields. Not many years ago the ring of the "lumberjack's" axe and the swish of the falling tree were the familiar sounds—today we listen to the bellow of the bull or the ringing of the bell on the leader cow's neck. It is a welcome sound in any case, for on the back of the dairy cow, more than on any other farm animal, rests the responsibility of development of this empire, and she is building well. Once a land of timber, sawmills, and lumbering operations, now it is rapidly coming to be known as the land of cows, clover, and creameries.

The recent activities of Holstein breeders and their respective county associations took the writer through this region, particularly into Marathon and Bayfield Counties. One notes with surprise, but with admiration the wonderful opportunities of this "North Country", as the usual traveler involuntarily calls this portion of the Badger State.

In Marathon County we visited the county agent, Frank Swoboda, a real hustler and a regular dynamo of better farming energy. He gave us the statistics which "sizes" our perspective—forty-three townships, fifty-eight thousand hustling farmers, fifty-five thousand dairy cows, the second largest hay acreage in a Wisconsin county, a group of enterprising, forward looking and forward thinking bankers who are farm boosters, and thriving towns.

In Bayfield County we traveled for awhile with V. E. Brubaker, another sterling agricultural leader. Day in and day out this United States Department of Agriculture and State Agricultural College representative is hitting the high spots in his car and giving the best that is in him to the agricultural development of another particular spot in this northern area. He told us of the 2,000 farms and their good crops of oats, barley, potatoes, fruit, and hay. We saw them. We also saw excellent prospects for plenty of silage for the 18,000 dairy cows. Here again, we have a bunch of banker boosters—many of them told us they were doing their bit to stock up and we believe them.

We've "made" the whole of this "North Country". We have seen similar conditions throughout. These two counties were our points of contact this time. We have gone through the empire—traversed it by daylight, on train and by car. It seems a land of assets and no liabilities, a veritable empire of cows and creameries.

Seventeen years ago John L. Chrouser moved onto a farm in upper Wisconsin. He liked Holsteins and his admiration for the breed and his desire for a herd soon led him to the farm of T. F. Vannedon in Wood County. Mr. Vannedon had two Holsteins for sale. They were sisters, Minerva and Cora Beets. John had his choice. He took Cora. Later Mr. Vannedom consigned Minerva to a Wisconsin Holstein sale. Minerva was attractive—both of these sisters were exceptional. Bob Haeger, of auction fame, saw the possibilities and took her home to Algonquin as his property. Eventually she found a place in his show string. Dairy cattle history has reported her winnings and extolled her quality each fall for years past. Seven times has she stood at the head of her class at the National Dairy Show and brought the purple ribbon to the hand of her Illinois owner. Last year was her last in the show ring says her owner. However, she will be exhibited as a typical exponent of the breed. She is now 14 years old and Bob says when she dies she will find a place of honor waiting her in the Haeger family lot. She put "Bob" on the map just as her blooded sister Cora put Mr. Chrouser into the limelight as one of the foremost breeders in this land of promise.

From the beginning made 17 years ago, with the purchase of Cora Beets, has sprung a herd of about 35 head. Appreciating the value of the good sire was a stepping stone in Mr. Chrouser's success. He searched much before he finally put his confidence in Pontiac Hendrick Burke. The foundation cow as before mentioned is Cora Beets and fully one-half of the present herd are descendants of these two animals. This combination of male and female, together with a certain amount of good fortune, is responsible for the valued holdings of Mr. Chrouser. However, back of the animals is a faith in the laws of breeding; a faith in the future of



"LIKE BEGETS LIKE OR THE LIKENESS OF AN ANCESTOR"

dairying and the north country; a well spent fund of good common sense; and a keen appreciation of the black and white breed.

Mr. Chrouser did his first official testing the last year. He has long been a member of his cow testing association and the last year in the local association, Cora, now 15 years of age, made over 10,000 lbs. of milk and more than 400 lbs. of fat. He plans to run this good old matron on official test this year.

Among his first records made very recently we find Cora Beets Oaks, a granddaughter of Cora Beets. On test during the month of July she made at 5 years 17.8 lbs. fat and 457.8 lbs. of milk.

Oaks Pontiac, another granddaughter of Cora, made 15.38 lbs. fat and 407 lbs. of milk as a junior four-year-old.

Sadie Burke Cornucopia, a great granddaughter of Cora, made 11.07 lbs. fat and 287 lbs. of milk as a junior 2-year-old

Hot weather records—made, as you will note, in July, 1920. Not so bad, is it?

There are other cases of merit up there. We mention this one because it is a striking object lesson for dairymen over this entire United States of America to "go thou and do likewise". This entire area of Wisconsin is booming in the live stock game and especially is this true with Holsteins. Mr. Grover of Minnesota. As secretary of the county Holstein association of his county he is a moving spirit among his fellow men. Then there was the herd of Fieldmier Bros., as fine a herd of about 20 head as you would ever hope to see, evidence of good bulls and a faith in the live stock and diversified farming business. There were others, too, like the Schroeder Bros., the Smiths, the Yderstad Bros.; oh, yes, they were all converted to dairying, going onward to success with their breed through the use of better sires, better females, In Marathon County there are more than 300 breeders of Holsteins, all of whom are using right good registered bulls and who belong to their county organizations. More than one-third of them have a start with pure-bred females.

Here again Marathon County is cited merely as an example. Bayfield, Barron, Burnett, Douglas, Price, Langlade, and many others are in the game. In Bayfield County we found such fellows as Thoralf Yderstad, a short course graduate of our college of agriculture, and once herdsman for and A. R. O. work. There were some to be sure who were talking selling out because of the "stake" on fruit this year. But they are the hit or miss kind of fellows. Adventurers, we call them in every day walks of life. They wind up on the rocks of despair or are doomed to forever take orders from the "stickers".

What is being done in this north country with dairy cattle of all breeds is a surprise even to those of us who are in closest touch. It is a revelation to the casual traveler. What it means to the settler to get a monthly dividend check through cows is readily seen by visiting those who "dairy it" and have a start with pure-breds. We visited several who "aim to make their money easier." We couldn't see the evidences of easy money, but we could see the progress of those who have tied their load of hopes to the foster mother of the world. God speed the day when we can go forth into the land that was once a land of forest shade and now is given over to dairy pastures, and see herd after herd of dividend payers, machines which convert raw materials into the necessities of life, and see farm after farm as the home of happy contented folk who are operators of the factories which more than four score and ten statesmen have eulogized as the very foundation of our national welfare and prosperity!

Oiling Harness

HOARD'S DAIRYMAN:—I would suggest the following method of oiling a harness: Get a barrel, fill it three parts full of water, float about one inch of oil on top, and then dip the harness. Hold the harness up a few minutes to drain. All the harness can be oiled in a short time. I prefer mineral oil, "machine oil".

Philadelphia, Pa. W. H. R.

Who'd board a hired man all winter if he didn't work? Then why board the hen that never lays an egg?



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In three weeks his egg production jumped from 10 to 100 eggs per day!

Colt Carbide Gas light is so near actual sunlight that it fooled the hens into working summer hours in winter weather.

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The Colt Carbide Lighting and Cooking Plant is easy to install, it is so simple that the hired man or a boy 12 years old can keep it in operation with but a few minutes attention each month. Costs nothing to maintain when not in use and is most economical. Colt home made gas light is clean, odorless, smokeless.

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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ia.	Monona—Farmersburg	Ernest Lihn	Oct.	307	48	62.5	W. J. Allert
Tenn.	Rutherford Co.	W. H. Oliver	"	96	12	66.7	Chas. Pearson
Wash.	Whatcom Co.	John Vickers	Sept.	487	83	88.9	A. E. Smith & Co.
Pa.	Juniata Co.	Karl A. Fettig	"	304	7	64.0	G. O. McClure
Wis.	Rock Prairie	W. J. McKee	Oct.	410	16	69.1	J. Wehenger & Son
"	Richland Co.	Henry Engsberg	"	490	11	47.3	R. P. Tabison
"	Amherst—Nelsonville	Geo. W. Baumel	"	366	29	70.5	Portage Co. Poor Farm
"	Ft. Atkinson	Wm. Seales	"	363	36	61.0	Jefferson Co. Farm
"	Monticello	H. T. Albrecht	Sept.	580	19	60.9	Fred C. Marty
Wash.	Wahkiakum	W. J. Carter	Oct.	450	48	66.3	C. W. Laughlin
Minn.	Pioneer	H. C. McMurray	"	1006	59	84.3	F. S. Ruble & Sons

Association Notes

Monona — Farmersburg, Iowa:—One registered bull was bought during October. Three members bought five head of registered females, these being the first pure-breds on each of these three farms. Three cows were sold to the butcher and three grade cows with cow testing association records were purchased. Two carloads of alfalfa hay were shipped in and another carload of cottonseed meal ordered. A few of the men have opened their silos. About one-half of the members combined soy beans with the silage corn. The highest milk record for the month is 1,536 lbs. milk, 58.4 lbs. fat, from a 3-year-old Holstein grade in G. A. Sabbann's herd. Last year this heifer had the honor of being the first heifer to go over 50 lbs. fat with first calf. Feed prices are: Silage, $4 per ton; mixed hay, $20; alfalfa, $36; oats, $40; corn and cob meal, $40; barley, $40; bran, $40; cottonseed meal, $70; oil meal, $80.

Rutherford County, Tennessee:—Several very fine cows have been added to the herds of this association. Chas. Pearson bought a very high bred milk cow. Mr. Pearson, who entered the show circuit with his Jerseys for the first time this year, was very successful, winning six firsts and six other prizes at the Tennessee State Fair, ninety per cent of the prizes at the Bedford County Fair, and every prize offered at Huntsville, Alabama, Fair. Kingswood Farm also purchased a fine young heifer.

Juniata County, Pennsylvania:—A committee of three farmers has been appointed to purchase the feed supplies for this association. At present there is an order in for a carload of bran. September market milk sold for $3.89 per cwt. The creamery paid 75c per pound for fat. Milk retails for 12c per quart and butter for 65c per pound. Feed prices are: Corn and cob meal, $45.80 per ton; ground oats, $56.20; bran, $63—$65; cottonseed meal, $77.30; oil meal, $80; Union Grains, $80; Peerless Dairy Feed, $70; hay, $25.

Rock Prairie, Wisconsin:—Four unprofitable cows were sold during October and one pure-bred Guernsey cow and five pure-bred Holstein heifers purchased. Three herds have been tuberculin tested this month. Market milk testing 3.5% sold for $3.70 per cwt. and 4c per point above. Milk retails for 14c per quart, butter for 64c per pound, and cheese for 35c per pound. Oil meal is rated at $72 per ton; bran, $37; barley, $1.70 per cwt.; oats, $1.80.

Richland County, Wisconsin:—More balanced rations are being fed. One grade Holstein herd was sold during October and replaced by registered Holsteins. Seven unprofitable cows were sold. Market milk testing 4% sold for $2.60 per cwt. The condensery paid 68c per lb. for fat, the creamery 59c, and the cheese factory 60c. Milk retails for 12c per quart, butter for 57c per pound, and cheese for 28c per pound. Feed prices are: Oats, 62c per bushel; corn, $1; barley, 69c; bran, $38 per ton; oil meal, $75; alfalfa hay, $30.

Amherst—Nelsonville, Wisconsin:—In September the creamery paid 65c per pound for fat. Milk retails for 12c per quart and butter for 60c per pound. Bran is rated at $38 per ton; oats, $34; oil meal, $70.

Fort Atkinson, Wisconsin:—The creameries paid 58c to 63c per pound for fat during October. Feed prices are: Silage, $7 per ton; alfalfa hay, $30; bran, $37 to $41; oil meal, $66 to $69; gluten, $58 to $70; barley, 90c per bushel; oats, 62c.

Monticello, Wisconsin:—A thousand-dollar pure-bred Holstein bull was purchased to head a pure-bred herd in this association. Most of the members are now feeding grain and silage. One member has put six cows in Advanced Registry with official testing, and others are to start soon. There are a few unprofitable cows left. Fourteen pure-bred Holstein cows were sold from one herd and two from another. September market milk testing 3.5% sold for $3, $3.20, and $3.70 per cwt. Milk retails for 10c to 15c per quart, butter for 65c per pound, and cheese for 25c to 35c. Feed prices are: Oats, 70c—75c per bushel; barley, $1.20; bran, $46 per ton; oil meal, $67.50 to $74; silage, $8.50; alfalfa, $30.

Wahkiakum Co., Washington:—One registered Jersey bull was sold to replace a scrub. Four pure-bred Jersey females were added to one of the herds last month. The creamery paid 71 cents per pound for fat in October.

Pioneer, Minnesota:—Market milk sold for $4.83 per cwt. in October. The creamery paid 71 cents per pound for fat. Milk retailed for 14 cents per quart, butter 65 cents per pound. Silage cost $4—$6 per ton; hay, $10—$20; bran, $34—$40; oil meal, $64—$70; corn, 55—70 cents per bushel; oats, 40—45 cents; barley, 65—75 cents.

Year's Report of Edgar Association

This association finished its first year on October 22nd. High prices of feeds and the excessively dry summer caused a curtailment in production. The average of the entire association is 6,140 lbs. milk and 247.1 lbs. fat. One of the lowest herds has an average of only 4,794 lbs. milk and 193.3 lbs. fat. The owner, however, is making a fine effort to get better cows and has sold six for beef, has purchased two pure-bred females, is planning on buying a few good grades, has had his herd tested for tuberculosis, and, what is most important, has signed up for another year of

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Cow Waters Herself



with this wonderful new Libbey Automatic Water Bowl. Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

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testing. The herd of Bernard Baeseman, grade Guernseys, produced fat at the lowest cost per pound, which was 21c. The cow producing butterfat at the lowest cost per pound, 17c, is a grade Guernsey owned by Edwin Amhaus. These cows freshened in the spring and went onto pasture soon after freshening, consequently Mr. Baeseman fed very little grain and Mr. Amhaus fed none at all, which accounts for the low feed cost. Fourteen cows qualified for the Register of Production. The high cow is a grade Holstein owned by Hart Brothers, which produced 11,666 lbs. milk, 427.1 lbs. fat. A pure-bred Holstein owned by Herman Pilgrim was second with 11,477 lbs. milk, 420.8 lbs. fat. The next three are two grade Holsteins owned by R. W. Olson, producing 10,817 lbs. milk, 417 lbs. fat, and 10,023 lbs. milk, 396.7 lbs. fat, respectively; and a grade Guernsey owned by E. W. Pfrang, producing 8,703 lbs. milk, 402.2 lbs. fat.

A year of testing proves the folly of dairy farming without testing. Every farmer had his poor cows and it was encouraging to note the way some of the members went after the improvement of their herds. During the year several of the members purchased pure-breds, ten herds were tested for tuberculosis with 13 reactors so far, six scrub bulls were routed, and two other members were induced to use their neighbor's pure-bred bull. Sixty-eight cows were sold for beef. The high herds are those of Hart Brothers, averaging 326.7 lbs. fat; Herman Pilgrim, 324.7 lbs. fat; R. A. Rietzow, 324.4 lbs. fat; R. W. Olson, 321.4 lbs. fat; E. W. Pfrang, 311.2 lbs. fat.

A Connecticut Yearly Report

The 197 cows completing a year's work in the Canaan County, Connecticut, Cow Testing Association averaged 7,000 pounds of milk containing 260.8 lbs. of fat; the average valuation given the product of these cows was $253.72, with an average feed cost of $114.41 per cow. The income over cost of feed was nearly $140.

The tester for this association, Mr. B. F. Dibble, makes the following comparison between the highest and the lowest producing herds in the association: The high herd in the association consisted of 10 cows that produced a total of 86,560 lbs. of milk containing 3,199 lbs. of fat, while the lowest herd in the association consisted of 21 cows, or double the number of the high herd, yet it only produced 93,072 lbs. milk containing 3,975 lbs. of fat. The product of the high producing herd was valued at $3,105 and the total cost of feed for these 10 cows was $1,189; while the product of the lowest herd was valued at $3,145, with a total feed cost of $1,448. The income above cost of feed for the former was $1,916 and for the latter, $1,697. In other words, the 10 cows in the high herd produced $219 more profit above cost of feed than did the 21 cows in the low herd. This computation as to profit takes no account of the additional labor or expense involved in housing and caring for double the number of cows. The tester makes a special note that the low producing herd received only home grown feeds, the assumption being that the other herds were fed a more varied ration and possibly a better balanced ration.

Jersey Cattle Notes

For week ending October 29:

Number of animals registered: Bulls, 202; cows, 558; total, 760. Number of transfers recorded: Bulls, 183; cows, 589; total, 772.

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are famous the country over for long life and accurate measure. They are heavily tinned from pure block tin after stamping. All joints are loaded with solder and the interior is absolutely smooth. There are no bacteria harbors. Neck and breast are joined on a powerful press in a perfect grip-lock joint, water-tight before tinning.

The Climax can shown herewith is a splendid can for wagon use, for delivering milk and cream to the creamery, etc.

SIZE	WEIGHT	PRICE
5 gal.	11 lbs.	$3.80
8 gal.	15 lbs.	$4.60
10 gal.	17 lbs.	$4.90

Write for big, free Dairymen's Catalogue.

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International Special Dairy Feed

MIXED RIGHT — PRICED RIGHT

International Special Dairy Feed is scientifically mixed. Its formula has been O.K.'d by experienced dairymen who proved that it made more milk. For many years thousands of dairymen have used it exclusively. Give it a fair test. Put one-third of your herd on a ration of International Special Dairy Feed for three months. Can be used as an entire grain ration or mixed with home-grown grains. Then compare the milk production with results secured from other feeds. You will secure more milk than from any other mixture of similar analysis. Order a ton of International Special Dairy Feed from your dealer and start making this test at once. It means more milk. And more milk means more money.



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Live Agents Wanted

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When you invest in a cream separator you can't afford to take chances with a machine that through faulty bowl construction retains particles to sour and taint the next day's skimming. You can't afford to buy a machine that destroys the body of the butterfat. You can't afford to use a machine that promotes unsanitary conditions in your dairy.

The one cream separator that will give you adequate protection against all of these faults is the

Primrose

Its bowl is absolutely free from holes and crevices in which milk can lodge. It is simple in construction, easy to wash. It skims at low speed, insuring the delivery of cream of the highest butter-making quality. Its clean lines and open base provide for sanitary conditions wherever it is used. Its rugged construction and automatic oiling system insure long life and easy running.

Bear these facts in mind when you are ready to buy a new cream separator.

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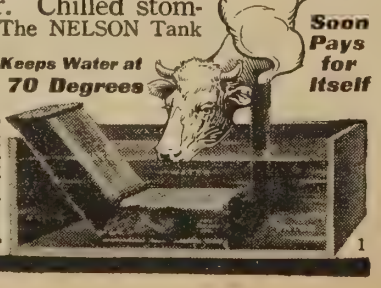
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Western Royal Live Stock Show

THE second annual Western Royal Live Stock Show was held at Spokane, Wash., November first to fifth. It is pre-eminently a fat stock show and dairy cattle formed but a small part of the exhibition. There were only two breeds of dairy cattle represented and the total number of animals shown was 83, of which 40 were Jerseys and 43 Holseins. Outside of a very few animals they were all commendable representatives of their breeds. The West grows good cattle. They are large, of good conformation and many have made exceptionally good records.

The dairy industry in the section tributary to Spokane is in its infancy and beef predominates. The small display of dairy cattle at the Western Royal plainly shows there is not a strong sentiment for the dairy cow among the farmers of that section. Those engaged in the breeding of cattle are putting forth united effort to popularize the cow, for they see her opportunity and necessity in their agriculture.

The report was current that there would be no dairy cattle admitted at next year's show, for their room would be needed for fat cattle. The breeders of dairy cattle will put forth effort to keep the dairy classifications and it is to be hoped that they will be successful. Those just starting to build herds need the education of the show ring. It will teach them proper dairy type and keep them from making many foolish mistakes in the selection of foundation stock. The show ring by no means takes the place of pedigree and records, but no man can be a successful breeder without taking into consideration type, conformation, and pedigree. Let us hope that the officials of the Western Royal Live Stock Show will continue a place for the dairy breeds.

Holsteins

There were five exhibitors of the black and whites and their animals would have been a credit to any show. Hollywood Farms had the largest number of animals on exhibition, and they were a very uniform lot. This exhibit emphasized the breeding qualities of their herd bull, Judge Segis, that was grand champion at the Pacific International Live Stock Exposition, Portland, 1919. Hollywood Veeman Segis, a grandson of Judge Segis, as a yearling won first and grand champion. He is an exceptionally well formed bull, deep bodied, long, rather high from the ground, straight back, large, and of good dairy quality. He lacks in masculinity, but this will undoubtedly come with age.

Hazelwood Ormsby Korndyke De Kol was senior and grand champion cow. She is now owned by Waikiki Farms and bred by John L. Smith of Hazelwood Farm. She is a very good cow, a little heavy over the shoulders, and not of the extreme dairy type of her stable mate, Hazelwood Ormsby Segis, a two-year-old and a competitor for grand champion. The judge would have made no mistake if he had made the latter grand champion.

The best class shown was the junior heifer calves and John L. Smith received 1st, 2nd, and 4th prizes.

The judge was J. B. Irwin. The exhibitors were as follows: Waikiki Farms, Hollywood Farms, Thos. J. Owens, John L. Smith, and F. E. Parks, all of Washington.

The awards are as follows:

Junior yearling bull—1, Owens on Hollywood Veeman Segis; 2, Hollywood Farm on Hollywood Fayne Segis; 3, Parks on Crystal Rock Johanna Joliet. Senior bull calf—1, Hollywood Farm on Hollywood Illustrites Segis; 2, Parks on Crystal Rock Johanna Hartog. Junior bull calf—1 and 2, Smith on Willow Springs Sir Ormsby and Hazelwood Heilo Posch Ormsby.

Cow three years and over—1 and 2, Waikiki Farm on Hazelwood Korndyke De Kol Ormsby and Hollywood Lelita Piebe De Kol. Cow two years and under three—1, Waikiki Farm on Hazelwood Ormsby Segis; 2 and 3, Hollywood Farm on Hollywood Segis Lady Fayne and Hollywood Segis Mercedes De Kol; 4, Parks on Susie Astrea De Kol Segis. Senior yearling heifer—1, Waikiki Farm on Uneeda Butter Girl, 2 and 3, Hollywood Farm on Hollywood Segis Belle Pontiac and Hollywood Segis Phoebe Veeman; 4, Parks on unnamed. Junior yearling heifer—1, Hollywood Farm on Hollywood Hengerveld Segis; 2, Parks on Crystal Rock Johanna Lass. Senior heifer calf—1, 3, and 4, Hollywood Farm on Hollywood Lilith Segis, Hollywood Mercedes Veeman, and Hollywood Segis Tetonkje; 2, Smith on Hazelwood Queen Heilo. Junior heifer calf—1, 2, and 4, Smith on Hazelwood Leda Heilo Ormsby, Hazelwood Leda Heilo Korndyke, and Hazelwood Heilo Josephine Ormsby; 3, Hollywood Farm on Hollywood Lilith Belle 2d.

Young herd—1 and 2, Hollywood Farm. Calf herd—1, Smith; 2, Hollywood Farm. Get of sire—1, Hollywood Farm; 2, Smith. Produce of cow—1, Hollywood Farm.

Junior and grand champion bull—Owen on Hollywood Veeman Segis. Senior and grand champion cow—Waikiki Farm on Hazelwood Ormsby Korndyke De Kol. Junior champion cow—Waikiki Farm on Uneeda Butter Girl.

Jerseys

There were 40 Jerseys competing for ribbons and there were many fine individuals. Competition was the greatest between the Glen Tana Farm and Waikiki Farm and when the battle was finished honors were about even. The Glen Tana Farm received the champion prizes on its bulls, Glen Tana Golden Fern Lad winning senior and grand champion and Glen Tana Golden Boy, junior champion.

Waikiki Farm won the champion prizes on females. Morier's Golden Ladd was senior and grand champion. She is a good type, deep body, well developed udder, refined, and has



AUSTIN'S MAY POGIS AND HER TWIN HEIFER CALVES, JERSEYS OWNED BY WM. MAC PHERSON OF GEORGIA

As a two-year-old this cow produced 7,823 lbs. milk, 467.5 lbs. fat. Thirty days after finishing her test she dropped her heifer calves. In June her name appeared in the list of 50-lb. Jerseys, her fat production being 53.68 lbs.

made good at the pail. Junior champion was won by Pilot's Duchess.

The judge was J. B. Irwin.

The exhibitors were as follows: Glen Tana Farm, Waikiki Farm, R. J. McGoran, and W. G. Barlow. all of Washington.

The awards are as follows:

Bull three years or over—1, Barlow on Viola's Graceful Boy. Bull two years and under three—1, Glen Tana Farm on Glen Tana Golden Fern Lad; 2, Waikiki Farm on Mauna Loa of Waikiki. Senior yearling bull—1, Waikiki Farm on Count's Foxy Owl; 2, McCorran on Trotsy's Flying Fox. Junior yearling bull—1 and 2, Waikiki Farm on Bonny's Pet of Waikiki and Esther's Pilot of Waikiki; 3, Glen Tana Farm on Glen Tana Sultan's Count. Senior bull calf—1, Glen Tana Farm on Glen Tana Golden Boy; 2 and 3, Waikiki Farm on Waikiki's Morocco Duke and Waikiki's Owlet. Junor bull calf—1, Waikiki Farm on Belle's Pilot of Waikiki; 2 and 3, Glen Tana Farm on Glen Tana Morocco's King and Glen Tana Dairyman.

Cow three years or over—1, 2, 3, and 4, Waikiki Farm on Morier's Golden Maid, Bessie of Shady Lane, Indiana Lady's Diana, and Emeline's Easter Lily. Cow two years and under three—1, Waikiki Farm on Owlet's Drucilla; 2, Glen Tana Farm on Glen Tana Sibyl 2nd; 3, Barlow on Pilot's Grey Mousie. Senior yearling heifer—1, Waikiki farm on Pilot's Duchess of Waikiki. Junior yearling heifer—1 and 2, Glen Tana Farm on Glen Tana Astrea and Glen Tana Sultan's Nelly; 2 and 4, Waikiki Farm on Pilot's Edena of Waikiki and Pilot's Coomassie of Waikiki. Senior heifer calf—1, Glen Tana Farm on Glen Tana Dorothy; 2 and 3, Waikiki Farm on Pilot's Trilby of Waikiki and Pilot's Valentine of Waikiki; 4, Pease on Mary's St. Mawes Glow. Junior heifer calf—1 and 2, Glen Tana Farm on Glen Tana Lois and Glen Tana Morocco Eva; 3 and 4, Waikiki Farm on Waikiki's Pilot Rosalie and Pilot's Rockland of Waikiki.

Aged herd—1, Waikiki Farm; 2, Glen Tana Farm. Young herd—1, Glen Tana Farm; 2, Waikiki Farm. Calf herd—1, Glen Tana Farm; 2, Waikiki Farm. Get of sire—1 and 3, Glen Tana Farm; 2, Waikiki Farm. Produce of cow—1 and 3, Glen Tana Farm; 2, Waikiki Farm.

Senior and grand champion bull—Glen Tana Farm on Glen Tana Golden Fern Lad. Junior champion bull—Glen Tana Farm on Glen Tana Golden Boy. Senior and grand champion cow—Waikiki Farm on Morier's Golden Maid. Junior champion—Waikiki Farm on Pilot's Duchess of Waikiki.

Worthless Farmers

HOARD'S DAIRYMAN:—Nature makes a quart of milk given by a 4,900-lb. cow look just as good and taste just as good and be, in fact, just as good as the quart made by the 8,900-lb. cow. Both quarts of milk are on the same market and sell for the same price. Nature makes one potato in a hill from a field, so far as the individual potato is concerned, just as good as a like sized potato from a field yielding four or five times as heavily. A half bushel of apples picked from a tree receiving no care at all, and possibly and very likely these are the only good ones from the three barrels that the tree bore, may be just as good as a similar amount from a properly cared for tree, and these apples sell for the same price. The point is that too much stuff is produced that is produced as a bare margin above family sufficiency. The careless, worthless farmer can exist on what he and his family have stolen from the soil; if he can get anything for his surplus he is satisfied. His extra stuff is what gluts the market. We have too many such farmers.

The war drove out and away from the farms a lot of worthless men. How much did it decrease production? The better farmers were left and they had a chance. They also had to work harder.

Greater disaster and discontent will follow a poor sale of five thousand bushels of wheat if it is the entire crop and only product of one man's farm than as though it were the combined surpluses of two hundred and fifty farms. Similarly, milk wars hit the heavy producer where it hurts while the fellow who has a hat full of milk suffers little.

What profit to a man to maintain a sanitary dairy when the filthy milk of a shiftless neighbor is mixed with his at the station? Can you name one price fair and profitable to both?

Progressive farmers have been working for a co-operative law. What will they do with it after they get it? There are enough scrub farmers in the United States to kill any co-operative effort the better men may try to launch. Progressive men wear themselves out trying to show no-account farmers where they will be benefitted. With what avail? Parasitic farmers make more off and out of such associations than the members who do the work and suffer the hardships. Some inducement to continue, is it not? Every loyal member of a co-operative association is a philanthropist, and there are some of us among this group that think we are fools. We are likely to grow pessimistic when we think upon these facts and conditions.

Besides having to contend with outside disturbances we have our inside troubles. We have to convince, educate, or convert our own "bunch" as well as the ones we seem to think in opposition to us or our best interests. This agricultural development is first a case of education; and the ones most needful of it are the hardest ones to get. The farm bureaus have not reached this class. Time after time have we held meetings, even down to the school-district plan, and the ones who most needed the meeting were not present. Farmers' institutes do not get these fellows. The only thing that will ever get under their

(Continued on page 820)

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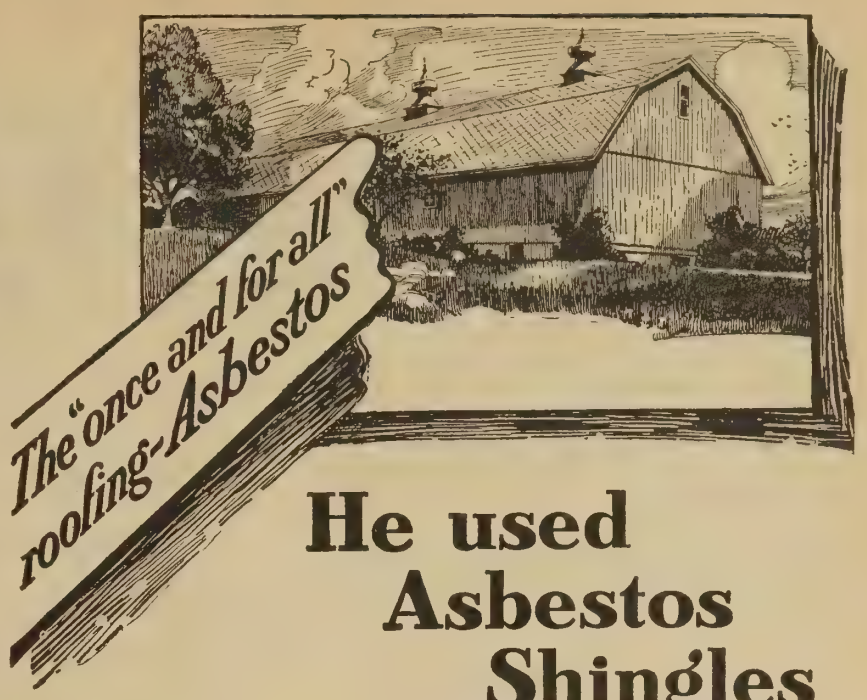
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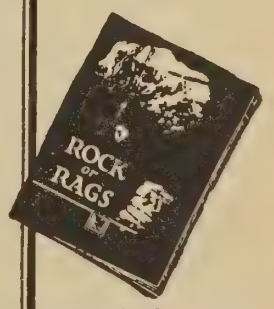
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EDITORIAL COMMENT



A PERSON who thinks that no other business than farming experiences losses or sells its commodities below the cost of production is mistaken. If all other business enterprises made a profit all the time, there would be no failures. However, there are hundreds of failures each year among merchants and manufacturers. It is a common trait of men to feel that they are engaged in the only industry that is experiencing hardships and that the work of others is easier, more inviting and yields greater profit.

MINNESOTA'S DAIRY PRODUCTS

It has been estimated by Chris. Heen, Dairy and Food Commissioner of Minnesota, that the increased production of dairy products in his state for the year 1920 will amount to $22,000,000. Minnesota's income from dairy products in 1919 amounted to $133,708,555 and it is anticipated that this year it will be $155,000,000. The big gain has come through the increased production of butter. Minnesota is the leading butter producing state in the Union and in 1919 her butter brought $80,875,676. The total value of cheese was but $2,909,655. She produced a good quality of butter but it has been estimated that owing to poor quality of butter one county last year lost $22,000 and another county over $100,000. Farmers who desire to get the most out of their milk should appreciate that quality plays a big part in getting the best market price. The buttermaker must have a good quality of milk and cream if he is to turn out a grade of butter that will sell at the best price.

We presume every county in Minnesota last year lost money because of the low quality of butter produced, but so far as we know attempt was made in only two counties to estimate the loss. What a fuss these patrons would have made if they had been cheated out of this amount of money through failure to pay for some of their butter or by some other scheme! A loss inflicted upon themselves never seems so bad, especially when it is by the indirect route.

THE CONTAGION WAS BURIED

"The heifer is disposed of and the contagion buried."

Such was a part of the comment we made six months ago concerning the first reactor found in the Hoard's Dairyman herd in twenty years of testing for tuberculosis. Many of our friends were concerned over this and they were led to question whether tuberculin testing was desirable, therefore the sequel to this is now presented.

Last week our herd was retested, including every animal from littlest calf to matronly cow. To make doubly certain, the three tests were applied—the opthalmic, the intradermal, and the subcutaneous. The result was no surprise, but it is most satisfactory to know that no reactor was found and the herd is now back on the accredited list.

We give these results, personal as they are, in order to emphasize again the value of continuous and regular testing for tuberculosis. We had good reason to feel safe years ago, for the only animals introduced into the herd were tuberculin tested bulls from tuberculosis free herds. We had tested long enough to feel certain we had none of this insidious disease in our herd, yet year after year we continued to test against the chance infection that might come in unaware and without notice. Last May the test showed that tuberculosis had gained admittance, how, we do not know—possibly with purchased feed, possibly it was brought by a tramp dog, possibly by some chance visitor, or in any one of many other undiscoverable ways.

But, continuous testing year after year discovered tuberculosis before it had opportunity to spread, and the contagion was buried at once. What might have happened if we had not tested we do not like to think. Instead of the one heifer, we might have lost several, and the herd that has been built up through trial and tribulation might have been wrecked. The annual test has not cost much, but failure to test might well have cost us thousands of dollars and in addition might have wiped out a life-time endeavor to improve quality in our herd.

All these things are so personal that it was with hesitation that we made the first announcement and that we now recount the sequel. What has been said is offered to the readers of Hoard's Dairyman that they may profit by our experience. Tuberculosis is insidious and it is costly. Only by eternal vigilance will its ravages be reduced to the minimum. Our best weapons are the tuberculin test, the accredited herd plan, good light and ventilation, and sincerity in care and attention to health standards.

MARKETING FARM PRODUCTS

Complaining of conditions and of bad practices in the selling of agricultural products and of the wrong methods of arriving at the prices of farm products does not lead to their solution. Enough has been said to show the necessity of farmers having a larger part in the marketing of their products and arriving at their prices.

It is no small task for the farmer to provide storage and secure credit so that his products will not have to be marketed at the time of their harvest. It requires a business organization in the hands of capable men if the farmer expects to establish the practice of placing his products on the market as they are needed for consumption.

In many dairy sections there is opportunity to establish a cheese federation so that fifty, one hundred, or more cheese factories can unite and build a large storage where the cheese can be cured under proper conditions and marketed direct to the wholesalers and retailers of cheese. The creameries have an opportunity to federate for the purpose of standardizing their butter and marketing it under a brand. In sections where market milk is largely produced there is opportunity to develop cheese factories for the making of special kinds of cheese, like Roquefort and Swiss, and to manufacture various products from whey and skimmilk. There is opportunity to turn a considerable amount of the so-called market milk into a high grade of butter and sell it at a special price. It would not be expecting too much to get, at least, 10c more than the highest quotations for the best quality of butter now produced. We were recently advised of a large creamery company whose entire production of butter is selling for 10c a pound more than some of the large creameries are receiving. Then there is also the opportunity of building storage for the various kinds of farm products; this will place the farmer in position to market everything he produces when it will pay him the most money. But this will require organization on his part. It would not be necessary that all farm products are sold co-operatively, but the farmer will never be satisfied with our present system of marketing unless he places himself in position to sell his products to the best advantage and knows what they are worth in the market.

PRICES OF FARM PRODUCTS DECLINE

For some time there has been concerted action to reduce the prices of all commodities, and it would seem that the drive has been especially aimed at farm products. At any rate, they have declined faster than other commodities. We do not see the logic of those engaged in this endeavor, for we have not an over-supply of farm products. We are comfortably well supplied with the necessities of life, and it is highly desirable that our food supply be maintained. The farmers have worked hard to produce the present crop and our larders are again well supplied. To attempt to drive down the prices of farm products is to lessen production in the future and we fear this is not desirable. Strange as it may seem, it was only last spring that many of the leading men of our country thought famine was ahead of us. The prices of farm products were sufficiently high to stimulate the farmer doing his best and he did. Now we have an adequate supply of farm products. It is not wise for our future nor just to those who have put forth the effort to get this supply to attempt to so reduce prices that they will not return the cost of production.

Last spring the farmers planted potatoes, and the seed was worth $5.00 a bushel. It required about 12 bushels of seed per acre, so the seed cost amounted to $60. The present price of potatoes is about 75c a bushel. No farmer can afford, with the present price of land and labor and with seed costing $5 a bushel, to plant potatoes and risk getting a crop when they only return him 75c a bushel. The consumer should understand this. The next year's acreage of potatoes is not likely to be so large and the prices may be far too high, which is also bad. It is unfortunate that the prices of farm products cannot be stabilized, for we believe it would be an advantage to both the producer and the consumer. We must be ready to abide by the law of supply and demand. It is the most satisfactory way of regulating prices, but we do object when there is concerted action upon the part of the government or men to drive down the prices as it jeopardizes the future supply of our food and causes heavy losses to the producer.

THE PRICE OF MILK

"The Price of Milk" is the title of a new book by Professor Clyde L. King, who has gained an enviable reputation among both producers and consumers as arbitrator of milk prices in Philadelphia. It has already established its place beside "Feeds and Feeding", "Dairy Cattle and Milk Production", and the few other books that are a constant source of help for the seeker after reliable information on dairy questions. The discussion of the subject is sane and reasonable. The author has gathered together much of the investigational work that has been done, discusses it in an intelligent manner, and makes a direct and concrete application that will be of immediate and direct service to producers, distributors, and consumers of milk everywhere.

Robert W. Balderston, the efficient secretary of the Interstate (Philadelphia) Milk Producers' Association, says: "As a milk producer myself and secretary of an organization of milk producers I want to commend this volume to all milk producers everywhere as a book that will help them in making the decisions they must make in marketing their milk." We also commend this new volume to every person interested in the milk problem. It discusses the economics underlying and affecting the price of milk, as also the costs of production, distribution, and manufacture. It is an unusual book in that it discusses a technical subject thoroughly and in such manner as to be valuable to the student, but at the same time the data is so well selected and so clearly presented that the lay reader can not only understand but his interest and attention is immediately aroused. The book is both reliable and readable.

If producers are to protect themselves in the markets and understand their problems so they can apply the right principles of marketing, they must know why the general public is interested in milk, what forces fix prices and their relationship, what are the various systems of arriving at costs of production and distribution, and the different forms of producer-marketing organizations. These subjects are discussed in "The Price of Milk", as well as other related subjects, such as the value of milk in the diet, collective bargaining, dairy statistics, fair price policies, etc.

Germinating Hard Seed

Referring to the article by A. L. Stone in your issue of July 30, "Hard Seeds in Legumes", permit me to suggest that here on Cherokee Farms we find that clover and other leguminous seeds that are gathered after they are all thoroughly ripe are practically all hard, but gathered when the seed pods are still partly green nearly all are soft and will germinate quickly. We have also found that by sowing hard Bur clover seed in June or July it will make a good stand in November, but if not sown until September or October it frequently fails to germinate at all.

We also find that beggar-weed seed does not germinate until it has laid in the ground at least a year. Because of this long period of germination of beggar-weed seed we sow it every year at the last cultivation of the corn and when the corn is off we turn the seed and stubble under. By plowing again in the spring at about the same depth or a little more the beggar-weed seed germinates and makes a fine crop of hay after the corn is laid by. About every third year we turn the whole crop of beggar-weed seed under so that by this simple rotation we are able to raise corn every year on the same land.

Would it be possible to sow alfalfa and red clover late in the fall and plow it under and by plowing again at a little greater depth in the spring bring the seed to the surface and get a good stand?

Monticello, Fla. C. F. L.

This question may be answered in the affirmative provided the process is properly carried out. This must be taken into consideration, however, that in plowing this seed under it will be distributed at various depths in the furrow, some of it being thrown to the bottom of the furrow, a portion of it on the surface or very close to it, and another portion at varying depths between the bottom of the furrow and the surface of the soil. This means that when the field is plowed there will be at least a portion of the seed buried so deeply that it cannot reach the surface. In order to obtain a good stand by this process it would probably be necessary to use considerably more seed than if it were sown under normal conditions. Except for the fact that the seed would be moistened to some extent and perhaps be in better condition to start a rapid growth in the spring there would seem to be no particular advantage in this program. Under conditions where the temperature is high and the moisture sufficient it would probably be fully as satisfactory to seed the clover and alfalfa in the spring. The only argument for the proposed method would be a possible improvement of the soil condition by the double plowing.

Wis. College of Agriculture. A. L. STONE.

Ration With Alfalfa—Silo For Four Cows

In figuring dairy rations nowadays I suppose the Wolff-Lehman standards are almost completely ignored. Would you say that the Haecker standard is a reliable guide at present or would you suggest working with some other standard mentioned in "Feeds and Feeding"? Alfalfa hay is the only feed I have and no silo. Could you suggest a grain ration for these cows without any silage or beet pulp or mangels?

I have only 15 acres with a small pond at one end. Do you think this would keep 4 cows if I put up a small silo?

I have just put a cement floor in the barn. Would you suggest covering the cow stalls with boards or would it be safe without?

Waukesha, Wis. H. F. S.

In our own computation of dairy rations, we use the Haecker standard and have found it very satisfactory. The old Wolff-Lehman standards are not now in use, but the modification of this standard as suggested by the authors of "Feeds and Feeding", is very satisfactory in computing rations. There are others who use the Armsby energy standard which they consider somewhat superior. This latter method, however, is used more largely in the East.

There are various combinations of grain which will go very well with alfalfa hay as the sole roughage. Among these we list the following:

400 lbs. corn meal, 100 lbs. cottonseed meal, 100 lbs. gluten feed, and 100 lbs. wheat bran.

400 lbs. corn meal, 200 lbs. gluten feed, 200 lbs. old process linseed meal, 100 lbs. ground oats.

300 lbs. corn and cob meal, 200 lbs. gluten feed, 100 lbs. cottonseed meal, and 100 lbs. wheat bran.

100 lbs. corn meal, 100 lbs. old process linseed meal, 100 lbs. ground oats.

Cows will not eat ordinarily to exceed 30 lbs. of alfalfa hay when this is the sole feed which they secure. This method of feeding is followed to a considerable extent in California where alfalfa is relatively cheap in price and in very large supply. Dairymen in the Middlewest states find it more profitable to supplement alfalfa hay with grain and reduce the quantity of alfalfa. It is said that where alfalfa costs more than 40 per cent of the average cost of a grain mixture, it is not profitable to make it the exclusive feed. We would not feed to exceed 10 to 15 lbs. of alfalfa, supplementing this with one of the grain mixtures mentioned at the rate of, say, 4 lbs. of grain per day to cows producing less than 20 lbs. of milk and increasing the grain fed by one pound for each 3½ to 4 lbs. of milk produced over 20 lbs. This amount of feed should be varied according to the use which the cow is making of it. If she tends to become overly fat and fails to increase in milk flow consistently, then we would cut down the amount of grain, and vice-versa.

We do not advise the erection of a silo for herds of less than 10 animals. This is because of the difficulty of removing enough silage each day to keep the silage from excessive spoilage. It would be more profitable to raise rutabagas or mangles as the succulent feed. This entails somewhat more labor but we believe in the long run it will prove more profitable. The fifteen acres should easily support four cows and their young stock.

While it is preferable to cover the cement platform upon which the cows stand, yet this is not at all necessary and is not done by the majority of farmers. The best covering is either cork brick or creosoted wood block, but there is no reason why planks may not prove fairly satisfactory.

Small Pits for Storing Root Crops

HOARD'S DAIRYMAN:—There is more occasion this fall for the construction of root pits to help out in taking care of surplus crops raised this year than in several years past. If the pit is constructed and taken care of right, there need be no fear of the danger of the crop freezing or rotting. Likewise there is no evident depreciation in quality. We have seen, in several cases where pits have been opened during March and April, the crops stored therein were as fresh and as sweet as on the day when the crop was put in.

The size of the pit, of course, depends on the quantity of crop to be stored. One can best judge the size of pit by the heap of the crop to be "pitted". A pit to store 60 bushels of potatoes or roots can be made in the following manner: Measure off, preferably, a circle of five feet in diameter and excavate five feet, leaving the bottom flat. Place a layer of dry straw about six inches deep at the bottom. Then fill with potatoes or roots up to within a foot of the top.

Next, cover the top with about ten inches of dry straw well packed. Place inch board cover over this leaving air space from one to two inches. The cover to rest on supports close in to the wall of the pit. It is best to have air space between the crop and the board cover. Quite frequently no allowance is made for air space in pits. Cover with dirt to about two feet deep overlapping about two feet outside of the pit and round up at center to conical shaped body. As the days lengthen and the cold weather strengthens, gradually heap up a little more dirt until about three feet depth is reached. Always select a high, well drained spot, easily accessible to the home.

In April or May when the pit is opened, the crop appears fresh and as vigorous as when "pitted" in the fall. There is little or no loss in moisture. It is stored under even temperature practically and the intermittent freezes and thaws in no way affect the contents of the pit. A pit requires no particular skill in planning it. It requires no outlay of money for materials and construction. It is the best thing to save potatoes or root crops, where no better means for storage are available.

Wisconsin. J. F. WOJTA.

Registering Grades—Inbreeding

Can a grade cow be bred to a registered bull and her calf be bred to the same kind of a bull and so on for enough crosses to make the resulting cross entitled to registration? What is the general opinion among good breeders of the practice of inbreeding? How far is it safe to follow?

Red Lake, N. M. R. B. S.

In order to be eligible to registry an animal must have both parents already entered in the registry books of the particular breed to which it belongs. The offspring of a grade cow mated to a pure-bred and registered bull can never be registered in any of our dairy breed associations, no matter how many crosses of pure-bred sires are used. After a certain number of crosses the Shorthorn herd book of England will admit animals after examination. In America, however, this is not accepted.

Inbreeding is one of the most efficient measures of improving dairy stock, but in like manner it is a most dangerous thing to be handled by the average breeder who is not fully informed. Inbreeding not only emphasizes the good qualities of the animals mated but it will in like measure emphasize the weaknesses and the bad qualities of these animals. There is also danger of producing less vigorous offspring unless care is exercised.

There is some less danger of inbreeding where a pure-bred bull is used upon grade cattle, for there is less likelihood of the same blood strains predominating. We would hesitate to advise even this except in the case where the sire has proven himself potent in passing on dairy qualities to his offspring and is himself an excellent individual. In these cases, we would not hesitate to breed a daughter to her sire or to a half brother, or other close relation. As a choice between a nearly related sire of good quality and an unrelated sire of inferior quality, we would choose the former.

Sorghum Fodder for Cows

I have been told by some milk men here that sorghum fodder with the seed on will dry up milk cows. As I have sorghum that has about four bushels of seed to the ton, will you tell me if it is safe to feed?

Meno, Okla. A. B. M.

Sorghum fodder with the seed on will make a good feed for cows and we know of no reason why it should cause them to dry up. It is more than likely that the drying up of the cows is due to insufficient feeding rather than to the sorghum seed itself. If not fed with legume hay and a good grain mixture, we would expect sorghum fodder to dry up cows. This is not because eating the seed dries up the cows, but merely because the cows are not getting enough milk making feed.

If this fodder is properly supplemented with good legume hay and a sufficient grain allowance, there is no reason why the cows should not do very well. It is understood, of course, that sorghum fodder, like corn fodder, is not the best feed for dairy cattle. It does not provide the succulence in the ration as does silage and we would not expect quite as good results from its feeding as from feeding silage.

The sorghum seed itself is very hard and somewhat indigestible unless ground. Indeed, grinding nearly doubles the value of this seed as feed, and when ground it is considered to have four-fifths the value of ground corn.

Relative Production of Heifers and Cows

When one is breeding up Holstein grade cows for production with 8,000 lbs. per year as the minimum below which no mature cows are to be kept, what would you consider the minimum yearly production for heifers freshening first time at from 24 to 30 months?

Morrisville, N. Y. A. L. B.

It is generally estimated that a two-year-old heifer will produce during her first period of lactation about 70 per cent of her mature production. As a three-year-old her production will be 80 per cent of her mature record and at four years, 90 per cent. These figures, of course, are merely averages and may not apply to individuals. There is also the consideration that must always be taken into account as to whether the first record made was made under fairly satisfactory conditions. We would hesitate to eliminate a heifer of good breeding and fair promise upon the basis of just one year's performance.

Johnson Grass for Illinois

Is Johnson grass good pasture? Will stock do well on it and do they like it? Will it stand Illinois freezing and frequent overflows?

Fairfield, Ill. T. J. H.

Johnson grass is not thought to be a very good pasture grass even in the South where it flourishes. It is more often made into hay and is considered a fair hay crop and fairly satisfactory as a dry roughage for cows. We question whether it would be suitable to conditions existing in Illinois, as it is essentially a southern plant. In the South, it is one of the most persistent weeds they have in their cotton fields. We have not heard of its adaptation to northern or semi-northern conditions.



What Does Your Feed Cost Per COW?





What does it cost you to feed your cows? It depends entirely on **how** and **what** you feed them. The only way you can figure feed costs is to deduct the cost of feed from the value of milk production.

If you feed your cows sparingly and try to economize on feed, your feed costs will be high because the first use made of the feed your cows consume goes to provide bodily maintenance and leaves little for milk production.

But if you feed the **right kind** of feed liberally—give your cows sufficient to provide them with both bodily maintenance and milk producing nutrients, your feed cost will be low. That's why

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fed according to the Schumacher Feeding Plan have become so universally popular with dairymen and farmers everywhere.

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This combination fed liberally **reduces feeding costs** because it **increases health condition and milk** production. You can prove it to your own satisfaction and profit by making a test with any cow. The results will be gratifying and make you a strong advocate of the Schumacher Feeding Plan—the plan that costs less because it produces more. Ask your feed dealer



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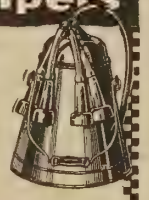
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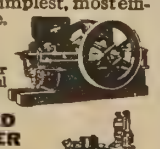
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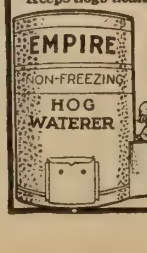


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Practical Community Dairy Work in Arkansas

The schools of vocational agriculture in Arkansas are preaching the doctrine of "Better farm practice, better farm business, and better farm living." This, of course, means more dairying, better dairy cows, and better dairy practice. W. L. Hall, agricultural instructor at Rogers, Ark., has not only been preaching the above doctrine, but he is able to report a number of converts to the faith.

Something over a year ago Mr. Hall was employed to teach vocational agriculture in the Rogers school and, according to the Arkansas plan, he made a thorough community survey and from this survey formulated a problem to be solved by the adult farmers in a part-time and evening school. The problem that Mr. Hall proposed and which he offered to assist in solving was the improvement of the dairy herds in and around Rogers. This section of Arkansas is known far and wide as one of the choice fruit sections of the United States. Much attention has been given to this phase of farming and the farmers are well versed in pruning, spraying, and marketing of fruit, but they had neglected, in their zeal for apple culture, another industry that in Mr. Hall's judgment would be equally as profitable and that would fit in most admirably with fruit growing. Community meetings were held. The advantages of dairying for Northwest Arkansas were explained. Dairy specialists from the agricultural extension department of the University gave their testimony and advice with the result that a cow testing association and a co-operative sire club were organized. To make this co-operative association the most effective possible, Mr. Hall spent a part of the past summer in the state of Wisconsin studying the methods of the cow testing associations in that state, and from the knowledge gained there he formulated a workable plan for his community. This plan contemplates the keeping of dairy records the same as any cow testing association makes keep, but instead of a regular cow tester employed by the farmers, the tests will be made and the records kept by Mr. Hall and his students in vocational agriculture. This work in testing the cows and keeping the records by the students will receive credit in the regular agricultural course in the Rogers school, and the regular meeting of the association will constitute an evening school for adult farmers. Along with the cow testing association the farmers are studying the marketing problem and a movement is under way for a co-operative marketing association that will save money to the farmers in both the purchase of concentrates and dairy supplies and the selling of the cream.

"It is the duty of the agricultural teacher, as I see it," said Mr. Hall, "to make a thorough study of his community, discover the agricultural needs, then, through co-operation with the farmers and all other available agencies, to satisfy this need." Mr. Hall is doing this in the Rogers community.

Arkansas. E. B. MATTHEW.



THESE PURE-BRED JERSEYS ARE PROVING THEIR WORTH TO THE MEMBERS OF THE COW TESTING ASSOCIATION OF ROGERS, ARK.

The Milking Machine Operator

HOARD'S DAIRYMAN:—One of our largest dairy farmers observed the other day that as soon as labor becomes available on the farm there will be milking machines of the second hand variety for sale at any old price. This farmer has been having some trouble with his machine, as one would expect from the remark. It rather looks as though a half or more than half of the owners of milkers might say, "that's so", when they hear that remark, yet a fair proportion of those who say it would keep the machines.

When you come to study this machine question it comes down to the point of the operator. It is about as necessary for the farmer to take charge of the machine as it is for him to do most of the milking when that is done by hand. Even then there is a good big difference in men. Some farmers of the best type are not particularly good at handling machinery. Indeed, it seldom happens that a man excels in all lines and possibly the greater talent he displays in some one line the less we may expect in some others. True, the farmer is an all round man, but superiority in all lines is not to be expected.

The hired man of today is, commonly speaking, inferior to the one of ten years ago. There are some good ones and a few who will handle the milker as well as the employer, but these are not the rule. If I were a milker manufacturer I would wish my machines placed with a farmer who would operate his own outfit. Even then it would fall into the hands of an inefficient operator now and then.

We have found that two double units are about as many as one man can use with real profit. In a twenty cow dairy one can be used with real advantage, but after a somewhat extended experience we believe that two such units fill the bill better, even with sixteen cows.

Then you want to know your cows. There is more difference in cows than in machines and just as much as in men. Some cows are nervous and fidgety and can't help it. Some milk hard and some easy. Some are uneven, many have quarters that need set-

cial attention. All this is up to the operator. Not every Tom, Dick, and Harry can handle the situation.

New York. H. H. LYON.

Are Concrete Stave Silos Durable?

HOARD'S DAIRYMAN:—The proverbial "lightning against black-gum" has found a more modern equivalent in the substitution of "concrete silo" for the obdurate tree. Here is a photograph of two of a battery of four 110-ton concrete stave silos on the Cox-



LIGHTNING STRUCK THESE CONCRETE STAVE SILOS

Alexander plantation, near Pine Bluff, Arkansas. Do they look as though lightnin' had struck 'em?

They don't.

Three years ago a bolt of lightning made a drastic test of their stamina by striking them both fairly and squarely. Some chunks of concrete were knocked from each, most of the damage being done about the door openings.

No trace of cracks can be found in either silo, and Mr. Cox, who repaired the damage, had great difficulty in pointing out the scars. Less than one sack of cement was used in making needed repairs.

Arkansas. DAVID THIBAULT.

Talking in Cow Stable

HOARD'S DAIRYMAN:—"Should the milkers talk in the stable while the herd is being milked?" That is one of the questions I have heard asked rather often as I've been making my rounds as an official tester. I have been in barns where 40 cows stood and not a word was said above a whisper during the milking time. And I've been in dozens of them where the milkers and feeders sang and whistled just as they pleased. I've also been in the stables where the workers talked quietly to each other and to the cows.

As to the effect—and that is what governed all of them—I can see no difference particularly but it looks to me as though anything is the right plan that is not strange to the cows. Entire quiet is not natural. While outside the men talk to each other and laugh and whistle. In the barn they are absolutely quiet. What does the cow think?—if she thinks. If she is inclined to be a bit nervous I believe she will have her ears all set for something to turn up unexpectedly. If it does not, all is fairly well except that she is on edge—nervously—and can't do her very best in the pail.

On the other hand, I think it is an extreme just as bad to have a barn filled with shouting and swearing at milking time. This strikes a nervous cow just as hard as the extreme quiet, I believe. I've been in such barns sometimes and very good cows have been there with very satisfactory records but yet I always felt that they could have been better.

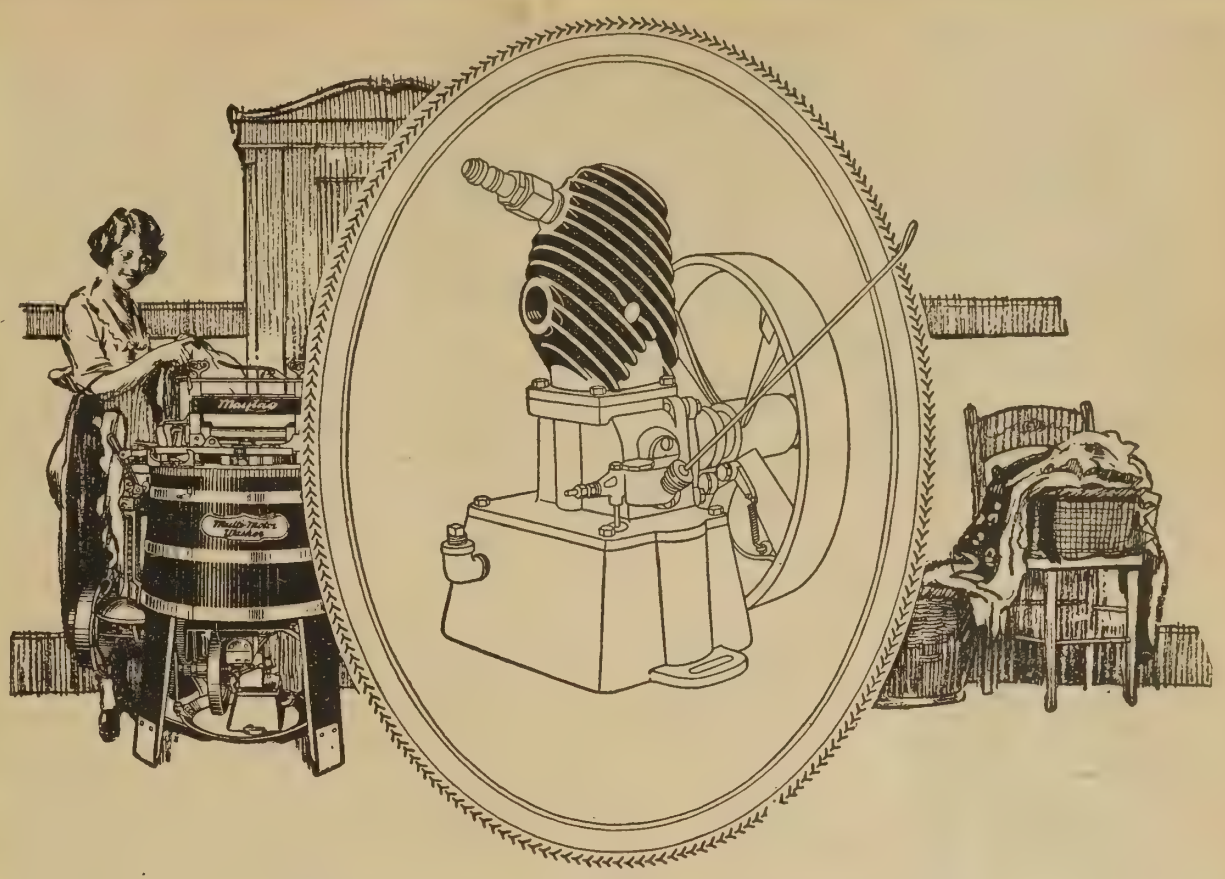
One of the things that I don't like to see and I know the cows object to, is the presence of small children with wagons, tricycles, or other playthings in the barn. It is annoying to the milkers and also to the cows. The noise made by the youngsters and their playthings is unexpected and at times startles a cow until there can be nothing less than an effect on her milk production. Large dogs can and do have the same effect on the nervous cow. If these things have to be tolerated let them be at some other time than milking time.

The ideal condition at the barn during milking, it seems to me, is a natural noise caused by talking by the men and talking to the cows. A milker surely doesn't lose anything at the pail if he speaks a word or two to the cow he is milking. No matter what he says, even if no more than her name, but say something. The chances are that the cow will see the milker when he approaches but she might not and in that case there is a little startled feeling that does more or less harm. Surely, our cows are not so touchy, however, that one milker may not talk to another in a normal tone of voice without causing any injury to the production.

Everything about the barn and everything in the usual order has always seemed to me to get the best results. Some herdsmen are so particular that they have a certain time to milk a cow. If they were at the barn two minutes before time they would stand idle for two minutes before starting to milk. Regular milking hours are expected by the cow and she appreciates them seemingly. Yet, two minutes for a cow's clock is getting it down rather fine. I believe it is far more important to not vary the order of milking than not to vary the time a few minutes. Cows notice that readily and will be upset nervously if their turn is missed. I have seen this done as a test and there is every evidence that the missed cow knows there is something wrong. She sometimes will partly leave her feeding and wait for the milker to get at her when he should.

Ohio. EARL ROGERS.

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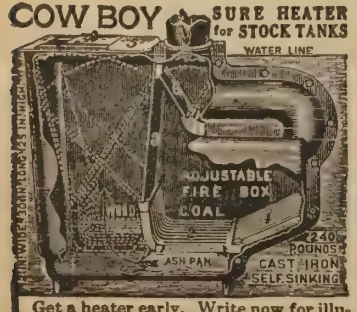
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Heredity and Prodnction

(Continued from first page.)

ed will not nick well, and consequently good results will not be secured.

"Such terms as 'blood harmonizing', 'cold blood', 'warm blood', and so on, are terms that are commonly used in connection with the term 'nick', giving the impression that the inheritable characters are carried in the blood. Such is not the case.

"When two animals are mated and good offspring are secured, it is said that these two animals, or the families they represent, 'nick' well. If the result of the mating is undesirable, the animals do not 'nick' well. We frequently see the statement that the bulls of a certain line of breeding have been found to nick well with all families, or with certain families. The real question which underlies nicking, as I understand it, is this: Are the factors governing milk and butterfat production that enable Fauvic's Prince to sire daughters with great producing ability, the same factors or combination of factors that enable Golden Glow's Chief to sire great producing daughters?

"It has been demonstrated that one pair of Guinea pigs of certain colors may be mated and get offspring of a certain color. Another pair of Guinea pigs, of different colors than the first pair, may be mated and get offspring of the same color as the offspring of the first pair. The color factors in the first pair were undoutedly different from the color factors in the second pair, but the result of the combination of these different sets of factors is the same. If the combination of factors governing production that makes one bull a sire of great producing cows is different from the factors that make another bull a sire of great producing cows, then it is not difficult to conceive of failure resulting from the mating of the first sire with the second sire's daughters. If the factors that enable one bull to be a great sire of dairy production are entirely different from the factors that enable the second bull to be a great sire, and the two sets of factors are brought together, the reaction of the two sets may result unfavorably and therefore the animals may not nick. If, however, the factors that enable one bull to be a great sire of producing ability daughters are the same as those which enable any great sire to be such, then any great sire may be mated with the daughters of another great sire of the same breed, with the expectation of securing good results.

"Let us suppose that those two great Jersey sires, Fauvic's Prince and Golden Glow's Chief, have equally great ability as sires of production and type, but are unrelated. The question is, will an animal of the following breeding:

No. 1. { Fauvic's Prince / (Dam) / Fauvic's Prince }

be likely to have greater ability as a sire than an animal of the following breeding:

No. 2. { Fauvic's Prince / (Dam) / Golden Glow's Chief }

"Aside from the questions of the effect of inbreeding on constitutional vigor and fertility, no reason is known why the animal of No. 2 breeding should not be as desirable as the animal of No. 1 breeding, unless it be that the factors which cause Fauvic's Prince to be a sire of great producing animals are different from the factors that enable Golden Glow's Chief to be a sire of great producing animals. If the breeding ability of Golden Glow's

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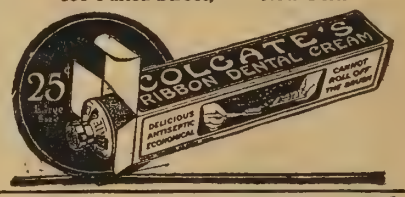
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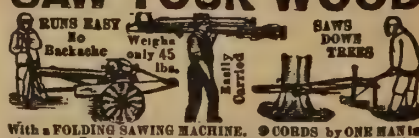


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Chief was unknown, then the animal of No. 1 breeding would be preferable, because we know that Fauvic's Prince is a great breeding sire, and his second appearance in the pedigree as sire of the dam eliminates the possibility of some undesirable breeding animal appearing there and representing 25 per cent of No. 1's ancestry.

"If the factors that enable these two bulls to be sires of great producing animals are different, it is very important that we should know to what degree of relationship they are different—or, let us say, how distantly related the animals that are mated may be, and still have like factors relative to producing ability.

"If the factors that enable these two bulls to be sires of great production are the same, then it is a question of mating animals within a breed, all of whose sires and dams for three or four generations have proved by their breeding records that they have the combination of factors that enable them to be great producers and transmitters of production, and also the factors that enable them to have and to transmit desirable type. When we mate animals with ancestry that comes up to these requireback to sires of the same kind of breeding, we will be securing animals which will not revert back to low production and undesirable type, and we will secure a large percentage of sires who will be prepotent in impressing these desirable characters on their offspring, even though the dams they are mated with are not so well bred.

"The question of whether or not the factors that enable one bull to be a great sire are the same as those that enable another bull of the same breed to be a great sire, is an extremely important one. We hope that our researches of dairy cattle breeding problems will throw some light on this point.

"I believe that the man who will make the greatest progress in breeding dairy cattle is the man who has complete knowledge of the ability of the ancestry of the animals he is working with to transmit great production and to transmit desirable type, and who will mate only such animals as have ancestry that comes up to these requirements—or if he can not mate animals, both of which have proven ancestry, he will use for generation after generation only such sires as have proved by their breeding records that they have the combination of factors that will enable them to transmit high production and also desirable type."

The more farm products sold near home the less demands on an overburdened transportation system.

The "Meierei"

(Continued from page 788)

ford to pay for comfort, courting discomfort.

Those Tinkling Bells

Half the pleasure in being at the meierei is centered in the surroundings. Instead of a small orchestra, which would be entirely out of place, appropriate music is provided by the tinkling bells of the animals which browse contentedly in the neighboring meadows. The picturesque whitewashed, slate-roofed building is more or less surrounded by thick woods, where Hansel and Gretel might have lost themselves, and which are full of ever-changing light and shade. The fields surrounding the meierei are gay with all the wonderful flowers which flourish six thousand feet above the sea-level, and the intense blue of the lake, a blue which sometimes turns to an unforgettable green, reflects the Alpine glow. Nearby are the mountains, eternally snow-capped, and towering in lordly magnificence.

From time to time you may hear a merry peasant yodelling his way home. The yodeller, however, does not cultivate this strange art with the zest of former days. Some yodellers, in fact, are so lost to all sense of the fitness of things that they prefer the mouth-organ to the yodel. That they should be allowed near the meierei is a blot upon Switzerland's escutcheon.

Creamery Bookkeeping

The Bureau of Markets has just issued Bulletin No. 865, entitled "A Classification of Ledger Accounts for Creameries."

This publication sets forth the ledger accounts which should be kept by the average creamery and describes in detail the manner in which each account should be kept. It also explains a number of the business and accounting practices incident to creamery operation, concerning which there now exists considerable confusion and misunderstanding.

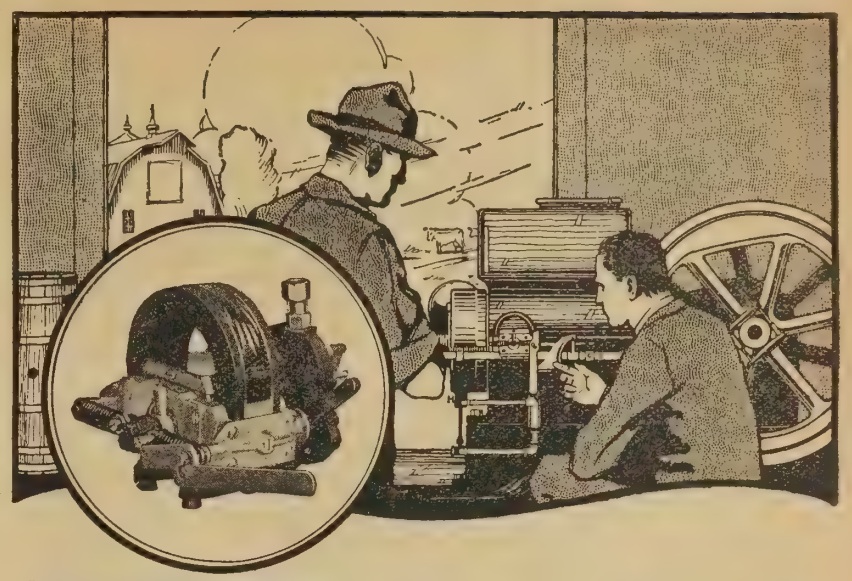
The bulletin is arranged to serve as a handbook for the creamery bookkeeper or manager, and will be a valuable guide in assisting him correctly to open and to keep an adequate set of books. It will be especially valuable as a guide in closing the books and preparing the Income and Expense Statement and Balance Sheet, forms of each being shown in the bulletin.

Bulletin No. 865 will be sent free on request to the Bureau of Markets, Washington, D. C.



MONOBELLE, A SEVEN-YEAR-OLD GUERNSEY OWNED BY F. L. HOWES OF MASSACHUSETTS

She has recently completed a splendid official record of 16,724.5 pounds milk, 847.64 pounds fat. This production exceeds her requirements for entering the Advanced Register by 135 per cent. She has a previous record completed in Class B of 11,209.6 pounds milk, 546.61 pounds fat. She was bred by Joseph A. Blake, Connecticut, and dropped June 3, 1912. Her sire is Bell-founder, a bull whose daughters have been making outstanding records in Falcon's Flight Herd, Connecticut.



WEBSTER MAGNETO *Service is Not a Repair Service*

A *Webster* Magneto seldom needs repairs. But, like many other well-built products, it renders fault-free service only in proportion to the way it is handled.

Therefore, *Webster* service is primarily an educational service—*not a repair service.* The industry of 46 *Webster* service stations and a corps of *Webster* service men is constantly and solely devoted to this three-fold purpose:

—confirming to the manufacturer, by actual performance, the claim that Webster interest in Webster Magnetos never ceases:

—demonstrating to the farm engine dealer the value of the Webster Magneto as a selling asset:

—helping users of Webster-equipped engines to get the highest possible ignition efficiency from their engines.

The 600,000 *Webster* Magnetos now in daily use and the fact that they are now supplied as standard equipment by 85% of the manufacturers of farm engines using make-and-break ignition, proves beyond all doubt the correctness of *Webster* theory and the thoroughness of *Webster* construction.

When you buy your next farm engine *insist* that it be *Webster*-equipped for no other ignition will serve you as dependably or as long.

WEBSTER ELECTRIC COMPANY
RACINE, WISCONSIN. U. S. A.



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This is the original and only Kant-Kom-Off blanket endorsed and used by the most successful live stock breeders. It brings your animals into the show or sales ring in glossy condition. That means more prize ribbons and higher bids. Has no equal as a protection against flies. Milch cows give more milk, stock thrives better when thus protected. An investment that will pay dividends to you.

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The only blanket with hip strap support of leg stay. Cannot lose off or be kicked off. Stays on day and night. Made of best and most durable material and will give you excellent satisfaction. We also manufacture stack and hay cock covers. *Write today for circular and prices.*

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CONTENTS

Heredity and Production - - - 785
A Kansas Dairy Show - - - - 786
The Dairy Optimist - - - 786
If - - - - - - - - 786
The Tie That Binds Producers Together 787
The "Meierei" - - - - - - - 788
A Dairy Cattle Show in Scotland - - 788
From Forest Shades to Holstein Pastures 789
Oiling Harness - - - - - - 789
Cow Testing Associations - - - - 790
A Connecticut Yearly Report - - - 791
Jersey Cattle Notes - - - - 791
Western Royal Live Stock Show - - 792
Worthless Farmers - - - - - 793
Minnesota's Dairy Products - - - 794
The Contagion was Buried - - - 794
Marketing Farm Products - - - 794
Prices of Farm Products Decline - - 794
The Price of Milk - - - - - 794
Germinating Hard Seed - - - - - 795
Ration with Alfalfa—Silo for Four Cows - 795
Small Pits for Storing Root Crops - - 795
Registering Grades—Inbreeding - - - 795
Sorghum Fodder for Cows - - - 795
Relative Production of Heifers and Cows 795
Johnson Grass for Illinois - - - - 795
Practical Community Dairy Work in Kansas - - - - - - - - - 796
The Milking Machine Operator - - 796
Are Concrete Stave Silos Durable? - - 797
Talking in Cow Stable - - - - 797
Creamery Bookkeeping - - - - - 799
New York Butter Market - - - 800
Current Feed and Hay Prices - - - 800
Higher Cheese Prices - - - - - 800
Lighter Receipts Hold Butter Market - - 800
St. Louis Milk Marketing Company - 800
James Pierce Dead - - - - - - 801
National Jersey Show and Sale - - 801
First Bull Association Sale - - - 802
Washington, D. C., Weekly News - - 804
Hopkins Resigns - - - - - - 804
Dairying Thirty Years Ago - - - 806
Twenty-second Lake Mills Sale - - - 806
Broadening Out - - - - - - 810
Junior Letters - - - - - - 811
Many Separators in Kansas - - - 813
Veterinary—Removing the Afterbirth—Barrenness—Blood in Milk—Pining Cow 814
The Corn Song - - - - - - - 814
Corn Cannery Refuse - - - - - 815
Bulletins of the Week - - - - - 815
Dairy Herd Management - - - - 816
Damage by Breachy Bull - - - - 817
Inventions and Appliances of Interest to Agriculture - - - - - - - - 818
Forage Poisoning - - - - - - 819
Soil Experiments Point Way to Larger Profits - - - - - - - - 820
Spare the Cultivator and Spoil the Crop - 822
Juneau Co. (Wis.) Holstein Sale - - 822
Green Co. (Wis.) Holstein Sale - - 822

New York Butter Market

NEW YORK CITY, NOVEMBER 9:—The tone of the butter market is far better than it has been for some time. That is due principally to a quickened demand for medium quality butter and also to the fact that reports do not indicate that large quantities of foreign butter are being exported to this country. Receivers, however, are still inclined to be nervous as they fear that the advances in prices of butter will serve to draw butter to this country. It seems highly improbable that Denmark will ship much butter in the near future, in view of the fact that it has contracted with England for the greater part of its surplus and also that it has been developing markets in Germany, France, and other European countries. It would seem that shippers of Argentine butter must be discouraged regarding the demand for that butter in this country as it is selling at very unsatisfactory prices. The butter is of very inferior quality and has the further disadvantage of being packed in boxes. While the box, or cube, is used successfully on our West Coast, that package meets with no approval in eastern butter markets. Some New Zealand butter has arrived on the Pacific Coast but in small quantities. Rumors regarding shipments of large quantities of that butter seem to have been false.

Hope is expressed by some receivers of butter that with the change of federal administration, a higher tariff may be placed on butter and other dairy products. The duty at the present time is 2½c per pound, whereas before the change of tariff schedules in 1914 it was 6c. There is considerable doubt on the part of some that a higher tariff would have any influence on the quantity of butter being imported. The present value of European exchange seems to favor the shipment of butter to this country. However, very little butter is arriving from foreign sources at present which seems to indicate that an active effort is being made to market the butter where it is more badly needed. It is realized by foreign shippers that our butter market is easily upset and that they are taking considerable risk in shipping the butter in large quantities as that would undoubtedly cause a break which would force them to take a comparatively low price for their butter.

There has been an upward trend to butter prices for fully two weeks. The principal advances have been on fancy butter but medium quality butter has also shown considerable improvement. Low firsts and seconds continue to be a drag on the market. However, there has been more inquiry for the low grades of late than has been known for some time. Receivers are very anxious to dispose of their holdings of such butter as they feel that a break may come at any time which might result in heavy losses. The fact that a high percentage of the Argentine butter which has been received in the last two months remain unsold and is being offered at prices ranging from 40 to 46c is a barrier in the way of disposing of the accumulations of low grade butter which are in the various stores.

On last week Monday, extras were quoted at 61½@62c. Tuesday was a general holiday, but on Wednesday the active demand caused an advance of 1c. On Thursday, there was a similar advance and since that time prices have remained stationary. For the last day or two, there has been less activity but the market remains very firm. Established quotations are: Extras (92 score), 64c; higher scoring than extras, 64½@65c; firsts (90—91 score), 56@62½c; firsts (88—89 score), 48@54c; and seconds (83—87 score), 40@46c.

W. B. LIVERANCE.

Current Feed and Hay Prices

[Report by U. S. Bureau of Markets]

Inquiry for feeds from the country trade during week ending Nov. 6 was even lighter than during the preceding week. The principal demand for wheat feeds for the last few weeks has been from jobbers. It is reported that the output of several of the largest flour mills has been contracted for until the end of December by the jobbing trade, among whom the belief appears general that stocks in the hands of country merchants are low and that prices will be materially higher as soon as a substantial demand from the country develops.

Quotations on bran are: $32 in Minneapolis, $35 in Chicago, $31 in Kansas City, $42 in Atlanta and Philadelphia, $41 in New York, $42 in Boston, and $40 in Seattle. Middlings range from $30 in Minneapolis to $46 in Seattle.

Cottonseed meal seems in ample supply, with prices holding firm without export demand. Hulls and Little Rock are offered at $5 in bulk. Around $38 is asked for 36% meal in the principal southern markets, with $3 to $4 extra for 41% meal. The 41% meal is quoted at $43 in Kansas City, $46 in Minneapolis, $49 in Chicago, and $51.50 in New York.

No improved demand for linseed oil meal is reported at prices $5 to $7 lower than last week in northwestern territory. The northeastern trade is well stocked, with offerings at $49 f. o. b. mill going begging. Quotations are: $52 in Minneapolis, $57.50 in Chicago, $60 in St. Louis, $55 in Philadelphia and New York, $66 in Seattle.

Importers are offering Dutch beet pulp in even weight sacks at $49.50, which shipments which left Europe during October are quoted at $49 f. o. b. New York. Samples of the New Dutch crop expected to arrive in increasing quantities are of excellent quality, light in color, coarse and very absorbent. The prices quoted for domestic pulp are $44 f. o. b. Chicago. Sugar company factories in Minnesota and Iowa are asking $41 demand draft. Domestic production of dried beet pulp is estimated by sugar factories 35% larger than last year. The demand is not so good as it was at this time last year.

Hominy feed advanced $2 over the low prices and is quoted at $33 in Minneapolis, $36 in Chicago and St. Louis, and $45 in Boston. Gluten feed demand is below normal, but prices held steady at around $43.

The hay market continues dull, with producers unwilling to ship at the prices offered. No. 1 timothy is quoted at $23 in Minneapolis, $24 in Kansas City, $32 in Chicago, $36 in Boston, and $43.50 in New York. Mixed hay continues to rule $2 to $4 under these prices, with clover hay at the same or lower price than mixed.

Alfalfa advanced from 50 cents to a dollar under light receipts and small demand. Quotations on No. 1 alfalfa are: $22.50 in Omaha, $27 in Kansas City, $28 in Minneapolis, $30 in Chicago, $31 in Los Angeles, and $33 in Atlanta and Memphis.

Higher Cheese Prices

[Report by U. S Bureau of Markets]

Cheese trading during the week ending Nov. 6 was stimulated by an active demand and markets are now recovering gradually after practically a month of dullness, during a part of which time business became stagnant and prices reached the lowest level for the year. While the reaction has not been so marked as that occurring in butter markets which also suffered a severe slump in October, the improvement seems to be more substantial and is not attended by the unsettled undertone which has kept butter operators rather nervous as prices again approach a high point.

Some dealers, of course, have no faith in the market and are sparing no effort to keep stocks moving in order to avoid any accumulation, but the general report from Wisconsin primary markets is that orders have been readily forthcoming without the necessity of price concessions and, in fact, that prices have been advanced in some instances in order to shut off buying. In view of this condition, the general feeling is that further advances will be in order, especially on some styles for which the demand has been unusually heavy of late. Closing prices for the week rule on the average about ½ to ¾c higher than the previous week.

The average wholesale prices on American cheese (style Twins) for the week ending November 6, 1920, and for the corresponding week last year, were as follows:

	Week ending November 6 1920	1919
New York	27.5	31.8
Chicago	24.2	31.6
Boston	26.0	33.0
San Francisco	26.3	31.3
Wisconsin Boards	23.2	30.9

The total receipts of American cheese at the first four markets were: 2,983,306 lbs., as compared with 3,932,231 lbs. for the corresponding week last year and 2,579,001 lbs. for last week.

Lighter Receipts Hold Butter Markets

[Report by U. S. Bureau of Markets]

Probably the most striking feature of the butter situation this past week has been the sharp decrease in production. This decrease is evident in reports from producing sections, from the shrinkage in total receipts on the markets, and from the smaller number of tubs making up individual shipments. The general development of the market was much the same as that reported for last week, in fact the upward trend was simply a continuation of the recovery previously mentioned. Prices advanced, but for the most part the advances were limited to top scores, although toward the latter part of the week undergrades also began to move. Chicago appeared to be in the best shape of all markets, as not only fine butter but medium grades, including short-field offerings, were cleared early.

In spite of the firmness of the market on fine butter, the very evident falling off in the make and the more active movement of storage butter, the market is still unsettled and nervous in character. Prices are high again, but the sentiment persists that consumption will surely fall off unless prices stay lower. Advances on the various markets were frequently contested. Free offerings of Danish butter at a price under 48½c delivered New York did not help to instill market confidence. Samples of New Zealand butter were also seen on eastern markets, and future arrivals, it is said, will be shipped east for distribution.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending November 6, 1920, and the corresponding week last year, were as follows:

	Week ending November 6 1920	1919
	cents	cents
New York	63.4	69.5
Chicago	61.6	66.3
Philadelphia	63.3	69.0
Boston	59.7	67.0
San Francisco	52.0	63.7

The receipts of butter at these markets were 6,572,023 lbs. as compared with 8,131,694 lbs. for the corresponding week last year and 7,062,005 lbs. for last week.

St. Louis Milk Marketing Company

The Southern Illinois Milk Producers' Association will form a co-operative milk marketing company through which all milk will be sold direct to distributors and through other wholesale methods. The Illinois Agricultural Association having a membership of 11,000 in the nine dairy counties surrounding St. Louis offered to assist the producers in forming their marketing organization by supplying ten solicitors for thirty days to sell stock, by getting in experts of other co-operative marketing associations to help outline the organization, and by the use of their legal department.

The only requirements were that the Illinois Agricultural Association must know that the form of organization outlined is one which will be a forward step in solving the problem of milk producers. The Agricultural Association is a promotion and service organization composed of farmers of all lines in all parts of the state and will not take an active part in the company when organized.

Over half of the delegation in attendance at the meeting of milk producers were members of the local farm bureaus and I. A. A. The meeting unanimously accepted the services of the state association. The agricultural association has set aside a fund of $7,500 to assist in this work, and if necessary will contribute more. A meeting will be held in two weeks at which time leaders from Chicago and Minneapolis milk marketing companies and legal advisors will be present to assist in forming this organization. Milk producers have been on strike since Sept. 17 and have just come to a settlement with the dealers. —D. I. A. A. News Service.

NATIONAL JERSEY SHOW AND SALE

Week at Shreveport Great Success. Sixty Jerseys Average $707. Show Goes to Dallas in 1921

THE first National Jersey Show, held in connection with the Louisiana State Fair October 28 to November 7, more than met expectations. The exhibit was the best seen in the country this year, the facilities for displaying the animals were excellent, and the attendance of interested dairymen exceeded that of all previous shows of the year. The week's success may be guaged by the plans already under way for staging the second national show at Dallas in 1921 and offering twice the Shreveport premium total of $6,000.

In the second National Jersey Sale held with the show, sixty animals brought an average of $707. The quality of this selected offering was high and some prices were well below values. When the financial situation of southern agriculture is considered, however, the auction must be rated as highly satisfactory.

The Show

Two hundred head of Jerseys put across the proposition in the minds of those who took this show to Louisiana. The South is ready for better dairy cattle—so Jersey breeders changed the words of "Dixie" to "Now the Jersey's queen in Dixie" and put on an exhibition to liven up the interest in the breed. Undoubtedly much was accomplished. Besides a goodly ringside attendance, thousands of southern farmers were acquainted daily with the events of the show by very liberal newspaper publicity.

The exhibit was made up from seventeen herds in ten states. The premium list of $6,000 permitted offering eight prizes in each class, ranging from $45 down, in most classes, and from $100 down for exhibitor's herd, young herd, and calf herd. This constituted the largest money awards ever made in a Jersey show. Eight herds succeeded in winning second place ribbons but the blues all went to three with the purples evenly divided between two. Longview Farm of Missouri won thirteen firsts and four seconds and showed senior and grand champion bull and junior champion female; Ed. C. Lasater of Texas won six firsts and eight seconds; and Ayer & McKinney of New York won four firsts and four seconds and senior and grand champion cow and junior champion bull.

M. D. Munn of Minnesota, president of the American Jersey Cattle Club, officiated in the ring with Hugh G. Van Pelt of Iowa as associate judge.

The bull classes, particularly, were much better than at Chicago, from the aged sires to calves. Raleigh's Oxford Prince, Lasater's 1918 National Dairy Show grand champion, was an easy winner among the mature bulls. He shows his eight years a trifle but measures up in size, type, and Jersey masculinity. Chief Raleigh, Longview's three-year-old, found a close competitor in Dahlia's Noble Fern, owned by A. H. Henderson of Louisiana, but won the class. Fashionable Fern Lad, Longview's 1920 National Dairy Show grand champion two-year-old, took the blue in his class and later won highest honors by defeating the other aged winners and Ayer & McKinney's junior champion, Brampton Patricia's Prince. The grand champion won on his lines, his neatness, and his finish. He lacks the depth and spring of rib of the Lasater bull and of his three-year-old stablemate. The junior champion, the grand champion at Toronto this year, fought his hardest battle in the class where he met Wolff's Chieftain and, Longview's Dairy Cattle Congress and National junior champion. The New York calf is larger and perhaps a little stronger but was heavy over the top and lacked the finish and clean cut form of his contendor.

Lasater won in a class of 18 aged cows with Grove Bell Queen, second place going, after some debate, to Imp. Lady Gilbert, exhibited by Ayer & McKinney. The larger, stronger Texas cow suited the ringside better than the refined type of her New York rival. Both cows were a bit faulty in udder but either would have been a worthy winner. Two Longview four-year-olds led their class, Raleigh's Star of Peace and Fontaine's Nema, respectively. Longview's Rochette's Noble Nina was the best three-year-old, defeating Meridale Fern's Jess.

The feature of the entire show was Imp. Fern's Oxford Triumph, Ayer & McKinney's two-year-old, widely advertised as "the $15,000 cow". She was made grand champion, but not without two very close decisions. In her class, You'll Do's Fairy owned by the Thomasville Livestock Company of Georgia, was a strong contendor. The Georgia heifer is larger and has the substance which pleased onlookers. She was shown dry but gave evidence of a superior udder. The winner was showier and of the small finished type. Again in the senior championship competition, there was no clear decision for the winner—the aged cow and the three-year-old both excelling her in points. The latter had the best udder of the three. The aged cow lacked the flash of the two-year-old but was her equal in type and excelled in size, capacity, and strength of top. A reversed decision would have pleased many. The two-year-old had no difficulty in defeating Longview's junior champion, Raleigh's Blue Feather, a senior yearling.

The following gives the awards by classes for the first five places:

Bull 4 years old and over:—1, Ed. C. Lasater, Texas, on Raleigh's Oxford Prince; 2, Smith Farm, Louisiana on Campanile's Golden Fern; 3, C. E. Shuptrine, Alabama, on Peerless Jolly Fern; 4, Ayer & McKinney, New York, on Val Darkie's Ajax. Bull 3 years old and under 4:—1, Longview Farm, Missouri, on Chief Raleigh; 2, A. H. Henderson, Louisiana, on Dahlia's Noble Fern; 3, White City Jersey Farm, Oklahoma, on Tulsa Chief; 4, Lasater on Madam's Oxford Noble. Bull 2 years and under 3—1, Longview Farm on Fashionable Fern Lad; 2, Lasater on Ester's Falfurrias Oxford; 3, White City Jersey Farm on Eventide Bell Boy; 4, Thomasville Live Stock Co., Georgia, on Reception Stockwell; 5, Estate H. C. Minor, Louisiana, on Lucinda's Pansy's Fontaine. Bull 18 months and under 2 years—1, Lasater on Falfurrias Nobleman; 2, Island Home Farm, Tennessee, on Fern's Noble Dictator. Bull 1 year and under 18 months—1, Lasater on Tormentor's June Prince; 2, White City Jersey Farm on Distinction's Golden Lad; 3, Longview Farm on Manora's Fairy Lad; 4, Estate H. C. Minor on Oxford Financial Noble; 5, J. K. Dering, Illinois, on Oxford Chieftain. Bull calf 6 months and under 12 months—1, Ayer & McKinney on Brampton Patricia's Prince; 2, Longview Farm on Wolff's Chieftain 2nd; 3, Lasater on Golden Lily's Nobleman; 4, Longview Farm on Blue Feather's Raleigh; 5, A. H. Henderson on Viola's Campanile. Bull calves under 6 months—1, Longview Farm on Star's Fairy Lad; 2, Longview Farm on Buttercup Butter Lad; 3, Lasater on Great Scott's Nobleman II; 4, White City Jersey Farm on Isabelle's Champion; 5, Smith Farm on Lilac's Golden Fern.

Cow 5 years old or over—1, Lasater on Grove Bell Queen; 2, Ayer & McKinney on Imp. Lady Gilbert; 3, J. E. Jones, Missouri, on Financial Lad's Lovely Sweet; 4, A. H. Henderson on Fern's Oxford Ever; 5, Smith Farm on Jolly's Bayleaf of Falfurrias. Cow 4 years old and under 5—1, Longview Farm on Raleigh's Star of Peace; 2, Longview Farm on Fontaine's Nema; 3, Thomasville Live Stock Co. on Fern's Oxford Duchess; 4, Lasater on Village Knight's Jessie; 5, Lasater on Eminent Lad's Edith You'll Do. Cow 3 years and under 4—1, Longview Farm on Rochett's Noble Nina; 2, Ayer & McKinney on Meridale Fern's Jess; 3, Longview Farm on Raleigh's Lily White; 4, Lasater on Raleigh's Alice of Falfurrias; 5, C. F. Stevehaln, Connecticut, on Oxford You'll Do's Pet 2nd. Cow 2 years and under 3—1, Ayer & McKinney on Imp. Fern's Oxford Triumph; 2, Thomasville Live Stock Company on You'll Do's Fairy; 3, Henderson on Beauty's Victoria K. Mt. F.; 4, Longview Farm on Chieftain's Manora; 5, Island Home Farm, Tennessee, on Sultan's Foxy Cowslip. Heifer 18 months and under 2 years—1, Longview Farm on Raleigh's Blue Feather; 2, Ayer & McKinney on Brampton Annette; 3, Lasater on Great Scot's Constance; 4, Lasater on Fancy Falfurrias Carnation; 5, Longview Farm on Raleigh's Queen o' the Night. Heifer 1 year and under 18 months—1, Longview Farm on Raleigh's Royal Fairy; 2, Lasater on Great Scot's Lady Westgate; 3, Lasater on Knight's Favorite Fern; 4, Ayer & McKinney on Hauteville Virginia; 5, Henderson on Double Majesty's Julia. Heifer calf 6 months and under 12—1, Ayer & McKinney on Brampton Golden Wanted; 2, Longview Farm on Raleigh's Miriam; 3, Longview Farm on Raleigh's Pretty Maiden; 4, Lasater on Great Scott's Silver; 5, Henderson on Golden Fern's Dainty Miss. Heifer calf under 6 months—1, Lasater on You'll Do's Royal Sensation; 2, Ayer & McKinney on Meridale Cowslip; 3, Longview Farm on Raleigh's Royal Maid; 4, Dering on Raleigh's Bright Maid; 5, Lasater on Constance's Michaelmas Royal Sensation.

Senior and grand champion bull—Fashionable Fern Lad, owned by Longview Farm, Missouri. Junior champion bull—Brampton Patricia's Prince, owned by Ayer & McKinney, New York. Senior and grand champion cow—Imp. Fern's Triumph, owned by Ayer & McKinney. Junior champion cow—Raleigh's Blue Feather, owned by Longview Farm.

Cows having Register of Merit record of 600 lbs. fat at 5 years and over—1, Lasater on Majesty's Flo of F. Cows having Register of Merit record of 400 lbs. fat made under 5 years—1, Longview Farm on Raleigh's Star of Peace; 2, Lasater on Village Knight's Jessie; 3, Henderson on Fern's Oxford Ever; 4 and 5, Lasater on Eminent Lad's Edith You'll Do and Majesty's Flo of Falfurrias.

Exhibitor's herd—1 and 3, Longview Farm; 2, Lasater; 4, Henderson; 5, Thomasville Live Stock Company. Breeder's young herd—1 and 4, Longview Farm; 2 and 5, Ed. C. Lasater; 3, White City Jersey Farm. Calf herd—1, Longview Farm; 2, Lasater; 3, White City Jersey Farm; 4, Cedar Crest Farm; 5, Henderson. Get of sire—1 and 5, Longview Farm; 2, Henderson; 3, Lasater; 4, Shuptrine. Produce of 1 cow—1 and 4, Longview Farm; 2 and 3, Lasater; 5, Henderson. Dairy herd—1, Ayer & McKinney; 2, Lasater; 3, Longview Farm; 4, Henderson; 5, Shuptrine.

The Sale

Twenty-one consignors from thirteen states sold cattle in the Second National Jersey Sale to breeders in eleven states and Canada. Louisiana and Texas were the heaviest buyers, taking twenty and eighteen head respectively. S. A. Guy of Louisiana took the largest number, paying $4,600 for six head.

R. J. Fleming of Ontario bought the two highest priced animals of the sale. You'll Do's Fairy, the two-year-old second prize heifer consigned by the Thomasville Live Stock Company of Georgia, was the top cow, going for $4,000. This animal in the show the preceding day was a very close contendor for honors over the grand champion female. The leading bull in price was Buttercup's Butter Lad, a February, 1920, calf from Longview Farm. He sold for $3,200. He is by Flora's Queen's Raleigh and out of Raleigh's Eminent Buttercup whose production of 85.9 lbs. of milk in a day is a world's record. This calf is a strongly line bred Raleigh.

The opening bid of the sale was $1,000 offered for Fern's Oxford Duchess, a four-year-old daughter of Fern's Oxford Noble, consigned from the Georgia herd. She was struck off to W. P. B. Frelinghuysen of New Jersey for $2,350.

The center of interest of the auction was Gamboge's Vellum Majesty, M. D. Munn's seven-year-old herd sire. There was much speculation concerning the price he would bring. He was grand champion at the National Dairy Show in 1917 and has sired the greater part of Mr. Munn's present herd. Bidding was slow. Mr. Lasater's offer of $2,000 was finally raised by T. C. Barrett, Jr., of Louisiana who became owner of the champion for $2,100.

The only other animal of the sale to reach $1,500 was the senior calf, Raleigh's Miriam, grand champion of the 1920 Dairy Cattle Congress. She was consigned by Longview and purchased by C. M. Gouch of Tennessee.

The following lists the animals selling for $500 or more and gives their buyers:

S. A. Guy, Louisiana	
Aldan's Surprise	$800
Raleigh's Golden Brightness	850
Imported You'll Do's Pet 2nd	1,225
Fancy Falfurrias Carnation	1,025
R. J. Fleming, Ontario, Canada	
You'll Do's Fairy	$4,000
Buttercup's Butter Lad	3,200
T. C. Barrett, Jr., Louisiana	
Gamboge's Vellum Majesty	$2,100
B. R. Parrish, Kentucky	
Majesty's Morn Merline	$575
Ed. Lasater, Texas	
Majesty's Vellum Girl	$825
Fern's May Dolly	550
China Bell's Jolly Maid	750
A. H. Henderson, Louisiana	
Majesty's Elm Maid	$500
C. M. Gouch, Tennessee	
Raleigh's Miriam	$1,500
L. P. Townsend, Iowa	
Financial Fern Lady	$500
P. H. B. Frelinghuysen, New Jersey	
Daisy's Fern Maid	$1,050
Fern's Oxford Duchess	2,350
W. R. Spann, New Jersey	
Floss of Oaklands	$500
Knight's Favorite Fern	600
B. T. Sumner, Texas	
Eminent's Foxy Cactus	$500
Goddington's Cowslip	650
Mrs. C. Ellingsworth, Pennsylvania	
Minette's Sultana	$1,050
C. M. Hutton, Louisiana	
You'll Do's Gold Lock	$1,050
E. K. Smith, Louisiana	
Golden Lily's Nobleman	$700
Longview Farm, Missouri	
Financial Lad's Lovely Sweet	$1,400
Albert Seple, Louisiana	
Regina's Fern of Fitch Farm	$525
A. N. Hoopes, Pennsylvania	
Financial Plymouth Anna	$1,000
D. T. McCarty, Missouri	
Mary You'll Do	$700
W. H. Webb, Texas	
Hauteville Buttercup	$500

The Banquet

On Friday evening breeders crowded a banquet hall, in a Jersey get-together. Many instructive and entertaining remarks were heard from southern cattle men and from visitors from the North. The occasion furnished opportunity for expressions of appreciation from Dixie dairymen for the inspiration of a show made possible through the co-operation of northern breeders. It gave opportunity also for public acknowledgement of the many courtesies extended exhibitors in the show management. Special mention was given the work of C. H. Staples and W. R. Hirsch.

James Pierce Dead

James Pierce, editor and owner of the Pierce Farm Weeklies, died at his home in Des Moines on November 1st.

Mr. Pierce was born on a farm in Ohio on May 9, 1848, and, though nearly 73 years old, at the time of his death was in active charge of his various publications, The Iowa Homstead, The Wisconsin Farmer, and The Farmer and Stockman. While a boy he was employed as a printer's apprentice, but at the close of the Civil War he engaged in farming in Northern Missouri, and somewhat later established himself as a printer and publisher of various county papers.

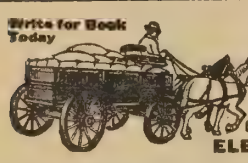
Mr. Pierce has been a vigorous champion of farming and farmers. He was a good fighter and employed a trenchent pen. He will perhaps be best known for these qualities, but many of his editorials were filled with sentiment and kindness that endeared him to his great host of readers.



"13,965 Miles —and Still Going Strong"

Not phenomenal mileage, to be sure. But how many truck owners are getting even so much from their tires? By the time this tire is past its usefulness it will probably have given from twenty to thirty thousand miles. Even this is not unusual — for a Kelly Caterpillar.

Kelly-Springfield Tire Co.
GENERAL SALES DEPARTMENT
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FARM WAGONS
High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in colors.
ELECTRIC WHEEL CO., 31 Elm Street, Quincy, Ill.



Alfalfa Hay
The Choice Dairy Kind
We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.
W. A. Ferson Hay Company, Kansas City, Mo.

ALFALFA HAY
FOR DAIRY COWS
The H. M. Goldwood Co.
St. Joseph, Mo.



For bedding most convenient, serviceable and sanitary. Write for prices.
Defnet & Jagerson Supply Co., Neenah, Wis.

First Bull Association Sale

"I'll show 'em a real bull next year."

The time was Oct. 22nd, 1920.

The place was the cattle shed of the Piedmont Fair Association at Greenwood, S. C.

The occasion was the Inter-association Bull Show—the first of its kind in the United States.

The remark quoted above came from one of the bull keepers as he led his charge back into the cattle shed and tied him in his stall. The bull had won second place in his class where eleven bulls had been entered. The bull keeper was dissatisfied with winning second place and the explanation is the story.

In the Piedmont section of South Carolina, the boll weevil appeared this year for the first time, and the damage done upset the calculations of some of the died-in-the-wool cotton growers.

To encourage diversification of agriculture and to increase interest in the bull association work with Jersey cattle, some of the Clemson College and U. S. Department of Agriculture Extension workers, being of a prudent nature and foreseeing, conceived the idea of staging an Inter-association bull show. Greenwood is the center of a progressive section of the Piedmont and in the counties adjacent to Greenwood there are at present seven Jersey bull associations. The Piedmont Fair officials were glad to encourage this new feature and agreed to finance the entire cost of bringing the bulls to the fair including the expenses of each bull keeper.

In the show held, the seven bull associations of McCormick, Greenwood, Laurens, Greenville, and Abbeville counties were represented by twenty-three Jersey bulls, carrying in their veins some of the best Jersey blood in America.

The classes and winners are as follows:

Three years old and over—1, McCormick Bull Association on Golden Jollys Killiarn; 2, Simpsonville Bull Association on Bonnie Jesup Lad; 3, Fountain Inn Bull Association on Blue Fox of Fountain Inn. Two years and under three:—1, 1st Abbeville Bull Association on Lieutenant Pogis; 2 and 3, 3rd Abbeville Bull Association on Lime Ridge Rosalyn's Torono and Lime Ridge Lass Tor. One year and under two—1 and 3, Greenwood Bull Association on Gamboge Prince of Nutwood and Bossie's Gamboge of Nutwood; 2, Simpsonville Bull Association on Captain's Financial Victor. Best kept and handled bull, any age—1, Simpsonville Bull Association on Bonnie Jesup Lad; 2, 1st Abbeville Bull Association on Lieut. Pogis; 3, Fountain Inn Bull Association on Blue Fox of Fountain Inn. Best Jersey bull association exhibit—1, Greenwood Jersey Bull Association; 2, First Abbeville Jersey Bull Association; 3, Laurens Jersey Bull Association; 4, Second Abbeville Jersey Bull Association; 5, McCormick Jersey Bull Association. Grand champion Jersey bull—McCormick Bull Association on Golden Jolly's Killiarn.

The value of the show cannot be estimated because there are so many angles to be considered. Without a doubt, a new pride has been developed among the five hundred or more South Carolina farmers who have money invested in the bulls shown. Farmers from all over the Piedmont were present to inspect the bulls and to witness the judging.

The show was also a great demonstration in the proper care and handling of bulls and the proper fitting of them for the show ring. Many of the bull associations organized in the United States have gone on the rocks because the proper man could not be secured as bull keeper. That has always been the real problem in the organizing of bull associations. As these animals came to the fair, they were not trimmed and clipped and polished after the manner of regular show animals; but before a single animal went into the show ring, they were all put in excellent show condition by the bull keepers under the direction of the dairy specialists and county agents present.

The judging was done by Professor W. W. Fitzpatrick of Clemson College and every decision was carefully explained to a large and highly interested audience. This was one of the educational features of the show. Many farmers who saw the show had never been to college or paid any attention to the fine points of cattle. Professor Fitzpatrick explained the placing of each bull and answered questions from those present. The excellent material afforded a real opportunity to give a demonstration in the proper judging of cattle.

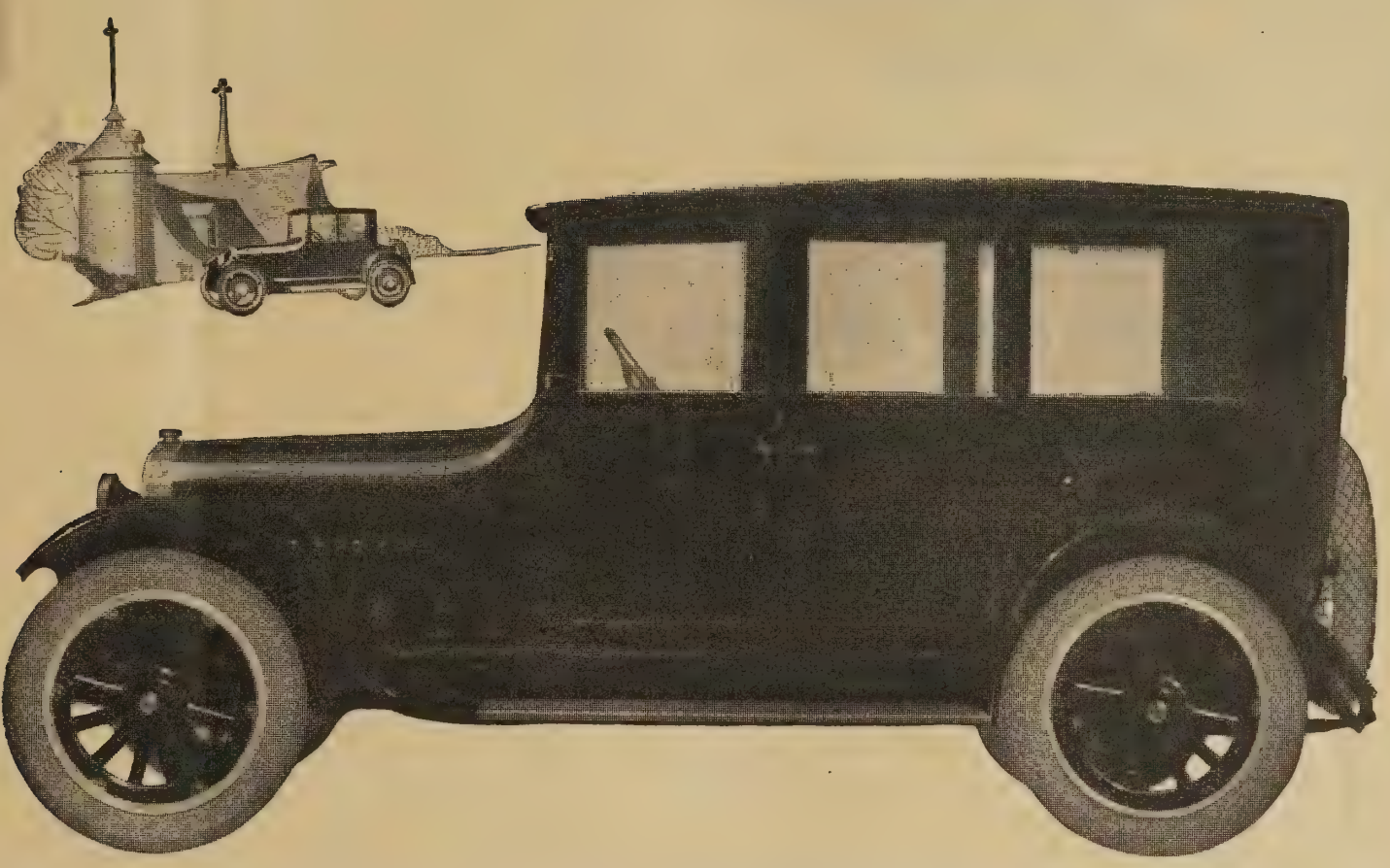
Under the direction of the Greenwood Jersey Bull Association, a sale of 26 Jersey cows and heifers was held on the fair grounds. Mr. D. D. Elliott of Wisacky was manager of the sale. The offerings were excellent and farmers wanted cattle but the low price of cotton acted as a damper. However, the cattle with a few exceptions went to the five counties mentioned above. With bulls of breeding shown above and cows of successful and popular blood lines, the future of the Jerseys in the Piedmont is assured.

The show was an experiment but the results are already manifest in the new interest and enthusiasm among Piedmont farmers. It passed the acid test when the fair officials, who had financed the show and arranged for the prizes, expressed themselves as having received their money's worth. The farmers have a new and intelligent interest in Jersey cattle. The stockholders of the bull associations have seen their bulls bring home the prize money. The bull keepers are alive with the lure of the show ring. They have a new pride and a new interest in their charges and are working hard for the show next year, and for the year after when the bulls and their get will probably be shown under the auspices of the Piedmont Jersey Cattle Club which will shortly be organized.

So. Carolina. HENRY JOHNSON.

Uncle Ab says: When you feel that you've got to say just what you think, it's sometimes best to stop—and just think.

OAKLAND OWNERS REPORT RETURNS OF FROM
18 TO 25 MILES PER GALLON OF GASOLINE
AND FROM 8,000 TO 12,000 MILES ON TIRES



THIS NEW OAKLAND SENSIBLE SIX FOUR DOOR SEDAN IS POWERED WITH THE FAMOUS 44-HORSEPOWER, OVERHEAD-VALVE OAKLAND ENGINE

LET your new car be an Oakland Sensible Six Sedan. For the farmer, as for every other class of citizen, this is the thoroughly practical automobile. It is the most useful car, providing homelike comfort and security in any weather. It is the most sensible car, linking its many advantages to the minimum of operating cost. The present Oakland Sensible Six Sedan retains the proved high-power and light-weight principle of construction in an even stronger chassis of longer wheelbase. However you judge it, whether by performance, reliability or economy, it affords a value not to be duplicated in any other type of automobile.

OPEN CAR, $1395; ROADSTER, $1395; FOUR DOOR SEDAN, $2065; COUPE, $2065
F. O. B. PONTIAC, MICHIGAN. ADDITIONAL FOR WIRE WHEEL EQUIPMENT, $85

OAKLAND MOTOR CAR COMPANY, *Pontiac, Michigan*

OAKLAND
SENSIBLE SIX

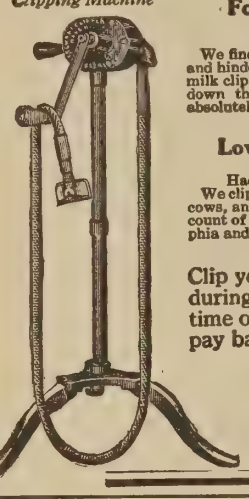


Clipping a Jersey from Natoma Farm, near Hinsdale, Ill.

Five Minutes a Month

with the Stewart Clipping Machine on a dairy cow keeps the hair short on udder, flanks and underline, making cleaning before milking a quick, easy job. Long hair gathers dirt and filth, that can't be prevented from dropping into the milk. Regular clipping is a big help toward keeping the cow clean. Only a clean cow produces clean milk. Clip with a Stewart —no progressive dairy farm can afford to be without it. Let Stewart users tell you their experience:

Stewart No. 1 Cow Clipping Machine



For Certified Milk

EDGEMOOR FARM
Santee, Calif., Feb. 9, 1920.
We find that keeping the tail, udder and hindquarters of all of our cows in milk clipped helps greatly in keeping down the bacteria count, which is absolutely necessary in certified milk.
Edgemoor Farm.

Low Bacterial Count

HADDON FARMS
Haddonfield, N. J., Nov. 20, 1919.
We clip the udders and flanks of our cows, and have the lowest bacterial count of any milk going to Philadelphia and Atlantic City.
E. F. Gill.

Equal With Barn Cleaning

Rockton, Ill.,
Dec. 2, 1919.
I have used a Stewart Clipping Machine for several years. Believe that anyone trying to produce clean milk will find that clipping is as necessary as barn cleaning.
F. E. Zahm.

Cows Give More Milk

HILLSIDE DAIRY FARMS
Westby, Wis., Apr. 3, 1920.
The clipper is doing excellent work, and cows gain from four to ten pounds of milk a day. It makes milking a nice clean job.
Thos. Sebion.

Clip your cows with the Stewart No. 1 every thirty days during the stabling season. Complete, ready for a lifetime of service, only $14 at your dealer's, or send $2 and pay balance on arrival.

Electric Clipping Machine, 110 Volts, A. C., $80

Chicago Flexible Shaft Company
Dept. A-156, 5600 Roosevelt Road, Chicago



KANE SYRO

direct from Cuba to you

KANE SYRO comes direct from Cuba and Porto Rico, the home of real cane molasses—contains approximately 52% sugar and will make all kinds of roughage palatable and appetizing.

No Sugar is Extracted

This wonderful feed molasses is unusually rich in milk producing fats and when mixed with roughage makes an economical feed for cows, hogs, sheep and horses.

We have molasses NOW in our Philadelphia Tank Station for shipment at once. All shipments made in good, staunch barrels. Write for Prices and Booklet.



National Molasses Corporation
207 Walnut Place, Philadelphia, Pa.



20 to 25% Bigger Winter Milk Yields

WITH pure, rich milk analyzing 87% water—and with your winter herd *getting only ¼ to ⅓ of their natural water requirement from icy outdoor tanks,* you can see where cold weather cow-thirst is one of the biggest causes of your year-after-year winter milk shortages. With

Simplex Improved Water Bowls

your cows drink "to their hearts' content" day and night. Result—*20 to 25% more milk from every cow all through the housed-in season.* And no more frozen tanks—no tank-heater make-shifts—no more twice-a-day "herding out" periods. *Write for Full Information on the Modern Miracle.*



F. RASSMANN MFG. CO.
29 Rowell Street, Beaver Dam, Wis.
Manufacturers of Complete Barn Equipment



ONLY DROP CLEAN WATER BOWL MADE

Keep Tab on Your Cows

Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. **Hoard's Dairyman, Fort Atkinson, Wis.**

Washington, D. C., Weekly News

[Special to Hoard's Dairyman]

Washington, Nov. 10—Reports received at the headquarters of the Maryland-Virginia Milk Producers' Federation indicate that this organization is growing and increasing in efficiency every day. The reaction from the election of officers which took place three weeks ago is a very satisfactory one, and has been followed by numerous voluntary applications for membership, and a number of instances where members have gone out and signed up their neighbors. The association voted at its annual meeting to apply for affiliation with the National Milk Producers' Association. The full list of officers elected includes Dallas Berry, president; J. G. Thompson, vice-president; T. E. McLaughlin, secretary and general manager; and Y. E. Booker, Jr., treasurer. Two field agents were named, C. T. Rice of Oakton, Va., and H. H. Fraley of Derwood, Md. President Berry has been a member of the old executive committee since 1916 and was chosen president without opposition. He succeeds Daniel A. Slaughter, whose death but a short time before the annual meeting was a great loss, and a severe blow to the organization. J. G. Thompson, the new vice-president, was also for some years a member of the old executive committee. Thirty directors were elected, ten to serve one year, ten for two years, and ten for three years. The executive committee consists of the president and vice-president, and Messrs. Frank S. Walker, J. Clifford Miller, and Maurice Stabler.

An attack on the insufficiency of the tuberculin test as a means of preventing tuberculosis infection in the milk supply in this city appears in the Washington papers this week, signed by President Berliner of the Anti-Tuberculosis society. He calls attention to the possibility of "doping" to prevent a real test, and of the intervals between tests when infected animals are likely to get into milk production herds, and thus infect all the milk. He urges pasteurization of all milk used. In answer to this representatives of the milk producers call attention to the vital statistics of the District of Columbia, proving a decrease in number of tuberculosis cases, and a material decrease in deaths from tuberculosis and in infant mortality in the past three years, which Health Officer Fowler broadly intimates is traceable in large part to the excellent milk inspection regulations, including the requirement that all cows whose milk is permitted to be sold here shall be tuberculin tested.

Dr. C. W. Larson of the Dairy Division in discussing this called attention to another aspect of the case which is often lost sight of. Eradication of tuberculosis, he said, is doubly important, first as a health measure, for no none wants to use milk from unhealthy cows, no matter what the trouble, and second as an economic matter. "I was in Massachusetts recently," he said, "talking with one of the biggest milk producers there. He does not raise his own cows but buys them. He told me that he could not get profitable results from a cow which had tuberculosis. They were unprofitable animals. We too often lose sight of this end of the tuberculosis question. Cows diseased ought to be removed from the herds because they do not and can not produce milk as cheaply and as efficiently as healthy cows."

R. R. Graves of the Dairy Division made an address at Montgomery County (Md.) Pomona Grange, last week, describing the work in pure-bred animal investigations being carried on at the Beltsville Experiment Station. He explained the plans of the Dairy Division to make an effort covering several years to fix prepotent characteristics of certain great producing strains, if this can be done, and if possible to discover how it can be done. To carry this out, experiments in line breeding, and in cross breeding are to be carried out, and large numbers of both male and female progeny tested carefully. The number of bulls is already exceeding the capacity of the station, and numbers are being loaned to experiment stations, to carry on the testing and tabulation of results. He said that the supply was larger even than the experiment stations could use and offered to loan bulls to dairymen in the territory near Beltsville upon agreements to continue the testing and keeping of records.

Hopkins Resigns

HOARD'S DAIRYMAN:—"The producer of both meat and milk producing animals is confronted with serious marketing difficulties which must be satisfactorily handled if these industries, the state, and the nation are to prosper."

This was the key-note struck by A. W. Hopkins in his letter of resignation of the secretaryship of the Wisconsin Live Stock Breeders' Association—that the association was in a position of opportunity to render a distinct service to Wisconsin stockmen by setting itself seriously to the task of helping to answer this and other large questions.

The Wisconsin Live Stock Breeders' Association was organized in 1901 by leading Wisconsin stockmen. Since that time it has had seven secretaries, although Mr. Hopkins, who has just retired, was actively associated with the work almost from the very beginning. The other secretaries are: Frank W. Harding of Waukesha, W. L. Carlyle of Madison, L. F. Martiny of Chippewa Falls, F. H. Scribner of Rosendale, Eben E. Jones of Rockland, R. W. Rowlands of Waukesha, and A. W. Hopkins of Madison.

In 1911 the association received an appropriation of $4,000, which was soon increased to $7,000. At the present time it is granted $9,000 a year.

The appointment of George W. Davies, the assistant secretary, is significant of another phase of the work now being carried on. It has been generally admitted that the organization of the farmers has been pretty completely performed, and that the education campaigns, such as the pure-bred sire drive, has mainly accomplished its purpose. For Wisconsin to continue her progress, or even to exceed what has already been accomplished, the younger generations must be aroused. For this reason boys' and girls' club work is being emphasized at the present time almost to the exclusion of the other work. Mr. Davies is a trained teacher and educator, and thoroughly familiar with the boys' and girls' club work program.

The Wisconsin Live Stock Breeders' Association is not the work of one man, or the result of one idea. Back of it has been the co-operation of the leading stockmen of Wisconsin but co-ordinating their efforts, inspiring their imagination, and tireless his activities has been Mr. Hopkins. In his brief letter of resignation he scarcely touches upon the personal side of his work, but those who have been more or less closely associated with him can testify to the interest he took in Wisconsin live stock affairs.

Wisconsin. W. A. FREEHOFF.

Cessation of work with crops should give time to fix up around the farm.

More Milk Right Down the Line

CHAS. P. WERRY has had some interesting and typical experiences in getting more milk with Purina Cow Chow. Read what he says:

"I have used Purina Cow Chow for four or five years. Last year I contracted for 30 tons and a car of gluten, and fed in the proportion of two bags of Cow Chow to one of gluten. I got out of gluten in February and after that fed Cow Chow alone. *The cows did better on your feed alone* than with the gluten mixed in. This was my experience on my home farm."

"On my other farm I *got out of Cow Chow* and could get no more from the dealer and the cows *went down a can of milk*. This year I have contracted for 60 tons and will feed it entirely alone, having bought no gluten at all."

"I have been entirely free from bag trouble which I cannot say as to other feeds I have used. The cows not only *milked better than with my own mixtures* and other feeds but they *remained in good condition* during the season."

Chas. P. Werry, Westtown, N. Y.

Such experiences don't just "happen so." There are reasons back of them that you should know. Let us send you some interesting facts about Purina Cow Chow. Order Cow Chow from your nearest Purina dealer.

RALSTON PURINA CO., St. Louis, Mo.
Ft. Worth, Tex. Nashville, Tenn. Buffalo, N. Y.

Sold in Checkerboard Bags Only

Purina Cow Chow





"BALL BAND" TRADE Red Ball MARK

What the Red Ball Stands For

Satisfying fit.

Real comfort for your feet.

More Days Wear, at the lowest cost per day's wear.

These are the things the Red Ball Trade Mark stands for—these are the reasons why ten million people wear "Ball-Band" Rubber Footwear.

Look for this Red Ball when you buy Rubber Boots, Arctics, or Light-Weight Rubbers.

Ask your dealer for our free illustrated booklet, "More Days Wear." It will show you many of the different styles of Rubber and Woolen Footwear which we manufacture.

MISHAWAKA WOOLEN MANUFACTURING COMPANY
313 Water Street Mishawaka, Ind.
"The House That Pays Millions for Quality"



Dairying Thirty Years Ago

Taken From the Issue of Hoard's Dairyman of Nov. 14, 1890.

There ought to be added to the curriculum of our Universities and Colleges a special department for teaching the "Science of Common Things", familiarly known as "gumption".

Edward Atkinson, the great statistician, is reported as having said that the greatest invention of which he can conceive would be to perfect a scheme that would transfer atmospheric nitrogen into available plant food.

The United States of Columbia, S. A., imported during the last fiscal year, from the United States, 60,710 pounds of oleomargarine and other butter importations at about 12 cents per pound. In the same time was imported from the United States 279,943 pounds of butter valued at $51,151, or 19 cents per pound. The amount of cheese exported to that country was 228,229 pounds valued at $29,593, or 13 cents per pound. Venezuela took over twice the amount of butter at the average price of 17 cents per pound and but one-twelfth the amount of butter imitations. Fraud butter sold on its merits does not find favor with the South American states.

An Enlightened Agriculture

In Volume One of the Conquest of Mexico, the historian, Prescott, devotes several pages to a description of the agriculture of the Aztecs and makes use of the following words:

"The same enlightened spirit applied to agriculture raises it from a mere mechanical drudgery or the barren formula of traditional precepts to the dignity of a science."

The foregoing sentence contains the whole philosophy of agricultural progress. Every farmer can apply it as a tape line for his measurement. Is he applying an "enlightened spirit" to his farming operations? Is he following the "barren formula of traditional precepts" in his judgment and work on the farm? Is he trying to be a man of science, or an automaton?

He does not need a college education to "apply enlightened spirit" or become a scientific farmer. All he needs is to exercise brains enough to have a reason for what he does, and how to do it. That is all.

Mothers, Use Milk

"Can you have all the milk you want to drink?" asked one boy of another. "Why, of course, can't you? My mother tells me to drink all I want. She thinks it's good for me." "I wish my mother would say that," replied the first speaker. "She will never let me have but the least little bit. She says she can't afford it." This conversation is of interest because it shows the mistaken ideas of economy which some women have. In the village where these two boys lived, milk was 5 cents a quart. Their mothers had nearly the same amount of money yearly to spend on food; one bought three or four quarts of milk every day and encouraged the children to drink all they wished; the other never bought more than a quart, yet, while she scrimped her family in regard to milk, she supplied pies, cakes, and other less wholesome food lavishly. It is a fact that few housekeepers are as generous with milk as with other food.

Even in farmers' families it is not unusual to find milk used sparingly on the table, while cream never appears except in honor of company. Such housekeepers evidently do not understand the value of pure milk as food. It is now extensively given in illness, many patients being kept alive by its use, as they can digest it when unable to retain anything else. Nearly all children like milk and there is nothing better for them. In a family where milk is constantly and freely used by the children, their supper always consisting of bread and milk, irregularities of digestion are almost unknown. Of course it is of utmost importance that the milk be pure. When it is impossible to satisfy one's self on this point, it is a wise precaution to heat the milk to a boiling point before using. There are also methods of sterilizing milk which render it harmless even when it contains poisonous germs. A true student of economy will deprive her children of pastry and doughnuts, but not of this wholesome food.—Orchard and Garden.

Twenty-second Lake Mills Sale

Lake Mills, Wis., Holstein breeders held their twenty-second semi-annual consignment sale at the Lake Mills sale pavilion October 27, when they sold 75 animals for $15,905, a fair price considering the inclement weather, present unfavorable market conditions, and the fact that no very high record animals were offered.

C. M. Beveridge topped the sale with Aaggie Segis Denver, a springing 2-year-old daughter of a 36-lb. sire and a 31-lb. dam. She was purchased by Andrew Frank of Wisconsin for $700.

Mack, Kelly, and Krause did the selling with Sale Manager F. H. Everson in the box.

Following is a list of all animals selling for $300 or more and buyers of same:

Milford Meadows Stock Farm, Wisconsin	
Primrose Jessie Johanna Inka 2d	$310
S. E. Jones, Wisconsin	
Mutual Fobes of Junction View	$400
Johanna Bessie Homestead Twisk	305
J. A. Craig, Wisconsin	
Mutual Pride Bessie Homestead	$505
Pearl Korndyke Wayne	500
Aaggie Baker Pell De Kol	350
Fred Gurr, Wisconsin	
Eagle Pontiac	$420
John Piper, Wisconsin	
Catalog No. 25½	$355
Geo. Hetts, Wisconsin	
Leon Johanna Piebe	$400
Halsey Sedgwick, Wisconsin	
Pansy Nell Senator Pontiac	$310
A. J. McFarlane, Wisconsin	
Sedgeland Hengerveld Inka Polkadot	$430
Sedgeland Mercedes Homestead	310
Ben F. Berg, Wisconsin	
Sedgeland Hengerveld Mercedes	$655
Roy Bues, Wisconsin	
Pearl Johanna Pontiac 2d	$500
Andrew Frank, Wisconsin	
Aaggie Segis Denver	$700
Daisy Homestead Inka	440
Marion Vale De Kol	325
Owen Mullen, Wisconsin	
King Veeman Oak De Kol	$300
Kilpatrick Bros., Wisconsin	
Princess Lily	$300
H. H. Bridge, Wisconsin	
Matina Colantha Maid	$325

There are only fourteen counties in the state of Illinois which do not have farm bureaus. At a meeting of the Extension Department of the University and the I. A. A. organization department, it was decided that both paries will assist any of these counties which show any amount of interest in organization. It was thought best not to invade these counties and establish farm bureaus without considerable interest shown by the home folks.

Douglas Fir
Northern White Pine
Idaho White Pine
Western Soft Pine

WEYERHAEUSER FOREST PRODUCTS
TRADE MARK REGISTERED IN U.S. PATENT OFFICE

Western Hemlock
Washington Red Cedar
Red Fir and Larch
Norway Pine

AN INDUSTRY IS NO STRONGER THAN ITS SERVICE TO THE PEOPLE

YOU have heard men say that good lumber is scarce. They say that lumber isn't what it used to be, and that we must soon come to use substitute materials.

Do you know how much good lumber there is in this country today? With the possible exception of the hardwoods there is as much good lumber available for construction purposes as there ever was at any time since America became a nation.

There is more standing timber today in the United States than ever was made into lumber since the Pilgrims landed on Plymouth Rock.

An industry is no stronger than its service to the people.

As substantial factors in the lumber business the Weyerhaeuser people wish to render real service to you and to everyone who uses lumber.

Whether you are a home-builder planning a beautiful residence; a workman who wants a couple of boards or a bunch of lath; a farmer building a cow-barn or a corn-crib; or a great industrial corporation specifying 10,000,000 feet in one order—we want you to know the facts about lumber.

To this end we will supply to lumber dealers and to the public any desired information as to the qualities of different species and the best wood for a given purpose.

This service will be as broad and impartial as we know how to make it. We are not partisans of any particular species of wood. We advise the best lumber for the purpose, whether it is a kind we handle or not.

What we advocate is conservation and economy through the use of the right wood in its proper place.

If we could insure your getting the wood you ought to have, it might mean a difference of years in the life and service of the lumber—fifty years perhaps as against a few months. So important is the selection of the right wood or grade of wood for a given use.

From now on the Weyerhaeuser Forest Products trade-mark will be plainly stamped on their product. You can see it for yourself at the lumber yard or on the job after it is delivered.

When you buy lumber for any purpose, no matter how much or how little, you can look at the mark and know that you are getting a standard article of known merit.

WEYERHAEUSER FOREST PRODUCTS
SAINT PAUL · MINNESOTA

Producers of Douglas Fir, Western Hemlock, Washington Red Cedar and Cedar Shingles on the Pacific Coast; Idaho White Pine, Western Soft Pine, Red Fir and Larch in the Inland Empire; Northern White Pine and Norway Pine in the Lake States.

MARKETS

CHICAGO—Butter—Creamery, extras, 62c; standards, 58c; dairy, firsts, 48@60c; seconds, 40@43c.

Eggs—Ordinary, 56@61c; firsts, 57@68c.
Cheese—Twins, 26c; Young Americas, 22½c.

MILWAUKEE, Nov. 12—Butter—Creamery, tubs, 61c; prints, 62c; extra firsts, 58@59c; firsts, 50@52c.

Eggs—Fresh firsts, recandled for city trade, 65@66c; current receipts, country candled, 58@60c; checks, 36@38c; dirties, 42@44c.

Cheese—Twins, 24¼c; Daisies, 23¾c; Longhorns, 25c; fancy, 22c; Limburger, 1 lb., 21c; 2 lbs., 22c.

NEW YORK, Nov. 12—Cheese—Firm; state milk; common to specials, 20@28c; skims, common to specials, 10@20c. Butter—Firm; receipts, 6,695; creamery extras, 64c; state dairy, tubs, 37@62c; imitation creamery prints, nominal.

Eggs—Steady; receipts, 11,207; nearby white fancy, 98@1.00; nearby mixed fancy, 67@93c; fresh firsts, 77@88c.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Ship Your Poultry

to us and get all that it is worth. As we have a high class trade we can get you the highest market price for your poultry, live or dressed.

We paid on November 10th, 1920:

Springs,	live 27c,	dressed 32c
Hens,	live 27c,	dressed 31c
Cox,	live 23c,	dressed 25c
Dux,	live 30c,	dry-pick 40c
Geese,	live 27c,	dry-pick 32c
Turkeys,	live 38c,	dry-pick 45c

Fred Johnson & Co.

338 W. So. Water St. Chicago, Ill.

FOR SALE—(also 2 of his sons)

Glenwood Boy of Linwood A. R. 33109

Two tested daughters. Sire, Langwater Frenchman A. R. Dam, Idea of Alfalfa Farm A. R. 740 lbs. fat. Extra large, well marked and a good handler, 5 years old. Also Bourbon Red turkeys.

Will Mulry, Hixton, Wis.

Dairymen — *Buy Ohio Holsteins*

at L. C. Klein's Reduction Sale

Tuesday, Nov. 30, 1920, Lima, Ohio

Mr. L. C. Kline, Lima, Ohio, will cut his herd in half and offer to the highest bidder

Tuberculin Tested 55 Guaranteed Holsteins

Here are just a few of them:

1. Two daughters (full sisters) of Pauline De Kol Ophelia with 44.52 lbs. butter, 7 days 837.4 lbs. milk.
2. Olga Pender Pietertje 2d, a granddaughter of Pontiac Korndyke, out of a 31.81-lb. granddaughter of Woodcrest Pietje.
3. Inka Pontiac Hilldale, another granddaughter of Pontiac Korndyke with a 2-year-old record of 20.56 lbs. butter, 416.7 lbs. milk.
4. A dandy granddaughter of Changeling Butter Boy.
5. Fifty more cows and bred heifers. Also three good serviceable bulls.

Listen! If you are milking grades or have a pure-bred herd, right now is the time to buy *good Holstein cattle.* Every animal tuberculin tested and sold on a 60-90 day retest guarantee.

Come to Lima. Free transportation from Barr Hotel to Farm

Watch for Wayne Co. Breeders' sale, Dec. 13, 1920, Orrville, O. 75 head, including 20 A. R. O. cows, 20 daughters A. R. O. cows, 7 serviceable bulls out of A. R. O. dams.

Also remember the Seneca Co. Breeders' Sale, Dec. 8, 1920, Tiffin, Ohio. 65 head including Leonard Keller's herd of 25 grade cows, 40 head pure-breds from a number of other herds.

All under management of

Ohio Holstein-Friesian Association

Howard C. Barker, Field Secretary Tiffin, Ohio

WAUPACA COUNTY

HOLSTEIN SALE

More Federal Accredited Herds than any other County in Wisconsin

Fair Grounds, Weyauwega, Wis.

Wednesday, Nov. 24th

(The Day Before Thanksgiving)

50 Choice Pure-breds

42 Females — 8 Bulls

Creditable Records
Superb Quality
Excellent Type

It will pay you well to consider the following: ¶ For instance there are 27 cows and heifers many with A. R. O. records, bred to 26-, 27-, and 29-lb. sons of Sir Pietertje Ormsby Mercedes 37th, the $100,000 bull recently sold from this county. Also some bred to 32-lb. and 41-lb. sires. A large proportion of these cows are due to freshen soon. ¶ There are six nice, large typy cows that will be fresh at sale time. They are real producers as indicated by their records. ¶ There are three dandy young heifers from good cows and sired by valuable bulls. Also there are three mighty good yearling heifers that will look good in your herd. One is a granddaughter of 37th. ¶ If you need a good bull be with us on the 24th and buy a grandson of 37th or one of the other good ones. Practically all are ready for service. Among them you will find a fine, light colored 24-lb. maternal brother to Ponderosa Grace Pietertje Ormsby, Wisconsin State Champion Junior 4-year-old with a record of 35.02 in 7 days. He is sired by a 29-lb. son of 37th. Some bull. ¶ Remember that 14 of the cows are bred to choice high record sons of Sir Pietertje Ormsby Mercedes 37th. ¶ **All animals over 6 months or age sold with the 60 - 90 day retest privilege.**

This sale is the day following the Waukesha and Watertown Sales — *complete the circuit*

For information and catalog write

James H. Dance, Sale Mgr.

Waupaca, Wisconsin

Sale in heated pavilion

Auctioneers: J. E. Mack

Weyauwega is on Soo Line 40 miles north of Oshkosh

F. H. Everson in the Box

Annual Fall Sale
High Grade Holsteins
Cameron, Missouri
Thursday, Dec. 2nd

170 Head of High Class Dairy Cattle Consisting of: —

40 head of fresh cows.
57 head of springing cows.
48 head of 2-year-old springers.
2 big Holstein cows.
1 big Holstein calf.
2 big Holstein bulls.
20 head of Guernseys and Jerseys.

Note — We consider this the best consignment we have ever sold. Many of the mature cows weigh from 1,100 lbs. to 1,400 lbs. with splendid udders.

All Cattle Tuberculin Tested

Sale starts at 10:30 a. m. in our Sale Barn

Best of Railroad Connections

For further information write

Ensign & Derby, Midland Hotel, Cameron, Mo.

Auctioneers: Deems, O'Brien and McCullough

The Holstein Breeders' Sale Co.

will hold their

Second Fall Sale
Dec. 3 and 4, at Fond du Lac, Wis.

It is our policy to sell cattle that have not been worked out, and will make the buyer money.

We will offer a choice draft of 35 head from the W. F. Bielke and Son herd at Fairwater. All under 4 years old with records up to 20 lbs. butter 7 days.

We will sell:

2 — 22-lb. cows.
2 — 20-lb. cows.
3 — 19-lb. cows.
A choice lot of springers for winter milking.
We will offer a fine lot of bulls ready for service.
Including a 29-lb. grandson of Sir Windsor Ormsby Butter Boy.
A 28-lb. grandson of King Mutual Konigen, whose dam has a 37-lb. record.
A 28-lb. grandson of Joe Oak De Kol Fobes.

Watch for further information

S. H. Bird, Mgr. - So. Byron, Wis.

MERIDALE JERSEYS

To make room for new importations we are compelled to sell quickly a number of cows and heifers. They are fully representative of Meridale quality. Many have Register of Merit records. Our accurate records covering thirty-two years of constructive breeding give you assurance of the worth of their breeding.

You can buy to advantage either singly or in carload lots. Write or telegraph — or better still come to see them. Our telegraph station is Delhi. Convenient railway stations are Delhi, Bloomville and Oneonta.

This is one of the Big Events of the year.

Ayer & McKinney

MERIDALE FARMS

Meredith **New York**

Wisconsin
Ayrshire Breeders' Auction

(First Semi-Annual Sales Event)

Sale held at the
Madison, Wis., Live Stock Sales Pavilion
Tuesday, November 30th, 1920

***50 HEAD*— A Carefully Chosen Offering of High Class Ayrshire Breeding Cattle from Wisconsin's Foremost Herds — Cows in Calf, Bred Heifers, Open Heifers, 1920 Heifers, and a Few Bulls.**

Note the following consignors:

Aldebaran Farms, Stephen Bull, Prop., Racine, Wisconsin, include four head of choice young heifers of the right kind of breeding that should prove attractive to buyers.

Edelweiss Farms, Fred Tschudy & Sons, Monroe, Wisconsin, include a few choice young heifers of popular breeding and choice individuality.

J. W. McNab, Black River Falls, Wisconsin, contributes nine head of choice young cows and heifers, all popular in color, extra well bred individuals.

Adam Seitz, Prop., Spring City Herd, Waukesha, Wisconsin, contributes some extra choice quality females that will be an attraction in any herd they go into. Seitz cattle need no introduction. They have spoken for themselves for years. See them at the sale.

A. J. McNab, Black River Falls, Wisconsin, includes five head of good young females due to freshen this winter and spring. He breeds the big boned, good colored sort of popular blood lines.

Mrs. Sever Stavedahl, Brodhead, Wisconsin, includes two choice 1920 heifers and four head of splendid two-year-olds. These heifers are sired by the noted Wisconsin Dairy King, a grandson of Bargenoch Gay Cavalier Imp.

L. C. Streator, Ladysmith, Wisconsin, recently came into possession of the well-known Ferndell herd of Ayrshires. He is contributing twenty females and a few good young bulls, all of which have been inspected by the sale manager and pronounced O. K. in color, blood lines and individuality.

This offering is strictly composed of good, sound, clean cattle sold subject to the severest test and guaranteed to please or no sale.

Wisconsin breeders have repeatedly asked the sale manager to start Ayrshire auctions rolling in this state. A large number of breeders have promised their support.

The sale will be held in the Department of Animal Husbandry's Live Stock Sales Pavilion on the University Farm at Madison, Wisconsin. Remember the date — Tuesday, November 30th.

CATALOGS NOW READY

Write direct to the sale manager at once. Use a post card. Send your own and the names of other Ayrshire breeders you know. Plenty of catalogs for everyone.

Remember this is the first semi-annual Wisconsin Ayrshire consignment sale. Attend the sale, pick out what you want, get acquainted with the breeders and plan to enter some of your own cattle in the spring sale which will be talked over and decided upon at this event.

Address for further particulars and catalogs

Amos Burhans, Ayrshire Sales Manager, Waterloo, Iowa



HOARDS DAIRYMAN JUNIORS



A DEPARTMENT FOR THE DAIRY FARM BOY

Broadening Out

Upon Their Arrival in Thomasville, Ga., Jimmy Writes to the Home Folks

THOMASVILLE, GA.,
AUGUST 29TH, 1920.

DEAR FOLKS AT HOME:—Well, here is your Jimmy, miles and miles away from you all, in the land of cotton, niggers, and mules and, as far as I am able to determine, in the land where people are just beginning to wake to better farming. We have been here nearly a week now, and of course I should have written you before this, but if I had I wouldn't be able to tell you one-half of what I can now. We have been travelling some since getting here, seeing the country and going to places of interest and, believe me, folks, when I say your little red-headed Jimmy will be quite content to stay in Wisconsin, for awhile at least, if he ever gets there again. It never used to mean much to me when as kids in the district school we sang Home Sweet Home. But say, "Be it ever so humble, there's no place like home," 'sgot some meaning to it now. That makes me think, Jerry, and I'm laughing right now about it, too, how we used to, and all the rest of the kids, also, say "womble" for humble when we sang that line. Poor little idiots,



A LITTER OF HAMPSHIRES ON THE RODENBERRY FARMS

we didn't know any better then, but I guess "womble" meant just as much then to us for all we cared, eh, Jerry? But, by jinks, humble's the word for me tonight as I sit here writing this letter.

Now I'm going to keep the experiences about the trip down here until I get home; so this letter will only contain news about our stay in Thomasville, and I guess by the time you get through reading this much you'll be glad to wait to hear the rest. Bob's out tonight. He thinks he's in pretty strong with a little southern dame that we both met at a party we got invited to the other evening. Guess she's interesting enough, but I get awful tired of listening to her drawling talk. And she's so languid, too. (My college dictionary's up in our room, Jerry, in the left hand corner of the second drawer in the dresser. I'll try not to use words that I think you do not all understand, but probably one will creep in once in awhile. So, if any words sound kind of big to you, just get the dictionary. But as I said, I'll try to write so that you will understand everything.)

There was a woman at that party who seemed to take quite a liking to yours truly, but of course as is always my luck with the women, she was married. Anyway, I could see that she was quite interested in me, and before the evening was over she made it a point to corner me, and the first thing she said was this: "You're from the North; I knew it as soon as I met you and heard you talk!" Then she whispered, kind of confidential like you know, "Oh, it does seem so good to hear some one talk who sounds his r's and speaks with some snap. I get so tired of listening to the way these people speak." Of course I guessed she must have come from the North, too, and so I asked her and I found out that she came from Buffalo, N. Y. She spent as much of the evening as she dared to with me (jealous hubby was there, too) and I felt kind of uncomfortable at times because you know these southerners are hot headed. Guess if I had wanted to do my part, there might be a divorce scandal in the southern courts! But thanks to you, dad, and the old willow tree that furnished the backing for you, I know my place when I'm out in society. She was mighty nice, though, and I felt just a bit sorry for her, because I really believe she is lonesome for the North. If she feels like I do tonight, I wouldn't blame her if she packed up and left on the next train.

But, Bob, he's different than I am. He seems to fit in better and he acts perfectly at ease no matter where he is. Must be his home training and his good looks that make him get away so strong. Well, as I said in the beginning, we are stopping in Thomasville. This is a pretty progressive little town of about 8,000 people. It is the county seat of Thomas County, one of the best agricultural counties in the state, according to the people here, and, of course, you'll have to take their word for it. This used to be a great winter resort for the northerners who have enough money to come south for at least a part of the winter. The spacious hotel accommodations are still here, but they have been turned into business blocks and offices. Northern people do not stop here so much now, but go right on through into Florida, where I presume there are greater attractions for this class of people.

We were surprised to find a Wisconsin man, secretary of the chamber of commerce here. And he attended the University of Wisconsin, too. He has made it interesting for us and has taken quite a bit of his time to show us around the country. The one thing that Thomasville boasts about at the present time is a big cow which they all talk about. When I first heard of it, I thought they probably had some kind of a monstrosity. But I soon learned that they meant just a plain, ordinary bull which is owned here by one of the best farmers. Well, he is not so ordinary, either, because he was the winner of the grand championship at the last International Stock Show. His owner is Mr. E. E. Mack of this place. He took us out to see his herd of Herefords one day, and incidentally we saw Bonnie J., the championship bull. Although I am not so interested in beef cattle, I'll have to admit that Bonnie J. is a wonderful animal. So this is what the people mean when they talk about the big cow; too modest to say bull, I guess. Mack's herd of fine Herefords goes to prove that the South can raise cattle successfully. This man Mack is an interesting fellow. We learned a great deal from him about conditions here in general. He has his buildings painted and things fixed up in good shape, and that is a lot more than can be said for the most of them here. He has a silo, too, and he showed us a field of sorghum that was yielding 20 tons of ensilage per acre. His corn was the best I have seen down here, too. When I told him that he said: "That's what manure will do for this soil!"

Mack seems to have solved the pasture problem for this section pretty well. You know that they can't have quite the same pasture crops down here that we have. They don't have our clovers, alfalfa, timothy, and blue grass to work with. Just imagine dad trying to get along without these. You'd say, "It can't be done". Yes it can, and Mack is doing it with great success. He makes a mixture of lespedeza, carpet grass, and Dallas grass. We saw a herd of about twenty Herefords pasturing on, well, I would say anywhere from thirteen to fifteen acres of this kind of pasture. Mack told us that they had been there without any other kind of feed since the latter part of February. It is August now and the pasture is in good condition and the cattle are sleek and fat. Some of them use Bermuda grass but Mack says that this mixture gives him better results. And you should see his lespedeza pasture in the pecan orchard. Just like a carpet, it's so thick and smooth. Speaking of pecans, this is a great pecan section. There are acres and acres of pecan orchards here, and I judge that some of the farmers are making this their main business.

Mack had a lot of calves and yearlings that he is fitting for the International again this year, so I suppose when that is over the natives will have something else to talk about. He has a hog farm, also, which he is just starting. We visited that, too. He had about a dozen breeding sows, Poland Chinas, that he had shipped in from Ohio. It did seem good to see a real hog again after seeing the razorbacks that run wild around here. This place was not as interesting as the other because it is just being started. By the way, Mack is a Wisconsin man. He was born up around Waupaca and he moved down here when a boy. He must have made good because he seems to be interested in the leading banks of the city. He's doing a big thing for the South in the way of better farming and I guess he's opening their eyes some to what can be done down here. They have one big advantage here and that is the weather. You don't have to have buildings that cost a fortune to start with. Mack says that if you work it right there is only a period of about sixty days that you have to feed in the barn. All the rest of the time the cattle can be pastured. And that makes me say right



'TWAS PAT THIS AND PAT THAT

here that the weather is quite delightful. It gets a little hot in the daytime, about noon, but the evenings are nice and cool. It's a lot different than I thought it would be.

Suppose you will be thinking that Mack is the only pebble down here. Well, that's not so for there are quite a few others who seem to be getting away pretty strong. For example, there is the Holman Dairy Farm. This is really a more modernly equipped place than Mack's. Of course, it has to be for he is in the dairy business and that makes some difference. We spent nearly half a day with Mr. Holman. He has a very fine herd of registered Jerseys. They surely were pretty. I asked him why there were not many of the big black and whites down here, and he answered with a twinkle in his eye: "They'd starve down here, boy, it takes too much to fill them up." Holman's a real fellow. We liked him so much that we found it hard to get away. His was the first farm that really made me think of our northern farms. His pastures were fine, too, but he was using quite a little of Bermuda in his.

The Neal Dairy Farm was also interesting in many respects. Mr. Neal has his buildings located right in a pine grove. The only objection I had to that was that it seems too shady for a dairy. He was filling his silo the day we were there, and it was funny enough to watch those niggers working. To begin with, they don't haul the corn from the field the way we do. They just pile all they can get in a three-deep wagon box, call it a load, and start for the silo. I asked Mr. Neal why they didn't really haul loads, and he said: "You can't get a



WE LEFT THEM CUSSING EACH OTHER

nigger to do that." Then he said, as if to turn the subject: "If you want to see something funny, climb up the ladder and take a peep into that silo; it's only about half full." I went first and Bob followed. What do you suppose, Jerry, I saw that was so funny? And it was funny, I assure you all. Eight nigger women lined up 'round the sides of the silo, dancing up and down to the tune of a song they were humming. Think of it, eight people in a silo to pack it. We are lucky if we can get two. Mr. Neal says that it takes that many, because a nigger will do just so much and no more. I'll tell you, dad, this section needs more white men engaged in farming before it will develop very fast. Niggers are too ignorant and irresponsible and too satisfied with what is.

I haven't mentioned Pat Ward yet, have I? Well, I mustn't forget Pat because I want you all to get acquainted with him. Pat is the county agent of Thomas County, and to me he was the most interesting man we met. He is well versed about southern conditions in general and especially about Thomas County, and he doesn't hesitate to tell you what he thinks. I am enclosing a picture of him which Bob took one day when we were out with him. That will give you some idea how he looks but it won't tell you the interesting side of him. Everyone knows him, and it's Pat this and Pat that. You'd think that he was expected to be all there is to know about agriculture, and he is just about that, too, as far as these people are concerned. They keep him busy and I guess they are getting their money's worth out of Pat. He's one of those kind that just takes things as they come, and does what he can with the job that's liable to turn up.

I didn't ask him, but I should judge that he stands a little better than six feet in his stocking feet. He doesn't stand exactly what the military department would call straight, but throws his head forward as if he didn't care when the rest of his body got there. But he can pull himself together about as quickly as anyone when there is work to be done. I don't know why he wears glasses, but I do know that he never looks through them when he is talking to you. His mouth opens and shuts with a determination that makes his listeners feel that when he has spoken he has said all there is to be said about that particular question. He fits in well and I have come to the conclusion that he is just about the ideal type for this kind of work here in the South.

Pat took us out yesterday to a big hog farm located up at Cairo, about twenty miles from Thomasville. This farm is owned by a man named Rodenberry, a kind of banker farmer. Although the farm is not up in good shape, I think that there are wonderful possibilities in it. It must be one of those old cotton plantations. We saw 350 hogs in one feeding lot. It was quite a sight; 350 black hogs with a white band running entirely around the body of each. Can you guess the breed, Jerry? Well, they are Hampshires, and quite attractive, too. The manager says that they have tried several breeds and this one seems to do the best. I am glad that we came out here because again it proves that the South can do things in stockraising.

You will note the picture of the mule and boy driving him that I am enclosing. I thought Bob would laugh his head off at that outfit. The poor little devil was trying to plow out the peanuts growing in between the rows of corn. I don't think that either one had any interest in the job except that each seemed to be trying to outdo the other in being about as ornery as he could. The old mule seemed to walk just where it suited his fancy the best, and the boy followed, paying more attention to swearing and cussing than he did to the kind of job he was doing. We stopped the outfit long enough to get this snapshot, and I don't know whether they ever got started again. We left them cussing each other about what we didn't regard any of our business.

On the way home, we stopped in to see a tobacco farm. I learned some things here I never knew before. This fellow had about 15 acres covered over like the picture I am sending shows. This is to furnish a partial shade for the tobacco while it is growing so that the leaves will be of better quality. It keeps them from getting too thick. I don't mean that this is to stop the leaves developing, but just to keep their tissues thin. The slats you see are only laths strung on the wires that are stretched from pole to pole. It must be quite a job to cover a field like this. The crop you see there now is the second one this year, but it is not a crop of tobacco. Cowpeas have been planted in rows. These will be cut and spread out, then plowed under for green manure. That's another advantage they have down here. Much of the land can be cropped twice a season. We saw a big field of sugar cane growing on this farm, also, in fact that picture of Pat Ward was taken in a field of sugar cane.



TO MAKE THE TOBACCO LEAVES THIN

Oh, yes, and I mustn't forget to tell you that we drove down into Florida to fish in the Gulf of Mexico. We didn't have any luck, though, but it was piles of fun just the same. You should see some of the old timers hanging around those fishing stations. I'll just bet they have never been more than ten yards away from those places all their lives. I'll tell you more about that trip when I see you again. We will be leaving here now in a couple of days. I think we will head for Ashville, S. C. That is a resort town about which we are hearing a great deal, so we think that it will be a good place to make the next stop.

This is the longest letter that I have ever written and I'm getting tired and since you will be just as tired by the time you all get through reading it, I'll just call it quits right here. We both stood the trip well, and we have had a mighty pleasant and instructive week here, but I am sure we will both be glad to see old Wisconsin again. Bob just stepped in and tells me to offer his best to you all, and also that you needn't worry about me wanting to locate down here. He says that I am cured of that wild idea. So here's trusting that you are all in good health and enjoying the new house. With much love to you all, I am

Your son,
JIMMY.

Junior Letters

Hoard's Dairyman Juniors:—I live on a 150-acre farm. We have five horses, twenty-nine cows, eight head of young stock, and two bulls. I have twenty-three chickens, three old ducks and two young ones, and seven pigeons.

We sell all our milk to an old soldiers' home—about 300 quarts a day.

I like to read the stories about Bob Ramsay and Jimmy Green. I wish some of the juniors would write to me and tell me about their ducks or pigeons. My address is Noraton Hts., Conn.
Stanton Wilson.

Hoard's Dairyman Juniors:—I live on a farm of 178 acres. I have a Holstein heifer. She is not a pure-bred but is just as nice. She is now over 9½ years old. We are now milking 28 cows. We have a pure-bred Jersey calf I feed twice a day.

I am going to have some pure-bred White Leghorn pullets. I expect to have about 12 in all.

If any of the juniors want to write to me my address is R. D. No. 1, Homer, N. Y.
Leland J. Baldwin.

Hoard's Dairyman Juniors:—We are milking 11 cows now. Two of them freshened a short time ago and we have a few more to freshen yet.

We have about 70 spring pigs and are going to have three litters of fall pigs.

We filled our silo about a week ago and are cutting the rest of our corn to shred.

I help with the chores each morning and night and milk about 3 cows. My brother and I received a bull calf for helping with the work. He is about three weeks old.

All of our cattle are registered Holsteins and our hogs are pure-bred Chester Whites.
Wisconsin. Orville Martin.

Hoard's Dairyman Juniors:—I live down in the Ozark region on a 208-acre farm. My father is a cattle and strawberry raiser. We have about 35 head of cattle. All of them are thoroughbred Shorthorns except 11 Holsteins and a couple grades. I have interest in the berries of a 12-acre berry patch next spring and then I am going to buy me a calf. I am 13 years old and I am in the 8th grade in school. I wish some of the juniors would write to me. My address is R. R. 1, Goodman, Mo.
J. E. Martin.

Hoard's Dairyman Juniors:—I am twelve years old and am in the eighth grade at school. I have a calf and a pig. My calf is a grade Guernsey; her name is Buttercup. I entered her in the calf club last year. We own 70 acres of land and rent 40 from a neighbor. We have a pure-bred Guernsey bull and fifteen Guernsey cows. We are milking fourteen of them just now. Five of them are grades and the rest pure-breds.

We have about ten acres of orchard in which we grow apples, plums, and cherries, also a few pears; two acres of raspberries, four acres of strawberries, fifteen acres in truck garden, and the rest in general farming. We have two auto trucks and a touring car. I have been reading the junior letters and was very much interested in them. I wish some of the juniors would write to me. My address is R. F. D. No. 5, Oshkosh, Wis.
Ward A. Rasmussen.

Hoard's Dairyman Juniors:—I have been wanting to write but have been very busy helping on the farm.

In your last letter you asked me about my goats and sow. My old goat had twins again but they were both billies so I sold them.

My sow had eight pigs last spring which I expect to sell about Xmas time. My sow got rheumatism so I sold her. I got $17 for her.

We are milking six cows at present.

We have got around 60 pigs and two more sows will have pigs soon.

I would like to hear from some juniors. My address is R. 2, Juda, Wis.
Andrew Mussehl.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

Wanted—Buyers for Wisconsin live stock listed for sale through banks of the state; all breeds and ages. BANKER-FARMER EXCHANGE, 1822 Chadbourne Ave., Madison, Wisconsin. 16-spl

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whit water, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows and young stock by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

Registered Holstein young bulls; farm prices. Sire's three ncarest dams average 28.68 lbs., 4.51 fat. FRANK CLOVER, Loomont, Montana. 3*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Purebred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

High grade Holsteins. Can spare one car load. H. A. KUHTZ, Waukesha, Wis. 7*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Tnoir dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

If you want the very best bred, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves. $25.00 each, I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 16-4

Our greatest Holstein offer in calves. 3 weeks—$22.00. Why pay more? Ask about them. Satisfaction guaranteed. MAPLE LAWN FARM, Elkhorn, Wisconsin. 16-4

For Sale—10 head choice high grade Holstein heifers to freshen from November first to fifteenth. All my own breeding and raising. These heifers from one of the best herd of cows in Lee County. Also a registered Morgan stallion, 7 years old, sound. Has never been beaten in the show ring. A. H. BOSWORTH, Dixon, Ill. 16-3

Holstein bull ready for service, grandson of Wisconsin's only 40-lb. butter cow, 782 lbs. milk in 7 days. $200. ROY HARRIMAN, Appleton, Wis. 17-4

For Sale—9 head registered Holsteins, 6 from 3 to 8 years old, five due to freshen this fall, one unbred, now milking. Price, $1,350. Three calves, 8 to 10 months old, price, $325.00. Well bred, large size, good individuals. For pedigree, etc., write W. EARL AKLEY, De Kalb Jct., N. Y. 17-2

Holsteins. Yearling bulls, sire from a 30-pound daughter, Pontiac Korndyke, $150.00 up. DEWEY PIERSEN, Metamora, Michigan. 17*

Holstein—Registered and high grade heifer and bull calves, 2 to 5 weeks old, crated, $25.00 up. GRAND VIEW FARM, Solon Mills, Illinois. 17-4

Pure-bred Holstein calves, three weeks old, best breeding. Heifers $80.00, bulls $37.00. Shipped C. O. D. subject to inspection. YOHN STOCK FARM, Watertown, Wisconsin. 17-2

Large, young registered Holstein cows and bulls ready for service, out of good record dams, for sale. We always satisfy. DATE HOLSTEIN FARMS, Baroda, Michigan. 16-spl

Choice, registered Holstein bulls, serviceable age, 32-lb. sire, record dams. Send for photo and price. FRANK THOMAS, Delavan, Wis. 16-spl

Keep your money until you see my calves. Beautifully marked high grade Holstein heifer calves at farmers' prices. Registered bull calves, $40. I ship C. O. D. and guarantee safe delivery and satisfaction. J. M. McFARLAND, Watertown, Wis. 17-3

Bull for Sale—Nearly two years old. Dam has eighteen-pound seven-day and 555-pound yearly record as senior yearling. Sire, a son of Pontiac Korndyke. GEORGE CURTIS, Stockton, Ill. 17-2

Registered Holstein cows, heifers to freshen early winter. Open heifers, heifer calves. Priced to sell. Send for catalog. WOODLAWN FARM, Sterling, Ill. 17-2

Holstein heifer and bull calves, pure-bred and high grades, from 3 weeks to one year old. Price from $30 to $75, everything guaranteed. BURGESS & PECOY, Bonair, Iowa. 17-2

For Sale—30 head of large, heavy producing Holstein cows. Also two registered sires. H. F. McNUTT & SON, Oxford, Wisconsin. 17-4

Holstein bull—Serviceable age. Half white, nice individual. Sired by Segis King Johanna. Dam, daughter of Johanna McKinley Segis. Has 40-lb. breeding on both sides of his pedigree. Price, $100. N. HOUSLET, Oxford, Wisconsin. 17-2

Registered Holstein bulls, sired by Sir Aaggie Rag Apple Johanna. $100 and up. L. B. ROESCH, Lancaster, Wisconsin. 18-3

For Sale—Extra heavy producing, entire registered Holstein herd. Not a blemished udder. Bred, sired by 32-pound bull. 37 head females. Price $7,500.00 O. WESTERHEIDE, New Douglas, Ill.

STOCK FOR SALE

For Sale—Five very fine Holstein show bulls, ready for service, A. R. O. dams. Send for descriptions, pedigrees and prices. ORCHARD LAWN FARM, J. W. HOWARD, Genesee Depot, Wisconsin. 18-2

Feed shortage compels me to offer a carload high grade Holstein heifers, mostly springers. Also, half car registered, tuberculin tested cows, some of which have A. R. O. records. Priced to sell. BURKEVILLE STOCK FARM, J. W. Sherrill, Owner, Burkeville, Va. 18-2

We have for sale several grade Holstein bull and heifer calves, also two registered Holstein bull calves, ages two weeks to seven months. Prices $25.00 to $250.00 each. For further details address MILLS DAIRY FARM, W. W. Arnold, Jr., Supt., Manchester, Georgia. 18-4

Dispersal—Twenty choice grade Holstein cows and registered Holstein bull. Necessary account other interests. Mostly fresh and springers. Act quick. LAKESIDE FARM, Mukwonago, Waukesha County, Wisconsin.

170 head extra good dairy cows and heifers in our sale December 2nd. ENSIGN & DERBY, Cameron, Missouri. 18-2

Jefferson County Guernsey Breeders' Association can supply a number of grade heifers, 6 to 15 months old. Also older heifers and cows. New list of registered animals now out. H. A. MAIN, SECY., Fort Atkinson, Wis. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 13*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Entire herd of sixty head May Rose Guernseys, any number to suit buyer. H. A. KUHTZ, Waukesha, Wisconsin. 11-*

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

For Sale—Registered Guernsey bulls and females, with Advanced Registry breeding, at moderate prices. Herd is Federally inspected. Write for list. HELENDALE FARM, Athens, Wis. 17-spl

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-8

Registered Guernsey bulls. All ages. FAIRVIEW FARM, Brodhead, Green County, Wisconsin. 15-4

Three registered Guernsey bulls, nine to twelve months old, from good producing dams. B. L. SNYDER, Bloomer, Wis. 14-spl.

Thirty registered Guernsey bulls on hand. Must sell at once to make room. HARRY GRISWOLD, West Salem, Wisconsin. 15-4

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. Will take note for 90 days. HOMER RUNDELL, Livingston, Wis. 15*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

Registered Guernseys—Males and females. Herd under Federal Supervision and free from disease. Satisfaction guaranteed. CLOVERNOOK FARM, Milwaukee County, Wisconsin. 16-4

15 grade Guernsey cows and heifers, some to freshen in November and December. Tested accredited herd plan. GEORGE HANSEN, South Valley, Otsego, New York. 17-2

Guernseys for sale—Registered bulls old enough for service. Nice ones. RISING SUN STOCK FARM, Samuel Hertel, Prop., Van Wert, Ohio. 17-2

For Sale—My herd of fifty Guernseys. Herd bulls—son of Ne Plus Ultra and Langwater Warrior. The most popular strains represented in the herd. JAMES H. SEAMAN, Glens Falls, N. Y. 17-2

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

In order to make room for registered stock will sell 15 choice grade Guernsey young cows and bred heifers all sired by and bred to registered bull with A. R. backing. Good milkers from heavy milking dams. QUINEILO FARMS, 297 East Water, Milwaukee. 17-2

For Sale—My herd of high grade Guernseys consisting of six cows due soon, seven bred heifers and three yearlings, $1,275 for the lot. MILBURN SURATO, Holt, Michigan. 17-2

Federal Accredited Guernseys—4 high grade cows under 5 years old, good producers, very yellow milk, cheap for cash. GEORGE HOPKINS, Ballston Lake, New York.

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

Sunny Ridge Guernseys—Grade cows, registered bulls from one week to yearlings. Prices reasonable. HARRY COULTER, Randolph, Wisconsin.

For Sale—4 pure-bred Guernsey bull calves, 11, 7, 5, and 3 months, prices $100, $60, $50, and $35. Also registered Guernsey cow, $325. W. E. HARGROVE, Roberts, Wisconsin.

For sale or trade for or on Holstein bull, ten-month-old Jersey bull, Stallion Shetland pony, seven horse power gasoline engine and ensilage cutter. W. J. SMITH, Fairgrounds, Henderson, Ky.

Fine son of Pogis 99th of Hood Farm for sale, bargain—3 years old, sure breeder. Sold only because can't be used on his own daughters. F. S. LOW, Danvers, Mass.

STOCK FOR SALE

For Sale—Bull calf from cow producing 650 pounds of butterfat in twelve months. Price, $150.00. Calf born March 29, 1919, nearly black in color weighing about 750 pounds. Sire, a grandson of Sophie 19th, who holds the world's record for butterfat of all breeds. Dam, a seven-sixteenths Jersey cow weighing about 1,250 pounds. SHERMAN NURSERY COMPANY, Charles City, Iowa. 18-6

Registered Jersey Bulls—$60.00 each. Tested dams. Accredited herd. ELM-O FARM, Austin, Minn.

Jersey bull bargains. SHADELAND FARM, Carroll, Nebraska. 18-3

Jerseys for Sale—Fifteen high grade and registered heifers bred to a grandson of Sophie 19th of Hood Farm. Also three young Guernsey cows. GUY WALKER, Fennimore, Wisconsin. 18-2

STOCK WANTED

Wanted to purchase—One to ten high grade Guernsey heifers that have freshened since September 1st or will freshen before December 31st. Tuberculin tested and guaranteed free from contagious abortion. Reply giving price and breeding to VILLAGE FARM, Grass Lake, Michigan. 17-2

Guernseys Wanted—From 10 to 20 unbred yearling heifers, or would consider the purchase of an entire herd. Stock must be well bred and of good type and priced right. Write L. P. MARTINY, Chippewa Falls, Wisconsin. 18*

Wanted—Car bred Holstein heifers or young cows. Must be good individuals of fair breeding. H. T. WEATHERS, Greenville, Texas.

Wanted—A Holstein bull calf, average 30 lbs. or better; price, picture, details. C. W. FOWELL, Readstown, Wisconsin.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SHEEP

For Sale—Registered Shropshire and Rambouillet rams of quality and breeding. M. R. JEFFRIS, Jeffris, Wis. 5-15

DOGS

German Shepherd, Collies, Old English Shepherd and Airedale dogs, trained farm helpers; puppies; Poland China and Duroc boars. Holstein bulls. Good young cockerels. Rabbits. Send 10c for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 17*

Coon Hounds—Rabbit Hounds. Trial. Photos. Testimonials. Catalogue. KASKASKIA KENNELS, Herrick, Illinois. 18-4

SWINE

Choice spring Hampshire boars sired by junior champion Indiana State Fair 1919 and out of choicely bred sows. Prices $50 to $100 apiece as long as they last. WOODLAWN FARM, Sterling, Illinois. 17-2

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS De Graff, Ohio. 14-8

Poland Chinas for sale. Spring pigs. Large type. Excellent breeding. EXPERIMENT STATION, Ashland, Wisconsin. 18-2

POULTRY

Highest prices paid for live poultry, veal, hides, eggs, butter, pigeons, etc. Quick returns. Fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 11-13

Pure-bred S. C. Brown Leghorn cockerels, $1.50 each. J. AMOS KENNEDY, Rochester, Minn. 17-2

For Sale—Choice Partridge Wyandotte cockerels. F. W. GIBSON, Osage City, Kansas.

HORSES

Registered Percheron mares for sale. A fine pair of blacks, were three years old September 1. Weight about 3,000 lbs. DWIGHT H. BAILEY, Mansfield, Pennsylvania. 17-2

BEES

Italian Bees $12.00 colony. Queens $2.00 each, $11.00 for 6. Poland-China pigs $15.00. MISS LULU GOODWIN, Mankato, Minn. 19*

HONEY

Honey—Finest quality, for sale in 10-, 25-, 50-, or 100-lb. lots at 30c per pound. Bees $12.00 colony. MISS LULU GOODWIN, Mankato, Minn. 4*

Clover Honey—Ten-pound pail $3.00 postpaid first and second zone. Larger sizes write for prices. SCHULTZ APIARIES, Ripon, Wisconsin. 18-3

DAIRIES

Dairy for Sale—40 milch cows, one bull, delivery car, 2 horse wagon, boiler, sterilizer, bottle washer, bottles, cans and everything needed in a dairy. 18 months' lease on 125 acres. 50 acres in cultivation, rest in pasture. Six-room house. Three miles from Wichita Falls, Texas, 50,000 population, and the oil center of Texas. Give possession at once. Milk $1.00 per gallon, 25 cents per quart. Price, $7,000; $4,000 cash, balance in small monthly payments. E. A. DEBUS, Wichita Falls, Texas. 15-4

For Sale—Dairy in southern part of Ohio, retailing 400 quarts milk at 16 cents and goodly amount of cream. Pasteurizer, cooler, rotary filler, clarifier, separator, 20 H. P. boiler, bottles, cases, milking machines, etc. Also wagons, farm machines, five horses, 45 head of cattle and other items too numerous to mention, $12,000.00 Address BOX 458, care Hoard's Dairyman.

For Sale—An excellent, established, retail business, 60 cows, grade Holsteins and Jerseys. Getting 27½ cents per quart for Holstein, 25 cents per quart for Jersey. All feed for winter. Can raise feed here entire winter. Reason for selling, cannot secure competent help. KEYWORTH'S DAIRY, Houston, Tex. 18-2

Wanted—Someone to start a dairy in town of 1,000. We have 9-acre farm adjoining town that would make ideal dairy farm. No other dairy here now. Write CHESTER & DE BOER, Arlington, S. Dak.

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

FARMS WANTED

Farm Lands Wanted—Many Iowans will buy land in other states during the next few weeks. Why not sell your land to one of these buyers? Not long ago the Stoutenberg Land Company, Butterfield, Minnesota, sold three farms in a single day by our plan. Send us a complete description of the land you have for sale, the number of acres, its distance from town and school, what improvements it has, if any; how it is divided into fields; your price, terms, etc., and we will tell you, without obligation on your part, how little it would cost to get in touch with these Iowa buyers. At the same time we will send you our free booklet, "Farm Buyers and Where to Find Them". It will open your eyes. Write today, for the land buying season is on. THE DES MOINES REGISTER AND TRIBUNE, Dept. 47, Des Moines, Iowa. 16-spl

Farms wanted—Must be over 240 acres, productive soil, good buildings and fully stocked. Can handle at once. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

FARMS FOR SALE

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss.

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

For Sale by Owner—420-acre farm in Lake County, Illinois. Best of soil. Good set of buildings including house, two barns and silo. Two miles from town. Price for quick sale $120 an acre. DAVID W. WILLIAMS, Lake Forest, Illinois. 13-6

Farms for Sale—In Trumbull County, Ohio. Any size by a farmer who has had twenty-four years' experience in this section and knows farm values. Write for descriptions. NEAL DUCK, North Bloomfield, Trumbull County, Ohio. 15-4

New York farms for sale—Excellent soil, climate, water. 112 acres, $6,500; alfalfa land, two houses, two barns, running water in buildings. 76 acres, alfalfa land, large good house. $3,500, only $1,500 down. Others. GEO. R. CROSS, 86 Seneca St., Oneida, N. Y. 15-4

20-acre farm, modern house, silo, stock, personal property; 2 miles from Oshkosh; $9,000.00. Also other farms any size. FRANK R. VAN KEUREN, 7 Church Street, Oshkosh, Wisconsin. 17-2

Three hundred-acre farm near Glens Falls, N. Y. Sixty acres woodland. Excellent water supply. Large homestead with modern conveniences. Tenant house. Large barns and out buildings. For particulars write JAMES H. SEAMAN, Glens Falls, N. Y. 17-2

Write today for our bargain farm and land lists. R. R. FORWARD, Duluth, Minn. 17-3

Fine dairy and other farms for sale. Write TRENTCONNER REALTY COMPANY, Fayetteville, Ark. 17-2

New York Farm Agency, Westfield, New York, sells farms. Old folks die at about 100. Have to quit. Opportunity for young men. Come East! 10-spl

Farm Bargains—60 miles Twin Cities. Free list, man. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

Buy Farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and service. Offices throughout the state. Write the CENTRAL OFFICE at Oneida, N. Y., for a brief list and state your requirements. 8-spl

Where dairy farming is profitable—There are localities in the South where, on account of the rapid development of industrial cities and towns, supplies of dairy products are short and prices are high. In these same localities long grazing seasons and winter cover crops cut down feeding costs and all conditions are exceptionally favorable for profitable dairy farming. Good improved farms can be bought at prices much lower than are asked for similar lands in other parts of the United States. Buy a Southern dairy farm now while prices are still low, make money and build up a valuable property. Forr full infromation write to J. C. WILLIAMS, Manager, Southern Railway Development Service, 1302 Pennsylvania Avenue, Washington, D. C. 14-spl.

300-acre stock farm on main highway. Eastern Pennsylvania, 20 miles from Philadelphia. R. R. Station on corner of farm, 28 trains a day. Mansion house and four fine tenement houses. Cow barn —50 stanchions, calf barn, tile silo, horse barn, implement and tool houses, other farm buildings. 15-acre park, fine shrubbery, lake, bungalow. Easy terms. Address BOX 460, care Hoard's Dairyman. 18-2

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin. 13-13

Great Combinations—Best markets, best roads, highest prices for produce, cheapest farms, biggest profits in farming. NEW YORK FARM AGENCY, Westfield, New York. 18-spl

For Sale—80-acre irrigated farm, ideal for dairyman, in Carlsbad Project, N. M. Forty acres in alfalfa, hundreds of trees, well, windmill, cement tank, house requiring renovating for residence. Distance to Otis railroad station, ¾ mile. Good schools, good roads, climate delightful. Price $16,000—half cash, balance, interest 6%. Payments first year, interest only, thereafter four equal annual installments. Mineral right on one forty reserved. Address L. F. DIEFENDORF, Owner, Carlsbad, New Mexico. 18-2

Oklahoma farms. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Oklahoma.

For Sale in Clark County, Wisconsin: 80-acre farm, 75 under plow, 5 acres timber. 1½ miles to town and high school, ¾ mile cheese factory. 2 silos, good buildings. 18 registered Holstein females, herd sire, horses and machinery. Terms easy. LOCK BOX 123, Granton, Wisconsin. 18-6

Farm Bargain—120 acres in Midland County, Michigan. Good soil, large house and barn. Silo, stone road to Bay City and Saginaw. Requires $3,500.00 cash. Write EDWARD HESSE, 590 Gratiot Avenue, Detroit, Michigan. 18-2

300 acres, $4,500 with horses, cattle, tools, crops. Large quantity hay, corn, oats, potatoes, apples, etc.; carry stock and family through winter; magnificent stock farm, near town; cuts 75 tons hay; 40-cow spring-watered pasture, 1,000 cords wood, 300,000 ft. timber, high-priced market nearby, big income this winter; 225 apple trees, 1,000 sugar maples, sugar house, evaporator, etc.; 10-room house, maple shade, delightful view; several barns; owner called distant state, $4,500 takes all, part cash, balance easy terms. Details page 12 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

Southwest Missouri dairy farm, 100 acres eight miles from Springfield, 8-room house, large barn. Fine, never failing spring, running water through pasture. Offered now at $80.00 per acre. Other dairy and stock farms for sale. If interested write NATIONAL LAND & INVESTMENT CO., (Wm. C. Cornell, Mgr.) Springfield, Missouri.

Michigan farm for sale, one of the best diversified 560-acre farms in the best section of Michigan producing large crops of small grain, corn, beans and sugar beets. Rich, level, chocolate loam soil, well fenced and improved. Will sell with or without personal property. The live stock consists of 60 head of pure-bred Holsteins, various ages, 10 work horses, lot of Hampshire hogs and miscellaneous poultry. Farm is located one mile from good town with two railroads and two elevators convenient to Saginaw and Detroit. For full particulars as to price, etc. Address BOX 472, care Hoards' Dairyman.

FARMS FOR RENT

Wish to correspond with party who would be interested in a share proposition in raising pure-bred Durocs and Holsteins. I have all the necessary buildings, feed, etc. Can furnish part of the stock if desired. R. F. JOHNSON, Assumption, Ill. 16-3

WANTED TO RENT

Experienced farmer and son want to rent a farm where land and buildings are good, where stock is furnished; or would consider a salaried proposition. WILL KENNEDY, Baraboo, Wisconsin.

Working manager of 200-acre dairy farm wants share proposition with owner of large, modern farm, agricultural graduate, 34, active, on the job, responsible; understands feeding and care of dairy stock, care and cultivation of various soils and crops, familiar with all farm machinery, tractors, gas-engines and trucks. 10 year's experience, four with present proposition, want larger proposition. You have the capital, I have the experience and ability, let's get together. Will locate anywhere. Address BOX 457, care Hoard's Dairyman.

MACHINERY

Want the cheapest, handiest belt power? Then ask about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Wilsins, Kansas. 16*

For Sale—At a bargain. My entirely new Ann Arbor Fly Wheel Silo Filler complete with Blower and Distributor Pipe (never used). Cost me $485, will sell for $325 to move quick. Address BOX 102, Fond Du Lac, Wisconsin. 17-6

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00; 500 pounds capacity, $34.00, 700 pounds capacity, $40.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

A. P. Double end bottle filler and bottle washer. Both as good as new. Half price for quick sale. J. H. ALLENSWORTH, Amsterdam, Ohio. 18-2

Nine Hog Motor, never used. Price $90.00, sacrifice for $50.00. Make brood sows grind their own feed. FLOYD HARRIS, Mantorville, Minn.

Sharples Tree, Perfection, Empire milker units. Prices. Bargains, electric motors. FELIX LUIS, Stockton, Illinois.

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking. "The Tobacco of Real He-men." 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 18-4

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Get-Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf



Advertising in this department is 7c per word. Remit in advance.

POSITIONS WANTED

Farm manager with energy, push and proven ability desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Married man, age 28, with proven ability wishes position as manager or herdsman. Broad experience with registered cattle. Experienced in both official and semi-official work. Best of references. Prefer position in Iowa, Minnesota or Wisconsin. Kindly state conditions and salary in your first letter. Address BOX NO. 177, Sta. A., Brookings, S. Dak. 17-4

Experienced dairyman wishes position on thoroughbred dairy farm. Am not a college graduate, but have had experience. Am a widower, 46 years of age. Have used a Sharples Milker. Able to take complete charge of handling men on a farm. Address A. G., 1006 West 24th St., Milwaukee, Wis.

Experienced farm foreman with lifetime practice, and technical training in dairying, desires the work of developing a first-class farm, and herd. Single, age 30, a competent workman, and prepared to assume responsibility. Would like to learn of an opportunity South. Address BOX 463, care Hoard's Dairyman.

Young married man wishes position March 1 as manager of dairy farm. Ten years, experience with both pure-bred and grade dairy cattle, and over two years' training in the College of Agriculture, University of Wisconsin. Address BOX 462, care Hoard's Dairyman. 18-4

Wanted—Position milking and feeding cows on official test in barns with modern conveniences. Can give best of references. Guernseys or Jerseys only preferred. Will go in any state. I am American born, Scotch descent, age 39. When answering this ad please state conditions and salary for a man who can produce the goods. F. Y. SAMPSON, Sunbury, Ohio.

Farm Manager; college training; life experience all lines farming and dairying. Thoroughly conversant with all kinds farm machinery, tractors, gasoline engines, etc. Commercial proposition preferred. Address BOX 468, care Hoard's Dairyman.

Want a position as manager of dairy or stock farm, wages or salary. A. F. GREEN, Goldsboro, N. C. 18-2

Position wanted as manager of modern farm, American, Protestant, married, one child, 40 years old, 22 years in present position. Life-time experience in general farming, stock raising, fruit growing, farm accounting, and have carried out extensive plans under landscape gardener. Have had six winters at different agricultural colleges. Excellent references. Only high class proposition considered. Address BOX 469, care Hoard's Dairyman.

Wanted—Position as herdsman or assistant on up-to-date dairy farm. Four years practical experience with registered Holsteins, making A. R. O. records, also calf raising and abortion cases. Write full particulars and wages paid in first letter. NORMAN K. DYKE, R. 2, Box 137, Kingston, N. Y.

Danish gentleman, 42, married, seeks position as superintendent of gentleman's estate; life experience, thoroughly skilled in all branches of scientific farming, up-to-date rotation for dairy herd, live stock and pig breeding. Good organizer on large scale and used to modern labor saving machinery; first-class references. Address BOX 470, care Hoard's Dairyman.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

Alfalfa hay for sale. A. B. CAPLE, Route 3, Perrysburg, Ohio. 17-4

For Sale—80 tons timothy and clover hay, A-1 condition. T. W. CLARK, Poplar, Wisconsin. 17-3

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

MISCELLANEOUS

Silverware—26-piece set William Rogers, worth $10.00. Price, $4.75. HYMAN, 1720 Hartshorn, East Cleveland, Ohio.

U. S. Government wants Railway Mail Clerks. Particulars free. FRANKLIN INSTITUTE, Dept. E-121, Rochester, New York. 18-2

POSITIONS WANTED

Manager—Desires position on high class dairy farm or estate. Married, small family, middle age, college trained, life experience. Advanced Registry work, and breeding high class dairy cattle a specialty. Address BOX 454, care Hoard's Dairyman. 17*

Thoroughly experienced dairyman, single, wants position on a first-class dairy. Address BOX 466, care Hoard's Dairyman.

HELP WANTED

Wanted—First-class working manager. 200-acre dairy farm near Chicago. Herd of Holsteins. Buildings and equipment modern and up-to-date. Give full particulars regarding nationality, age, family, experience and references, also compensation. Address BOX 467, care Hoard's Dairyman.

Wanted—Good, reliable married men to farm on shares. Owner and tenant to furnish stock and seed each half, and divide profits equally. Only experienced farmers, willing to work, will be considered. References required. Apply OSCAR OLSON, Dousman State Bank, Dousman, Wis. 12*

Experienced man for general dairy farm work. $60.00 to start. LEE P. GRANT, Bloomville, N. Y. 12*

Wanted—Two or three good farmers and milkers. Hollanders preferred. Am operating 240 acres of land and 50 A. R. O. Holsteins. Must be reliable and dependable. State wages, etc. in first letter. Will offer a partnership after two years' faithful service. C. A. PARKS, Assumption, Illinois. 16-3

Wanted—Experienced test feeder and milker in Holstein herd. Married or single. State ability, reference and wages first letter. MAPLE LAWN FARM, Assumption, Illinois. C. A. Parks, Mgr. 16-3

Wanted—Several maids at once at Wisconsin School for the Blind. J. T. HOOPER, Supt., Janesville, Wisconsin. 17-3

Wanted—Married man, no children, wife willing to help with housework, farm experience required; man to be experienced dairyman and poultryman, agricultural college training preferred. State experience, give references, and salary expected which will include board. Address BOX 464, care Hoard's Dairyman.

Wanted—Experienced man on milk wagon. $100.00 per month, and if stay six months a bonus of $20.00. MRS. ROBERT M. PRITCHARD, Box 186, Hibbing, Minn. Phone 377 W.

Wanted—Capable and trustworthy farm manager for large institution farm. Single man preferred. Address BOX 459, care Hoard's Dairyman.

Wanted—A competent, reliable, working foreman on dairy farm. Address BOX 461, care Hoard's Dairyman.

Wanted—Single man as assistant herdsman for a Guernsey herd near Pittsburg, Pa. Must be a good milker of good character and a willing and neat worker. State all particulars and wages expected with board and room. References required. JOHN J. COSTOFF, Beechwood Farms, Sharpsburg, Pa. 18-2

Wanted—Dairyman to build up herd—one who understands feeding. Single man preferred. State salary expected. Give experience and references. INDIANA STATE SANATORIUM, Rockville, Ind. 18-2

Wanted—Single man for general herd and A. R. Guernsey work in Wisconsin. Experience unnecessary. Under personal supervision. Character references desired. Address BOX 465, care Hoard's Dairyman. 18-2

Wanted—Practical farmer with large family of boys for one of the best diversified 1,200-acre stock and grain farms in the best county in Michigan. This is a modern farm with herd of 50 registered Holsteins, 150 head of beef cattle. Personal property and live stock valued at $50,000.00. Would consider selling half interest and working farm on shares for period of five years. Address BOX 471, care Hoard's Dairyman.

Wanted—Herdsman for herd of pure-bred Guernseys on farm forty miles north of Chicago. Have cows now on test, more to go on during winter and spring. Must have knowledge of butter making and be able to follow instructions. Agricultural school training not a drawback, neither is it essential. Must be single, Protestant and willing to work with test cows on test cow hours. To start now, will pay $75.00 a month and board to start. Address MR. B., care H. T. Crawford & Co., Waukegan, Illinois.

Many Separators in Kansas

HOARD'S DAIRYMAN:—A good indication of the hold which dairying is obtaining in the agriculture of Kansas is contained in the fact that cream separators are in use on three out of every five farms in the state. This was determined by a recent study by the state board of agriculture of the assessors' returns for the present year.

On March 1, there were 94,556 separators in the state, which is an increase of 35 per cent in the number in the last five years. An average of about 5,000 separators a year have been purchased by Kansas farmers during this period. Reno county leads the others in the number of separators with 2,124. Eleven other counties reported more than 1,500 of these machines.

J. C. Mohler, secretary of the Kansas State Board of Agriculture, ascribes the large number of separators in use both to the rapid development of dairying and to the constantly increasing tendency of farmers to employ more machinery in their work.

Kansas. F. M. CHASE.

Coming Events

Dec. 9-11, 1920—International Farm Congress meets at Kansas City, Mo.

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

NULIFE

Pure Sugar Cane Stock Feeding

MOLASSES

Makes more milk. Puts more fat on steers, horses, sheep, and hogs in less time. Feed *NULIFE* pure sugar cane molasses with all your roughage and grain.

If your dealer can't supply you, send us his name and *Order Direct,* 55 gallon barrels—25c per gallon—$13.75 per barrel *F. O. B. Chicago.* Pamphlet on *Feeding Facts Free. Prompt shipment. Order Today.*

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10 Cents

WORTH OF COMMON ORDINARY **KEROSENE** or **Coal Oil** will keep this lamp in operation for **50 HOURS** and will produce

300 CANDLE POWER

of the purest, whitest and best light known to science. Nothing to wear out or get out of order. Simple. Safe. Absolute satisfaction guaranteed. Send for catalog showing lamps for every purpose; also special introductory offer and agency proposition. Write today.

No Wicks to Trim
No Smoke
No Smell

KNIGHT LIGHT & SODA FOUNTAIN COMPANY, 363 Knight Bldg. Chicago

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Practical Low Cost **Sewage Disposal**

You can provide your home with all sanitary convenience—baths, toilets, etc.—by use of HYDRO-KAUSTINE SEPTIC TANK and system. This most efficient device, with a little tiling, gives you a most effective sewage disposal outfit for home, school, factory, or other rural building. It is buried; no odors; no vermin; no attention; no cost. Design is government-approved; built of enameled Armco iron. Contsruction and operation both Guaranteed.

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But see for yourself how easily, inexpensively sewage disposal can be secured. Ask for Free Booklet H. D.-4. State whether for home or public building and give number of occupants.



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Finely Ground

Raw Rock Phosphate

increases the fertilizing value of manure 60%.

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get particularly good returns from money invested in **rock phosphate.**

The car supply is much improved and we can now make immediate shipment. Write for our prices and free booklets.

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DALY FOOD STOCK FEED **MOLASSES**

$11.00 FOR 50 GALS

Best and Greatest Stock Feed ever discovered. Equal to corn and cheaper. Barrels weigh 615 pounds, over 50 gallons. Big feeders using 60-barrel car lots cheaper. Can be mixed with roughage to replace grains. Will ship sight draft to bill of lading payable on arrival at your station. Sample and book free.

THE J. J. GARVEY COMPANY, DEPT H, NEW ORLEANS, LA.



Exchange Pennies for Dollars

It pays to invest in cow health. The cost of a package of Kow-Kare, the great cow medicine, is measured in cents; the increased milk income from a healthy cow is reckoned in dollars.

Kow-Kare enjoys a quarter-century record of leadership in the prevention and successful treatment of all cow ailments due to weakened digestive or genital organs, such as Barrenness, Retained Afterbirth, Lost Appetite, Scouring, Bunches and Abortion. The Kow-Kare treatment is inexpensive but produces prompt and visable results. One trial will convince you.

Buy Kow-Kare from feed dealers, general stores or druggists.

KOW-KARE



70¢ and $1.40 Sizes

DAIRY ASSOCIATION CO.
LYNDONVILLE, VT.

NOTE: The Trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of BOTH the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.

CHIEF STEEL EQUIPMENT

The Best For Modern Farms

Farm necessities that are in greatest demand. Famous for their value, permanence and saving of labor, time and money. Chief Steel Equipment will pay you big dividends on YOUR FARM.

Chief Cupolas The most modern in design, and best in workmanship, and absolutely necessary to insure healthy hogs and stock. Chief Cupolas make correct ventilation an assured fact. Pure air costs nothing---but returns big profits.

Chief Sunshine Hog House Windows

Sunshine in the pens. That's the secret of successful hog raising. Your hogs can't thrive and grow cooped up in dark, damp, foul pens. Install **Chief Roof Windows,** and give your pigs a chance to make money for you.

Investigate the complete Chief line. Every article made of galvanized Keystone copper steel, rust and rot proof.



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Tell us what you are interested in. We'll send our catalog with full information. Also, on request, four modern hog house blue prints. Write today.

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Keep Tab on Your Cows

Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. **Hoard's Dairyman, Fort Atkinson, Wis.**

Hood Farm Abortion Remedy
and
Hood Farm Breeding Powder
Will Check and Prevent
ABORTION

If you are having trouble from abortion, order these two Remedies at once, give them a thorough trial and we are sure that you will be pleased with the result.

Chemung, N. Y.

Gentlemen:—For the enclosed five dollars please send me the Abortion Remedy and Breeding Powder. Have had splendid success with your Remedies. No more abortion.

PHIL WYNKOOP.

PRICES: Abortion Remedy, prepaid, $1.25, $2.75 and $9. Breeding Powder, prepaid, $1.15, $2.75 and $5. Injection Tube, by mail, 90 cents. One medium Breeding Powder, one medium Abortion Remedy, one Tube, prepaid, $5.75. Please mention this paper.

C. I. HOOD CO., Lowell, Mass.

DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.



Write for free booklet with guarantee and letters from farmers and dairymen

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28 Jeff St. Lancaster, Wis.

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Send postcard NOW for this wonderful free book "How to Breed Live Stock." It's a revelation! Discloses amazing secrets of animal breeding!

Learn how to prevent abortion--why so many animals fail to breed --how to care for breeding animals--why so many animals die at birth. Many other chapters just as important. Book shows pictures of breeding organs. Also tells of our famous course in animal breeding--the course that has taught hundreds how to increase live stock profits and to prevent costly mistakes. Learn in your spare time at home. Free book will astound you! Don't miss it! Send postcard NOW!

NATIONAL SCHOOL OF ANIMAL BREEDING
Dept. 411-A Pleasant Hill, Ohio

ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis



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DOG DISEASES
And How to Feed
Mailed free to any address by the Author
America's Pioneer Dog Medicines
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Don't Wear a Truss



Mr. O E. Brooks

Brooks' Appliance, the modern scientific invention, the wonderful new discovery that relieves rupture, will be sent on trial. No obnoxious springs or pads.

Brooks' Rupture Appliance

Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. Sent on trial to prove it. Protected by U. S. patents. Catalog and measure blanks mailed free. Send name and address today.

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Fistula 10,000 horses successfully treated last year with **Poll Evil**

Fleming's Fistoform $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Fistula and 200 other Horse and Cattle Diseases.

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ABORTION IN CATTLE



CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Removing the Afterbirth

When a cow does not promptly expel her afterbirth the owner usually resorts to one or the other of several popular remedies, none of which can be considered reliable. The old Irish treatment is to give the cow her own first milk or colostrum, a practice that does not quite meet with the approval of those who like to make and eat biest cheese or bestyn pudding, which is a product of such milk. Another plan is to hang a weight on the protruding afterbirth, a practice that must be considered highly detrimental. Others let the cow eat six or eight quarts of whole oats at one meal when the afterbirth is retained and consider such treatment effectual; while a more sensible plan is to inject a mild antiseptic solution into the vagina at intervals of six hours until the afterbirth is expelled. To the latter plan we have no objection, but the other treatments mentioned do not seem to have any certain effect. Neither do internal remedies cause expulsion of the afterbirth.

Understanding from what has been said in a previous article that the villi of the chorion have not loosened in the crypts of the cotyledons of the womb, the necessity of manual removal of the afterbirth becomes apparent. If expulsion does not occur inside of 48 hours, after two gallons or so of bloodwarm water containing a heaping teaspoonful of table salt have been injected into the vagina at intervals of six hours, a trained veterinarian should be employed to remove the membranes. On no account should a non-expert do the work, for it is dangerous and if improperly done may ruin the cow for future usefulness.

The operation is performed as follows: After injecting into the womb a mild antiseptic solution the veterinarian puts on a thin rubber glove on his cleansed and disinfected hand, introduces it and squeezes gently each cotyledon in turn to rid it of some of its blood and so loosen the villi. Simultaneously a finger is inserted between the afterbirth and cotyledon and used to strip away the membrane. If the operation has been long delayed some of the cotyledons may come off during the work. This is inadvisable and to be prevented so far as possible. After the cotyledons of the main chamber of the womb (fundas) have been stripped clean the afterbirth running down into a horn of the womb is pulled upon to bring up more cotyledons which are stripped in turn. When as many as possible have been freed of afterbirth the veterinarian then flushes out the womb with a mild antiseptic solution, such as a 2 per cent mixture of Lugol's solution and water introduced by means of a return flow catheter. This is done until the fluid comes away clear. We also believe in swabbing the womb with absorbent cotton saturated with the antiseptic solution. The final step is to insert and leave in the womb a gelatine capsule containing iodoform and boric acid.

The old fashioned plan was to insert all the fresh, unsalted lard the hand could carry into the womb and this treatment had its good effects. Afterward the vagina should be flushed out daily with antiseptic solution and if the cow is a fine animal it will pay to have the veterinarian treat the womb a few times until found healthy. If the work is not well done, or done in such fashion that infection occurs, pyometra and sterility will result.

Barrenness

We have a heifer that freshened with her first calf last November. We delayed breeding, thinking it would give her a chance to grow. She came in heat regularly until the last two months. I have not seen her show any signs. We have not had any bull around the herd so I am certain that she is not with calf.

Nye, Wis. B. H. W.

As soon as possible have a trained veterinarian treat her womb and ovaries. That will be most likely to bring on a period of heat. Meanwhile syringe out her vagina daily with lukewarm water containing a heaping teaspoonful of salt to the quart and feed her generously on oats.

Blood in Milk

We are having trouble with a herd of 18 head of dairy cows. All of them gave bloody milk but 3. The only place we can find it is in bowl of separator. Every cow seems in perfect health giving a good flow of milk and eats everything you give them.

Orlando, Fla. W. A. S.

One cow may be to blame for the entire trouble. Set a sample of milk from each cow in separate sterilized vessels. By this means you may be able to detect the affected cow. It may be a heifer that recently has had her first calf, or a cow suffering from chronic mammitis, or one that has growths in a teat which bleed from irritation at milking time. Red color of milk may also be due to the bacillus prodigiosus, a germ existing in milk utensils.

Pining Cow

I have a fine cow which last year gave five gallons of milk a day. Last April she freshened again before grass came and gave four gallons a day. Two months later she started falling off in milk. Every few days she would have a spell of staggering as though she were drunk. She appeared very nervous during these spells. She kept falling off in milk until now she only gives about 3 quarts of milk daily. Does not have any more spells now but is still very thin in flesh.

Mattoax, Va. L. A. L.

Both cow and calf probably are afflicted with tuberculosis. You might as well kill the calf at once and make a careful examination and report findings to us, if you cannot have a qualified veterinarian present at time of examination. You should also have the cow tested with tuberculin and dispose of her according to state law, if she reacts. Meanwhile keep her isolated and do not use the milk. If she proves to be tuberculous you should cleanse, disinfect, and whitewash the stable. If she is not tuberculous she may be afflicted with traumatic pericarditis caused by swallowing a sharp object such as a wire, nail, or pin. Infection of the womb would be another possible cause.

The Corn Song

Heap high the farmer's wintry hoard!
Heap high the golden corn!
No richer gift has autumn poured
From out her lavish horn!
So let the good old crop adorn
The hills our fathers trod;
Still let us, for His golden corn,
Send up our thanks to God!

Let other lands, exulting, glean
The apple from the pine,
The orange from its glossy green,
The cluster from the vine;
We better love the hardy gift
Our rugged vales bestow,
To cheer us when the storm shall drift
Our harvest fields with snow.

Thro' vales of grass and meads of flow'rs
Our ploughs their furrows made,
While on the hills the sun and showers
Of changeful April played.
We dropp'd the seed o'er hill and plain,
Beneath the sun of May,
And frightened from our sprouting grain
The robber crows away.

All thro' the long bright days of June
Its leaves grew green and fair,
And wav'd in hot mid-summer's noon
Its soft and yellow hair.
And now, with autumn's moon-lit eves,
Its harvest time has come,
We pluck away the frosted leaves,
And bear the treasure home.

Let vapid idlers loll in silk
Around their costly board;
Give us the bowl of samp and milk,
By home-spun beauty poured!
Where'er the wide old kitchen hearth
Sends up its smoky curls,
Who will not thank the kindly earth,
And bless our farmer girls!

(From the notebook of student at the Wisconsin Short Course of 1897, Author Unknown.)

Sale Announcements

Nov. 19—Guernseys. Guernsey Cattle Club of Van Wert Co., Ohio. M. S. Myers, Secretary, Van Wert, Ohio.
Nov. 19—Holsteins. Skaalen's Home for the Aged, B. J. Larson, Supt., Stoughton, Wis.
Nov. 19—Holsteins. Jefferson County Holstein Breeders' Consignment Sale at Lake Mills, Wis. A. F. Gafke, Jefferson, Wis., Sec'y.
Nov. 20—Holsteins. Sheboygan County Sale at Plymouth, Wis.
Nov. 22—Holsteins. Waukesha County Holstein Association Sale at Waukesha, Wis., W. L. Baird, Sec'y.
Nov. 22—Holsteins. Leavenworth County Breeders' Herington, Kansas. W. H. Mott, Sales Manager.
Nov. 23—Guernseys. J. Harlan Frantz, Waynesboro, Pa.
Nov. 23—Guernseys. Mankato, Minn. Dr. M. B. Wood, Sale Mgr.
Nov. 23—Holsteins. Watertown Holstein Sales Co., Semi-annual Consignment Sale at Watertown, Wis. Francis Darcey, Manager.
Nov. 23—Holsteins. Dr. Blackburn's Sixth Annual Consignment Sale at Cuba, Ohio.
Nov. 24—Holsteins. Waupaca County Holstein Sale, Weyauwega, Wis. James H. Dance, Sale Mgr., Waupaca, Wis.
Nov. 26—Holsteins. Macoupin County Breeders' Sale, Shipman, Ill.
Dec. 1—Holsteins. Stephenson Co. Hol. Ass'n. Sale at Freeport, Ill. R. N. Thompson, 130 N. Wells St., Chicago, Ill., Field Sec'y.
Dec. 2—Holsteins. Effingham Co. Hol. Ass'n. Sale at Effingham, Ill. R. N. Thompson, 130 N. Wells St., Chicago, Ill., Sec'y.
Dec. 3-4—Holsteins. Holstein Breeders' Sales Co., Fond du Lac, Wis. S. H. Bird, Secretary.
Dec. 7—Holsteins. D. V. Whiteleather Dispersion at Columbia City, Ind. F. G. Johnston, Columbus, O., Sale Mgr.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.

Corn Cannery Refuse

HOARD'S DAIRYMAN:—The canning of sweet corn is now an important industry and it leaves a large quantity of refuse, consisting of shucks, cobs, and other portions of the corn plant, as well as imm-ture and overripe ears or ears that have been spoiled from any cause. Large amounts of this material have been fed in the past but in some districts a considerable proportion of it has been allowed to go to waste. Recently the interest in this material has been increasing and many questions are now asked regarding its value. In view of the lack of information regarding its use as a feed for live stock a digestion trial was undertaken in the Dairy Husbandry Section of the Iowa Agricultural Experiment Station. Such a test does not give all of the information necessary regarding a feed but the results obtained show the need of giving greater attention than is at present devoted to the utilization of this product which is too often wasted.

The digestion trial was conducted with two cows which were fed for a time on corn cannery refuse as the sole ration. The refuse was obtained from a local factory and was about two days old when used. It had generally fermented to some extent, had an offensive odor, and was not in first class feeding condition. It consisted largely of shucks of the sweet corn as the spoiled ears and cobs went into separate piles.

Table I—Composition, Digestibility, and Digestible Nutrients of Corn Cannery Refuse

Nutrients	Composition %	Digestibility %
Moisture	83.28	
Dry matter	16.72	31.9
Crude protein	1.32	7.7
Nitrogen-free extract	9.17	39.9
Crude fiber	5.02	24.4
Crude fat	.34	42.5
Ash	.87	

The amount of dry matter present in the corn cannery refuse was small, only 16.72%, and but 31.9% of this was digestible. The nitrogen-free extract was the most abundant constituent of the dry matter, constituting more than one-half of it.

A better appreciation of the value of the corn cannery refuse can perhaps be obtained by comparing it with corn silage. For this purpose the values for corn silage and corn are taken from Feeds and Feeding, by W. A. Henry and F. B. Morrison.

Table II—A Comparison of Corn Silage and Corn Cannery Refuse

Nutrients	Digestible nutrients in 1 ton Corn silage Lbs.	Cannery refuse Lbs.	Cannery refuse and 5 bus. corn Lbs.
Dry matter	348	106	357
Crude protein	22	2	23
Carbohydrates	300	98	291
Fat	14	2	15
Total	354	104	348

If the corn cannery refuse is compared directly with corn silage, it does not appear to be of much value as it contains about one-third as much total digestible nutrients and only one-tenth as much digestible crude protein as does the corn silage. If, however, five bushels of corn, which is the average amount contained in one ton of silage, be added to a ton of cannery refuse, it is found that its feeding value is then practically the same as that of a ton of silage.

This gives a good indication of the relative value of the corn cannery refuse and shows that it should not be wasted. Dairymen who are located near corn canneries will find the refuse a valuable source of succulence. Many are using it at the present time though it is frequently handled in a haphazard manner. Some allow it to lie in dumps as it comes from the cannery but this is wasteful as a large amount of the material spoils; others put it up in more regular piles and this reduces the surface waste to a considerable extent; still others put it in the silo and this is undoubtedly the most satisfactory method of saving it.

A. C. MCCANDLISH.
Iowa College of Agriculture.

Bulletins of the Week

Use of Synthetic Diets in the Growth of Baby Chicks, by E. B. Hart, J. G. Halpin, and H. Steenbock. Reprint from The Journal of Biological Chemistry, Vol. XLIII, No. 2, published with permission of director of Wisconsin Experiment Station, Madison, Wis.

Experiments in Farming, by H. L. Russell and F. B. Morrison. Bulletin 319, Annual Report of the Director of the Wisconsin Experiment Station, Madison, Wis.

Better Seed Corn, by C. P. Hartley. Farmers' Bulletin 1175, U. S. Dept. of Agriculture, Washington, D. C.

A System of Farm Cost Accounting, by C. E. Ladd and Jas. S. Ball. Farmers' Bulletin 572, U. S. Dept. of Agriculture, Washington, D. C.

Control of Corn Rots by Seed Selection, by J. R. Holbert. Circular 243, Illinois Experiment Station, Urbana, Ill.

Practical Pointers on North Dakota Farming, by W. C. Palmer. Circular 40, Agricultural College, N. D.

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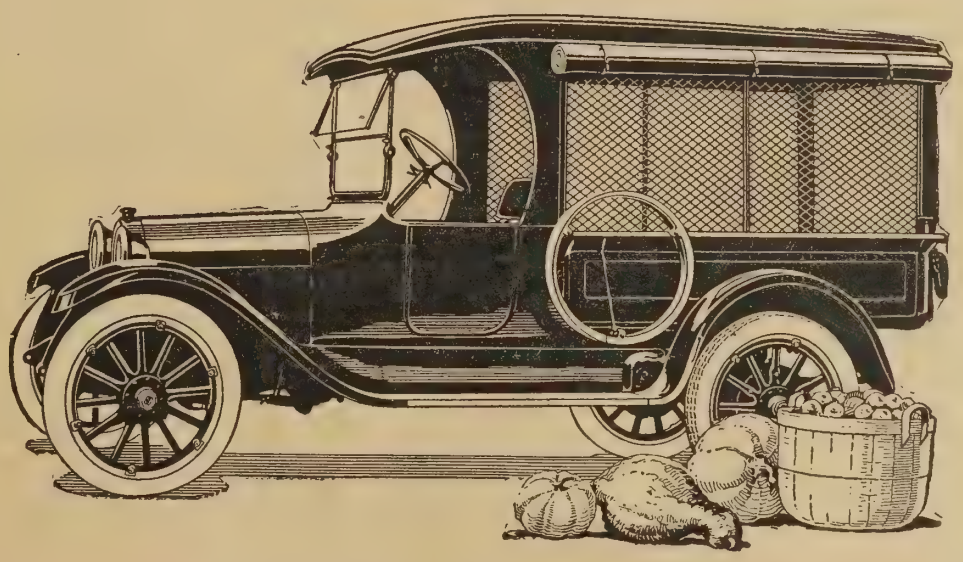
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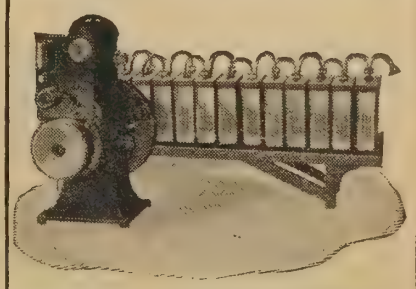
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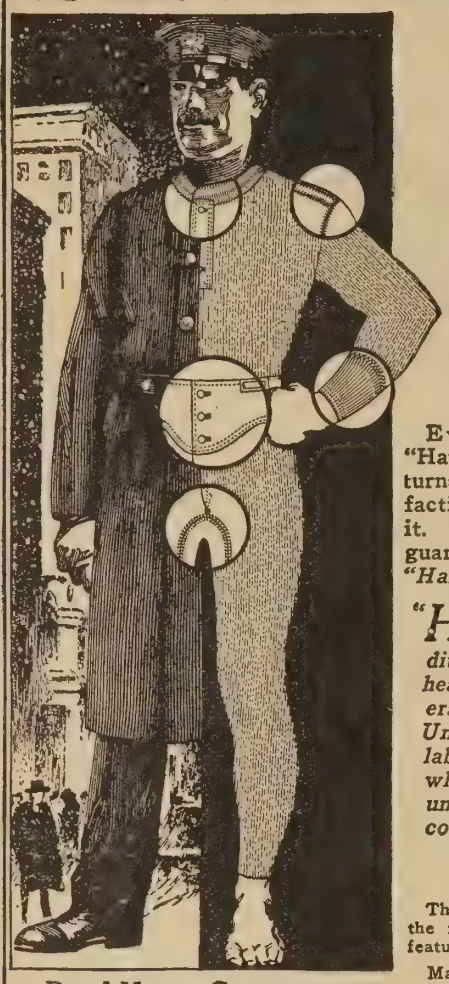


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Dairy Herd Management

In a previous issue we published the report of the trip certain Oklahoma farmers took to Wisconsin, and below we give their story of three of the farms visited:

"Mr. W. M. Nelson's herd is mostly Guernseys. He owns 80 acres and rents 100 acres. In 1919 milked 19 cows, grade Holsteins and Guernseys. Is turning to the Guernseys because he expects to sell whole milk to the town trade. Now sells cream to ice cream factory. Ten years ago had a herd of milking Shorthorns. They proved unprofitable. He changed to grade Holsteins. Three years ago he began changing from Holsteins to Guernseys, and expects soon to work into the pure-bred Guernseys exclusively. Just recently installed entire barn equipment, including modern stanchions, stalls, milking machine, Delco light system, steam boiler, etc. His stanchions and stalls cost about $1,100.00, installed. His herdsman is a boy 22 years old who has worked for him nine years. This young man spends his whole time taking care of the cows. Last year Mr. Nelson bought a registered heifer Guernsey calf and gave to this boy. He paid $165 for it. It will come fresh soon and is valued now at $250.

"Mr. Nelson practices growing sweet corn. In 1919 he had 12 acres of sweet corn, the large Golden Bantam variety. He picks about half the ears, selecting the best ones, and sells them at Oshkosh. His income for 1919 was about $1,400 from this source. He then harvests the entire crop and puts it into the silo. Thinks in this way he gets about two-thirds as much ensilage as though he sold no roasting ears. He plants this sweet corn very thick.

"His income from cream is now about $200 a month from 16 cows, part of which are dry. He has a separator which he runs by gasoline engine. He thinks skimmilk is worth about $1.00 per 100 pounds in feeding calves and pigs. He thinks there is no material difference in Guernseys or Holsteins, if one is going to sell whole milk to cheese factories, condenseries, or to the ordinary town trade. Thinks Holsteins are more rugged and will use profitably a greater proportion of roughage. He is going into the Guernseys because he wishes to cater to the better town trade.

"He keeps a few hogs rooting in the manure pile at the rear of the barn. Says hogs practically live from what they get from the manure pile.

"Mr. Nelson's stanchions are so arranged that cows face outward from the center aisle. As in practically all dairy barns in Wisconsin, the barn floor is of cement. The surface of the center aisle is corrugated, the corrugations being in imitation of cement blocks of 4x8 inches. This tends to prevent slipping on a smooth floor.

"Mr. Nelson, in addition to the herdsman, has a middle-aged man who has been with him eleven years. These men are up at 4:45 each morning and begin milking at 5:00 o'clock. They also begin milking in the afternoon at five o'clock. They are through with their chores at 7:30. The boy herdsman says Guernsey cows are easier to milk than Holsteins. Says they sell Guernsey calves to the butcher at 4 to 5 weeks old; Holstein calves at three weeks."

"Feeds heifer calves five pounds or over of whole milk at a feeding, twice a day for three weeks. They are then put on skimmilk for about seven months, giving about ten pounds as a feed for Guernsey calves and twelve pounds for Holsteins. The boy says one man can care for 20

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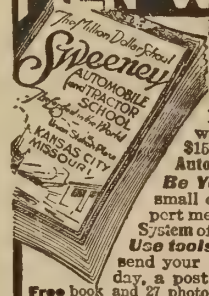
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H. R. Mosley

"Mr. Mosley owns 120 acres, valued at $20,000.00, and is president of the County Guernsey Breeders' Association. In 1919 he milked about 16 cows, one-half being pure-breds. Has a very excellent 3-year-old bull with records back of him on both sides of from 500 to 800 lbs. butterfat. Sells cream to creamery. Feeds skimmilk to pigs and calves. Thinks skimmilk is worth 50c to 75c per 100 lbs. The cream he sells tests from 20 to 25% butterfat. He is now getting 76c a pound for butterfat. In November he got 71½c a pound. The average test of his herd is about 5% butterfat. He says when cows are shedding the butterfat test is apt to drop somewhat.

"In 1919 he milked 16 cows, about half of which were pure-breds. Prefers heifers to come fresh at about 28 months old. Likes cows to be dry about six weeks. If they are to be put on official test, they should be dry three months. Feeds his cows about 1 lb. daily for each 4 lbs. of milk produced, from the following ration:

"In a mixture of 100 lbs., there will be 20 lbs. gluten, 40 lbs. bran, 30 lbs. ground oats or barley, 10 lbs. oil meal. In addition, all the hay and ensilage the cows will clean up. Likes cows to come fresh in fall.

"Lets calves run with the cows freely for from one to three weeks. This gives them a good start, which is important in the producing of vigorous calves. Then gives about 3 lbs. of whole milk twice a day until calves are 4 to 5 weeks old. Would be still better to feed calves three times a day. Gradually change to skimmilk in a week, and increase the feed to 10 lbs. of skimmilk twice a day, and continue feeding skimmilk until the calves develop, but is better to continue feeding skimmilk until calf is 10 or 12 months old. Also, feed calves grain and hay. Usually keeps calves up through pasture season, but will permit early fall calves to go on pasture. He thinks grass and milk are an unbalanced ration for calves and cause scours. A variation in pasture through the summer is apt to stunt the calves.

"Mr. Mosley's crop rotation is: First year, meadow, (with coating of manure as topdressing); second year, corn; third year, grain (oats or barley).

"He puts about 15 loads of manure to the acre."

Lois Sorenson

"Have lived here seven years, own 103 acres of land, bought seven years ago at $13,000. It is worth now $16,500; all under cultivation. Have been milking from ten to seventeen cows. Have had fully registered Holstein herd for only three months. Started three years ago to build a registered herd. Have now seventeen head of registered stock over eighteen months old. I do not recommend registered stock for a beginner in dairy work. I have belonged to the cow testing association for three years. This association is a great benefit to the farmer in keeping account of individual cows. I do not use machine because I have plenty of help to do hand milking. I have no objection to machine if handled right.

"Received in December $3.58 per hundred pounds for whole milk sold at the cheese factory, received nothing back. Average test 3.8%. I sell the whole milk to the cheese factory. I figure that I will make more on sale of stock on a registered herd than from the sale of milk. I have started to raise Duroc hogs.

"The following taken from the reports of cow testing association are for a period of nine months:

Month	No. cows	Income	Feed	Profit
March	10	$312.55	$112.00	$300.55
April	12	275.40	110.00	165.40
May	8	249.22	104.00	145.22
June	9	267.40	34.38	233.02
July	10	271.20	72.50	198.70
August	10	267.20	72.50	194.70
September	11	269.20	77.00	192.20
October	7	95.75	23.80	71.95
November	8	192.80	100.40	92.24

"Cows on pasture beginning June. October's small production indicates cows dry.

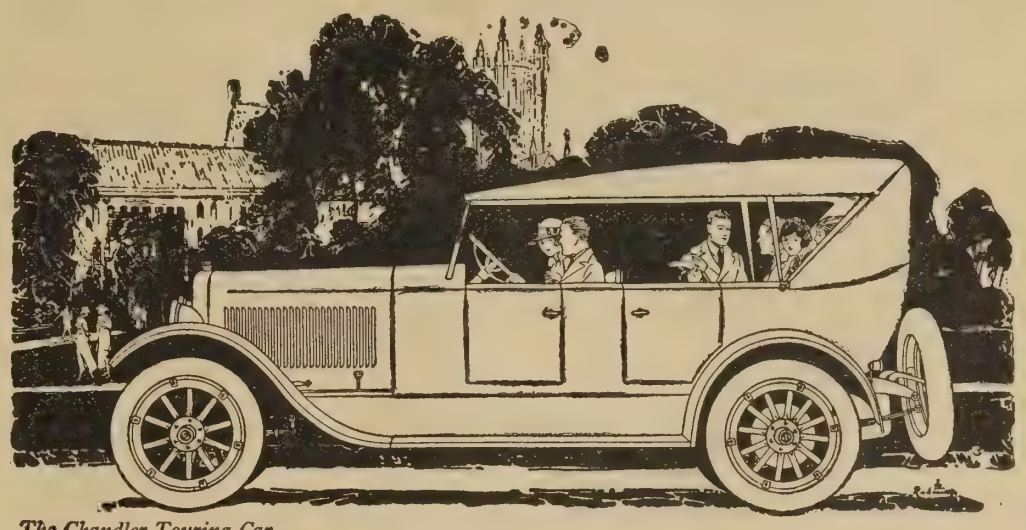
"Milk all cows twice a day. I measure grain to each cow, giving one pound of feed to four pounds of milk. A mixture for feed per five hundred pounds as follows: Bran, 200 lbs.; gluten, 100 lbs.; ground oats, 100 lbs.; oil meal, 50 lbs.; cottonseed meal, 50 lbs.; and 2½ lbs. salt to 200 lbs. feed.

"I usually feed thirty pounds silage daily. Prices of feed are: Hay, $20 to $25; marsh hay, $10; straw, $68 per ton; ground oats, $50; gluten, $52 to $55; oil meal, $72; bran, $42.

"The following is a report taken from the cow testing association records for the year April, 1917, to April, 1918, inclusive. Record shows average of twelve cows for the year: Milk, 6,600 lbs.; butterfat, $248; average test, 3.75; value of product, $147.00; cost of feed, $70.00; profit, $77.00. Returns for each one dollar spent for feed, $2.16. Average price of butterfat during this year was from 50c to 66c."

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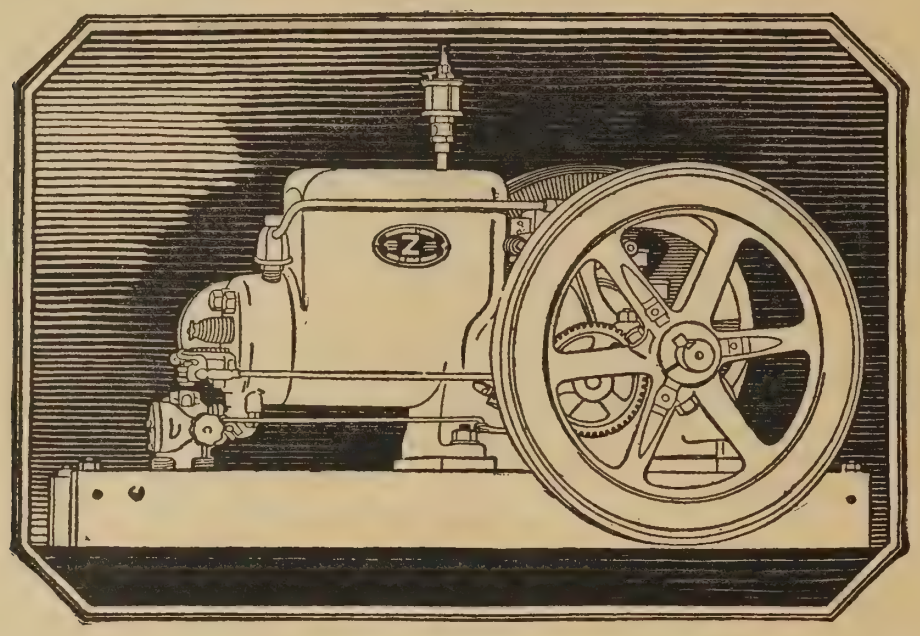
Damage By Breachy Bull

HOARD'S DAIRYMAN:—As to damages due owner of cow that has been bred by a trespassing bull, I will state that courts allow such damages. It is for the jury to decide, after considering the breeding of the cow and bull, value of calf as bred, and value of calf if cow had been bred to the bull used by owner of cow. If you write Professor of Damages at your state University Law Department he will give you an interesting review of the decisions.

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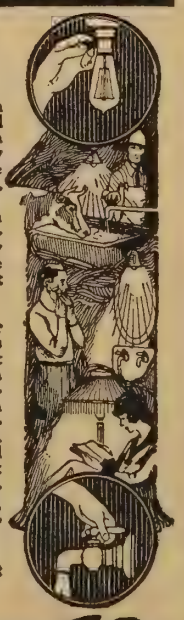
Farm Home Protection

Guard the Health of Your Family!

Modernize your home with a Kewanee Sewage Disposal System. Guard the health of your family, provide city conveniences and increase the value of your property.

With it you can use modern plumbing appliances. Simple and sanitary—absolutely dependable. First cost is the only cost—nothing to get out of order.

No matter how old your house, Kewanee Systems completely modernize it at reasonable cost. There is a Lighting Plant, a Water Supply System, a Combination System supplying both running water and electric light. Hundreds of styles. Send for our valuable free booklet on modernizing the home.



KEWANEE PRIVATE UTILITIES CO.

422 South Franklin Street
Kewanee, Illinois

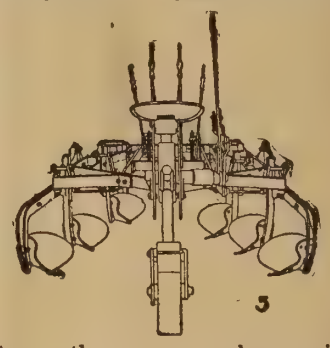
KEWANEE

Running Water—Electric Light—Sewage Disposal

Inventions and Appliances of Interest to Agriculture

Vineyard Plow

Between the rows in a vineyard or hopfield, the soil is plowed toward the centre one year, and toward the rows the next and deeper at the center than at the sides. For this purpose the gangs on this plow are interchangeable, to plow toward the



center or the reverse, and are quickly adjustable as to depth and width. (Holt Manufacturing Co., Stockton, Cal. U. S. Patent, 1,333,811).

Hay Loader

The "float" on a hay loader retains the hay on the carrier, but if the top is rigid the whole float rises over a bunch of hay and parts of it do not perform their function; to overcome this, the top bar here is flexible, and



permits the whole float to work properly, no matter how the hay is bunched.

(Thomas Mfg. Co., Springfield, Ohio, U. S. Patent, 1,319,724.)

Stack Ventilator

The ventilators here are sheet metal pipes perforated with many holes. The large central pipes are fixed rigidly in the ground; the stack is built up around them; and the smaller lateral pipes are inserted, at the proper

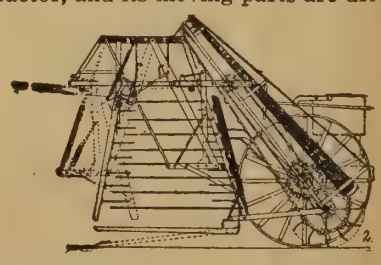


times, in slots in the central pipes which allow for the settling of the stack.

(R. A. Doles, Eddyville, Ky., U. S. Patent, 1,286,562.)

Hay Rake and Cocker

This machine rakes hay from a swath or windrow, elevates it into a conical cock forming cage, and discharges the finished cock from the bottom of the cage. It is hauled by a tractor, and its moving parts are driv-



en by power from the tractor. It and the tractor are operated by one man.

(International Harvester Co., Chicago, Ill., U. S. Patent, 1,331,482.)

Canada. C. J. LYNDE.



A good bull is more than half the herd. A scrub bull is mighty near all of it.

Start right—put an AYRSHIRE BULL at the head of your herd

No class of cow is in as great a demand to-day as a GRADE AYRSHIRE

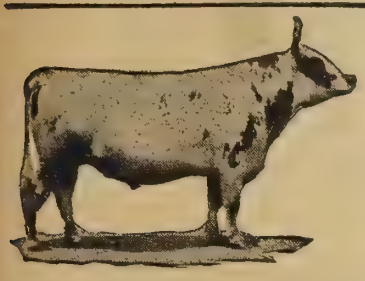
BUY AYRSHIRES

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

The muffled drums sad roll has beat
The SCRUB BULL'S last tattoo
The Pure Bred now must take his seat
Go back! Get out! Skiddoo!

Start right—put an AYRSHIRE BULL at the head of your herd





We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANIA

Middlesex Meadows Ayrshires

No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.

We offer Nona's Chancellor of Middlesex, the six month's grandson of a champion out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.

A. Henry Higginson SOUTH LINCOLN, MASS.

Wisconsin Ayrshire Breeders' Association

Aldebaran Farms

Choice Stock For Sale

RACINE, - - WISCONSIN.

Union Valley Farm Ayrshires

A few finely marked and bred for production heifers; also some well marked bull calves for sale. Herd headed by Midland General No. 17404. R. R. Chicago, Milwaukee and St. Paul.

F. A. Bollig, Black Earth, Wisconsin.

Ayrvale Farm

Herd Sire Norah's Netherton No. 19427

Dam's 4-yr.-old record 12,364 lbs. milk, 517 lbs. butter. Young stock of both sexes for sale.

A. J. McNab, Black River Falls, Wis.

Orchard Home Stock Farm

Herd headed by Cavalier Beuchan Lindsey and Star of Silver Pet, bred for production, both sexes for sale.

J. A. Dalton, - Oconomowoc, Wis.

EDELWEISS FARMS AYRSHIRES

Young stock for sale. Our aim is breeding for production. Fred Tschudy & Sons, Monroe, Wis

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson o Brown Kate, record 1,080 lbs. butter in year.

WM. NISBET & SONS, Richland Center, Wis.

For complete sale list of pure-bred and grades address the secretary,

STEPHEN BULL, - Racine, Wisconsin.

For Sale— Two Nice Ayrshire Bulls

born last April and May. Their sire is a grandson of Brown Kate, who produced 1,080 lbs. butter. Their dams are A. R. cows. Address

Department of Animal Husbandry, University of Wisconsin, Madison, Wis.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL, Wellington, Ohio

FOUR BULLS 15 to 18 Months Old

They are in pink of condition and ready for immediate service. They are from choice stock. Priced reasonable.

FRED TSCHUDY & SONS, Monroe, Wis.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Ayrshires

We are offering 20 cows and heifers, most of them due to freshen in November. The lot includes 9 A. R. cows. They are all straight, sound, young animals. 15 are sired by a son of Rena Ross 3rd with 3 A. R. records. All are bred to a bull combining Nox'emall and Finlayston blood. Must sell to provide room for young stock.

Colebrook Farms

A. W. Eno, Prop., Honesdale, Pa.



Milking Cows

Fresh and Bred Heifers and Sons of Ringmaster's B. B. Diplomat For Sale

DUNCRAGGAN, WESTFORD, MASS.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

WORLD'S CHAMPION AYRSHIRES

Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.

PENSHURST FARM, NARBERTH, PA.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

Addington's Champion

No. 19561

Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk

FOR SALE—Sons and Daughters from high milking dams.

Tuberculin Free Herd

BLACKBURN FARM Sewickly, Pa.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Forage Poisoning

For a number of years the American veterinary practitioners have observed a disease in cattle which has not been definitely associated with a specific cause. Much conjecture and many theories have been advanced relative to the development of the disease yet the evidence seemed to point to the feeds affected animals consumed. Molds, chemicals, changes in the feed and even animal parasites have been mentioned as probable factors. In many instances where horses were fatally afflicted cattle consumed the same feed with impunity. Rusk's and Grindley's obserations in this connection have been repeatedly confirmed by the writer.

In 1916 the Kentucky Experiment Station demonstrated conclusively that one type of forage poisoning in horses was caused by germs resembling B. botulinus. Contaminated feeds were fed to horses and small laboratory animals with convincing results. Furthermore, the disease could be induced at will with artificial cultures isolated from the feed. These investigations threw the first true light on forage poisoning in horses, and it seems quite probable in the light of recent evidence that the same microorganism might be an etiologic factor in so called forage poisoning in cattle.

During the past twelve months feed and intestinal contents from nineteen affected herds located in twelve different counties in Illinois were received for examination. A disease resembling forage poisoning in cattle had occurred in each instance and the veterinarian requested verification of the diagnosis. Different feeds were submitted, including silage, oil meal, calf meal, and bovine stomach contents. Bacteriological examination of the specimens enumerated revealed the presence of a pathogenic organism culturally and microscopically characteristic of B. botulism in samples from eight of the nineteen outbreaks.

Bacteriological findings of suspicious feeds in outbreaks of food poisoning emphasize the prevalence of this organism and the probable extent of the disease in cattle. It is presumed from the evidence at hand that B. botulinus is widely distributed in nature and may be an important etiologic factor in causing one type of forage poisoning in cattle. If this conjecture is correct it is further believed that feeds may frequently become contaminated and if stored under suitable conditions development of the virulent toxin may follow. In the light of present knowledge it appears that one type of bovine forage poisoning is associated with B. botulinus. The symptoms of botulism in cattle often assume a chronic character and may not be readily recognized unless associated with acute cases. In two outbreaks botulism in cattle was incorrectly diagnosed as hemorrhagic septicemia. Botulinus antitoxin for the prophylactic treatment of exposed animals may be secured from the Laboratory of Animal Pathology, University of Illinois, Urbana, Illinois.—H. R. SCHWARZE, Associate in Animal Pathology.

"Mold spots all through the silo." This is probably due to the corn being so dry when ensiled that it did not ferment quickly and thoroughly enough to use up the air contained in the cut corn.

Worthless Farmers

(Continued from page 793)

hides is an economic condition that is so drastic that it will prove almost disastrous to everybody. To prevent this, thousands of live farmers have supported, and will support, granges, farm bureaus, the American Federation of Farm Bureaus (our chiefest and best hope), and countless local, co-operative associations.

In New York State, our greatest economic organization, the Dairymen's League, is facing a crisis. Its continuation depends on the loyalty of its members and the inclusion into its membership of the milk producers who are now parasites of the worst type. If these men could only realize how much good they could do by "coming in" and how dangerous they are to themselves outside, they would become members. Some day the goose will be killed. Possibly the loss will be the necessary lesson.

How we do sympathize with the milk producer who will not join the League because he does not believe in starving babies. How we honor the fellow who says, "Yes, it's a good thing, but I'll wait and see how it works out." How we love the man who is legally a member, yet actually an assassin of his association. But, how much we do think of the man who is there with the good word, the truehearted support, the desire, courage, and nerve to do what must be done to insure success. This last is the kind that makes us try it again; the kind that in every way outweighs the other kinds.

New York. W. J. HAGAR.

Soil Experiments Point Way to Larger Profits

The University of Missouri College of Agriculture has established methods of treatment whereby larger profits may be gleaned from Missouri's cultivated soils. Since 1905, thirty soil experiment fields have been operated for varying periods on a number of the important soil formations in the state. Data from all these fields operated three or more years, and covering fourteen cropping seasons, show:

1. Finely ground limestone brought an average gross return of $10.08 for each ton applied in a rotation of corn, oats, wheat, and clover or a net return of $6.08 a ton.

2. An application of 300 pounds of steamed bonemeal divided between corn and wheat in a corn, oats, wheat, and clover rotation brought a gross return of $31.86, or a net return of $25.46 an acre.

3. An application of 400 pounds of acid phosphate divided between corn and wheat in a corn, soybean, wheat, and clover rotation brought a gross return of $25.70, or a net return of $20.30 an acre.

4. An application of 100 pounds of muriate of potash divided between corn and wheat in a rotation of corn, oats, wheat, and clover brought a gross return of $7.35, or a net return of $2.35 an acre.

5. Eight tons of average barnyard manure applied to corn in a corn, oats, wheat, and clover rotation brought an increased return of $32.04 or $4.00 a ton of manure. With the cost of applying estimated at $1.25 a ton, the net return was $2.75 a ton.

6. On the basis of per cent increase on the money invested, the treatments have averaged during a four-year rotation: Limestone, 152 per cent; bone meal, 397 per cent; acid phosphate, 362 per cent; potash, 46 per cent; manure, 220 per cent.—Missouri Agricultural College News.

31,763.9 lbs. milk
1,786.8 lbs. fat
Made in one year by the two grandams of

Jersey Bull

No. 281 dropped March 7, 1920

Solid Color—Price $250.00

We offer bulls and bull calves ranging in price from $150 and up. Write us for extended pedigree, description, etc.

HOOD FARMS, Inc.
Lowell - - Mass.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Cedar Crest Farms
Offer Jersey Bull

A fine individual, Nation's Raleigh, (185639), dropped August 14th, 1919. His grandsire Imp. Hauteville Fairy Boy (90952) had twenty daughters in Register of Merit, his dam, Nation (256031) entered Register of Merit at seven years, producing 8,850.7 lbs. milk, 503.64 lbs. butterfat. Also a few first class Jersey cows.

J. K. Dering, Owner, Lake Villa, Ill.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON. - Edgerton, Wisconsin

158 R. O. M. records made by
AYREDALE JERSEY COWS

Average 10,503.6 lbs. milk, 582.5 lbs. fat.
We offer bulls and bull calves from these cows, sired by
CARRY-ON of AYREDALE (164012). His dam and two grandams average 17,151.2 lbs. milk, 928.4 lbs. fat.
SOPHIE GILSLAND TORMENTOR (123584). Dam made as a 4-year-old 15,952 lbs. milk, 888 lbs. fat.
SOPHIE 19TH GRANDSON (165221). Dam made 15,578.7 lbs. milk, 809.5 lbs. fat.
The bulls we offer are close up to the World's Champion producer Sophie 19th of Hood Farm. Correspondence solicited. We would appreciate information about your herd, so as to price you bulls calculated to add size, type and increased production.
Write F. W. AYER
AYREDALE STOCK FARM, Bangor, Maine



JERSEYS

More Udder—Less Cow!

YOU don't feed a hulk when you feed a Jersey! A 1000-pound Jersey will usually produce more butterfat than a 1400-pound cow of other breeds. More udder and less cow is a mighty important item in cow profit.

The butterfat production per year of a Jersey often exceeds her live weight!

Have you read the story of Plain Mary, the World's Champion Jersey? Her two farmer-owners kept her in an ordinary barn with the temperature at times over 40 degrees below zero. But Plain Mary made a world's record never-the-less.

Any man can make profits with Jerseys. They are the cows for the working farmer. Write today for the full story of Plain Mary and other valuable information which we will send you free.

"The Profit Breed"

The American Jersey Cattle Club
324-E West 23rd Street, New York
An Institution for the Benefit of Every Jersey Owner

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

FOR SALE

a few choice bred
Jersey Heifers and Cows
Murdale Farms
A. W. Murphy, Owner
1360 West 3d St., Cleveland, Ohio

Jersey Bull For Sale

dropped February 4, 1920. Sired by McKay's Noble Fox No. 164786 and from McKay's Pauline No. 385951. This calf is the best for his age of any I have seen. Will sell at $125. Is easily worth $300. Write
J. F. Schmidt, Whitehall, Michigan



For Sale—Eight New Milk Cows

These cows have type, breeding and are real producers. Guaranteed right in every way. If you are looking for good cows, come and see them or write for particulars.

W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

GUERNSEYS

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls

All ages, sired by a son of Beda's May King, out of dams who are daughters of Governor of the Chene (1297) P. S., Langwater Raritan, Prince Charming and others. Write for prices.
Peter Simon, Elba, Minn.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.
For Sale by
RADISSON FARM, ANOKA, MINN.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.
SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

For Sale
Dorothy's Cherub of Iowanola 63495

born Jan. 13, 1920, a nice individual. Sire is Cherub's Winner 34180, who now has eight of his first daughters on official test and doing good. Dam is Dorothy Arnold 37247, one of our choice herd matrons. A. R. record of 9,362.4 lbs. milk and 455.34 lbs. fat in Class E. She has two daughters in the A. R., one with a record of 9,565.6 lbs. of milk and 502 lbs. fat in Class E and the other 12,855.2 lbs. of milk and 640.09 lbs. of fat in Class D.
Federal Tuberculosis Free Accredited Herd.
Mountain Bros., Carrier 485, Des Moines, Ia.

Guernsey Bulls

May Rose on both sides. Dams in A. R or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

Hillswold Farm
Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

GERAR GUERNSEYS

We are offering an exceptionally fine lot of young bulls, some old enough for service.

SEND for our sale list.

Headed by a son of Langwater Royal 4th; he and his two full brothers are the only bulls with three sisters that are class leaders, out of a 525-lb. two-year-old Langwater Royal 2d daughter.

Louis McL. and E. Gittings Merryman
Cockeysville - - Maryland

May Rose Guernseys for Sale

Bull Calves and Heifers from A. R. Bulls and A. R. Cows

Sweet Springs Farm
Troy, Ohio



Economy in Production ← **GUERNSEYS** → Quality of Products



Are you interested in a pure-bred bull campaign? Let us tell you how such a campaign should be conducted.
THE AMERICAN GUERNSEY CATTLE CLUB, BOX H 96, PETERBORO, N. H.

Heifer Calves on the Hoard's Dairyman Farm



These young ladies are all the get of Anton's King Confidence 43517. They are not for sale at any price. Our object is to let you know the type and style of offspring this great bull is getting us.

MaChere Confidence, the dam of A. K. C., made 764.65 lbs. of fat as a junior 4-year-old. We are now offering bull calves, some ready for service, sired by him. We appreciate your inquiry.

Hoard's Dairyman Farm
Fort Atkinson - - Wisconsin

Attention —
Guernsey Breeders or Prospective Breeders!

We have for sale some very high class cows that would make a great foundation for prospective Breeders, or they would make a very valuable addition to any herd.

Most of the cows have splendid A. R. records, or records in the making.

If you are looking for something of the highest quality in Guernsey breeding you cannot do better than write us.

We also have several young bull calves sired by the great bull, "Cherub's Prince", whose progeny won all the highest honors at the 1920 National Dairy Show.

Address all inquiries to Percy Jones, Farm Superintendent, Iowa Dairy Separator Company.

W. W. Marsh - - Waterloo, Iowa

40 Guernseys
At Mankato, Minn., Nov. 23, 1920
At 1:30 in the New Sale Pavilion

The entire herd of Jens Arnbal of Albert Lea, Minn. May Rose Governor of Jean Duluth, a son of May King of Linda Vista, together with 15 of his daughters, will be a leading feature of the sale. The herd is on the Federal Accredited List.

Auctioneers: O. S. Johnson, A. C. Gray

Write to the sale manager for catalogue.

Dr. M. B. Wood, Mankato, Manager of Sale
First Nat'l Bank of Mankato, Clerk of Sale

May Rose Bull For Sale

Exceptionally fine individual, 10 months old.

Sire Superb of Edgemoor (49590)—Dam: Imp. Cypress of Sarnia (53729). Sire out of Imp. Dunington Goldie 5th (3rd place Class E) with 796 lbs. of fat. Also the 1st prize junior A. R. at N. D. S. 1920. His grandsire is Imp. Itchen May King, Grand Champion N. D. S. 1920. Her dam has 423 lbs. of fat Class C and is due to freshen January 13th. She is a fine individual, will be re-entered on test and capable of 700 lbs. of fat.

Corium Farm, F. J. Rueping, Owner. Fond du Lac, Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Tristram Farm Guernseys

3-year-old son of Langwater Princeling for sale. A sure breeder and a fine crop of calves to show. Two yearling bulls of service-able age, good A. R. backing. One, a son of Drymaid's Nonpariel of Iowa, whose two nearest dams average over 860 B. F.

TRISTRAM FARM CO., Eau Claire, Wis.

For Sale

Two Advanced Registry Guernsey Bulls excellent breeding and conformation. Tuberculin tested. One 2-year-old and one a yearling. Dams' records over 515 lbs. per year as 3-year-olds.

Address
Emil Walther. Medford, Wis.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

$4000.00

buys an excellent foundation herd of 15 Guernseys. Write for particulars to

MEADOWLAND FARM, Litchfield, Conn.

Poshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

Harbor Hill Guernseys

We Bred and Developed
The Breed's Champion Roll of Honor Cow

Linden Girl of Harbor Hill 3rd A. R. 4651, 15,032.8 lbs. milk 785.89 lbs. fat Class CC. We offer a few bull calves carrying similar blood lines.

C. H. HECHLER, Superintendent, Box 30, Roslyn, New York.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection

OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

A Great Sire
IS
FALCON'S PROUD WARRIOR

considered by many to be
The Greatest Son of Langwater Warrior

Outstanding bull calves for sale.

Falcon's Flight Farms, Litchfield, Conn.

Stop! Look! Listen!

And you'll not be missin'
Your choice of 25 females
(We're telling no tales),
Of popular May Rose lines.
Fine type, and great dairy signs.
Also 2 males, one 18 months,—
The other still bunts.
$250 takes the older.
For the rest, send for folder.

Forestdale Farm, Richard D. De Forest, Amsterdam, N. Y.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association
Appleton, Wis.

Guernsey Bulls

Two good yearlings for sale at $150.00 each. The dam of one has an A. R. record of 403 lbs. fat in F. and is doing better on retest. Dam of the other has a show record and is on official test.

Folly Farm, - Libertyville, Ill.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. Gordon, Jr., Nelsonville, Portage Co., Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

When writing advertisers please mention Hoard's Dairyman.

FOR SALE!

Any number up to a carload of choice grade GUERNSEY cows.

These are high grade cows of superior breeding and individuality that last year, under ordinary herd conditions, averaged more than 860 lbs. butterfat per cow. Herd headed by Hope's May Rose of Maple Hill No. 36903, whose dam has a record of 776 lbs. butterfat at 3 years of age, making her a class leader.

TILDEN FARMS
James H. Murphy, Mgr., Delavan, Wisconsin.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Spare the Cultivator and Spoil the Crop

HOARD'S DAIRYMAN:—A man about to leave the business of farming remarked that farming was a gamble. I have seen instances where crop yields in proportion to the labor expended in producing them seemed to bear out the luck proposition. I have seen corn planted on sod about June first and given only three cultivations, yield thirty or forty bushels per acre. On the other hand, I have seen fields of corn tended carefully that yielded very little hard, mature corn. Yet neither of these cases were matters of chance. The factors that largely determined the above results were a good soil quite clean of weeds in the one case and an unusually hot and dry summer in the other instance.

It is surprising to see the small gulf that lies between success and failure. This was very forcibly and clearly demonstrated to me today when I was cutting corn and noted the difference in both yield and quality of corn in different parts of the field. On the north side of the field my daughter had part of eight rows as her plot of corn for the county club work. Beyond these rows to the south was the rest of the field. Of course the cultivator was kept going pretty steadily in those rows of which the corn plot formed a part; and besides that my daughter used a hoe and pulled any audacious weed that dared show its ugly form. The rows to the south of the plot got no hoeing but received the benefit of fair cultivation—except the half dozen rows on the extreme south side. For some reason or other—either the day was too short or it was left for a more convenient season—these rows were left twice as I recall it now, and consequently received two cultivations less than the middle portion or average rows of the field.

And now for the results: Ten ears selected from the corn club plot won second place at the county fair. They were sent in to the state fair held at Salem the next week, distancing their former competitors and winning second place at the state fair.

The middle rows of the field were just average; but no one need to be told which rows the cultivator had skipped twice. The half dozen or so rows, with their smaller ears, kept pointing reproving fingers at me saying: "You spared the cultivator and spoiled our chance in life."

Oregon. SUBSCRIBER.

Juneau Co. (Wis.) Holstein Sale

The Holstein Breeders' Association of Juneau County held their first annual sale at Mauston, Wis., October 26, selling 46 animals for an average of $266. Three of these sold for $1,000 or more, two tieing for top price honors at $1,250. H. A. Thompson, Wisconsin, purchased one of these, Diamond Gift Elgin 2d. The other, Mountain Ash Belle, a three-year-old now doing very well on year test went to R. Ritchart, also of Wisconsin.

J. E. Mack did the selling with F. H. Everson, sale manager, in the box.

Following is a list of all animals selling for $300 or more and buyers of same:

M. W. Riddlestine, Wisconsin	
Lady Johanna Senator Plebe	$500
Clothilde Pauline Beauty	625
L. O. Larson, Wisconsin	
Appoline Johanna 2d	$600
Guy Carter, Wisconsin	
Pauline Netherland Rollingdale	$340
Lady Spofford Clover Mead	300
J. Mortenson, Wisconsin	
Daisy Johanna Pauline De Kol	$355
Tilda Mercedes Canary Ormsby	325
F. Gonsolen, Wisconsin	
Segis Johanna Mechthilde De Kol	$600
W. H. Sullivan, Wisconsin	
Lucy Johanna Mechthilde De Kol	$600
R. Ritchart, Wisconsin	
Mountain Ash Belle	$1,250
H. A. Thompson, Wisconsin	
Diamond Gift Elgin 2d	$350
E. P Warme, Wisconsin	
Segis Cornucopia De Kol Spofford	$350
Kuff Bros., Wisconsin	
Daisy Michals De Kol 2d	$300

Profitable farming is a matter of business and farms can be most successfully operated only on a sound business basis.

Green Co. (Wis.) Holstein Sale

The Holstein breeders of Green County, Wis., held their semi-annual sale at Monroe, Wis., October 28—29, a most unfavorable time because of the present market milk slump in that section.

They sold 155 head for a total of $26,740 with $400 the top price. Truttschell Bros., Wis., paid this for a very good five-year-old cow consigned by Samuel Ulbert.

At the same sale 12 calf club calves were sold for an average of $229.

Hager, Eells, and Hellen did the selling with Wood in the box.

Following is a list of all animals selling for $250 or more and buyers:

H. A. Hugelshofer, Illinois	
Zur Fayne Hamilton 2d	$360
Grace Vineyard	375
J. P. Ames, Wisconsin	
Grassland Shibloleth Pontiac	$300
Belle Fern De Kol 3d	350
Herman Gempeler, Wisconsin	
Williams Farm Butter Girl Janie	$335
Bell Fern De Kol 2d	340
Molly Johanna Mechthilde	300
Fay F. Weltz, Illinois	
Sylvia Longfield Homestead	$255
Lady Tirania Pauline Ormsby	250
W. H. Rhoda, Wisconsin	
Long Hollow Beauty Rag Apple	$255
Burt Farms, Wisconsin	
Lady Netherland Veritas	$265
Al Bobler, Wisconsin	
De Kol Lady Korndyke	$260
Truttschell Bros., Wisconsin	
Jessie Canary Homestead Paul	$325
Johanna Star De Kol Aaltje	260
Lady Mechthilde Aaggie De Kol	400
I. J. Sexauer, Illinois	
Sophie Eva	$250
A. M. Stauffer, Illinois	
Rowena Vale Titje 4th	$310
E. P. Wallmann, Illinois	
Jessie Woodcrest Copia De Kol	$370
J. D. Hohlen, Wisconsin	
Houwtje Blue Belle Corine 2d	$275
M. Benjamison, Wisconsin	
Magnet Pontiac Korndyke	$265
F. B. Green, Wisconsin	
Beauty Johanna Segis	$295
Milbrant Bros., Wisconsin	
Indi Hengerveld Johanna 6th	$290
Cap. Walters, Wisconsin	
Aaggie Mac Korndyke Pontiac	$300

Harping on the same string is all right if it's a good string. The value of good farm records is a string worth harping on.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

SWINE

Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of

Epochal Berkshires

Get a Herd Sire or a Foundation Trio

From the herd that has won more first prizes and more championships at the biggest shows this year than all its competitors put together.

Some statement, but it's true!

The Epochal Herd won 62 firsts out of a possible 106 and 23 championships out of a possible 42 at the 1920 Missouri, Illinois, Iowa, Indiana, and New York State Fairs, the Eastern States Exposition at Springfield, Mass., and the National Swine Show.

The Epochal herd won in 1919 and 1920, 429 prizes; 140 firsts, 44 championships, and 14 grand championships. This is more prizes, more firsts, more championships, and more grand championships than were ever before won in two consecutive years by any one Berkshire herd in the world.

Young boars that are herd sire prospects of the kind that lift strains to the top, $200 each and up. Trios of six months old pigs carefully and properly mated—a real foundation—$300 to $2,500.

The services of our experts will start your herd "right"; and will save you years of time in achieving success in your breeding operations. Write us. You will like the way we help you!

Epochal Berkshires are the deepest and smoothest big-type hogs.

Martinsville, Ind. Preston, Kans. Axial, Colo.

GOSSARD BREEDING ESTATES

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

Early to Market—Full Weight



51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.

Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.

Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age, and are uniformly red in color.

Write for our Free booklet "*Duroc-Jersey Hogs Are Prolific and Profitable.*"

The National Duroc-Jersey Record Association. Dept. 300 Peoria, Ill.

The largest swine record association in the world—12,000 members

BROWN SWISS



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JUBILEE FARM

Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Twenty Brown Swiss

bred cows and heifers for sale. Also a few bull calves. Cows bred to a grandson of College Bravura 2.

Ayers Stock Farm

R. F. D. No. 6, Burlington, Wisconsin

HOLSTEINS

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

GEO. E. STEVENSON, Scranton, Penna.

I Now Offer A Grand Son

of two of the greatest sires of the breed. King Pontiac Jane Veeman No. 316983, born Feb 11, 1920. Color evenly marked, well grown good individual.

His sire—King Pontiac Mona Veeman, being a promising son of King of the Pontiacs. His first twelve daughters to freshen have record from 16 lbs. to 21 lbs. as 2-year-olds.

His dam—Craig Manor Jane Veeman, A. R. O. record of butter 26.60 lbs., milk 510.1 lbs. Believe she is capable of improving her record at next freshening. She is a daughter of Sir Veeman Hengerveld who now has 125 A. R. O. daughters, 17 with records above 30 lbs. and three with yearly records above 1,000 lbs. of butter, 24,000 lbs. of milk. $300 buys this fellow if taken soon.

Herd under Federal Supervision.

W. D. Robens, Poland, N. Y.

Yearling Bull

Ready For Service

Here is a show bull whose dam has a 3-year old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.

The first check of $150.00 takes him.

G. G. Burlingame, Cazenovia, N. Y.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,

Box 253. Cortland, N. Y.

Holstein Bull For Sale

Born Feb. 11, 1920; nearly all white, fine individual, well grown. Sire—a 29.9-lb. proved son of King of the Pontiacs. Dam—a 22.6-lb cow of splendid dairy type that has produced 80 lbs. of milk a day. Price $200 F. O. B. Sherburne. Inspection invited.

Edwin P. Smith, Sherburne, N. Y.

Young Bulls Backed By Yearly and Seven Day Records

We have for sale a few young bulls, up to 11 months old that are sired by our senior herd sire Finderne Pride Johanna Korndyke. He is one of the best sons of King Segis De Kol Korndyke and from Finderne Pride Johanna Rue, former world record cow with 1470 lbs. butter in 1 year. These youngsters are well grown and are all from A. R. O. dams with records up to 30 lbs. Write us for full information. We will answer promptly.

ANTRIM FARMS, - - - SYRACUSE, NEW YORK

WE Want You in—

Watertown, Wisconsin

Next Tuesday, November 23

Because we know we can please you — satisfy you — make you money. We know we can do this because we have selected the sort of Cattle that you and all discriminating buyers seek.

We would call your attention to the following outstanding features of the sale.

1. Our cattle come from clean, long established herds — no jobber herds.
2. Our cattle have been inspected by competent men; the undesirable rejected.
3. Our cattle are bred by responsible men — men who have made our sales what they are. We select our men as well as our cattle.
4. A very attractive lot of bulls, with royal pedigrees, makes the sale especially interesting to those seeking herd sires.
5. We have a large percentage of springers and fresh cows.
6. A large portion of the cattle have been insured under the 60-day plan. This relieves you of worry after the sale.
7. In buying from the Watertown Sales Co. you are patronizing a tried, proven quantity as opposed to a sporadic sale venture, launched merely to unload, with no thought of the future. We are in the business to stay and appreciate that square dealing alone insures longevity in the sale business.

Send for a catalog and be convinced that we have a very attractively bred lot of cattle and then come to the sale and satisfy yourself that the cattle are individually square with their breeding.

Francis Darcey, Secretary, Watertown, Wis.

How Much Does A Carnation Sire Cost?

Purchase a Carnation Sire and examine him. If he is not satisfactory, return him at our expense.

He reaches you guaranteed free from any disease, and a breeder.

99% of the Carnation Sires develop daughters that produce much more milk and butter than their dams

and

The Sons of Carnation bulls find a ready market, because of more and greater records of their dams made daily and advertised everywhere.

Price $350.00 and UP

Eastern Office:
1111 Consumers Bldg.,
Chicago, Ill.

Western Office:
1111 Stuart Bldg.,
Seattle, Wash.

Carnation Stock Farms

Home of Contented Cows

FARMS
Western Farm,
Near Seattle, Wash.
Eastern Farm,
Oconomowoc, Wis.

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

Bairdland Holsteins

We are offering

CHOICELY BRED BULLS

ready for light service, sired by a 33-lb. bull and out of tested dams. We will answer your inquiry promptly. S. A. BAIRD & SON, WAUKESHA, WIS.

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke tge over 37 lbs. butter in 7 days. Come

dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams aver- and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Old Deerfield Herd

Headed by King Piebe Korndyke Johanna. Bulls from one to six months of age for sale. Prices $50 to $75.

CARL FOLL, Deerfield, Wisconsin

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Last Call!

Waukesha County Holstein Breeders'

Conscripted Sale

Monday, November 22, 1920

The greatest opportunity Wisconsin can offer to get a real bull this fall or winter.

A 10 MONTHS OLD SON OF CARNATION KING SYLVIA, "THE $106,000 BULL", and out of a 34-lb. daughter of Sir P. O. M. She has three records over 30 lbs. and a milk record of 19,900 lbs., 805 lbs. butter in 290 days. A wonderful individual, combining the blood of the two greatest families in the world. YOUR FIRST OPPORTUNITY TO BUY THIS COMBINATION.

A 7 months old son of 41st and out of Bonnie Johanna Mooie De Kol with 29.64 lbs. of butter in 7 days and 18,124 lbs. of milk and 694 lbs. of butter in 306 days. Individually right. Good enough for any herd and bound to increase in value as he becomes older.

A number of other bulls, the best, from 30-lb. dams, near 30-lb. dams or from 1,000-lb. dams. YOU'D BE SURPRISED.

20 other bulls from the greatest sires and from young cows with good records.

We have only the Best Bulls in this Sale

Females —

Several daughters of 30-lb. cows.

A number of choice cows with good records, one of them a young cow with twice over 27 lbs. Now on test, and a sister to Wellington Vashti Korndyke now making between 1,200 and 1,300 lbs. of butter in a year.

A dispersion of 20 head of large frame, typy cows from the Duke Burnell herd, most of them bred to freshen this fall to Woodcroft Perfection, Wisconsin's first 40-lb. bull with a yearly record of 1,000 lbs. butter, some with records up to 22 lbs. as 2-year-olds. These cows have never been developed. HERE'S AN OPPORTUNITY.

Others all the way from 4 months to 7 years selected from the herds of WAUKESHA'S LARGEST AND MOST RELIABLE BREEDERS.

EVERY ANIMAL COMES FROM A TESTED HERD, tested to ship anywhere and sold subject to a *60-DAY RE-TEST*.

The committee has conscripted the kind it would want for foundation stock. You buy them at your own price.

Sale commences at 10 A. M. in heated sales pavilion. Get your catalogue at the sale.

WAUKESHA COUNTY HOLSTEINS

WAUKESHA COUNTY HOLSTEIN-FRIESIAN BREEDERS' ASS'N

Waukesha - - - Wisconsin

Harvest Farms Company

will sell at

Watertown, November 23

Harvest Sir Ormsby (114268)

The second best full aged individual bull in the state, being second to the wonderful Baird bull at Wisconsin State Fair 1920. We recalled this bull to use on a few of our own herd and to go with our herd to the State Fair. It may seem futile to offer a seven-year-old bull in a public sale but whatever price he may bring we shall feel that we have done the Holstein industry of the state a benefit if we can succeed in putting him at the head of some herd where individuality is desired. This bull has been used in a small herd of indifferent individuals and yet every calf he sired has the same individuality, the same dairy type as has this sire and they are remarkable producers at the pail. Not only is he himself a good producer of good individuals but he comes from a family of good individuals. His full brother, at the head of the Otto Brandt herd at Horicon, has gotten young stuff that win at shows and that sell excellently in the sales. This bull is not only a good individual but he is backed by some of the very best of the old time breeding. His dam, Harvest Pet Ormsby made 22 pounds at two years old, she freshened in the summer after that record and was never put on test but once when with twin calves, she made a record of 24 pounds. Her dam was Pet Douglas 4th Brightest, one of the really great transmitting dams of the breed. One of her daughters is now State Champion in the Junior 3-year-old class with over 32 pounds. Another daughter stood a three-year-old record of 27 pounds. We have five undeveloped females of this family still on the farm, they are all being developed.

The sire of Harvest Sir Ormsby is a 20-pound son of Paul Beets De Kol, whose dam, Sethje Golden 2d, made her record of 20 pounds at New York State Fair on the grounds at the age of twelve after she had been made champion of the Fair. She has one 30-pound daughter, Sethje Golden Nannette.

He is active, sure and is sold guaranteed to be a Breeder for one year. Our aim in recalling this bull was to put him in some herd where his splendid properties might be retained.

J. P. Riordan, Manager - Mayville, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Step Ahead

Advance your herd by a good sire. Sons of Iowana Sir Ollie have real quality and production too. We have a few youngsters from yearly record dams. Write

Walcowis Farms
Lake Geneva, Wis.

It will be for you a

Step Ahead

Ormsby Bulls

Line Bred Ormsby bulls from 2 mo. to 8 mo. old. Every one good individuals, healthy and thrifty. Herd Federal tested. Address

C. G. KEYS,
Friesian Park Farm, Richland Center, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Wayside Lawn Farms

offer

Three A. R. O. cows, two 2-year-old heifers bred to King Mutual Korndyke 11th whose two nearest dams average butter 7 days 34.90, butter 1 year 1,137.02. Bulls from tested dams from 3 to 9 months old. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

Millar Farm offers:—

Thirty-Lb. Bull Two and a Half Years Old

Dam — Strongsville Blue Bell 3rd. A 30.38-lb. daughter of Sir Douglass Korndyke, who in turn is a 22-lb. son of Korndyke Wayne Paul De Kol, the maternal brother of Pontiac Korndyke.

Sire — Blue Bird Canary Pet, a grandson of the 34.96-lb. bull, Canary Paul Fobes Homestead.

His dam has a record of 18 as a three-yeaf-old.

Details furnished upon request.

WM. MILLAR, JR., Menomonie, Wis.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

RICHLY BRED

HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes**, a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby**, a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.

Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Waupaca County Holstein Breeders' Association

1. Where the largest breeders can secure their choicest herd sires.
2. Where the average breeder can buy those animals of high class breeding that will build up his herd.
3. Where the beginner can obtain that good foundation stock with most excellent type and good records at moderate prices.

Buy that carload in Waupaca Co., the county noted for its large number of Federal Accredited Herds.

Stock for sale at all times.
Write to

A. B. Rowe, Sec'y, Waupaca, Wisconsin

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

Ready For Service

A son of a 40-lb. bull

Sire — Woodcroft Perfection, whose dam, Lady Perfection Korndyke, has a record of 40.25 pounds butter in 7 days and 1,046 pounds in a year.

Dam — Napoli Korndyke with 25.77 pounds butter in 7 days. This bull was born Februray 19, 1919. He is about two-thirds white, straight and a splendid individual. Tuberculin tested. Write for pedigree. Price, $450.00.

BURKE BROS., WAUKESHA, WIS.

RELIANCE

Holstein Stock Farm

Is offering 9 registered Holstein bulls for sale. Also some very fine heifer calves and cows.

Mrs. W. H. Ascott, Sparta, Wisconsin.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

25 Holstein Cows For Sale

or exchange. 23 are high grades, 2 are registered. Also my herd bull, a grandson of K. S. P. A., the $50,000 bull. This bull is from a 27-lb. cow. Most of the cows are bred to him. All are young cows, well marked, heavy producers. Price, $200 per head if entire herd is purchased.

Will take 2 good teams of draft mares or mules as part payment or might consider a good used automobile as partial payment.

G. A. HIGGINBOTHAM, Rossville, Kas.

Illinois Holsteins—The Cattle to tie to—The best investment for your foundation

Stephenson County Association

HOLSTEIN SALE

Freeport, Illinois

Wednesday, Dec. 1

65 Hand Picked Holsteins

Guaranteed and subject to 60-90-day re-test

These Cattle were carefully selected from the choicest animals in the herds of Stephenson County's progressive breeders. The selections were made by Mr. Fred Morrison, Jr., proprietor of Harkland Farm, Bayle City, Ill., and a Committee from the Stephenson County Ass'n.

INDIVIDUALITY is the FEATURE of the SALE—but *Production* and *show ring records* will not be lacking. For instance, a bull that won FIRST at Wisconsin, Illinois and the National Dairy Show will be sold. A heifer that was Junior Champion at the Illinois State Fair in 1918. Two daughters of King Pieter 19th. A daughter of Walcowis Canary Pietje. A son of King Korndyke Sadie Vale. Three daughters of King Segis Pontiac. Two daughters of Canary Fobes Bessie Homestead. A bull that stood second in New York State Fair, in a ring of 56, and was First at the National Dairy Show, 1917. A daughter of Paul Calamo Korndyke, the only bull that took Grand Champion at the National Dairy Show three times, and also sixteen Grand Championships in one year. This heifer is also out of Haeger's great old show cow, Prilly Clothilde De Kol, that stood so often second to the unbeaten Champion, Minerva Beets, and she was Junior Champion at Illinois and is bred to a 37-lb. son of King Segis Pontiac. A two-year heifer out of a 23-lb. dam and granddaughter of a 36-lb. cow. A 19-lb. cow. A 26-lb. three-year-old. A cow with a two-year-old record of 26.87 lbs., which is the second highest in the state.

Note—This is absolutely the time to lay in some foundation breeding stock. There are not enough hand picked ones to go around and they are undoubtedly going higher. And the fellow who takes his nerve right with him and picks off all these selected cattle he can afford now, will be "sitting pretty" when you hear from him a few years from now. It takes some time to build a herd—but a good one is wonderfully well worth all the time and pains it takes to get it.—R. N. Thompson.

Everything Guaranteed and Subject To Re-Test

Sale under the Management of the

Illinois Holstein-Friesian Association

R. N. Thompson, Field Sec'y, 130 North Wells St., Chicago

Catalogues will be ready for mailing about November 15th

Complete Dispersion Sale

of D. V. Whiteleather Herd

50 Registered Holsteins

at Columbia City, Indiana

Tuesday, December 7th

Consisting of

1 5-year-old herd sire	1 6-year-old cow
1 11-year-old cow	5 5-year-old cows
1 10-year-old cow	2 4-year-old cows
2 9-year-old cows	8 3-year-old cows
7 7-year-old cows	7 2-year-old cows

12 heifers born in 1919, some bred and some not bred.

3 heifers born in 1920.

4 males from 6 weeks to 4 months of age.

Reference Sire No. 1 is a grandson of Aaggie Cornucopia Pauline, a daughter of De Kol 2d's Paul De Kol, and the first cow to go above 34 lbs. as a senior 4-year-old. She has two 30-lb. daughters and one of these has two 30-lb. daughters. His dam is a 22.39-lb. daughter of Rag Apple Korndyke (therefore a sister to Rag Apple Korndyke 8th) out of a 27.73-lb. sister of King Segis. One-half the families in this sale are daughters of Reference Sire No. 1 and those that are bred are bred to a son of King Segis Pontiac, out of a 26.61-lb. daughter of Paul Calamo, a grandson of Pontiac Korndyke.

For further information write for a catalog now ready and mailed on application.

F. G. Johnston, Sale Manager

37 West Lane Avenue, Columbus, Ohio

COL. L. PERRY, Auctioneer

Macoupin County Holstein Breeders' 2nd Annual Sale

65 Head Quality Holsteins —10 a. m. sharp, November 26th at Shipman, Ill.

Macoupin County Breeders are putting some of their best into this sale. They will rest their reputation on their entries. The entries have been picked by a committee for individuality and soundness.

A 60-day Guarantee given for Tuberculosis

Among the entries:—Cows with records close to 30 lbs.

Sons and daughters of, and cows and heifers bred to bulls with 7-day records up to 37 lbs., and 1,300 lbs. yearly.

Four yearly record sires with records of 1,058, 1,146, 1,149 and 1,313 lbs., are in active service in this county and are represented by offerings in the sale.

Easily accessible, sale tent within block of depot.

Notes Accepted where Suitable Bank References can be Given

Send for catalog

W. E. French, Sale Manager Shipman, Ill.

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

"SPOT"



Eli Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.

KITTLE BROS., Holland, Ohio.

FerndaleFarm

Offers for $200.00

Grandson of Spring Farm Pontiac Cornucopia, born April 21, 1920. Four nearest dams have A. R. O. butter records that average 26.55, average test 4.15. Calf is good individual and seven-eighths white. This is a bargain. If you want him act quick.

R. T. STEVENS, Shelby, Ohio.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, he 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 8, Capron Ill.

Buffalo Creek Farm Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

Oklahoma

Ormsby bred bull calves, from untested heifers. Prices right. 90-day retest. Return privilege if not satisfied. Calves are from a 32-lb. 3-year-old bull.

Photos and pedigrees on application.

Bostwick & Son, Ardmore, Oklahoma

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.

A. F. Randolph, Prop., CANTON, ILL.

57 BULLS

From four to eighteen months of age. All pure-bred registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke.

Wm. N. Osborn, Wanatah, Ind.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.



Purebred Holstein Cows Return $1.54 for One dollar of Feed

Even though you may regard your farm as a diversion or your hobby, you would doubtless prefer to see it self-supporting, and perhaps take still greater pride in it for that very reason. Here are two or three facts! Holsteins are the largest, most vigorous, most even tempered, the easiest-cared-for breed, and the greatest yielders of milk in the world. Their milk is the most evenly balanced in fat, sugar and proteids, and for that reason easily digested. It is everywhere recognized by the medical profession as absolutely the best for infant and invalid feeding as well as for general use. A herd of Holsteins will give you on the average $1.54 for every dollar's worth of food they eat. Send for our free literature and look it over. Perhaps you will be interested in buying Holsteins.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

Your Choice of **50** Young Bulls

They Are Out of Yearly Record Dams And Sired By—

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his grandams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow — the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms
Winterthur - - - Delaware

Why Buy a Son of King Pietertje Ormsby Piebe?

Because he is one of the very best long distance bred sires in the country.
Because he not only is backed by show ring individuality but is himself siring show ring winners.
Because he will be given every chance as a sire and his daughters will all be given the best possible chance.
Because his sons are always in demand. If you have one he will actually increase in cash value during the next several years.
We have several good youngsters for sale by him from good 7-day and year-record dams.

Hargrove & Arnold Holstein Co., Norwalk, Ia.

Ormsby Bulls—

The 30-lb.—1000-lb. Kind



If you want one of that kind — a real individual — write for our sale catalog.

We have left just a few sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, from cows with 7-day records up to 40 lbs. and that have made or are making year records.

Have also a few splendid grandsons of S. P. O. M. from the same kind of dams.

MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA
Address all correspondence to Garden Court Apts.

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

HOME FARM HOLSTEIN FRIESIANS

Home Farm Korndyke Sir Clyde

a light colored son of Woodcrest Sir Clyde we offer, just a year old. His dam is a 16-lb. 2-year-old daughter of K. K. S. V. 24th. She will have over 525 lbs. butter for the year; second dam, an 18-lb. 2-year-old daughter of Sir Sadie Cornucopia. He is given a federal certificate of health. Write today.

W. B. Barney & Sons - - - Chapin, Iowa

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS
and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Son of a 37-Lb. Ormsby Bull
Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.
BLUEBELL FARM, RICEVILLE, IOWA.

$150 to $500 Buys a Serviceable Bull

Sired by a good yearly record son of Colantha Johanna Champion. They are out of tested and untested granddaughters of Pontiac Korndyke. Will also price a few good heifers up to a year old—the same breeding.

Ontonagon Co. Farm
Ontonagon, Michigan
T. G. Roberts, Herdsman. J. S. Netterauer, Sec.

THE TRAVERSE HERD

We have what you want in
BULL CALVES
the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich.

Holstein-Friesian Bulls

sired by
"SIR ORMSBY WISCONSIN BANOSTINE"

A 34-lb. sire. From A. R. O. dams. Get our price list. Lilliberk Farms, Homer, Michigan.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

This Son of a 31-lb. Junior Three-Year-Old For Sale



KING ORMSBY ACMEANNA (313160), Born June 17, 1920

His two nearest dams average: Butter, 33.26 lbs. and milk, 663.30 lbs. in 7 days. He is a splendid individual, well grown and of a rugged type. He carries a splendid combination of breeding and will make some small breeder a real herd sire.

HIS DAM

LADY ACMEANNA ORMSBY DE KOL, is an outstanding individual. As a junior three-year-old she made 31.14 lbs. butter from 502.3 lbs. milk. Her sire is SIR MUTUAL ORMSBY DE KOL, a son of Duchess Ormsby Butter King and the 31-lb. cow, Maid Mutual De Kol. This cow is the dam of KING PONTIAC CHAMPION, the famous PABST FARM herd sire.

HIS SIRE

SIR COLLEGE CORNUCOPIA 2D, has a splendid list of A. R. O. daughters. His dam is College Belle Wayne, the famous South Dakota College producer. In 7 days she made 35.38 lbs. butter and 824.3 lbs. milk. She has a daughter with 989 lbs. butter for the year.

Price $1500.00

Guaranteed sound in every way. Will hold until six months of age and ship subject to 60- to 90-day retest

E. C. Schroeder Farms - Moorhead, Minnesota

Federal Accredited Herd

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

C. J. Oppliger, Forest Lake, Minn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

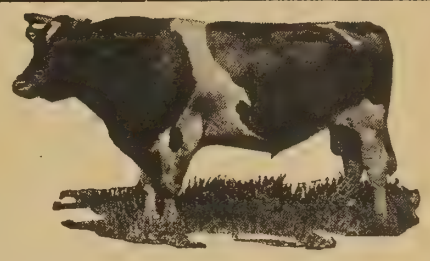
Female Holsteins for Sale

Pure-bred cows and heifers of choice breeding. Bred to our herd bull, "Sir Ormsby Segis Korndyke". Also fifty high grade cows and heifers, fresh and springers.

ISLAND PARK STOCK FARM,
Hanscom and Anderson, Props.,
R. F. D. 1, St. Cloud, Minnesota.

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

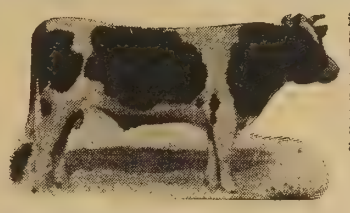


Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.

Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Just About Ready for Service — $500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams. For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.

(A Federal Accredited Herd)

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. GRAHAMHOLM FARMS,

H. R. Searles, Mgr. Rochester, Minn.

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

For Sale

Minnesota bred Ormsbys; Fresh Cows, Heifers and Young Bulls, by two of the best bred, year record Sires in Service. From A. R. O. dams.

M. L. Enright, East Grand Forks, Minn.

If You Went in to a Grocery Store

and laid the price of a dried up loaf of bread on the counter you would expect to get a dried up loaf of bread. Yet, a fellow came here the other day and laid down the price of a dried up bull. We haven't any dried up bulls for sale so he went home without one. If you want a good bull calf, any age, better write for the circular today.

Flecks Farms, Faribault, Minn.



The Farmer's Yearly Balance Sheet

National Interest demands that it show profits

IN 1830 ten hours of labor produced three bushels of grain. Today the same labor produces 60 bushels. The modern farmer more successfully combats insect blights, live stock diseases, soil conditions and in many cases even the elements.

This advance has been made at tremendous cost through research by the Department of Agriculture, Universities and other agencies supported by public funds because successful agriculture is vital to National prosperity. Only success can keep the best manhood on the farms.

In spite of improved methods, however, many farmers make only a "living" from their work. *In many cases criminal waste is the cause.* This waste is glaring in the case of farm machinery. Millions of dollars are lost yearly by farmers because machinery is not protected from the elements, and more important still, because it is inefficiently operated.

Prominent engineers agree that over 50% of all engine troubles on tractors, trucks and automobiles are due to incorrect lubrication. Incorrect lubrication not only means repair expense, but excessive oil and fuel consumption, frequent shutdowns and quick depreciation.

The Vacuum Oil Company has for years been recognized the world over as an authority on scientific lubrication. Gargoyle Mobiloils when used as specified in our Chart of Recommendation, have in hundreds of public and private tests shown a saving of oil from 50 to 70% and a fuel economy from 17 to 25%. Besides lower operating costs Gargoyle Mobiloils enable you to get engine results, which means more power, less trouble, less depreciation.

Farmers fully alive to this situation have increased their profits to an appreciable extent by the economies effected with scientific lubrication.

The Chart of Recommendations (shown in part on this page) specify exactly what grade of Gargoyle Mobiloils will give you best engine results from your auto, truck and tractor.

* * *

Gargoyle Mobiloils are put up in 1- and 5-gallon sealed cans, in 15-, 30- and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a booklet containing complete automobile and tractor charts and other valuable data.

GARGOYLE

Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC BRANCHES:					
New York	Philadelphia	Detroit	Minneapolis	Kansas City, Kan.
Boston	Pittsburgh	Chicago	Indianapolis	Des Moines

Chart of Recommendations *for* TRACTORS

(Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A"
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

NAMES OF TRACTORS	1920 Summer	1920 Winter	1919 Summer	1919 Winter	1918 Summer	1918 Winter	1917 Summer	1917 Winter	1916 Summer	1916 Winter
Allis-Chalmers (General Purpose)	A	A	A	A	A	A				
" " All Other Models	BB	A	BB	A	BB	A	BB	A	A	A
All Work	B	A	B	A	B	A	B	A	B	A
Appleton	BB	A	BB	A	BB	A	BB	A		
Aultman-Taylor (18-36)					BB	A	BB	A	A	A
" " (22-45)	BB	A	BB	A						
" " (15-30) (Waukesha Eng.)	BB	A	BB	A						
" " All Other Models	B	A	B	A	B	A	B	A	A	A
Avery (5-10)	A	A	A	A			A	A	A	Arc.
" Motor Cultivator & Planter	A	Arc								
" All Other Models	B	A	B	A	B	A	B	A	B	A
Bates Steel Mule	B	A	B	A	B	A	B	A		
Bean-Track-Pull	B	A	A	A	A	A	A	A		
Big Bull			B	A	A	A	A	A	B	A
Buckeye (Findlay, Ohio)	B	A	B	A	B	A	B	A	B	A
Case (9-18)			A	A	A	A	A			
" (10-18)			BB	A						
" (10-20)					A	A	A	A	A	A
" (12-25 & 20-40)					BB	A	BB	A	B	A
" (15-27)	BB	A	BB	A						
" All Other Models	B	A	B	A			B	A	B	A
Cletrac	BB	A								
Cleveland			BB	A	BB	A	BB	A		
Coleman	B	A	B	A	B	A	B	A		
Common Sense	BB	A	BB	A	BB	A	BB	A	A	A
C. O. D			BB	A	BB	A	BB	A	A	Arc.
Craig	BB	A	BB	A						
Creeping Grip			BB	A	BB	A	BB	A	B	A
E. B. (9-16)			B	A	B	A				
" (Reeves)	B	A	B	A	B	A	B	A	A	A
" All Other Models	A	A	A	A	A	A	A	A	A	Arc.
Flour City (20-35)	B	A	B	A	B	A	B	A	A	Arc
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Fordson	BB	A	BB	A	BB	A				
Gas Pull			B	A	B	A	B	A	B	A
Grain Belt	BB	A	BB	A	BB	A	BB	A		
Happy Farmer					B	A	B	A	B	A
Hart Parr	B	A	B	A	B	A	B	A	B	A
Heider	BB	A	BB	A	BB	A	BB	A	B	A
Hession			B	A						
Hollis			BB	A						
Holt Caterpillar (Model 18)							BB	A		
" (Model 45)	BB	A	BB	A	BB	A	BB	A	BB	A
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Huber	BB	A	BB	A	BB	A	BB	A	B	A
Illinois	B	A	B	A	B	A	A	A		
Indiana	A	A	A	A						
K. C. Prairie Dog	BB	A	BB	A	BB	A	BB	A	B	A
La Crosse	B	A	B	A						
Liberty	B	A	B	A	B	A				
Lightfoot			BB	A	BB	A				
Minneapolis	B	A	B	A	B	A	B	A	B	A
Mogul (8-16)					A	A	A	A	A	A
" All Other Models			BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A	BB	A
Monarch	BB	A								
National			BB	A	BB	A				
Neverslip (20-12)			B	A	B	A	BB	A		
" (30-18, 10-6)			BB	A	BB	A				
" All Other Models					B	A				
New Age			BB	A	BB	A	BB	A		
Nilson	BB	A	BB	A	BB	A	BB	A	B	A
Oil Pull (14-28, 10-20)					BB	A				
" " (12-20, 16-30)	B	A	BB	A						
" " (20-40)	B	A	BB	A	BB	A				
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Parrett	B	A	BB	A	B	A	BB	A	A	A
Pioneer	B	A	B	A	B	A	B	A	B	A
Royer	B	A	B	A	B	A				
Rumely (8-16)					BB	A	BB	A	BB	A
" (12-24)					B	A	B	A	A	A
Russell (Giant)	B	A	B	A	B	A	B	A	A	Arc.
" All Other Models	BB	A	BB	A	BB	A	BB	A	A	Arc.
Sandusky	BB	A	BB	A	BB	A	BB	A	A	A
Square Turn (15-30)			BB	A	BB	A				
" " (18-35)	B	A	B	A	B	A				
Titan	BB	A	BB	A	BB	A	BB	A	BB	A
To-Go	A	A	A	A						
Townsend	B	A	B	A						
Trundaar	BB	A	BB	A	BB	A				
Turner Simplicity	BB	A	BB	A	BB	A	BB	A		
Twin City (Model 15)									A	A
" " (Model 16)			BB	A	BB	A				
" " (Model 12-20)	BB	A	BB	A						
" " (Model 20-35)	BB	A								
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Velie			B	A	A	A				
Wallis	BB	A								
" Cub					B	BB	B	BB	A	Arc.
" (Junior)			BB	A	BB	A				
Waterloo Boy	A	A	A	A	A	A	A	A	B	A
Wheat			B	A						
Whitney	BB	A	BB	A	BB	A	A	A		
Wisconsin	B	A	B	A	B	A	BB	A		

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Expt. Sta.
Urbana, Ill.
20 July 21

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., DECEMBER 3, 1920. | Number 20

ADVOCATING THE AD

HELEN S. K. WILLCOX, NEW YORK

"THEY'RE at it again," mournfully observed a friend of our American bossy the other day. "In all the principal and most popular magazines, men's or women's, the folks behind the cottonseed or cocoanut cow are right on the job as usual boosting oleo to the skies. For instance, in nearly every Saturday Evening Post one or more of the Big Five, the packers, come out with a double page spread about good old oleo."

"But the milk people probably are running similar ads telling about their products, aren't they?" mildly inquired an innocent bystander.

"They probably are —not!" retorted bossy's friend wrathfully, "unless you except the occasional one put out by the condensed milk people such as Carnation and Bordens. No, no. The American dairyman and his representatives all agree that advertising on a stupendous national scale would do wonders toward rightening present chaotic dairying conditions, securing the good will of almost every man and woman in the country who can read, and educating the public as to the honest qualifications of milk and its by-products for a sounder place in the American scheme of things; but so far, we have done a lot of shouting and mighty little constructive effort toward a panacea which we all more or less believe in. Strange, isn't it?"

"Well, I've always thought that a year in and year out advertising campaign would do a good deal for the milk industry," the innocent bystander remarked thoughtfully, "but I supposed the milk folks had arrived at the same conclusion long ago and by this time they would be in a position to talk back from the opposite page to those brassy oleo fellows."

"Not so you could notice it," returned the B. F. wearily, "even though 85,000 of them are organized in New York and surrounding states and are proposing to take their business into their own hands and run it to suit themselves instead of the dealers. And just think of the tiny deduction which would do the trick if taken from the combined dividends of those 85,000 for one year! Not to speak of all the other farmers in the United States who could be levied on, or asked to contribute voluntarily. Why, the advertising appropriation of the imitation butter makers would look like two cents beside that of the milk makers, if someone would only start the contribution ball rolling, and think of the results in multiplied dollars and cents which would roll back to the farms as sure as this country is almost dry."

"Yes, and they've got some live subjects to work on," said the I. B. speculatively. "Now there's a lot of romance and interest and life in a glass of milk or a pound of real butter or a piece of real cheese or even in a saucer of ice cream. You could get under the hide of a business man any day by cleverly picturing the goodness and tastiness and wholesomeness of his noon-day lunch when made up of a crusty roll spread with sweet country butter, a schooner of milk fresh from the clover fields, or a square of rich, tangy cheese to accompany a good old fashioned spicy apple pie."

"Sure, and it makes me homesick just to think of such appetizing stunts," confessed the B. F. reminiscently. "Such advertising would take the poor tired business man back to the old farm at the first crack out of the box. He would remember how ma used to set the milk every night in the long pantry and how she would skim the thick goodness off every few days, and how she would let him work the dasher to the old churn and what excitement there would be when the butter got ready to come. And he'd remember how delicious that sweet home-made butter used to taste on great fat slices of ma's bread hot from the oven, with maybe a little maple syrup spread on for fair measure. And the tall schooner of milk would take our great industrial leaders back in memory to the old barn away up state where they milked old Brindle by lantern light and fed her and watered her and brushed her and petted her—and left her at the first opportunity for fairer and more profitable fields. Why, those fellows would read a subtle advertisement written around the old farm and the milk therefrom, and they would order a lunch of it from that time forth, for the sake of the old folks and the farm and bygone days if nothing more. Isn't that the truth?"

"I'll say it is," answered the I. B. enthusiastically, "and believe me, I'd like to write those ads! Before I'd get through, I'd have every town and city Jack and Jill tumbling over themselves to double their usual milk allowance and wondering how on earth they had let the substitutes put it over on them so long. Why, the facts and figures that milk and butter and cheese alone could muster would prove the complete undoing of competing also-rans, and with the old farm as a background to furnish the charm and romance, we'd all see our dairy troubles disappear as the morning dew and the old cow would just naturally have to hump to keep up with the demand."

"Oh, yes, all that would happen without a doubt if our advertising had the punch and flavor and appeal," the B. F. replied, "but like all the rest, we're doing a lot of talking and that's all. But this I do know, if I were some of the big organizations taking care of the farmer and dairyman today, I wouldn't let another night go by without taking off my coat and going after permission to start this long-talked of advertising crusade. Some of the producers have tried it with most conspicuous success, such as the Sunkist people, and the walnut people, the peanut people, and the raisin people, and the apple people from Washington and Oregon, but the farm won't have been fittingly represented and made to take its proper place in the sun until the milk and butter and cheese folks have their advertising innings and then keep everlastingly at it. Now why don't we advertise instead of taking it out in advocating?"

"Well, don't pick on me as if I were to blame," said the I. B. as he moved officeward, "but gosh! if they ever begin to advertise the products of the old farm so that you can fairly taste 'em, if they tell by word and picture of the clover fields and contented cows, my digestion can go blooey! I never could resist good butter and rich cheese and fresh milk. No, sir! I never could resist 'em in a regular colored-up American ad!"



WOMEN'S RELIEF CORPS FARM IN CHENANGO VALLEY, NEW YORK

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
EDITORS
A. J. GLOVER, P. C. BURCHARD,
C. L. BURLINGHAM

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Editorial Manager - - - A. J. GLOVER
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H. B. GURLER - - - - Mississippi
C. P. GOODRICH - - - - - Wisconsin
H. H. LYON - - - - - - New York
DR. E. V. MCCOLLUM Johns Hopkins University
PROF. C. H. ECKLES - Minn. Exp. Station

Subscription Rates

Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

This Ration Makes Winter Eggs

The following ration for winter egg production recommended by the University of Missouri College of Agriculture satisfies the needs of the hens and is economical and practical for most sections of Missouri. During the past year it has been fed on a number of Missouri farms with good results.

Scratch Grain: 10 pounds shelled corn and 5 pounds dry threshed oats. Dry Mash: 3 pounds wheat bran, 3 pounds wheat shorts, and 1½ pounds commercial meat scrap.

Where milk is plentful three gallons of skimmed milk or buttermilk furnished each one hundred hens daily will take the place of meat scrap. Either milk or some form of lean meat must be supplied in every ration for successful winter egg production. Commercial meat scrap can be obtained from most feed dealers in one hundred-pound sacks. One sack will supply protein needed by one hundred hens for more than two months. Kaffir or feterita may be substituted for the corn. Barley or feed wheat may be used instead of oats. Corn meal or ground oats may be substituted for shorts in the mash. Alfalfa meal or clover leaves may take the place of the bran. A good grade of tankage may be used instead of the meat scrap. In feeding this ration all grain should be fed in deep straw to compel the birds to exercise. The mash should be fed in self-feeding hoppers or troughs and a supply kept before the birds. In addition to this ration, hens should have an abundance of water, a supply of green food, and free access to sharp grit and crushed oyster shells, or soft limestone grit. With early hatched pullets, housed comfortably, and fed this ration, winter eggs are assured.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

That Comfy Feeling

The holidays lie just ahead,
With promise of a Christmas tree,
And dreams come to a restful bed,
Of gifts the Yule will bring to me.
It is a time of gladsome cheer,
Of smiles, contentment, and repose.
My crops all in—the hour so near
When every Christmas candle glows.

A while, at least, my chores are light,
No worry, 'til the dawn of spring.
And prospects seem sublimely bright
For May and all the birds that sing.
The herd is better than of yore,
Each cow a ribbon-winning belle,
How could a fellow ask for more?
I think I'm doing mighty well.

And so, each evening, by the fire,
The cattle snug, the barn as prim
As any parlor, my desire
Is linked with prayer-thoughts and a hymn.
I'm thankful for this span of rest,
When, in my slippers, I can sit
And rock and figure how I'm blessed
By luck and sort o' hugged by it.

⚜

James J. Jeffries, former world's champion heavyweight, seems to have made a success of farming since his retirement from the prize ring. He has a fine herd and many of the cows have won prizes for him at the Los Angeles Stock Show. And Jim feels so happy over it that he has gone and had his photograph taken with King Segis Pontiac Jannek, a super-prize winning Holstein. Well, we somehow feel that Jim will get more out of the dairy business than the prize ring, in the long run.

⚜

The Old Dairyman's Philosophy

The cow that habitually holds back her milk is some kin to the employee who loafs when the boss is not looking.

There are a lot of clubs a boy might join but believe me none of them can equal the calf club.

It's a long lane that has no turning but trust a cow to find the turn, no matter how far it is.

⚜

The Way Not to Succeed

Fight good roads movements.

Refuse to admit that pedigreed stock is best.

Look on cream separators as "fake machines".

Get along without silos of the modern kind.

Discourage living near transportation facilities.

Knock the idea of motor trucks on dairy farms.

Be unprogressive in dairy barn appliances.

Laugh at the very idea of mechanical milkers.

Never give the boys cows of their own.

Tell mother she doesn't need a dish washing machine.

Or a clothes washer or electric lights.

Be brutal, unkind to your stock.

⚜

"I'm getting along famously with my new hired hand."

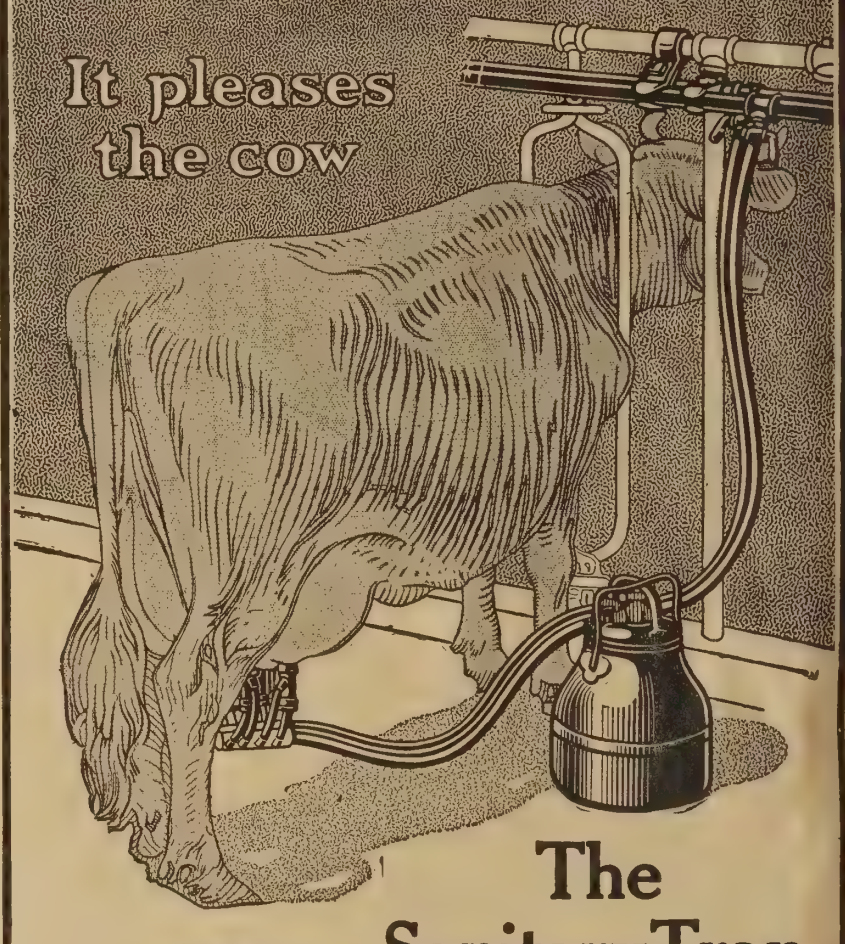
"How do you work it?"

"Oh, he only works when he feels like it and then on part time."

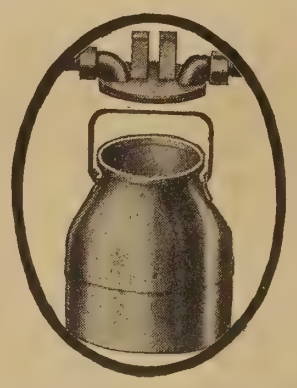
⚜

"Mother and the children are making out their Christmas lists already," remarked Dairyman Joe Perkis, "and while I haven't seen 'em yet, I'll bet a calf to a new cream separator that I'm down for the sort of woolen socks that make my feet feel as if I was walkin' in briars."

The De Laval Milker



The Sanitary Trap



(The Sanitary Trap is not shown in the part of the Milker installation pictured above. It is placed between the Pulso-Pump and the first line of stanchions)

The Sanitary Trap is one of the important features of the De Laval Milker. It is placed on the vacuum pipe-line, and catches any moisture which may be drawn into the vacuum line or form there by condensation. It also collects particles of scale or other foreign matter that may get into the system.

It can be conveniently and quickly removed, and may then be washed out as easily as an ordinary milk pail; and also permits cleansing the entire system.

The high efficiency of the Pulso-Pump (the rotary vacuum producing power unit of the De Laval Milker) makes the use of the old-fashioned bulky and unsanitary vacuum tank unnecessary.

The De Laval Milker is distinctly different, possessing many new and exclusive features that are of inestimable value to the careful dairyman and owner of valuable cows. Its action is positive and uniform from day to day, and it is faster, more reliable and more sanitary than any other method of milking.

Wherever cows are milked the world over, the name "De Laval" stands for quality and highest value to the user. The fact that it bears the name "De Laval" is a guarantee that it will give the service claimed for it.

Write to nearest De Laval Office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway New York
29 East Madison Street Chicago
61 Beale Street San Francisco

Season's Greatest Jersey Show

Photographs from Shreveport where highly successful exhibition was made and 60 animals averaged $707 at auction



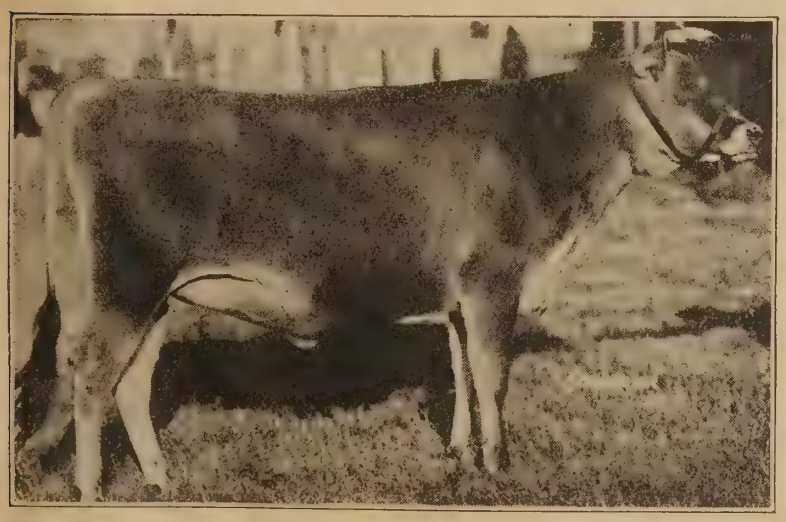
Imp. Fern's Oxford Triumph, grand champion female and the sensation of the show. $15,000 two-year-old owned by Ayer & McKinney, New York.



Buttercup's Butter Lad, highest priced bull, consigned by Longview Farm, Missouri, and bought by R. J. Fleming, Ontario, for $3,200.



Boosters for the show: W. R. Hirsch, Secretary Louisiana State Fair; herdsmen and caretakers; C. H. Staples, promoter of the show.



Raleigh's Miriam, Longview's senior calf, second in class at Shreveport and sold to C. M. Gouch, Tennessee, for $1,500.



You'll Do's Fairy, highest priced female. Consigned by Thomasville Live Stock Company, Georgia, and bought by R. J. Fleming for $4,000.



Aged cow class in ring. At right is Grove Bell Queen, winner, owned by Ed. C. Lasater, Texas.



Breeders and dairy farmers in front of coliseum where show and sale were held.

California Co-operatives and the Mid-west

Report of Representatives of Mid-west Farm Bureau Federations Who Visited Pacific Coast Co-operative Marketing Associations

THE matters which this committee observed and which seem to offer helpful suggestions in connection with the mid-west farmers' plans for co-operative marketing of grain and live stock may be grouped under four heads:

1. Relation of growers and marketing agency.
2. Legal structure of marketing agency.
3. Commercial practices.
4. Economic and social outlook and purpose of the co-operative organizations.

Relation of Growers and Marketing Agency

In the first place, your committee was deeply impressed with the fact that successful western co-operatives have passed beyond the stage of local shipping-point co-operation to that centralized organization which is necessary if significant results are to be obtained in the market distribution of the crop. The individual growers no longer seek to retain personal control over the disposal of their crop, through the local co-operative association, if they see fit or through other channels if these seem to offer more at the moment. Instead, they delegate their power to a large-scale marketing company which, either through a centralized or a federated plan of organization, brings to a focus the administration of supplies sufficient in volume to give it an effective influence in the market centers and hence upon the price-making process. The first step toward the stabilization of market conditions is the organization of producers (the supply side of the market) into units commensurate in size and trading efficiency with the buying agencies (demand side of the market) with whom they must ultimately deal.

This is simply to say that, for the specialized and delicate process of market distribution, they regard their industry rather than the individual producer as the unit, and as many as possible of those who grow a given commodity organize to have this work performed jointly for the best interests of all the members. Ten thousand five hundred citrus growers over all the important producing territory in California turn their fruit into one great marketing organization. Nearly as many prune and apricot growers, scattered over a stretch of several hundred miles, organize the selling of their commodity on a similar basis.

The western people invariably counseled us that it was useless to launch such a co-operative agency unless a majority of producers turn their products over to it for distribution and unless the members of the organization are tied to it by contractual obligation covering a period long enough at least to get the new sales system established in the markets, say five years. Even after it is so established they regard it as necessary to sign up the growers annually for the whole of each year's business.

The other side of this exclusive relationship of the producer to the co-operative selling concern is that the sales agency handles only the product of its members. It is not a commercial company trading with the general public for the profit of its members as are many of our farmers' elevators. Rather is it a mutual association for service to its members on a cost basis. In the judgment of your committee this exclusive membership relation of the Pacific Coast co-operatives represents the true type of co-operative organization and should be followed by mid-west organizations.

While an effective degree of centralization is necessary for the control of actual operations, this can be kept on a democratic footing through a federated scheme of organization and the vesting of control in the hands of directors elected by the member bodies. The voting trust type of organization seems to the committee inappropriate to a co-operative organization.

California co-operative associations fall into two classes, those in which growers hold membership directly in the central association and those in which individuals join in a local association, and those district exchanges join in a central exchange to give service to the whole industry. In view of the existing development of our local farmers' elevators and state farmer grain dealers' associations, it seems that the federated plan based on these already established organizations would be the one best suited to our needs.

Legal Structure

The two-fold plan of a non-stock distributing company and a stock corporation for warehousing and the handling of supplies seems excellently suited to the needs of the grain business. Its service-ability in facilitating the financing of a stored product through the use of warehouse receipts is clear. However, its value as a means of securing immunity from legal control is at least doubtful. In a decision just handed down by an Oregon court the position is pretty clearly taken that even a non-profit co-operative association is as subject as any other to prosecution for acts which tend to create a monopoly or to restrain trade.

This same issue comes up in connection with the contracts which seek to tie the grower to his marketing association for a period of from one to seven years. Such contracts can be made effective only through the use of fines, penalites, liquidated damages, provision which will be upheld by the courts, or through suits in equity to restrain others from alienating members or to enforce specific performance by such members. It is true that liquidated damage clauses have been successfully employed by the California Fruit Growers' Exchange and several other California associations. But while these contracts have been upheld in the lower court, no such case has as yet been adjudicated by the Supreme Court and the California people themselves are somewhat dubious as to what the outcome would be. In view of the decision of the Iowa Supreme Court in the Deborah case (160 Iowa p. 194) that provision could not be enforced in the state of Iowa, and it seems quite likely that at least some of the neighboring states would take the same stand. As for specific performance, Judge Morrison of Los Angeles, counsel for several co-operative associations, informed members of the committee that he saw little hope of securing relief of that sort from the courts in his own state, which is probably the most favorable place for such an experiment. As for injunctions or restraining orders, the action of the Oregon court and the attitude of courts elsewhere in labor union cases and those involving the holding of the food supply seem to negative any expectation that the courts would use this means of enforcing growers' contracts.

It may be added that the attitude of the California people on this point is the outgrowth of conditions somewhat dissimilar to those maintaining in the mid-west states and this committee would suggest that possibly the existing development of farmers' elevators and the sense of loyalty engendered by such agencies as the Farmers' Union, the Equity Society, The Grange, and the Farm Bureau Federation may be sufficient to guarantee the flow of an adequate supply of grain through the channels of the co-operative selling agencies, enabling them to accomplish all the proper objects of such associations, though not assuring them a monopoly position in the trade.

Commercial Practice

In their commercial practice, the Pacific Coast co-operatives follow two general lines: first, the distribution of their supplies to the country's markets as equally as possible, there to be sold at prevailing supply-and-demand prices; and, second, the naming of a price at which contracts will be executed and which aims to establish a periodic normal level, in some cases extending over a period as long as a whole season. It is the conclusion of your committee that the former method, which has been so successfully followed by the California Fruit Growers' Exchange, is the one which would be applicable to the marketing of grain at least during the early stages of operation by any centralized distributing concern which may be set up. This method is also used by the poultry producers in California and seems to us best suited to a commodity which in the nature of the case has a continuing rather than a seasonal market flow.

Even in the case of those associations which name an opening price, the door is left open for the revising of the price in case subsequent market conditions make it necessary or advisable. The practice of the California Almond Growers' Exchange is particularly significant in that Mr. T. C. Tucker, the general manager, insists that after the initial price has been named by the directors, power shall be left in his hands to modify this price when in his discretion such action is advisable.

A second striking feature in the commercial management of the western co-operative organizations is that they use existing trade agencies to a very large extent. Their point of view seems to be that such agencies are in the main efficient and that what is required is merely to bring them into such working relations with the producer that he may secure the benefit of their efficiency. The poultry producers in Los Angeles, in San Francisco, and in Portland have secured a membership on the regular exchange of these cities and practically all of the associations sell their product through the regular brokers in eastern markets. The chief concern seems to have been to eliminate the shipping point speculator and to retain such control of distribution as to prevent undesirable speculation in their commodities by central market wholesalers. It is true that some of the associations look forward to the time when, perhaps through the alliance of several commodity organizations, they can retain brokers in all the principal eastern markets who will be the agents exclusively of California co-operative associations. The citrus association already has its own salaried salesman in all the large markets.

It may be added in this connection that these associations have secured efficient business management by employing the best trained and most successful men of practical achievement wherever they could be found inside or outside their own membership. They have not been afraid to select men who had previously been private dealers, packers, or local shippers of their commodity. They have thus secured the best marketing brains and put them to work for the producers' interest. To do this they have not hesitated to pay good salaries, and

(Continued on page 876)



AYRSHIRES FROM THE MASONIC HOMES FARM, PENNSYLVANIA, WHERE A HIGH PRODUCING HERD HAS BEEN DEVELOPED

From left to right the illustrations show the milking herd with the modern barn in the background; Finlayston Bell's Mamie, ex-champion roll of honor three-year-old with a production of 11,298 lbs. milk, 424.75 lbs. fat; Finlayston Bell's Daisy, senior four-year-old roll of honor champion with a record of 11,549 lbs. milk, 490.75 lbs. fat; and Pamelia Ayer of Sunnyside 2nd, with a senior three-year-old roll of honor production of 10,672 lbs. milk, 380.11 lbs. fat.

WHO WON THE ST. LOUIS MILK STRIKE

Settlement Made on Basis of Monthly Values on Corn and Butter

WHAT will happen to the price of corn during 1921; are butter quotations going up during the coming year or will they slump? The answer determines who won the St. Louis milk strike. November 1 the Southern Illinois Milk Producers' Association began shipping milk to St. Louis on a year's contract in which the price is based on corn and butter values. From September 17 to November 1, the period of the strike, its members, almost to a man, loyally abided by the association's decision and held all milk from city shipment. Who won the strike—producers or distributors—is still disputed; each claims victory though each suffered heavy losses. The answer will be made by the trend of corn and butter markets.

The basis for agreement which started milk flowing cityward from the eleven counties in southern Illinois that supply St. Louis milk is a new one. Whether it is a good one for the producer remains to be seen. At least it made the November price slightly exceed that at Chicago. Moreover, it has the virtue of being the only basis successful as a means of settlement.

Basis for Monthly Price

The agreement holds until November 1, 1921, when it may be renewed for a year. The price is calculated each month by multiplying the per cent of butterfat by the average daily value of 92 score butter on the Chicago market for the previous month, plus one-half the average daily price of a bushel of cash corn on the St. Louis market as an allowance for skimmilk, plus thirty cents per hundred pounds for hauling and handling. An additional thirty cents per hundred pounds will be paid in November, December, January, and February, an additional twenty cents in August, while a deduction of thirty cents per hundred pounds is made in May and June. An illustration of the operation of this agreement is had in the calculation which established the November price at $3.10. The average Chicago price for 92 score butter in October was $.57, and that for corn in St. Louis, $1.01. Therefore:

Butterfat	.57x3.5	$1.995
Skimmilk		.505
Hauling and handling		.30
Addition for November		.30
November, 1920, price		$3.10

This price is paid within the zone in which the freight rate on a ten-gallon can of milk does not exceed twenty-nine cents, the producer paying transportation charges in excess. All milk is to be taken, the deductions in price taking care of the surplus. November milk retailed in St. Louis for 16 cents per quart.

Association's Beginning in 1912

The life of the Southern Illinois Milk Producers' Association has been a troubled one. It had its beginning in 1912 around Edwardsville where producers organized to fight indictments brought by federal authorities charging adulteration of milk. The producers won every case. When they invited the distributors to meet with their association in discussing milk prices, they were told, "Go home and milk your cows. We'll tend to this end." Five years ago the organization had grown to 800 members. When the price offered in 1916 was $1.29, they demanded $1.40 and held their milk on the farm for nineteen days. Again in September 1917, a near-strike was compromised under governmental pressure. Since that time the distributor has recognized the strength of the association and the right it claimed of having something to do with setting the price of its members product. Before that time the producer never knew the price of his milk until his check came. Now the association membership in its 111 locals exceeds 7,000, seventeen hundred having joined since the beginning of the strike. It furnishes 90 per cent of the milk consumed in St. Louis which totals around 100,000 gallons per day.

The Strike Ended November 1

The price paid in August and until September 15 was $3.75. The producers asked for a continuation of that price, 31 locals threatening to hold their milk if the association did not secure that or more. Negotiations with the five dealers who handle about five-sixths of the city's milk brought an offer of $3.50. The producers came down to $3.65 and finally to $3.60; the dealers only raised their bid to $3.55, leaving a difference of a nickel. Neither side would give in, so a strike was called for five cents, milk being held first September 17th.



ONE OF HERMAN SCHULTZ'S PURE-BRED HOLSTEINS WHICH HAS PRODUCED AS MUCH AS 93 LBS. OF MILK IN A DAY

Such cows return a profit at prices which will fail to give a living from a herd of average production.

Producers stuck loyally to their association. As late as October 20 only four out of 104 locals reported members shipping. Milk was skimmed and the cream sent to the creameries or other markets were found. But conditions did not favor a strike; it was ill-advised and unwise. From the beginning there was never a chance that the producers would get their price. The leaders claim to have known that, saying they only abided by the majority vote to build the association together. They say the producers had grown so used to success through their organization (which for the first seven months of 1920, for example, secured prices $.15 above those at Chicago) that they were unreasonable, that they only wanted to follow a "get more" policy. Many producers assert that the officers mistakenly led the association into a hopeless strike. These same men now hold that in the agreement which is made the producer has been "sold out", that the butterfat allowance is too low, the price for handling inadequate, and the valuation on skimmilk too small.

Wherever the fault lies in calling a strike when all commodity prices were on the decline and condenseries were frantically seeking a market for large quantities of milk, it soon became apparent that the producer could not control the supply. The Helvetia milk Canning Co. bought milk at Highland for $3.25 and shipped it to St. Louis dealers. Thereupon, on September 23, the producers cut down the daily shipments to the Helvetia plants at Highland and Greenville from 750 to 800 eight- to ten-gallon cans to 140 cans. Then milk began to flow in from northern Illinois, Wisconsin, Michigan, Indiana, and Ohio at prices as low as $2.25 plus transportation though some milk cost distributors more than the price offered the local producers. The supply was unlimited and the quality satisfied the health authorities of St. Louis. The distributors were therefore able to hold out indefinitely, while the growing impatience of members continually weakened the association's position. The fight was lost.

No Advertising Done

At no time has the association presented its cause to the consumers of its product. There is money in the treasury but the officers do not believe in advertising. They refuse to pay for publicity in daily papers which have published statements unfavorable to the producer. Throughout the period of the strike, and previously, public opinion has been molded entirely by the statements of the distributors. The public has had no opportunity to know the producer's side of the story—and the information given out has builded prejudice against him.

In the settlement made after the producers' milk had been kept out of St. Louis for about forty-five days, a year's contract was made. It is held that this is to the producers' advantage, that he has never before been able to know prices that far ahead. Though some members prefer not to decide on this point until the year's corn and butter prices are known, the price seems to be the best which could

(Continued on page 884)



PRACTICAL DAIRY FARM EQUIPMENT IN ST. LOUIS MILK DISTRICT

Even in the partial corn failure because of chinch bugs enough of a crop is secured for silage. Note the numerous windows giving abundant lighting. At the left is a load of cowpea hay, an excellent feed to combine with silage.



RECEIVING STATION AT SHIPMAN, ILLINOIS

This station was closed for 35 days during the St. Louis milk strike. The average daily shipment from this station was quickly reduced from 55 ten-gallon cans to two, indicating the producers' loyalty to their association.

Uncle Sam's Hired Men Who Serve You

This is the ninth of a series of articles this publication is running, in co-operation with the U. S. Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITOR.

The Man to Whom Soil is a Living Thing—Milton Whitney, Chief of Bureau of Soils

W. J. MADDOX

SOME years ago a group of highly respected men in the United State predicted dire things concerning the soil of this country—that before long it would lose its power to produce crops and that the then fertile fields would be barren wastes. It was a very alarming and gloomy picture and caused quite a deal of discussion. The prophets called upon a certain scientist of the United States Department of Agriculture, an expert on soils, to write a paper for them on the subject, expecting, of course, that he would back up their theory.

This man was Milton Whitney, now chief of the Bureau of Soils. Now Mr. Whitney had some ideas of his own on the matter. He prepared the paper, but he took issue with the gentlemen in question, and pronounced a theory directly opposite to theirs. His doctrine was summed up thus:

Can Not Be Used Up

"The soil is the one indestructible, immutable asset that the nation possesses. It is the one resource that can not be exhausted; that can not be used up. It may be impaired by abuse, but never destroyed.

"This does not mean," says Mr. Whitney, "that there have not been individual failures through poor management of the soil by individuals or communities. There are many failures in all industrial and commercial life, and the farmer is not exempt from similar limitation of capacity necessary for success.

"Researches of the bureau have shown that the soil is a living thing, in exactly the same way that an animal or a plant is a living thing—it breathes; it has a circulatory system; it has a solution carrying food material similar to the blood of animals; it is the home of the same kind of bacteria, chemical substances, and processes as play a part in the animal growth and maintenance; it digests organic matter disposing of the remains of animals and plants through much the same process and with the formation of similar organic products as animals."

The soil, he has found, is subject to fatigue, and in extreme cases to suspension of all useful activities, according to the treatment it receives and the conditions under which it exists. The soil, therefore, must be properly exercised by plowing and cultivation; it must be properly fed by plants, the remains of which it can digest, and by a rotation of plants, just as the dairyman finds it necessary to vary the feed of his cows to keep them in a high state of production.

A Physician to the Soil

Whitney, therefore, stands in the place of a physician to the soil. As a physician advises a change of occupation or a change of diet for certain human ailments and uses drugs to aid in his treatment, so Whitney diagnoses the disorders of soils and recommends a change of method, or a change of cropping system and the intelligent use of commercial fertilizers for restoring the soil to a healthy condition of production.

To make this service of nation-wide scope and bring it directly to every farmer in the United States is Mr. Whitney's problem. Under his direction his field specialists are conducting one of the largest pieces of work of the kind ever undertaken in any country. This is the soil survey which when completed will give a detailed account of the physical and chemical make-up of every square mile of soil in the United States. The information thus obtained is of value in many ways, particularly to the farmer. It forms a basis for determining how to treat the soil and cultivate it to the best purpose.

As to others to whom the information is of great value: The prospective farm purchaser is enabled to find the proper soil for his purposes and has expert judgment as to the nature of the soil in any one locality and the farming it is best suited for. The survey furnishes the basis for the experimental field work of the state experiment stations and also gives the stations the necessary knowledge for advising farmers in different parts of their states as to cropping systems and cultural methods. The railways use the soil maps in their development work. Road engineers and sanitary engineers use them. Forestry men use them as a basis of sales of land after the timber has been cut. They are important to the Reclamation Service for its development work, particularly for providing efficient drainage, and for the prevention of the rise of alkali where the possibility of such a danger is shown.

Mr. Whitney has often been asked to place a monetary value upon the soil survey.

"It is impossible," he declares, "to place a money value on information of this kind, but if I had a farm of 100 acres I should be willing to pay a man who has the experience in soils, such as our soil survey men have, $100 to visit my farm to tell me what the soils are, what they correspond to in other localities, and what the general experience of farmers and scientific men have developed as to the best cropping system, the best treatment, and the best line of development of the soils on my particular farm. It is easily worth a dollar an acre."

That is, if all the farmers in the United States believed in the value of soil surveys as Milton Whitney believes in them—and he ought to know—we would have, at a dollar an acre, a nice little value of $640,000,000 on the surveys of the 1,000,000 square miles already studied.

Of course, no charge is made by the bureau for its advice to farmers or anyone else to whom its knowledge or information may be of use. On the other hand, it is anxious to be of as wide service as possible. The 1,000,000 square miles already surveyed represent approximately one-third of the United States.

Probably the most notable other achievement of Mr. Whitney's bureau is its work against alkali. The occurrence of alkali in soils under arid conditions has caused enormous losses in the past. England has been studying the question in India for sixty years, and together with France has been pondering the same problem in the north of Africa since their occupation of that territory. The Bureau of Soils was the first to make a thorough, comprehensive study of the situation as regards the origin and character of the trouble.

As a result, its experts invented a small portable electrical testing apparatus which records through a telephone receiver the percentage of alkali at the surface or at any given depth in the soils. The methods devised by them for the detection of hidden alkali deposits and for the prevention of the rise and injury to crops from alkali through irrigation and drainage have been adopted by all the countries of the world confronted with such problems.

Through the soil survey the bureau examines and maps, in all arid regions, the amount of alkali for depths of six feet throughout the area under survey. The practical elimination of these alkali salts through drainage has been established, so that the alkali problem has ceased to have the dread that it formerly had and there is no longer a possibility of the rise of these salts from unknown and hidden deposits after irrigation begins.

The bureau has 82 men engaged in its field work, and 91 stationed at the main office at Washington, D. C.

A Profession and a Hobby

Since his appointment as chief of the bureau, Mr. Whitney has been closely associated with all its achievements. The study of soils is not only a profession with him but a hobby. At his home in Washington he has a private laboratory where he delights to spend his odd moments conducting experiments.

Whitney is a native of Maryland, having been born in Baltimore, August 2, 1860. He was appointed assistant chemist at the Connecticut Agricultural Experiment Station in 1883; and served as superintendent of the Experiment Farm, North Carolina Experiment Station, from 1886 to 1888. In 1891 he was appointed soil physicist of the Maryland Experiment Station, where he remained until selected to head the Bureau of Soils in 1894.

The Bureau of Soils, it should be remembered, is only one of the seventeen bureaus that go to make up the United States Department of Agriculture, all working together, each using information furnished by the others in planning and suggesting better methods in agriculture for the benefit of the farmers and also for the benefit of every other citizen of the U. S.



MILTON WHITNEY

Growin' Up For You

IT'S true we farmers have to work, from sun-up to sun-down, and still have lots of chores to do, when stores are shut in town; and it's a fact we have to dress in jeans of brown or blue, and wear big boots and old slouch hats that seem quite rude to you. But, city friend, it's helpful work and mighty healthful, too, while chores for livin', breathin' beasts are just a joy to do. And when we quit and go to bed, we sleep, for cares are few, while night winds call from crops and stock: "We're growin' up for you!"

Yes, crops and stock are growin' fast, while we're at work or sleep, just growin' into money that, will us in old age keep; for tho' we toil all day for them, they work all night for us, and that's a thing store stock don't do, so we are favored thus. The store man's pay is insecure, he waits and hopes for luck, while all the time his overhead threatens to get him stuck; he's glad if he makes both ends meet, with worry, work, and fuss, but on the farm our pay is sure—it's "growin' up for us!"

No doubt the city has its charms, with lots of shows to see, and ev'rybody's slick dressed up, compared with folks like we; but farm life's happy, just the same, we love all Nature's scenes, the glittering lights of the "White Way", beside the stars seem tame. We watch the movies of the skies and wondrous pictures see; the season's ever changing sights are ours without a fee. And then there is the farm's best crop, of children strong and fair, that in the city 'partment house, ain't welcome anywhere; they are life's sweetest joy to us, tow-heads and red-heads, too; thank God for them, America, they're growin' up for you!—DR. A. S. ALEXANDER.

M. A. C. Ayrshire Makes Record

Spot Fox, an eight-year-old Ayrshire owned by the Massachusetts Agricultural College, has recently completed a very creditable record of 17,749 lbs. milk, 634.39 lbs. fat. She began her test on September 26, 1919, at the age of seven years and eighteen days. She was bred by the Massachusetts Agricultural College and is owned and was tested by them. She is sired by Victor Cairn and out of May Fox. She already had to her credit a junior three-year-old record of 12,313 lbs. milk, 426.47 lbs. fat.

Vermont. J. G. WATSON.

Behind the Scenes at the National Dairy Show

O. R. ZOLL, ILLINOIS

THE great amphitheatre at 42nd and Halsted street was filled with thousands of spectators night after night who watched the artistic and spectacular feats of horsemanship, on the occasion of the dairy and horse show. During the day other thousands threaded the long aisles between the exhibits and marveled at the progress that has been made within a decade in the discovery of new milk products and the development of machinery to handle them. At all times people could be found admiring the beautiful herds of the five principal breeds of dairy stock that occupied the whole of the second floor.

All these folks thought little of what was happening "behind the scenes." The beautiful horses and ponies, when out of the arena, were the especial care of the jockeys and stable boys. On coming from the arena wet with sweat, each horse was received by stable boys who, armed with cloths, proceeded to rub him dry, after which he was carefully blanketed and then placed in his stall. At stated times each horse must be gone over with the clippers from fetlock to ear tips. He must be fed a balanced ration, must be washed, brushed, rubbed, and 'dolled up.' To keep one exhibit of thirteen horses in trim, seven men were required.

In the dairy barns, all exhibition stock was given similar care. They had their barbers and manicuring staff. The horns must be scraped and polished, and in some instances covered with leather covers; the hoofs must be cleaned and polished and a regular program of washing, brushing, and rubbing down, and daily exercise, must be carried out. Symptoms of disease must be noted and the animals taken to the hospital in an adjacent building.

Back of all this work lies the preparation of the stock on the home farm and the transportation to Chicago, under the immediate care of the foreman and his help.

To the writer who, for several days stood at the south entrance that led to the stables and who saw much of the 'behind the scenes,' all this was most interesting.

While the thought of the populace was on blooded horses and prize cattle there was another sort of animal that infested the show, that gave grave concern to the door keepers, policemen, and others responsible for seeing that all who entered paid the regular admission. I refer to the children that live in the vicinity of the stock yards. One could but note the striking contrast between the care bestowed upon the horses and cattle and that bestowed, or rather not bestowed, on these urchins of the street.

Here they came by couples, half dozens, and at times scores, with every conceivable sort of container for milk which was given away by the men at milking time. Some fairly well dressed, some poorly clothed; some fairly clean and others positively filthy; but all with a persistence that would not take "no" for an answer.

"Please, mister, can I go in for some milk?" was the pressing inquiry.

"No," replied the doorkeeper.

"Oh, please, let me in. Just turn your head and let me slip by. Won't you please?" came back in pleading tones. And if he turned his head even for the fraction of a second he could be sure that one or more had slipped by.

Should he out of sympathy for these children, hungry for the sweet rich milk, continue the dialogue, the crowd would grow and the pleading be pressed until in self defense he would be compelled to assume an angry attitude and yell: "Get out of here! Clear out before I break your heads," and swing a club viciously as if he intended to carry out the threat.

Perhaps at this moment a policeman appears down the alley; someone gives the signal, "There's the cop!" and immediately a dash is made pell-mell for Halsted street. The cop disappears and like flies they return, one, two, three at a time, from whence no one can tell, and before ten minutes has elapsed, the whole bunch is back again.

But the more resourceful youngsters do not waste time with the gatemen. Some new knot hole can be found—that is certain, so with eagle eyes they scan every square inch of the great building. Perhaps here is a high gate across an entrance with just enough room to squeeze in over the top, or perhaps from the window above the gate a friendly herdsman may reach down and pull the youngster up and into the goal of his ambition, the cow stables. Here is a twelve-foot gate with threatening barbed wire stretched across the top, but there is a space of three or four inches at the top between the gate and the post. To scale the gate and squeeze through this space is the work of a minute. Once in, the climbing of a 4 x 4 to the wash shed where the cows are given their shower baths, and then through a window, and our young knight has gained entrance to the fortress.

While one urchin eludes the guards in this way, another has found an open sky light and dropped down upon a friendly bunch of hay. More than one youngster—girls as well as boys—were hustled out of the doors by some imperious and officious guard, only to be back in, smiling and happy with a "hello, mister," a wave of the hand, and a dash away to safety.

How beautiful the show must have looked to these youthful eyes, and how delicious the milk must have tasted after such strenuous effort to gain entrance!

But—seven men to care for thirteen horses!—How many people were caring for these hundred children?

One man to every two horses which he clips, brushes, rubs, waters, feeds, and exercises with greatest concern, and which he watches over for any symptoms of disease. But these children—many of them with hair that apparently had never been thoroughly combed; clothes saturated with dirt; hands, face, and feet—perhaps the whole body—strangers to the bath—who looks after these children?

Dairying Thirty Years Ago

Taken from the Issue of Hoard's Dairyman of November 28, 1890

When the cow is annoyed, or is uncomfortable, she is not earning profit money for her owner.

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Same old stupidity manifests itself in Scotland that existed against the use of fanning mills. Some of the pious Scots who had "winnowed" their grain when the wind blew thought it was a sin to get up a gale with a fanning mill when the Lord willed there should be a calm. So now the inventor of the milking machine met the scorn and hatred of the milk maids who had been pulling cows' teats all their lives and were fearful their occupation would be gone if the cows were milked by machinery.

There are lots of fellows wearing pants who, in their secret souls, are just like those Scottish dairy maids—oppose any improvement that either nearly or remotely threatens to supersede any machine or interest that gives them bread and butter. They thus advertise their incapacity to earn a living in an improved world, but want to sweat one out of the ignorance of other folks.

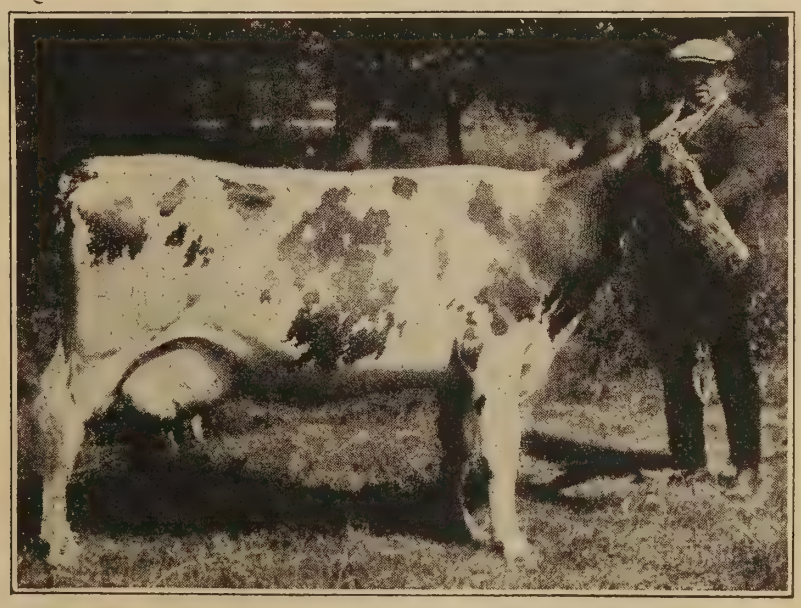
A Mammoth Cheese

At the cheese factory in East Otto the other day there was put into the hoop the biggest cheese ever made in this region and probably in the United States. It measured five feet in diameter and is 39 inches high. Its weight when cured will be 4,000 pounds and fully 38,000 pounds of milk were used in its manufacture. The abundant pasturage made the September milk unusually rich and this huge cheese is expected to be of prime quality. About four weeks will be required to cure it thoroughly. This record-breaker was made for a grocery house in Cincinnati which is about to occupy a large, new building. It is wanted as an attraction for the opening.—Buffalo Commercial.

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Mr. O. N. Dennison, Mason City, says that the requisites required to get good milk for the manufacture of creamery butter were honesty, cleanliness, and confidence. There must be honest dealing with the cows, honest dealing with the patron, honest dealing with the manufacturer. There must be cleanliness in the barn, with the milk utensils and in the factory. There must be mutual confidence between the producer of the milk, the maker of the butter, and the proprietor of the factory.

If any of these points are lacking in any particular there is lack and a loss in the best results that may be obtained from the dairy.



NANCY WHITEHALL

NANCY WHITEHALL, a seven-year-old Ayrshire cow, owned by Middlesex Meadows Farms, Massachusetts, is the latest addition to the 20,000-lb. class of the Ayrshire breed, having completed a 365-day mature record of 22,075 lbs. milk, 858.77 lbs. fat. This record places her in sixth place among the mature animals of the breed both in milk and butterfat. This completed record is remarkable on account of the fact that last year this cow completed a junior four-year-old record of 18,797 lbs. milk, 754.27 lbs. fat, test 4.01%, this record making her junior four-year-old champion in milk production.

Nancy Whitehall was bred by J. A. Dalton, Wisconsin. She was dropped October 28, 1913. She was purchased at the first Brattleboro Ayrshire Sale from Newton Farms, Massachusetts, for $925, and since that time has been at Middlesex Meadows Farm, South Lincoln. Her two completed records average 20,436 lbs. milk, 806.52 lbs. fat.

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The great want of today is men. Men who can't be bought and sold. Men with votes too honest to sell them. Men in office, too honest to buy them. Men who think twice before they speak, thrice before they act, and four times before they vote. Men quick to see and prompt to act. Men who will stand for right, firm as a rock, though powers and parties crumble, and all around seems chaos and confusion. Men prompt to condemn wrong, whether found in high places or low.

Men who can look the world and the devil in the face and tell the truth. Men too large for sectarian bonds. Men who know their message and can tell it and stop it when done. Men who mind their own business. Men who know how to work and are willing to eat what they earn and wear what they have paid for. Men too brave and true to betray a trust for self-interest.—Pennsylvania Farmer.

Those farmers who may have immature corn in their cribs can prevent molding by salting. Use one pound of salt to three bushels by weight of ear corn.

"SNAG-PROOF"
Rubber Footwear



Here's One Way to Make Your Money Go a Long Way

WEAR Snag-Proof Arctics over your leather shoes. You know how quickly snow and slush ruin leather shoes. And you know what leather costs. Snag-Proof Arctics are economical. They keep your feet warm, dry and comfortable. You can slip them on or take them off in a jiffy. You'll get seasons of satisfying service out of every pair.

There is a Snag-Proof rubber boot, shoe or arctic for every purpose. The Snag-Proof dealer will be glad to talk it over with you and help you decide just what kind of rubber footwear it will pay you to buy. All dealers do not sell Snag-Proof goods. We pick the dealers who are more interested in permanent satisfied customers than in quick profits. It will pay you to find the Snag-Proof dealer in your town. Once you learn what extraordinary value you always get out of a product with the green Snag-Proof label, you never will buy any other.

LAMBERTVILLE RUBBER COMPANY
Lambertville, New Jersey



LOOK FOR THE GREEN LABEL

California Co-operatives and the Mid-west

(Continued from page 872.)

feel that those payments have been amply justified by results.

It is also noteworthy that they have established adequate banking connections for the financing of their marketing operations. This is due to the fact that they could come to the banker presenting a thoroughly organized marketing system in the hands of trained and experienced men and with a substantial volume of the crop definitely placed in the associations control by means of growers' contracts. This is a point which will be of the utmost importance in the development of any grain marketing project by mid-west farmers. The experience of the Pacific Coast seems to make it clear that whenever it appears that the large volume of product is going to move through co-operative channels, that suitable arrangements will be made for financing this co-operative agency.

The third phase of the commercial practice of Pacific Coast co-operative organizations is their universal practice of pooling returns. This is a practice which is of the essence of the co-operative method. If any group of co-operating producers are ready to merge their marketing operations for the sake of securing a better average result for all, pooling is the logical method of procedure. It is by no means clear to your committee, however, that the grain and live stock farmers of this section are at the present time ready to renounce their individual control over the marketing process to this extent. In case such a feature were to be incorporated into any plans advocated by the committee of 17, it is clear that a thorough program of education would have to be undertaken before it could be put into actual operation. The introduction of state wool pools during the last two years has doubtless paved the way to some extent for such a move.

Economic and Social Outlook and Purpose of the Co-operative Organizations

The last and perhaps most important observation of this committee concerns itself with the general goal and attitude of co-operative organizations. Our western friends seem to have these aims in view (a) The improvement of handling processes and the reduction of loss and waste between the grower and the wholesale market. (b) The development of their market outlet through aggressive salesmanship, advertising, etc. (c) The stabilization of prices through better distribution both in time and place, the development of export markets, by-product uses, etc.

It appears to your committee that, in view of the character of our commodity, the Pacific Coast example under heading (b) above yields only negligible promise of benefit to our people. Substantial results could undoubtedly be secured under heading (a) by a central marketing organization strong enough to exact proper railway, storage, and financial services and prompt and adequate settlement of damage claims, and to secure a high level of business efficiency in both the physical handling processes and the business practices of each unit in the system from the local elevator forward.

Probably, however, the greatest interest of our people centers in what prospect there may be for effecting selling prices favorably or of assuring profitable net returns to the producer and whether California experience leads us to believe that such results might be secured through large scale co-operative organization.

It is the conclusion of your committee that the favorable results secured by Pacific Coast co-operative associations are the results of a combination of better merchandising methods and of the price levels brought about by general war and post-war conditions. Except in the case of the California Fruit Growers' Exchange and the Associated Raisin Company, their operations have been limited to the high price and "sellers market" period of the last four or five years. The leaders of the movement admit that, in common with all other business interests, they have difficulties ahead during the impending period of downward price revision. They recognize that the prices of the last years have stimulated production of land enormously and have tended to advance the capitalization of land as well as other forms of fixed capital. We believe heartily that in such periods of economic difficulty that a strong association of producers is even more imperative than in periods of high prices, when even individual methods will produce remunerative returns. However, this co-operative organization should seek merely to enhance the



BABCOCK CELEBRATION

On October 22nd all the students at the University of Wisconsin celebrated the 77th birthday of Dr. Stephen M. Babcock, the inventor of the test that bears his name. The above is a reproduction of an exhibit prepared by students of the College of Agriculture.

forcible at law, will give the association greater economies in marketing processes, and to protect its interests against artificial depression or discriminating practices. Any attempt to create and use a monopoly power for securing a specially favorable economic position for its members is as pernicious in a farmers' organization as in the case of the so-called trusts, to whose monopolistic activities we have so properly objected in the past.

Frankly, we feel that some of the western co-operatives occupy a position on this point which is economically sound and socially right. Others we think do not, and the state court in Oregon and the federal government in California have already taken steps to modify their procedure.

Summary

The conclusions of your committee can be briefly summarized as follows:

(a) No very strong, permanent, or extensive co-operative marketing organization is likely to be built up unless economic necessity forces a great number of the farmers into it. Present conditions and future prospects of grain prices would seem to indicate that grain growers may be ready for such a collective movement.

(b) Likewise no considerable result would be achieved unless producers of a given commodity over some area large enough to make a suitable economic unit consolidate their common interests in the most efficient distribution of the product of their industry.

(c) If the association is to have the proper basis for financing itself and organizing its distributive operations, its members must enter into a regular contract to deliver their product to it over a reasonable period of time. Such contracts, even if not fully enforceable at law, will give the association somewhat greater security than it would otherwise enjoy and will be morally binding or enforced by local public sentiment in a majority of cases. How far the courts will go in support of them will doubtless depend largely on the policies and practices which the association sought to carry out through the powers conferred by this contract.

(d) As soon as growers pass from the point of view of the individual to that of the industry, settlement on a pooling basis becomes necessary as a means of averaging the results of the joint action of all producers and of distributing the benefits of the organization equally to all its members.

(e) Lastly, your committee reports that the co-operative associations do not "fix prices". They simply are efficient agencies to get the best prices that the consuming market affords. The fact that several of the co-operative associations on the Pacific Coast are at the present time constrained to accept prices below their calculated costs of production indicates that they have not secured through their organization any immunity from fundamental economic laws. On the other hand, we are convinced that such associations are a powerful agency in securing for their members more favorable prices than they could otherwise obtain, and that our farmers need equally good selling service in the difficult times by which we are confronted.

Respectfully submitted,
J. G. BROWN,
H. G. BEALE,
WILLIAM G. ECKHARDT,
E. L. RHOADES,
E. G. NOURSE,
P. B. BAUSMAN,
HERMAN STEEN.

Fort Scott Dairy Show

HOARD'S DAIRYMAN.—The progress and interest in dairying in Southeastern Kansas was most graphically and convincingly exhibited at a local Dairy Show held at Fort Scott, Kansas, during the last week of October. Five years ago there were but few dairy cattle in this section, while today there are thousands of heads of Holsteins and Jerseys. These animals are of quality that would bring credit to a much older community.

At the show this year sixty-nine head of Holsteins and twenty-one head of Jerseys were housed in a large tent, while a second tent 50x120 feet contained a judging ring, platform, and twenty-three booths containing exhibits of milking machines, stanchions, electric lighting plants, dairy feeds, and farm and home machinery.

A feature of the demonstrations was one in which two cows from a local cow testing association were compared, both cows were from the same herd and had the same opportunity. One returned an income above the cost of feed of nearly $200 for the year, while the other returned only $80. Only through the association would it have been possible to have appreciated the great difference in the productive ability of the two cows.

In addition to band music, motion pictures, demonstrations, and lectures, entertainment was provided by a calf race in which a pure-bred Holstein calf was given to the boy who caught and held it, and also by a ladies' milking contest in which nine ladies competed to see who could first milk a quart bottle full.

Prizes were offered for the cows exhibit at the show which produced the greatest amount of butterfat in forty-eight hours. These prizes were awarded as follows:—First, Oklahoma Queen (Holstein) produced 4.3 pounds of fat and 104 pounds of milk; second, Manmouth (Holstein) produced 4.0 pounds of fat and 97 pounds of milk; third, Colorado Sue (Holstein) produced 3.5 pounds of fat and 96 pounds of milk; fourth, Stella (Holstein) produced 3.3 pounds of fat and 102 pounds of milk.

Kansas. A. C. MALONEY.



THE BOYS' JUDGING CONTEST

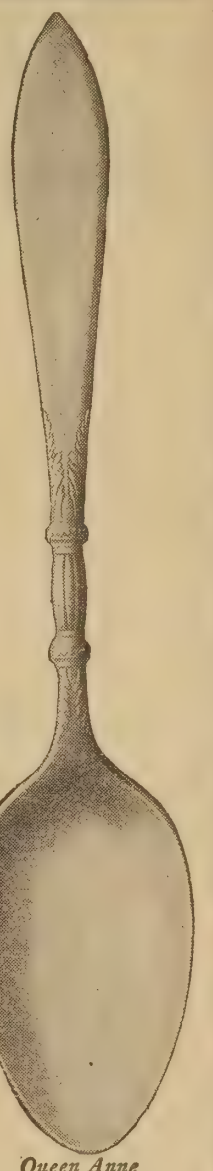
1847 ROGERS BROS.
SILVERWARE



The well-known Gift

EVERYONE gives silver. Those who give it with thought, choose the finest grade of silverplate—the "family plate for seventy years." Its reputation and attractiveness are known to so many that the familiar trademark instantly carries the message of highest quality.

Choose "1847 Rogers Bros." and you choose the preferred silverplate.





Old Colony

Queen Anne

WHEN you make a gift of "1847 Rogers Bros.," you give what may be the beginning of a complete service. Tea and Coffee Sets, Meat and Vegetable Dishes, Trays, etc., can be purchased to match the pattern of the Spoons, Knives and Forks. All are made in the best quality and guaranteed without qualification. Sold by leading dealers.

This distinctive feature of "1847 Rogers Bros." is well worth remembering.

For booklet Z-76, illustrating other patterns, write to the International Silver Co., Meriden, Conn.

The Family Plate for Seventy Years

INTERNATIONAL SILVER CO.

$6.95 BUYS A CREPACO Babcock MILK TESTER

Don't Keep Boarder Cows!

Appearances are deceiving. The cow you think is best may be unprofitable. The man who **knows** is the man who succeeds. The Crepaco Babcock Tester shown below will point out the unprofitable cow. It will enable you to buy cows with open eyes. It will enable you to secure adequate remuneration for your milk and cream.

Free Glassware, Etc.

For $6.95 we furnish a high grade, accurate, 4-bottle testing machine, one acid measure, pipette, two brushes, one bottle acid, and instruction sheet. Everything complete for testing.



Free Instructions Furnished

With each machine printed instructions are furnished which are plain and simple. A child can make the tests. Write for Big Dairy Catalogue.

THE CREAMERY PACKAGE MFG. COMPANY.
68 W. KINZIE ST. CHICAGO.



SHE Says:

"This Old Gallery Sure Needs Fixing."

Too bad it rotted out. Better luck —*and better lumber*— next time.

It is quite evident that the man who built the house (was it you?) didn't know about CYPRESS, "the Wood Eternal," which resists rot, defies decay, and does away with exasperating repair bills.

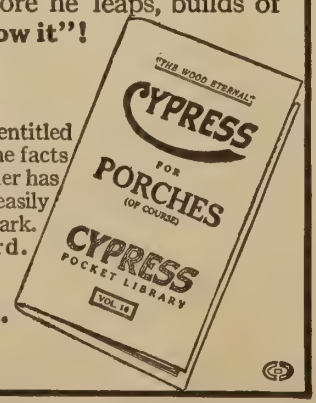
If you *were* the builder, it is not your fault, perhaps, that you didn't build of CYPRESS in the first place, but it *will* be if you don't *rebuild* with "the Wood Eternal."

You wouldn't make the same mistake twice, naturally.

Many a house, comparatively new, has to under go repairs to the galleries two or three times before any other part of the building needs attention. "He who looks before he leaps, builds of *Cypress* and builds for keeps." **"You know it"!**

Send for FREE Book

Vol. 16 of the famous Cypress Pocket Library, entitled "CYPRESS—BEST FOR PORCHES," and get the facts about "the Wood Eternal." Your local lumber dealer has genuine "TIDE-WATER" CYPRESS. You can easily tell the genuine by the Cypress "arrow" trade-mark. branded on the end of every board. Look for it.



SOUTHERN CYPRESS MFRS. ASSN.
103 Perdido Bldg., New Orleans, La., or
103 Heard Bank Bldg., Jacksonville, Fla.

When Writing to Advertisers, Mention Hoard's Dairyman

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
N. H.	Hillsborough Co.	W. E. Sargent	Oct.	272	14	62.9	Mitchell Bros.
Pa.	West Chester	Myrtle Barger	"		9	56.2	Thos. D. Wood
"	Avondale—West Grove	Thomas Ford	"		16	50.0	James Barrow
Ohio	Barnesville	Clyde E. Lewis	"	222	42	75.1	L. J. Taber
Ky.	Oldham Co.	W. E. Brohaugh	"	280	16	54.4	F. Von Allmen
Kans.	Bourbon Co. Co-op.	T. A. Trull	"	347	9	61.4	Trask & Richards
Ore.	Clatsop Co.	W. J. Kent	Sept.	413	28	52.0	F. E. Butler
"	Tillamook No. 1	D. A. Wilbur	"	886	86	69.5	John Schilds
"	Nestucca	Helen L. Miller	"	549	26	50.6	Jos Shriber
"	Smith—Umpqua	Lillian L. Smith	"	333	45	69.7	Baker Bros.
"	Coquille—Myrtle Point No. 1	R. S. Trigg	"	835	40	72.7	Martin Lassen
"	Coquille—Myrtle Point No. 2	Evogene Furnish	"	782	50	63.8	F. E. Willard
"	Rogue River	J. B. Bichan	"	287	38	67.2	B. F. Van Dyke
"	Bandon Co-op.	Geo. M. Rhein	"	764	32	70.9	Chris Richert
Wash.	Stillaguamish	Malvin C. Hong	Oct.	443	41	68.3	M. Eitzenberger
Ida.	Canyon Co.	C. M. Fist	"	265	29	58.8	H. H. Stiger
Pa.	North Branch	F. J. Holt	"	352	10	61.1	J. E. Tinker
Wis.	Whitewater	A. F. Probst	"	332	43	62.9	O. B. Roe
Mich.	Kent Co. Co-op.	M. J. Farmer	"	217	19	78.0	Otto Fisher
N. H.	Merrimac Valley & Strafford Carroll	C. F. Emery	"	464	12	55.8	Baker Farm
Va.	Augusta Co.	J. T. Collins	Sept.	150	5	54.3	Rawlings & Roller
"	Loudon Valley	W. D. Wermuth	"	416	13	64.8	W. L. Simpson
"	Rockingham Co.	P. G. Wenger	"	86	8	47.0	Tim Showalter
"	Southwest Va.	R. B. Strickler	Oct.	371	2	44.4	F. B. Kegley
Conn.	Canaan	B. F. Dibble	"	230	19	53.8	C. Goodwin

Association Notes

Hillsborough County, New Hampshire:—Cows did very well during the month of October. The drop in feed prices is reflected in the increased profits over feed in all herds. Some members started feeding silage with noticeable results in milk flow. Milk testing 3.7% sold for $4 per cwt. and 4c per point above. It retailed for 15c per quart and butter for 75c per pound. The local prices on feeds are: Bran, $59 per ton; corn, $50; hominy, $60; middlings, $70; mixed feed, $80; cottonseed meal, $67.50; gluten, $60; oil meal, $70.

Barnesville, Ohio:—In October market milk testing 3.5% sold for $3.50 to $4 and 5c per point above this test. Feeds are rated as follows: Oats, $2.20 per cwt.; hominy, $2.75; gluten, $2.80; bran, $2.25; oil meal, $3.50; cottonseed meal $3.75; beet pulp, $3.10; corn, $2.25.

Oldham County, Kentucky:—Two unprofitable cows were sold during the month of October. A great deal of interest is being taken in semi-official and official testing in this county and some very creditable records have been made. A Holstein cow in September made the second highest seven-day butter record in the state. Market milk sold for $3.49 per cwt., 5c being paid for each point above 4.2%. The creamery paid 53c to 60c per lb. for fat. Milk retails for 16c per quart and butter for 60c to 65c per lb. Feed prices are: Bran, $44—$60 per ton; ground barley, $58; cottonseed meal, $65—$70; hominy, $60; oats, 60c per bushel.

Bourbon County Co-operative, Kansas:—During October the condensery paid 72½c per lb. for fat and the creamery paid 55c per lb. Milk retails for 15c per quart, butter for 54c per lb., and cheese for 35c per lb. Cottonseed meal is rated at $3 per cwt.; bran, $2; oats, 45c per bushel; and corn, 50c per bushel.

Clatsop County, Oregon:—One separator was leveled in September and saved three pounds butterfat in two milkings. Dairymen of this section received $2.90 per cwt. for milk testing 3.8% and 5c per point above. Sweet cream sold for 73c and sour cream for 68c.

Rogue River, Oregon:—Dairymen here received $3.60 per cwt. for milk and 14c per quart for city trade. They received 70—74c for sweet cream and 64c for sour cream. Local feed prices are: Rolled oats, $62 per ton; coco meal, $64; barley, $59; millrun, $65; soy bean, $88; alfalfa hay, $20—$25.

North Branch, Pennsylvania:—A pure-bred Holstein bull was purchased during October to head a herd formerly headed by a grade bull. Five cows were sold, one of them as a "boarder". Three 2-year-old cows made around 13 pounds butter in a week under official test. Three per cent market milk sold for $3.85 per cwt. and 4c per point above this test. Milk retails for 12—15c per quart, butter for 60—75c per lb., and cheese for 34c per lb. Feed prices are as follows: Mixed hay, $25 per ton; corn silage, $8; wheat bran, $55; cottonseed meal (36%), $70; corn and cob meal, $45.

Whitewater, Wisconsin:—October milk testing 3.5% sold for $2.63 per cwt. and 7c per point above. The condensery paid 75c per lb. for fat and the creamery paid 73c per lb. Milk retails for 14c per quart, butter for 68c per lb., and cheese for 29c per lb. Local prices for feeds are: Oats, $40 per ton; corn, $25; oil meal, $65; alfalfa, $32.50; silage, $6.

Kent County Co-operative, Michigan:—Due to the fine fall weather, pasture is still good in some localities. Whole milk retails for 15c per quart. October prices for butterfat ranged from 60c to 65c. Feed prices are: Corn silage, $8 per ton; clover hay, $18; alfalfa, $30; timothy, $26; mangels, $5; ground oats, $40; Unicorn, $70; bran, $38; linseed meal, $70; cottonseed meal, $65; corn meal, $60; barley, $50; gluten feed, $56.

Merrimac Valley and Strafford Carroll, New Hampshire:—In this combined association, one farmers' exchange is very active in buying grain and another does a monthly business for a few members. A number of unprofitable cows are weeded out each month with resulting higher average production per cow. Some members are improving their feeding, with increased profit. October market milk sold at an average price of $4.60 per cwt. The creamery paid 76c per lb. for fat. Milk retails for 15—18c per quart. Hay is rated at $25 per ton; silage, $10; bran, $60; cottonseed meal, $68; oil meal, $70; ground oats, $66; gluten, $68; hominy, $60; N. H. Dairy, $68.

Augusta County, Virginia:—Market milk sold for $4.25 per cwt. in September and butterfat for 70—72c per lb. Milk retails for 15c per quart

and butter for 65c per lb. Prices paid for feeds are: Alfalfa hay, $30 per ton; clover hay, $30; mixed hay, $25; corn silage, $8; "Ready-mixed" grains, $80; cottonseed meal, $75.

Loudoun Valley, Virginia:—Prices received for the month of September are: Market milk, 32—33c per gallon; cream, 20% at $1.75 per gallon; butterfat, 88—93c per lb. Feed prices are as follows: Corn silage, $10 per ton; "Ready-mixed" grains, $75—$80; wheat bran, $60; corn meal, $75; cottonseed meal, $85; beet pulp, $60.

Rockingham County, Virginia:—September market milk sold for $2.80 per cwt. and butterfat for 70c per lb. Milk retails for 12c per quart and butter for 48c per lb. Alfalfa hay is rated at $28 per ton; clover hay, $25; mixed hay, $25; corn silage, $8; "Ready-mixed" grains, $82; wheat bran, $68; middlings, $70; corn meal, $90; cottonseed meal, $80. Two unprofitable cows were sold.

Southwest Virginia:—October market milk sold for 30c per gallon and butterfat for 90c per lb. Retail milk is sold for 14c per quart and butter for 75c per lb. Feed prices are: Corn silage, $8 per ton; "Ready-mixed" grains, $70; wheat bran, $60; middlings, $80; cottonseed meal, $73. Five unprofitable cows were sold.

Canaan, Connecticut:—One pure-bred bull was placed during the month of October. Three per cent market milk sold for $3.65 per cwt. and 4c per point above. Feed prices are: Hay, $30 per ton; silage, $8; bran, $50; oil meal, $62; cottonseed meal, $67.50; gluten feed, $63; ground oats, $54.

Cow Testing Associations Help Nova Scotia Farmers

Cow testing associations in Nova Scotia are proving quite popular and useful in the dairying sections of the province as a means of bringing the farmers together and distributing information which would tend to improve their conditions and help to increase the production of their herds.

During the past two or three years one feature of the work has been to foster and help organize breeding associations. Because of the small number of cows in the average herd of Nova Scotia, it was practically impossible for each farmer to own a pure-bred bull. But through the breeding associations, a great many farmers are now able to have the use of a pure-bred sire which has been especially selected because of the milk producing quantities of its ancestry. The cow testing associations and breeding associations are working together to increase milk production by means of better breeding.

This spring, by means of a monthly letter sent to the different testers in Nova Scotia, the dairy promoter, Mr. H. R. Brown, put on a campaign to have the farmers of the associations sow a mixture of oats, peas, and vetches as a silage crop or for green food during the latter part of the summer. Arrangements were made whereby the farmers could procure good seed through the cow testing associations and altogether something over 100 acres were sown. The crop has proved to be such a benefit that the men who sowed this last spring are already planning to sow a much larger acreage next year.

Thus by fostering better breeding and better feeding, the cow testing associations are materially helping to increase the production of the dairy cow in Nova Scotia. These are only two ways in which the farmers are being helped, but they show the possibilities of what might be accomplished by a cow testing association in any dairy community.—Canada Department of Agriculture.

Co-operation and Justice

HOARD'S DAIRYMAN:—We read with interest such articles on co-operation as that in Hoard's Dairyman for October 1, 1920, on "Almond Growers". Some of the underlying principles of healthy co-operation are rapidly becoming a part of the thought of all. As with all movements of this character where a great power is acquired there is grave danger of carrying principles of honest economics to the extreme. There is one very serious condition exhibited in the operations of almond growers and one, which, if allowed to extend itself to other co-operatives, may completely destroy them.

Someone is quoted in the above-mentioned article as follows: "By organizing the almond growers have been enabled to fix a price for their product which yields a fair return on their land and labor and pays a reasonable profit besides. That is the reason why there has been such a tremendous increase in the acreage devoted to almonds." This is probably fair and right from every economic standpoint, so long as the supply of almonds does not greatly exceed the demand.

But, in the same article, Mr. T. C. Tucker, who is indicated to be the general manager of the Almond Growers' Exchange, is quoted as follows: "We pay no attention to the cost of production. We set a price that we think will move the crop."

Earlier in the same article appears this statement: "Note that statement in the preceding paragraph—fixes the price. That does not refer to the steel trust, nor is it a mistake in print." The author evidently feels that the methods followed approximate those of the steel trust and is proud of it.

It appears that the almond growers have waxed exceeding rich because it is pointed out that the acreage has increased about sevenfold in ten years. Who pays?

Suppose the situation represented by the almond growers was duplicated by the wheat growers. Every farmer would produce wheat and more wheat and yet more wheat and in a little while the consumer would be getting very cheap bread.

Who should benefit by co-operation? Only those who co-operate?

There is a beginning and an end to every commodity. There are those who create the supply and there are those who create the demand. Without either of these there had as well be no commodity.

The producer is entitled to cost plus a reasonable profit. Those who exact more because they can charge "all the traffic will bear" without respect to cost are as much "profiteers" as any who have been convicted.

Justice is about as large an element as any in the world.

We believe one of the principles of co-operation is justice.

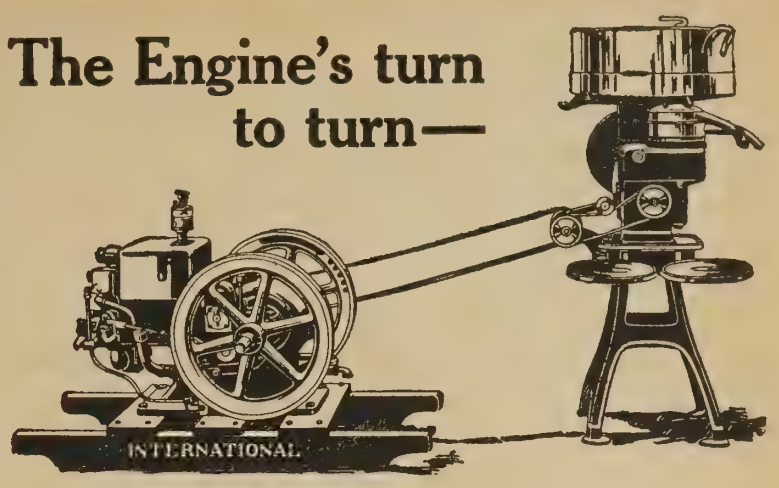
Selling, from an economic standpoint as well as that of fairness, must start from the basis of cost of production. After that supply and demand will determine the profit. If the demand is established, control production and none need worry about profit if fairness is there.

REX E. WILLARD.
North Dakota College of Agriculture.

Jersey Cattle Notes

For the week ending November 12: Number of animals registered: bulls, 213; cows, 563; total, 776. Number of transfers recorded: Bulls, 223; cows, 822; total 1,045.

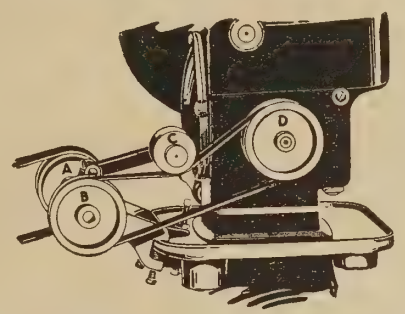
The Engine's turn to turn—



Every dairy farmer who handles a large volume of milk knows that turning the easiest running cream separator in the world by hand gets to be monotonous work before the day's run is finished.

The **Primrose Direct Power Drive** has simplified greatly the matter of separation on a considerable scale. This practical little addition to Primrose efficiency can be attached to any hand-operated **Primrose Cream Separator** and does not interfere in any way with hand turning of the separator when occasion demands the latter method.

By means of this simple attachment, direct connection can be secured to an engine without speed-reducing gear, to a line shaft or portable electric motor.



If your milk volume has reached such proportions as to make separating a real task, then it is most certainly the engine's turn to turn. A **1½ h. p. International Kerosene Engine** and **direct-power-drive Primrose** will shoulder the job willingly and handle it efficiently.

A, belt pulley on counter-shaft. **B**, flanged pulley on counter-shaft. **C**, belt tightener. **D**, clutch pulley on extended pinion shaft.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(INCORPORATED)
CHICAGO U S A
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EDITORIAL COMMENT



AN old subscriber in writing us says: "The flight of years has put me amongst the down and out class. I well remember your father's good advice to us at the farmers' institutes about forty years ago in my old home state, Wisconsin, 'to put our trust in the dairy cow', which I have done for a good many years, both in the old home state and in the West, and I have found his advice good. But now I find myself beyond the age of active dairy work and having sold the farm, I will, in closing my pleasant relations with Hoard's Dairyman, say Godspeed in the good work you are doing."

There is high remuneration in a communication of this character, for in the years of active dairy work this subscriber found the advice of Hoard's Dairyman good and he has not been disappointed in following the footsteps of the cow. There is also an element of sadness in it, for the active work of life is done. There is melancholy in the closing days of life, but if a person has lived well and contributed his share to the progress of the world there is a satisfaction and a compensation which only comes to those who have done their duty.

IN one of the schools of Indiana an experiment was conducted to determine the effect of feeding the children a liberal quantity of milk. One boy, who had trouble with sore eyes and was undersized and listless, showed marked improvement when he was placed in this test. The account of this case comes to us as follows:

"This was very interesting. The boy had been treated for trachoma for a year and his eyes would not respond to treatment after a certain stage was reached. His teacher reported that he had 'no energy at all either for work or misbehavior. He has no interest, no effort, no life at all. He just sits.' The first two weeks he gained 1½ lbs., and his eyes lost all the inflammation. At the end of the third week the medical examiner inquired if he was in the test and when told he said, 'That accounts for his sudden and wonderful improvement.' By the end of the fourth week, he had totaled a gain of 2 lbs. His interest in school had increased and he was able to make an effort. Withdrew from test at end of fourth week. A visit to this boy at another school at the end of nine weeks showed his eyes reverting to the old condition and his attitude in school the same as formerly. The mother had promised to increase his allowance of milk and butterfat."

"NO MONEY FOR DAIRYMEN"

A prominent banker in the West at a banquet held at Spokane, Wash., recently made this statement: "I would not lend a dollar to a farmer to purchase dairy cows." This man is extremely ignorant of the dairy industry and someone should take the trouble to inform him of the stability of the dairy industry and those engaged in it. He little appreciates that dairying is the most substantial and safest branch of agriculture to follow and that men who are willing to milk cows are among the best class of farmers. He does not appreciate that the cow is a soil builder; that she produces the best and most important food, one that is indispensable to the human race; that she is the most economical producer of food; that her crop never fails and she produces an income every day; that she gives the whole family an opportunity to work and earn; that she utilizes feeds that would be wasted without her; that she furnishes the best market for hay and increases the prices of all crops.

This man has heard the complaint that dairy farmers are producing milk below cost of production, and this is true. It is also true of other crops when we take into consideration every phase of their production, including cost of labor, interest, depreciation, soil fertility, etc. This man fails to recognize that farming, especially dairy farming, is a family job and that neither the labor of the family has been paid for at market price nor has the fertility of the land, taken away by the crops, been charged against them. The stubborn fact remains that notwithstanding dairy farming has not been upon the same business basis as is manufacturing, it is none the less a most substantial industry and is so considered by bankers who understand the cow and the people who care for her. In dairy sections the farmer has no difficulty in borrowing money to buy cows. For the development of the dairy industry the bankers must be informed upon the stability and sincerity of the dairy cow.

IT PAYS TO KNOW

A dairyman who takes pains to know what every department of his farm is doing and the returns it gives, finds opportunity for improvement and increasing his returns.

The members of the Bashaw—Webster (Wis.) Cow Testing Association, when started February 1, 1920, had 9 scrub bulls but these have been disposed of and the association now has 100% purebreds. The members have also purchased 31 purebred females. Ten of the members now have purebred females when at the beginning there were none. Five members have installed drinking cups, assuring their cattle of an adequate supply of water at all times. One herd has been tuberculin tested and one member has had a milking machine installed. Twelve cows have been sold as being unprofitable and four good cows have been sold at a profit for dairy purposes.

The work of the cow testing association is pointing out to these men the necessity of better cattle and has led them to discard unprofitable cows and to improve their methods of handling their herds. It is not only revealing to them the individual differences of cows but it is stimulating them to be better managers of their herds. This cow testing association is revealing new methods of dairying and is creating a deeper interest in the work of caring for the herds.

BUYING FERTILITY

The good farmer studies his soil to determine how it can be treated in order to give him the most profitable returns. Soils vary in their composition, in their physical properties, and require various treatments in order to yield the best crops. It is quite the common practice to purchase so-called balanced fertilizer when in reality there is no such thing. The so-called balanced fertilizer contains phosphorus, nitrogen, and potash in varying amounts. Some soil may require all these elements but in a majority of cases more profitable results will be obtained if the farmer will apply separately the element or elements of fertility which his soil lacks.

It has been found that most up-land soils which have been cropped for a series of years lack in the element phosphorus and have an adequate supply of nitrogen and potash. This is especially true on dairy farms where legumes are raised and a large portion of the crops produced on the farm are fed to live stock. Most dairy farmers will find that it pays to use some phosphorus, for their soils lack this element.

It has been the practice for years on Hoard's Dairyman Farm to apply phosphatic fertilizers. We have used raw rock phosphate at the rate of 500 to 1,000 pounds per acre or 50 to 60 pounds per load of manure. We have also applied acid phosphate at the rate of 250 lbs. per acre when immediate returns from phosphorus were desired. We have found that the use of these phosphatic fertilizers has paid.

The Missouri Experiment Station reports that phosphatic fertilizers bring a return, on the average, of over 350%, while the use of potash, 46% and manure, 220%. Low lands, lands that usually require tiling, especially of a swampy nature, respond, as a rule, admirably to 200 or 300 pounds of some potash compound per acre. In our own experience we have found a six-acre field yielding no satisfactory crop except timothy but by applying a ton of muriate of potash to the 6 acres, one of the best corn crops ever grown on Hoard's Dairyman Farm was raised on this land. It would have been no advantage to this field to have applied nitrogen and we doubt whether phosphatic fertilizer would have paid, but the land did lack potassium and, because of the application given it, profitable crops have been produced for seven or eight years.

It therefore pays to know the kind of elements of plant food the soil lacks in order to supply it with the greatest economy. If the land needs phosphorus, buy phosphorus; if it needs potash, buy potash; if it needs nitrogen, buy nitrogen. When the soil lacks all three of these elements, buy them but try to determine what proportion of each one should be applied. Money can be saved and better crops grown by applying to the land the elements of fertility that are deficient.

COW TESTING DIRECTORY

The Dairy Division has recently published a directory of the cow testing associations in the United States which were active July 1, 1920. This directory lists 468 associations in 36 states. The leading state is Wisconsin with 115 associations. Pennsylvania comes second with 64; Ohio third with 41; New York fourth with 28; and Illinois fifth with 23. No other state has as many as 20. This directory shows the growth in the association movement from 1906, when the first was organized in Michigan. Four years later 40 were in operation. In 1913, 100 were organized, and by 1917, 459 were running. Scarcity of testers in 1918-19 cut down the number to 353 and 385 respectively. The return for 1920 to 468 is indicative of the promised increase which can be looked forward to in coming years. The number of herds in these 468 associations is 11,948, the number of cows under test 203,472. The average number of herds in each association is 25.5 and number of cows per association 434.

Introductory to the directory as published is the following statement by the Dairy Division: "Is cow testing worth while? Ask the dairyman who has recently joined a cow testing association, and he will seldom answer 'No'. Ask the dairyman who has seen the profits of his herd more than doubled through the work of the association and he will never answer 'No'. Ask the breeder of high class pure-bred dairy cows, after he has sold a bull calf from a record cow for a thousand dollars, and he will always answer 'Yes.' Cow testing is not worth while to the dairyman who makes no use of the records and who continues the doubtful practices of former years, but cow testing is worth while to the dairyman who desires to feed and breed according to known production. In dairy herd improvement knowledge alone is nothing, but knowledge followed by intelligent action is everything. To the man who belongs to a cow testing association, who studies the individual records of his dairy cows, and who selects feeds and breeds according to those records, cow testing is and always will be well worth while."

Storing Tops With Beets

I have harvested some mangels and beets which, because of the poor quality, were not topped. I have read somewhere that fermented beet tops were poisonous to cattle. It had been my plan to store these beets and mangels, and feed them out without topping, but I am puzzled as to whether I dare to do so.

Tomahawk, Wis. G. M. S.

Beet tops are considered a fairly satisfactory feed for cattle and they are fed in considerable quantities in many sections. There is some danger

that if fed in too large quantity they will tend to purge the cattle and for this reason they should be fed in a somewhat limited way and preferably in connection with some dry roughage, such as cut corn stover, straw, or hay.

Unless there is some unusual fermentation, beet tops will not be poisonous; indeed, we have heard of no cases of poisoning cattle through feeding these tops.

There is some question in our mind as to whether the contemplated system of storage would prove practical from an entirely different viewpoint. While we have had no personal experience and do not recall that the matter has ever been brought to our direct attention, we would fear that this method of storage would result in spoilage of the beet roots, as well as the tops. This is due to the fact that by storing in this manner the beets and tops will not pack closely together so as to exclude the major portion of the air. As long as there is any air entrapped with this mass of material there will be a considerable amount of mold developed and consequent spoilage. Such spoiled feed cannot be considered good for cattle and there is some question as to whether it might not even prove harmful. There is a difference between fermentation of beet leaves when packed in a solid mass and the fermentation or rather spoilage that comes when the leaves are kept apart by the beet roots. It is much like attempting to make silage without compacting the cut material so as to exclude air.

Overcoming Sorghum Poisoning

HOARD'S DAIRYMAN:—The article on sorghum poisoning by Ralph Kenney in the Nov. 12 Hoard's Dairyman I have read with interest and also the editorial comment on the same subject, especially Professor Fitch's views.

This past summer I spent considerable time in the harvest fields of western Kansas and eastern Colorado where a great deal of the sorghums are grown. I saw very little Sudan grass or sorghum being pastured. Most farmers seemed to be afraid of them for pasture although these are the main winter roughages. In June, 1920, occurred one loss with which I am personally acquainted.

In Lane County, Kansas, I spent some time on the farm of Mr. Jed Ramsey at Dighton. Here a neighbor lost nine head of cattle all in an hour or two one morning. His cattle broke through a fence into a neighboring field of cane. This was in June when the cane was young. None of the cane in the vicinity was stunted at this time either but the cattle succumbed to forage poisoning just the same.

Mr. Ramsey, at whose farm I was, is an experienced farmer from southeastern Kansas who has been farming in western Kansas the last four years—and, incidentally, he likes it. He realizes the troubles of the newcomer in that section in regard to forage poisoning.

"Too bad," he declared when he heard of his neighbor's loss. "That could easily have been avoided, though. Why is it we all have to learn by some sad experience like that? If those cattle had been used to eating cane, none of them would have been poisoned. I always raise small amount of cane right in the pasture where I keep my cows. They eat at it and are used to it all summer long. They sometimes break through the fence and get into large fields of cane but it doesn't affect them in the least as they are already used to eating cane. I have not lost any although many times they eat a great deal of cane when they break out."

Mr. Ramsey's statement I found to be correct as the cattle broke into a cane field twice while I was there and were eating cane for a long time before they were noticed. It seemed to harm none of them.

This western Kansas farmer may not know the scientific reasons for forage poisoning, as prussic acid, etc., but he has found and practiced a very simple and effective method of prevention. His idea is that cattle are bound to break through fences at some time during the season especially during the dry midsummer. He aims to be prepared for such occurrences by growing a little cane in his pasture since he believes most cases of forage poisoning are due to a sudden change from no cane to plenty of it. This is in accordance with the ideas of Professor Fitch of the Kansas Experiment Station and advanced on the editorial page of last week. Whether the theory of the cause is right or not, Mr. Ramsey's method of prevention has proved a good one and is practiced by old timers in that section.

The farmers of the Southwest are all aware of the danger of forage poisoning but some do nothing to prevent losses of their cattle. This possibility of forage poisoning plays a bigger part in the summer business of the farmers of this wide sorghum raising section than those who reside in other sections are apt to realize.

Wisconsin. G. H. CLAPP.

Blood in Milk

There is a peculiar state of affairs in the herd of one of our creamery patrons. His milk apparently is all right but when run through the separator the skimmilk shows blood streaks in it and when set to ripen next morning will be all separated and does not clabber like it should, besides it has a bad smell to it after 12 to 24 hours. At times the milk from this herd would clear up and again come back without apparent cause. The cows run on native pasture and are fed well. Apparently everything in connection with the dairy is clean and well kept.

Orlando, Fla. L. B.

Bloody milk may be the result of either of two causes. The milk may contain blood as it comes from the cow's udder, being caused there by injury, a diseased condition, or a fevered condition; or bloody milk may be caused by bacterial growth from an organism which reaches the milk after it is drawn.

In the first case, it is very likely that a few, at most, of the cows in the herd are affected. The milker should discover which ones of his cows produce bloody milk. It may be necessary for him to keep separate samples of milk, but it is likely that by very careful examination as the cows are milked, he can discover which ones, if any, of the cows are so affected.

If this diagnosis fails, the next most likely cause of this condition is a bacterial infection after the milk is drawn. We can only suggest in this case the thorough sterilization of the utensils with which the milk comes in contact. It is quite common for blood to occur for some time in the milk of a newly calved cow. Heifers with their first calves are often affected. Congestion or gorging of the mammary gland with blood causes rupture of minute blood vessels so that bleeding, severe or slight, results. As a rule, this condition soon subsides and that may be hastened by feeding a very light ration and giving a handful of glauber salts in feed or water two or three times a week. In persistent cases, however, it may become necessary to bathe the udder with vinegar and water or alum solution two or three times daily and give one dram of dried sulphate of iron and three teaspoonfuls of salt in the feed twice a day until bleeding ceases. In old standing cases, affecting but one or two teats, growths in the milk ducts are the usual cause, and if they cannot be removed by operation, the cow should be allowed to nurse calves or should be "dried off".

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Cream Thickens in Making Butter

My cream gets as thick as soft butter and only tests from 28 to 30 per cent. Then I heat it and it takes three hours for butter to come. I have to churn at 64°F. now. I follow the same system for ripening and churning but since we have been feeding dry feed, it has been getting thick. Sometimes my butter is streaked. Is it because it gets too cold? Is it all right to heat the cream by putting a clean steam hose in the cream and heating it? Please tell me how to remedy this.

Simmons, Ariz. J. F. Y.

The thickness of the cream noticed in this particular case must be due to some peculiar fermentation which takes place in it, especially as the cream tests only about 30% fat. One way of determining definitely whether or not this is the correct explanation is to heat the cream while it is sweet up to a temperature of 150°F., hold it at this temperature 10 minutes, then cool at once to near 50° if possible and let it sour in a clean vat or can after this heating. If the unusual thickening is due to a special fermentation that takes place, this heating or pasteurizing will destroy that ferment and when the cream is cooled it will return to its normal consistency. Such pasteurized or heated cream may be soured by holding it at a temperature of about 60 degrees for 24 hours, then cooled to 55 degrees and placed in the churn at this temperature.

The streaks noticed in the butter are probably due to the uneven mixture of the salt through the butter, or the incorporating of too much curd or buttermilk in the butter. The best way to remove the latter is to wash the butter in the churn when the granules are about the size of wheat kernels by pouring a sufficient amount of cold water into the churn so that the granular butter will float on the cold water; then revolve the churn three times and draw off the wash water. Such a washing as this ought to remove the surplus buttermilk, but in case it does not and the last water drained from the churn is milky, the washing process may be repeated a second time. This, I am sure, will take out all the curd that may be left in the butter and should help to remove the streaks now noticed.

I do not think it is a good practice to heat cream by putting "a clean steam hose into the cream and heating it". This hot steam is likely to coagulate the curd in the cream into hard lumps which will probably be mixed with the granular butter when the churning stops and by working these hard lumps of curd through the butter cause the streaks you have noticed. The best way to heat the cream is to set the can of cream into a larger can of hot water and then stir the cream until it reaches the desired temperature. After heating, the cream must be cooled to near 55 degrees F. before churning.

Wisconsin Dairy School. E. H. FARRINGTON.

Shipping Calves

I noticed quite a writeup about the "Whitewater Calf Industry". I want to give you a little of my experience and observation in regard to the calf industry. A friend of mine sent for two Holstein heifer calves last spring. They were to be six weeks old at time of shipping. One was four or five week old and the other about one week old when shipped. He wrote the man he bought them of complaining about the age and size of the calves. The seller wrote and offered another one at reduced price to satisfy the buyer. He sent it C. O. D. and my friend paid for it and kept it.

I sent for four Guernsey heifer calves last spring and had them sent to a farm I own in Missouri. All were to be five or six weeks old. I am sure there was none of the four a month old and one was not ten days old when received at the farm. The calves arrived in a very weak condition. The youngest one came very near dying as a result of the trip. Three are grade Guernseys and the fourth one has got me guessing. It is red and white and as speckled as a coach dog. I presume it is an Ayrshire by its looks and the way it is outgrowing the others. It is not hard to tell why so few are returned when sent C. O. D. The shippers know they must send something near what they sell or have them returned. On the other hand, if they have their money and ship later they can send the ones they would not dare ship C. O. D. and some of the dealers are dishonest enough to do it.

Kansas. E. A. D.

(Editors' Note:—It is doubtful whether a shipper can afford to consign calves C. O. D. There are rascals among buyers as well as many sellers, added to which there may be the faint hearted buyer who does not understand that a calf shipped a long distance will not look its best upon arrival. This might lead to the rejection of a perfectly healthy calf and entail considerable expense to the shipper when he was not at fault. This method of purchase is not highly desirable unless the seller has faith and knowledge of the buyer's honesty and integrity.)

CONTENTS

Advocating the Ad - - - - - - 869
This Ration Makes Winter Eggs - - 870
The Dairy Optimist - - - - - 870
Season's Greatest Jersey Show - - 871
California Co-operatives and the Mid-West 872
Who Won the St. Louis Milk Strike - 873
Uncle Sam's Hired Men Who Serve You 874
Behind the Scenes at the National Dairy Show - - - - - - - - 875
Dairying Thirty Years Ago - - - 875
Fort Scott Dairy Show - - - 877
Cow Testing Associations - - - - 878
Cow Testing Associations Help Nova Scotia Farmers - - - - - - 879
Co-operation and Justice - - - 879
"No Money for Dairyman" - - 880
It Pays to Know - - - - 880
Buying Fertility - - - - - 880
Cow Testing Directory - - - - 880
Storing Tops with Beets - - - - 880
Overcoming Sorghum Poisoning - 881
Blood in Milk - - - - - - 881
Cream Thickens in Making Butter - - 881
Shipping Calves - - - - - - 881
Cheese Markets Steady in Face of Lighter Demand - - - - - - - 882
League Reduces Milk Prices - - - 882
Review of Grange Conclave - - - 882
Waukesha Holstein Sale Tops in Circuit 882
South Carolina Jersey Makes 375 Lbs. Fat 882
The Seattle Strike Settled - - - 883
Cleaning Eighteen Hundred Acres - - 883
Tenth Silver Medal Jersey Bull - - - 884
Jerseys Strong at Georgia Fair - 888
Washington, D. C., Weekly News - - 886
Cottonseed Meal Prices Tumble in Weak Market - - - - - - - - 886
Scarcity of Fancy Butter Keeps Market Unchanged - - - - - - - 886
Texas Calf Club Formed - - - - - 886
Valuing Skimmilk - - - - - - 888
American Farm Bureau Federation Convention - - - - - - - - 890
Ayrshire Breeders in Boston - - - 890
Walworth Co. Holstein Sale - - - 891
Watertown, Wis., Semi-annual Holstein Sale 891
New York Butter Market - - - - - 891
Every One a Prize Winner in the Largest Junior Live Stock Show Ever Staged in Wisconsin - - - - - - 892
Bradford Co., Pa., "Bull Reception" successful - - - - - - - - 893
Junior Letters - - - - - - - 895
Waukesha Guernseys Average $545 - 895
Missouri Dairy Cow Race - - - 895
Missouri Holstein Association - - 896
Dusting and Dairying - - - - 897
Second Iowa Guaranty Holstein Sale - - 898
Three Michigan Holstein Sales - - - 898
Holstein Grades Average $240 - - 898
Veterinary—Determining Pregnancy—Strong Milk—Warts on Teats—Warts on Head - - - - - - - - 899
Ayrshires Win Oregon Milking Contest - 899
A Correction - - - - - - - 902
Idaho Dairy Excursion - - - - 902
Sheboygan County Holsteins Average $340 902

Cheese Markets Steady in Face of Lighter Demand

[Report by U. S. Bureau of Markets]

While the week ending Nov. 20 was marked by fairly good trading in the cheese market with values generally well maintained, conditions seem to point to the fact that prices are close to the top now especially at primary markets, and that further advances such as those of the past few weeks are not likely to occur in the immediate or near future. In Wisconsin the feeling is current that the usual light buying from Thanksgiving time until the Christmas holidays will be further supported this year by the fact that a good deal of buying lately has been to replace depleted stocks, and that this trade has just about obtained its requirements.

Favorable fall weather led to considerable buying for storage purposes during past weeks, as quality has been running as good as regular September and October make, but with quality now beginning to go off this trade will cease to be a factor. Some price changes bringing different styles into line with each other may occur, but there are just as likely to be declines as advances. A number of factories have now turned to making those styles on which a particular heavy demand has caused prices to become highest.

Eastern Markets Still Confident

Reports from eastern distributing markets indicate that dealers have a fair amount of confidence in the present situation. As was mentioned last week, there is more definite information regarding the condensery milk surplus as it bears on cheese production, and it appears that a lot of this milk is going into other channels. It is also true that demand for fancy cheese has been and still is very good, and that receipts have fallen off somewhat and offerings in the country continue to become lighter. The Chicago market, however, does not share fully in this feeling, for trading there shows an unsettled undertone, and it is doubtful whether present prices can be maintained. Prices on both held and fresh cheese advanced slightly in distributing markets generally and held cheese is firm if of good quality. Dealers holding blocks of fancy in storage are making no particular effort to push sales.

Common Fall Defects Appear

Some of the fresh cheese appearing on the markets is beginning to show up poorly. Many lots are running irregular, and pasty texture is common. The fact that demand centers on fancy stuff is apt to make medium and undergrade stock hard to move, and for this reason there will be some tendency for dealers to hold off on lots which are at all unsatisfactory. Even now the market on undergrades is beginning to ease off some. Skim cheese reaching markets finds practically no demand. Export business is quiet, as it has been for some time, and inquiries are only occasional.

The average wholesale prices on American cheese (style Twins) for the week ending Nov. 20, 1920, and for the corresponding week last year, were as follows:

	Week ending Nov. 20 1920	1919
	cents	cents
New York	27.8	31.7
Chicago	25.2	30.4
Boston	26.0	32.7
San Francisco	30.4	32.1
Wisconsin Board	25.3	30.8

The receipts of American cheese at the four markets first given and at Philadelphia totaled 3,309,126 lbs., as compared with 3,501,082 lbs. for the corresponding week a year ago and 3,283,096 lbs. a week ago.

League Reduces Milk Prices

THE Dairymen's League directors have voted to sell December milk for $3.18. This is for milk testing 3 per cent butterfat at the 200—210 mile zone with the usual differentials for freight and butterfat.

Although it has been the custom for fifteen years, because of increasing costs of producing December milk, to sell it for more than November milk, this year's December price will be 47 cents a hundred or one cent a quart cheaper than the November price. The directors found that the majority of sentiment among members of the organization was for lower prices and that such lowered price should be passed on to the consumer. This is in line with what is taking place in the prices of all other products and commodities, and it is thought it will tend to increase the consumption of milk at a time when there is a surplus in League territory due to the fact that much of the milk which formerly went to manufacturers is not now being taken by them.

Borden's Farm Products Company has announced that it would pass the full reduction on to the consumer. It is expected that other distributors will do the same. Even at this reduced price, the manufacturing dealers who have refused to buy milk since October 1st will probably not buy milk of the Dairymen's League during December. As proof of the fact that these companies are not so much interested in not buying milk as they are in trying to break the farmers' organization, they are now, particularly the Nestle's Food Company, offering to buy milk of farmers in many sections at full League prices, providing the farmer will deal with them as an individual and not through his organization.—E. R. EASTMAN, Editor Dairymen's League News.

Review of Grange Conclave

On the eve of the adjournment of one of the most important sessions ever held by the National Grange of the Patrons of Husbandry, the results of its sessions can be summarized in a few paragraphs of much interest to American agriculture.

The Grange went on record in further continuance of its anti-class control program begun last year at Grand Rapids, Michigan, by adopting an open shop resolution in broad and undisputable terms, disapproving "any system which denies to any individual the right to work in any place where there is need for his industry at any time and at any wage which is satisfactory to him, or to quit his job for any reason which may be to him controlling."

On the tariff the resolution adopted was brief and forceful, demanding that "if a protective tariff is to be established as the policy of the government, then the laws must give agricultural industry the same protection as other industry."

On the land bank situation, the resolution endorsed the banks, and called for their support and legalized operation.

One strongly supported resolution called on the government to get out and stay out of business, specifying for immediate repeal laws creating the Food Administration, the Grain Administratnon, the War Trade Board, the War Finance Corporation, the War Labor Board, the War Finance Corporation, the Housing Corporation, all Fair Price Commissions, and "similar governmental instrumentalities."

A committee of three was authorized to present the Grange position to President-elect Harding, and another resolution set forth the fact that the Grange asked for the appointment of a real "farmer" for secretary of agriculture.

The Muscle Shoals Air-Nitrate plant matter was acted on, the resolution adopted favoring the operation of this plant by the government or by lease to a private corporation, whichever would prove to be most economical and effective.

A resolution was adopted favoring reclamation projects which would stand agricultural and engineering tests before their approval, and against wholesale appropriations for wholesale reclamation without such tests.

Grange co-operation in the effort to secure the meeting of the International Dairy Congress for this country in 1922 was unanimously voted.

The Grange voted to meet in 1921 in Oregon, with an agreement that Kansas would probably have the 1922 session. Leslie R. Smith was elected on the executive committee, giving Massachusetts this important place, and Worthy Master S. J. Lowell to the board of managers of the National Grange Monthly. A. M. LOOMIS.

There's a difference between feeding cows so they can exist and feeding them so they can produce milk.

Waukesha Holstein Sale Tops the Circuit

Once more Waukesha County Holstein breeders head the Wisconsin sale circuit by selling 78 animals for $37,605, just short of a $500 average. This is by no means the first time this has happened. In fact, for several seasons the Waukesha sale has topped all other county Holstein sales in the state, so it comes as no surprise this time, although it is worth while considering.

Seemingly the Waukesha County breeders have reduced the public sale business to a system that works every time. They get good cattle, have them in sale shape, advertise well, and the net result is a most successful sale whether you judge by the price average or the crowd in attendance (this year, the cattle sold to five different states).

Much of their present success is, of course, due to the fact that for years they have used the best of sires in the county and through their advertising have kept breeders everywhere informed of the quality of their cattle.

Four animals reached a four-figure price with Carnation King Ormsby Mercedes the top animal at $6,200. He is a 10-month-old son of Carnation King Sylvia out of a 34.55-lb. daughter of S. P. O. M., the first bull carrying this combination of breeding ever offered for sale. He was consigned by the Carnation Stock Farm and purchased by H. A. Nelson and Clinton Skewes of Wisconsin.

Second honors in the price list went to the Gustav Pabst Farms on a seven-month-old son of S. P. O. M. 41st out of a 29-lb. year record dam. He was purchased by Lawrence Murphy and Wittig Bros. of Wisconsin.

Mack, Krause, Love, and Benjamin did the selling with Sale Manager Baird in the box.

The following list includes all animals selling for $500 or more and purchasers:

N. J. Swan, Wisconsin	
Sissy Mercedes Johanna De Kol	$500
Jessie Fobes Pietertje De Kol 2d	550
Wm. J. Staah, Wisconsin	
Fancy Johanna Perfection	$550
Williams Bros., Wisconsin	
Pauline Pontiac Dairy King	$570
Clinton Skewes, Wisconsin	
Daisy Johanna Pauline Portage	$500
H. E. Dickinson, Wisconsin	
Johanna Fern Cliff McKinley	$790
J. H. Smith, Indiana	
Gem Korndyke Jewel 2d	$500
Swandale Orange Blossom	630
W. E. Peterson, Minnesota	
Corona Canary Johanna Ormsby	$650
J. A. Craig, Wisconsin	
Minnie Johanna 6th	$510
G. K. White, Illinois	
Pabst Creator Shadeland	$1,000
H. W. Core, Wisconsin	
Jessie Belle Empress Ormsby	$595
L. W. Frey, Wisconsin	
Sir Korndyke Fytje Pietertje 26th	$550
Jelke Dairy Farm, Illinois	
Sir Ormsby Johanna Lockhart	$500
N. F. Rother, Wisconsin	
Swandale Pontiac Aaggie	$700
Zeffie Aaggie De Kol 3d	750
Mitchell Bros., Wisconsin	
Nockdair Pontiac Aaggie Lad	$1,400
J. H. Jungbluth, Wisconsin	
Wisconsin Star Pontiac 4th	$550
H. A. Nelson, Clinton, Skewes, Wisconsin	
Carnation King Ormsby Mercedes	$6,200
Wittig Bros., Lawrence Murphy, Wisconsin	
No. 73	$1,500
H. A. Nelson, Wisconsin	
Denman-Dale Queen Champion Rag Apple	$520
W. H. Wilson, Wisconsin	
Princess Lyons Korndyke	$850

South Carolina Jersey Makes 375 lbs. Fat

The Jersey cow, Fern Princess of Suncrest, recently exceeded the South Carolina state record for three-year-olds by 53 pounds of fat. Starting at the age of three years and five months, she produced 7,482.7 pounds milk, 375.24 pounds fat. She was started on test by J. Hickson and sold to Charles B. Whitney before the completion of the test.

The Seattle Strike Settled

Commission Sets Price of $2.90 for 3.6% Milk

A. D. HURLEY, WASHINGTON

SEATTLE'S "milk controversy" which began early in October when producers, through the officials of the United States Dairy Associations, demanded a raise from $3.65 per hundred for 3.6% milk to $4.17 per hundred for milk of the same test has been concluded, for a time at least. At that time a milk commission was appointed by Mayor Hugh M. Caldwell. Both sides agreed to abide by the decision made by this commission for a period of one year. Following is the main part of the report submitted to the mayor by the commission:

In looking over the field of investigation for your commission it was discovered that there are some 370 producers shipping milk into the Seattle market, and some 60 distributors getting this milk to the consumers either through stores, restaurants, or delivery vans and wagons. The commission deemed it necessary to try and reach every one of these producers and distributors. Accordingly a questionnaire was prepared and sent out to each of them. Although the commission has not been able to get responses from all the producers, or all distributors, nevertheless the responses have been such that the commission has at its disposal testimony covering far more than fifty per cent of the packages handled by the distributors. All the larger distributors have responded. A few of the minor distributors have failed to heed the call of the commission.

With the information thus obtained the commission has felt that it has been put in possession of facts sufficiently widespread to enable it to arrive at safe conclusions.

Proceeding in the natural order from farm to home, the commission wishes to submit first their findings with regard to production. After mature deliberation we are convinced that Pearson's formula is the best basis known to us for figuring cost of production. This formula is the result of investigations carried on by Professor Pearson of the University of Illinois, covering a period of some two years. It is supposed to be applicable to any portion of the United States. He has reduced all of the items of feed handled and the cost of production to the equivalent classed under four general heads. For one hundred pounds of milk the cost is equivalent to twenty pounds of home grown grains, twenty-four pounds of purchased grains, one hundred ten pounds of hay, and three hours' labor.

If Seattle consumed all, or nearly all, of the milk produced in its immediate vicinity, your commission could set a price insuring the producer cost of production or even a profit; but the fact is that at the present time Seattle probably does not consume more than twenty per cent of the milk produced in the Seattle milk shed. This means that eighty per cent of the milk produced in this district must find other markets. These markets are principally the condenser, butter manufacturer, and cheese manufacturer. If your commission, in its attempt to give cost of production to the producer, should set a price too far above the price of these products, it is obvious that this eighty per cent would immediately seek the more remunerative market, and by such competition force prices down and disorganize market conditions, and also possibly flood the Seattle markets with an inferior grade of milk. For this reason the commission has decided, in arriving at a final price to be awarded the producer, that not only should the cost of production be taken into account, but also the market price afforded by the three outlets above referred to.

In connection with the butter price, the commission has decided to take the average being paid for butterfat in four co-operative creameries in this district, and to add to this price a flat allowance of fifty cents for the skimmed milk contained in one hundred pounds of raw milk. This gives the producer all the possible advantages of this market inasmuch as the co-operative creameries are supposed to eliminate some of the middleman's profit.

In arriving at the price per hundred weight of milk through the cheese market, the commission has taken the f. o. b. price at the co-operative cheese factory of Tillamook, Oregon, which has been successfully conducted for the past several years. Four cents per pound has been deducted from this price to cover the cost of manufacturing. In this item the commission has also made an allowance of twenty-five cents for the whey contained in one hundred pounds of raw milk. This is taken from authoritative sources which regard whey as having half the feeding value of skimmed milk.

Taking all of these items and finding the results for milk containing 3.6 lbs. butterfat per hundred weight, we have the following:

Condenser	$1.89
Butterfat at 61c per lb.	2.20
Skimmilk	.50
Cheese	2.50
Whey	.25
Cost of production	4.26
Average of four items	2.90

Lest the price thus obtained, however, should be too far out of line with the average of the three possible markets referred to above, namely, condenser, butter, and cheese, the commission has further decided that the price thus arrived at shall never be less than fifteen per cent above the average of the three items before mentioned, or more than twenty-five per cent above the average of the three items. This added price allowed to producers for the Seattle market is awarded by the commission as a premium for producing a high quality of milk and to insure a continuous flow of such milk into Seattle markets.

We, therefore, recommend that the price of 3.6 per cent milk be $2.90. We also recommend that for every point in butterfat above or below the 3.6 per cent a variation be made in the price of $2.90 equalling one-tenth of the price of butterfat on the Seattle market. To illustrate, at the present time the price of butterfat is 55 cents. A man marketing four per cent milk instead of 3.6 per cent would be entitled to a premium of 22 cents above the price of $2.90. On the other hand, if the producer were marketing 3.2 per cent milk he would have a corresponding cut below the price of $2.90. We recommend that the price of $2.90 here fixed go into effect November 16th, and continue in effect until January 1st; that not later than December 25th and the 25th of each succeeding month, the price be readjusted for each succeeding calendar month on the same basis as the price here arrived at, and that this adjustment be made by the Seattle Department of Health and Sanitation.

One of the troublesome problems for both producer and distributor is the disposal of the surplus supply of milk which is afforded at certain times of the year. On this point the commission has decided that the shipper shall be entitled to send to his distributor, through April, May, June, and July, the ordinary months of surplus, an amount equal to the average of his shipment for the preceding eight months. During the four months of April, May, June, and July any excess above this average may be shipped to the distributor, and the distributor shall allow the producer for the butterfat in his milk at the rate of ten cents per pound more than the running price of butter print on Western Avenue.

In considering the problem of processing and distributing milk in the Seattle market, your commission believes that it has been put in possession of basic facts. As pointed out previously in this report, we had most helpful co-operation from the major distributors. Certain preliminary features should be called to the attention of the public. In the first place, the Seattle housewife thinks in terms of quarts of milk left at her door. As a matter of fact, only about ten per cent of the milk brought into Seattle is thus distributed. Ninety per cent reaches the consumer through cafes, restaurants, hotels, markets, and grocery stores. The marketing of the ninety per cent in this way has both a beneficial and a depressing effect. It is beneficial in that it no doubt increases consumption of milk and reduces the average price to the consumers who get their milk in this particular way. It is depressing or hurtful in that it increases the cost of distribution to the consumers who have their milk delivered at the door. Possibly not more than two or three houses in a block receive milk from a dairy wagon, while the other houses will be supplied from the grocery stores. This means that the route of the dairy wagon is greatly lengthened in delivering a fixed number of packages. Another point that the public should be made aware of is that about eighteen per cent of the cost of the packages delivered at the door may be charged up to labor. This charge does not include office salaries or expenses of management, but it is chargeable alone to manual labor in processing and delivering.

To repeat, the housewife thinks in terms of quarts of milk, but the distributing cost is better figured in packages of delivery. Your commission has found that the four leading distributors in the city have delivered in the first eight months of 1920, 15,540,390 packages. The margin of profit in handling this vast quantity of milk is so slight that one-fifth of one cent per package less would more than eliminate the profit of the four concerns; while one-fifth of a cent per quart more would practically double their profit. The same condition we have found true for the entire year of 1919. These conditions warrant us in reaching a conclusion that competition has kept the margin of profit for the retailer down to the lowest possible level.

The housewife may be curious to know why, if this margin of profit is so slight, her price on milk delivery at the door always varies in terms of full cents. The fact is that the distributor frequently delivers one type of package at a loss because of the necessity of dealing in even money. He will then make up this loss in the sale of other packages. Only wise and careful management can keep the adjustment of the prices on these different packages at a point that will insure safe business.

Because of this narrow margin and the delicate adjustment necessary to conduct the business safely, your commission deems it unnecessary and unwise to attempt to set a price to the consumer.

In conclusion we would point out that the price charged for milk by restaurants and cafes is beyond the control of the distributors and of your commission.

Clearing Eighteen Hundred Acres

HOARD'S DAIRYMAN:—Marinette County, Wis., added to its cultivable land in 1920, through a clearing campaign, 18,000 acres. This is enough land to support 6,000 cows and as dairying is the principle business of the county the importance of the work accomplished by the Marinette County Land Clearing Association at once becomes apparent.

General satisfaction throughout the county was expressed in a celebration and land clearing roundup recently. The celebration centered at Wausaukee, where Larry F. Livingston, directing engineer of the association, maintains his headquarters. Automobile trains from all quarters carried thousands to "the land clearing county seat", the principal one going from the city of Marinette. In this train Dean H. L. Russell of the College of Agriculture rode as the guest of honor of the celebration.

The Marinette train paused at the various towns, and at Crivitz and Coleman the tourists were entertained during brief stops. Enroute this train paused long enough to see 300 feet of ditch "blown" with a single shot of dynamite. This was the first of two spectacular demonstrations of land clearing methods. The second was at Wausaukee and was the feature of the celebration. After delivering an address Dean Russell threw a switch that set off an acre of 125 stumps, a mighty blast that cleared one more acre in record time.

Wisconsin. LEO P. COOK.



WAITING FOR THE BLAST

An acre of stumps was blown at one blast to celebrate the close of the land clearing campaign conducted in Marinette County, Wisconsin. There were 1,800 acres cleared, which required the use of 314,000 lbs. of explosives including 26,000 lbs. of T. N. T.

It's all in the package

EVERYTHING else equal, people buy what looks best to them. People have been educated up to the parchment wrapper idea. It looks clean—and it *is*. It looks as though it keeps butter better, fresher, sweeter, more wholesome—and it *does*.

Where people have the choice they *buy* the better wrapped butter naturally, where they'd have to *be sold* the same butter, unattractively wrapped.

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And then watch your butter sales grow.

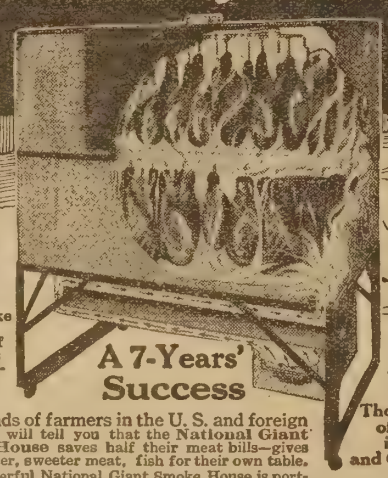
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This is the same Smoke House used by Governor Cox of Ohio; by big breeders and farmers all over the country. In use on Agricultural Experiment Farms; pictured in a leading article by Country Gentleman, and recommended by Farm Paper Publishers all over the land.

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WITH pure, rich milk analyzing 87% water—and with your winter herd *getting only ¼ to ⅓ of their natural water requirement from icy outdoor tanks*, you can see where cold weather cow-thirst is one of the biggest causes of your year-after-year winter milk shortages. With

Simplex Improved Water Bowls

your cows drink "to their hearts' content" day and night. Result—*20 to 25% more milk from every cow all through the housed-in season.* And no more frozen tanks—no tank-heater make-shifts—no more twice-a-day "herding out" periods. *Write for Full Information on the Modern Miracle.*



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29 Rowell Street, Beaver Dam, Wis.
Manufacturers of Complete Barn Equipment



ONLY DROP CLEAN WATER BOWL MADE

Who Won the St. Louis Milk Strike

(Continued from page 873)

be secured. It is maintained that in the settlement additional recognition of the association was secured; the dealers having heretofore insisted upon buying directly from the producer. Yet the contract as agreed upon is made by the distributors with the producers as individuals and not with the association.

Two Important Developments

Two things have developed during the past two months which claim attention in the future. The first is the application of the board of directors for a charter in the American Federation of Labor. Labor leaders in St. Louis urged this action. In the association it was sponsored by D. A. Brooks, president, and N. E. Baum, secretary, but did not have unanimous approval from the board. The benefit claimed for producers from this move comes through the distribution and labeling of their milk as a union product. With a producers' distributing agency it is said that the 85,000 union labor families would guarantee the business that number of patrons at the beginning.

The other development is the plan to start a producers' distributing plant, with bottling plants at Highland and other points. More than $100,000 has been subscribed for the Highland building. This movement is fostered by the more conservative members. They favor plants to care for surplus milk, equipped for the manufacture of condensed milk, butter, or cheese. If it later appears necessary, they would introduce a system of distribution. This constructive plan seems to be the best thing brought about by the trouble this fall.

The basis for price fixing at St. Louis may make it uncertain for some months to come as to who won the milk strike and permit both producers and distributors to claim a victory. The season's experience very definitely indicates that prices are not now regulated by local milk supply, that transportation and prices in other sections must be considered. Also it demonstrates a gratifying loyalty among the members of the Southern Illinois Milk Producers' Association. Whatever may be the faults of the present organization, and however badly members may have fared in the strike now ended, it can be said they stuck!

Tenth Silver Medal Jersey Bull

Valentine's Ashburn Baronet, a Jersey bull owned by J. A. Dickson and Son of Oregon, is the tenth bull to be awarded the American Jersey Cattle Club silver medal. He is the fourth to receive this award in Oregon. Silver medals are given for bulls having three daughters from different dams which produce exceptional quantities of butterfat in a year and drop a living calf within 155 days of the completion of the test. This bull has sixteen Register of Merit daughters whose average record is 8,222 pounds milk, 470 pounds fat. One of the best of these records is that recently completed by Countess Stella of Ashburn. She produced, as a junior three-year-old, 11,002.5 pounds milk containing 783.32 pounds fat. In two years she has produced 17,927.4 pounds milk containing 1,265.66 pounds fat.

The frost is on the pumpkin now,
A sight to make men weep,
It's pretty and poetic, but—
A frosted punk won't keep!

65 Lb. LAMBS BY APRIL



ALONG THE Seaboard
the south's newest great railway

In Florida farmers get "hot-house" prices for pastured lambs. Ewes drop lambs from November to January which are pastured on oats, rye and rape. By April they have a well-grown, fat, 65-lb. lamb ready for market.

Two Crops of Corn

Corn can be planted in February, harvested in May; planted again in April and harvested again in September. Velvet beans, planted with the crop, give the equivalent of 16 additional bushels.

There are millions of acres of yet untouched by the plow, productive prairie lands—and hammock soils that grow 75 bushels of corn—and muck soils that produce even more. Model schools and churches, excellent roads.

Write for information about Fla., Ga., Ala., N. C., S. C. and Va. farm opportunities.

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Empire Non-FreezableHogWaterer

Made of heavy galvanized iron — large capacity (70 gal.); drinking trough on outside where hogs can reach it; oil burner directly under trough—guaranteed not to freeze. Keeps water warm at a small cost. An abundance of fresh, clean water at right temperature. Keeps hogs healthy—fatten faster on the same feed.

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IT is everywhere observable, as above, that the traction, cushioning and activity of Goodyear Cord Tires on motor trucks, effect large savings for farmers.

This traction overcomes handicaps of soft, slippery going, of weather and of grade which formerly caused hauling delay and added expense in all kinds of farming.

This cushioning safeguards loads liable to injury, shrinkage or waste when unduly jarred, and thus enables the sale of full quantity and quality at best prices.

This activity permits entirely economical hauling to and from motorized machinery, and by bringing more selling points within hauling range, often reduces marketing costs.

All these virtues of the big pneumatics are made most practical by Goodyear Cord construction which sinews them with unusual strength and endurance.

Farmers' reports on motorization and pneumatics will be mailed to anyone interested, by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR
CORD TIRES

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

Washington, Nov. 24—Officials of the Dairy Division, as well as elsewhere in the Department of Agriculture, are much interested in the provisions in the plan which has been worked out by Secretary Meredith and his advisors for presentation to Congress, looking to a reorganization of the work of the department under two general heads: law enforcement and research. It affects the Dairy Division in particular, as this division is very largely interested in and working on problems of an investigational nature.

The plan has not been made public in any official manner but is a matter of general discussion in and near Department circles. The plan of Secretary Meredith calls for a director of investigational work and a studied reclassification of this work to bring it to date; cut out many of the old projects which are being continued, perhaps their usefulness; take up new problems which have arisen in the past few years, especially those growing out of war discoveries and new utilization of agricultural products; and direct and provide means for carrying on the most valuable research work now going forward.

In many ways this feature of Secretary Meredith's plan is of primary importance. It ranks equal at least to the large outline of cost of production work which he proposes. In view of the divided schools of economists as to whether or not cost of production bears any distinct relationship to selling prices, it may be said that some of the work proposed in the reorganization of the research work is even ahead of this more talked of part of his broad general plan.

For example, in the Dairy Division two primary projects are going forward: one, dealing with fundamental facts of animal nutrition in its relationship to milk secretion, for which equipment and facilities are insufficient at this time; the other, a breeding project dealing with an effort to discover the unknown factors in developing and fixing prepotency in transmission of milk production ability in dairy sires, which has already far outgrown the department facilities to carry forward, except with a large amount of volunteer assistance.

Under the new plan it ought to be possible to secure the attention of these two projects which will insure their proper support. Readers of Hoard's Dairyman are already familiar with some of this work and its results. Results, even with the meagre support possible, have already shown far reaching value especially in the nutrition and metabolism studies. All students of breeding know how fixed and definite are the results of certain strains of breeding, and it can safely be said that the effort now under way to study and test, through long lines of breeding experiments, can hardly fail to discover facts and principles of breeding which will be of immense value to the whole animal industry, if not to the human family itself.

The Dairy Division has other investigational work under way which also needs the attention a fully equipped division of investigation would provide. The utilization of skimmilk is one of these, including its work in cheese manufacture, in the production of casein, and more especially in the production of edible albumen. The scarce element in the world today, in usable form, is nitrogen. To save the protein foods which go to waste in skimmilk is a piece of work worth doing.

How large a part of the work of the department is for law enforcement, how little is for investigation, and what a still smaller part is for extension work is much misunderstood. It is apparent that one of the good results of Secretary Meredith's work will be to call general attention to this. Probably 75 per cent of the work of the whole department, much contrary to general impression, even in Congress, is in the enforcement of laws relating to pure foods, meats, dairy products, quarantines against destructive pests, cotton, grain, and other farm products, grading, etc. Segregating this into one division, giving another charge of research, and then giving adequate effort to extension, or the distribution of the knowledge required, through every available means, is a new conception of department organization.

To carry out this, and other forward looking plans, Secretary Meredith is asking Congress for an advance of ten million dollars in the appropriation needed. Part of this is to pay scientific men and executives in this department salaries commensurate with those paid men of equal skill in other employment, part is for the new heads of divisions needed, part is for new work, especially that in cost accounting and cost of production studies. The fate of this well considered plan when it gets into appropriation committee will be watched with interest.

Cottonseed Meal Prices Tumble in Weak Market

Stocks of Feed are Heavy—Demand Continues Light and Prices are Seeking Lower Levels

[Report by U. S. Bureau of Markets.]

The outstanding feature of the feed market during the week ending November 20 was the serious decline in cottonseed meal prices. In the Memphis market 36% meal dropped to $32, while 41% meal was offered at $3 per ton higher. In a few northeastern markets these grades were offered at $41 and $43, respectively, while in New England territory $45 and $47 was asked. Wide variations in prices continue. Soft winter wheat bran is offered at $42 in the Boston and Pittsburgh markets. New York and Philadelphia quote $41 and $45, respectively, and Buffalo dealers are asking $38 for the same commodity.

The demand for wheat mill feeds is not equal to production, which is below normal. Prices of wheat feeds generally held fairly steady, but several markets report that prices are easing off. Mixed feed and bran declined $1.50 per ton on November 20 in the Kansas City market. Canadian offerings of bran in the New York market exert a bearish influence, and spring and hard winter wheat bran continue to be quoted at $40.

Cottonseed Meal Breaks $4

Cottonseed meal and cake—There is no inquiry for cake and the demand for meal is limited. Prices in southern markets broke sharply. No improvement is noted in the export demand and the cottonseed product situation. Several cottonseed meal mills are running full capacity. Production in Texas is about 60%, while Georgia mills are operating 35 to 50%.

Linseed meal—Present stocks at mills are heavy. The demand is light and abnormally small for this season of the year. Chicago dealers report offerings at $51 delivered Chicago by Buffalo mills, their price being $45 f. o. b. Buffalo. Trading during the past week was on the basis of $50 Chicago between dealers. Jobbers continue to undersell mills $1 to $2 per ton.

Hominy feed—The demand for hominy feed has slackened up considerably on account of lower grain prices. The prices asked by mills which are sold up are in a few cases $4 per ton higher than those asked by mills which are anxious sellers. Yellow hominy sold at $31.40 Chicago, and $34 was offered for white hominy in that market. Large manufacturers are quoting pure white hominy around $42 sacked delivered New York. Production is not heavy at present as new corn has not yet started to move in volume.

Gluten Feed Advanced $4

Gluten feed—The demand for gluten feed has been in excess of production, which is estimated to be from 40 to 50% of normal. As a result prices were advanced about $4 per ton by manufacturers. Reports from various markets indicate that stocks in dealers' hands are good. Around $53 is asked in northeastern markets in 100-lb. sacks.

Beet pulp—The movement of sugar beets to factories is heavy. The demand, as for other feedstuffs, was slow. Bids were invited by dealers offering this commodity at special price concessions. New York importers' offers are $49 f. o. b. New York in even-weight sacks. Domestic supplies and importations are good.

Alfalfa meal—Memphis and Kansas City report that alfalfa meal seems to be in such light demand that best offers are no better than the price for the same grade of hay. Southeastern and northeastern markets quote around $40 for No. 1 meal, and No. 2 meal is offered at $7 less.

Reports from the principal hay markets indicate but little change in the hay market situation during the week. The demand everywhere is very limited and dealers and consumers are buying for present needs only, as they consider present market prices too high when compared with grain prices. Producers, however, are selling very little hay as they maintain that current prices do not cover cost of production and transportation. Receipts are generally light.

The alfalfa market has declined slightly because of an insufficient demand to absorb the relatively light receipts. With the price of alfalfa higher than oats, feeders are not inclined to buy the hay freely. Because of the continued decline in feeds, alfalfa mills are buying but little hay for milling.

Prices of prairie hay at Kansas City broke $3 during the week because of greaty increased receipts and a limited demand. Further declines are expected unless receipts become much lighter. The demand for top grades of prairie at Omaha and Minneapolis was good because of the very light receipts. The same condition existed at Chicago where the best southwestern hay brought $24 to $26 per ton or within about $6 of the price of timothy.

Scarcity of Fancy Butter Keeps Market Unchanged

[Report by U. S. Bureau of Markets.]

The short supply of fine butter continues to hold fresh butter markets steady, and prices were practically unchanged during the week ending November 20. At the close, however, a weak undertone was noticeable, and several factors tended to unsettle the market. Among these may be mentioned the heavy unsold stocks of storage butter, the approach of a season of somewhat heavier production, the general lack of confidence as shown by the absence of speculative interest and the disinclination on the part of buyers to take on a single package more of stock than is absolutely necessary to fill current orders.

Foreign Butter Competing Now

For some time Danish butter, both fresh and storage, has not been in favor with the trade at New York. However, this attitude has recently changed and Danish butter was well taken during the week at advancing prices. The prevailing tendency all week was to turn to butter which could be bought at lower prices. Fine butter was so scarce and so high that Danish which could be supplied regularly at prices 6c to 8c below domestic looked attractive. This butter is now seen on all of the four large markets.

New offerings are reported at 51½c to 52½c, duty paid, and some orders have been placed on that basis. One cargo of Danish shipped without refrigeration, but bought under a guarantee to be free from mold is due. A number of cars of New Zealand butter have also reached eastern markets and more is being pressed for sale. Liberal Argentine offerings are reported at New York but the quality is poor and sales difficult even at 40c to 45c.

Daily reports showing good reductions in storage reserve are in contradiction to the poor selling of storage on the open wholesale market. The explanation must be that distributing concerns are working on their own storage stocks if this explanation is correct. The situation would tend to weaken the market now, but might be a source of strength later on when these concerns have to buy again in order to supply their trade. Reports are current that poorer grades of storage butter have been selling actively on the Boston market at heavy losses, but that there is a firm tone on the better grades and no price cutting. There has also been some movement of undergrade storage at low prices on the New York market. Demand for quality offerings of storage is better.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending November 20 and the corresponding week last year were as follows:

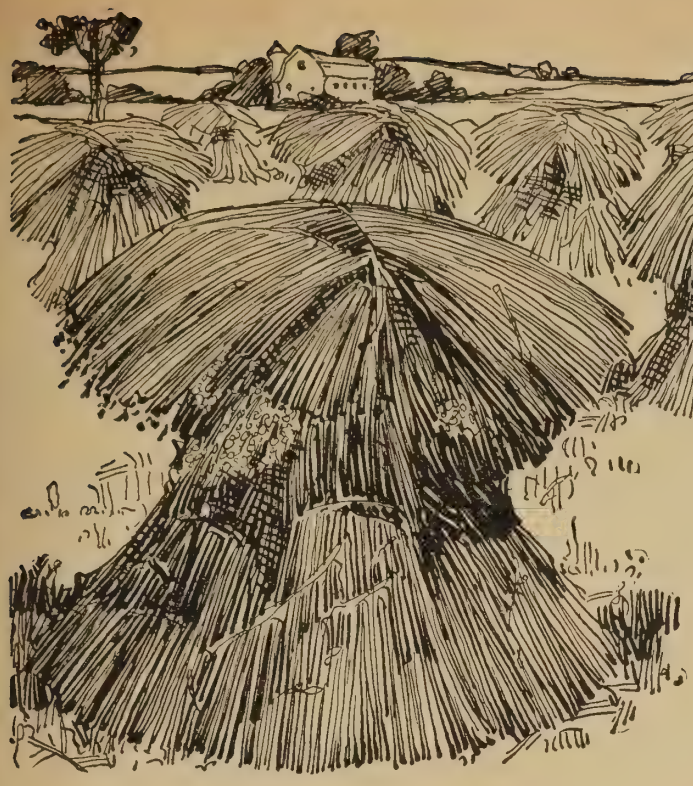
	Week ending Nov. 20 1920	1919
	Cts.	Cts.
New York	65.0	72.2
Chicago	60.8	70.9
Philadelphia	65.2	71.6
Boston	61.0	69.8
San Francisco	54.4	64.3

The receipts of butter at these markets for the week were 6,001,680 lbs. as compared with 7,881,943 lbs. a year ago and 6,061,500 lbs. for last week.

Texas Calf Club Formed

Breeders of Holstein cattle in Tom Green County, Texas, recently completed the organization of a Holstein Calf Club. Their purpose is to stimulate interest among cattlemen in that section for stocking their ranges with registered dairy cattle. The directors elected for the Club will serve as agents in securing calves for the organization. The members of the Club subscribe for calves for their children. A calf show and sale will be held at the end of the year.

Christmas, in the country of all places, should be a community holiday. It's too big a thing to be kept all within your family.



GET GREATER Feeding Results *from* Home Grown Grains



YOU have had a bumper grain crop. You naturally expect to depend upon it to a considerable degree as a winter milk producer. In this you are right. But bear in mind that grains alone do not provide a *balanced* ration for maximum milk production. Supplement them with *proper* concentrates and you'll arrive at the ideal milk-making ration. Here are two proven, guaranteed feeds with which to balance your grains.

International Special Dairy *and* International Ready Ration



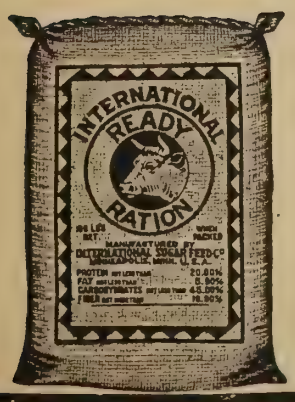
These feeds differ in protein content. Choose between them according to your requirements. Both of these feeds are covered by the broadest guarantees known to feeding men. Use these feeds with fodder corn, corn meal, gluten meal or as a straight ration with hay and silage. Your cows require the molasses and concentrates which these feeds contain. Get the proof in your milk pail.

Here Is the Guarantee—Read It!

We guarantee International Special Dairy and International Ready Ration to produce more milk than can be obtained from any other feeds or mixtures of similar analysis.

Feed International Special Dairy or International Ready Ration in accordance with directions and you can increase the milk production of any cow in your herd from 50 to 100 gallons during a 6 months' period as compared to results from using any other feeds of similar analysis. We guarantee this result as you can mail us comparative records and we will mail you check to fully cover guarantee increase.

Order a trial ton from your dealer today, or write us for information.



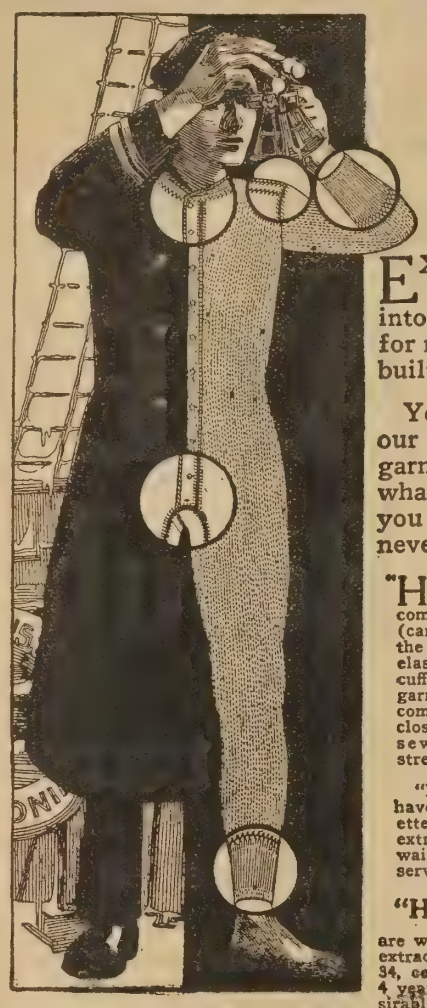
INTERNATIONAL SUGAR FEED CO.

MINNEAPOLIS MINNESOTA

Mills at Minneapolis and Memphis

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"HANES" is nationally standard underwear—*it will make good to you!*



Trade Mark

HANES

ELASTIC KNIT

UNDERWEAR

EXTRA wear, extra warmth and extra comfort are built into "Hanes" winter underwear for men just as accurate time is built into a good watch!

Your own test will prove why our guarantee on every "Hanes" garment is so broad. We know what "Hanes" must deliver to you in satisfaction! "Hanes" never disappoints!

"HANES" heavy winter weight union suits and the new silk trimmed, full combed yarn medium weight union suits (carrying the yellow Hanes label) have the non-gaping tailored collarette and elastic knit, shape holding arm and leg cuffs; buttonholes last the life of the garment; an extra gusset assures extra comfort across the thighs; the "Hanes" closed crotch *stays closed;* pearl buttons sewed on to stay; reinforcements strengthen every strain point.

"Hanes" heavy winter weight Shirts have the snug-setting elastic knit collarette and arm cuffs. Drawers have an extra wide, durable 3-button sateen waist band that assures comfort and service.

"Hanes" Boys' Union Suits

are wonderful value because they give such extraordinary service! Made in sizes 20 to 34, covering ages from 2 to 16 years. 2 to 4 year old sizes have drop seat. Four desirable colors.

See "Hanes" Underwear at your dealer's. If he cannot supply you, write us at once.

Read Hanes Guarantee:

"We guarantee Hanes underwear absolutely—every thread, stitch and button. We guarantee to return your money or give you a new garment if any seam breaks."

P. H. HANES KNITTING CO.

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New York Office: 366 Broadway

Next Summer—You'll want to wear Hanes Nainsook Union Suits!

One Man Saws 40 Cords a Day

Easily—At a Cost of 1½ Cents a Cord!

Write today for Big Special Offer and Low Direct Factory Price on Ottawa Log Saw. Strictly a one-man outfit that will *Beat the Coal Shortage* and make big money.

Friction Clutch You pull the lever to start saw blade, push lever to stop; engine runs on.



OTTAWA LOG SAW

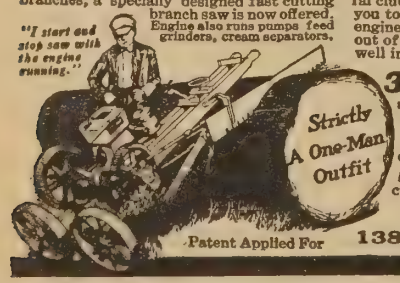
Cuts Down Trees—Saws Logs By Power



Does Work of 10 to 15 Men at less than one-tenth cost. Saw makes 310 strokes a minute. Mounted on wheels. Easily moved from log to log and from cut to cut along the log by one man. No more back-breaking cross cut sawing. The Ottawa fells trees any size. As one-third of the tree is in the branches, a specially designed fast cutting branch saw is now offered. Engine also runs pumps feed grinders, cream separators.

Direct Gear Drives Saw—no chains to tighten; no keys; no set screws. 4-cycle Frost Proof Engine with counter-balanced crank shaft. Pulls over 4 H-P. Oscillating Magneto Ignition and Automatic Governor with Speed Regulator. Special clutch, lever controlled, enables you to stop saw without stopping engine. Simply built; nothing to get out of fix. Uses little fuel. Works well in any kind of weather and on any kind of ground.





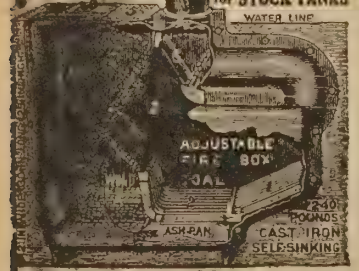
30 Days Trial Cash or Easy Payments. Get our new special offer and find out how easy it is to own an OTTAWA and let it pay for itself as you use it. You are fully protected by 30 day trial. The OTTAWA must back our 10-year guarantee. Over 10,000 satisfied users all over the world.

FREE BOOK. Send for big 32-page book and customers' reports. Today sure. Also our low prices,

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Patent Applied For **1382 Wood Street** **Ottawa, Kansas**

COW BOY SURE HEATER for STOCK TANKS



Get a heater early. Write now for illustrated circulars and dealer's name, to

DON'T WASTE FEED

SAVE IT this winter by heating the water for your stock with Coal, Wood or Cobs in a

COW BOY TANK HEATER

Quickest to heat; strongest draft; adjustable grates; ashes removed without disturbing fire; keeps fire 24 hrs., **Absolutely Safe;** pays for itself in 2 months with 4 cows; **Self-Sinking;** can be used in Wood, Steel or Concrete Tanks of any size. Most reliable, practical, efficient and durable Tank Heater manufactured. Thousands used everywhere.

"Purchased 3 of your Tank Heaters last Winter, worked very satisfactorily and are well worth their cost. Every stockman should use one." W. H. PEW, Prof. of Animal Husbandry, Iowa State College, Ames, Ia.

THE MUNDIE MANUFACTURING COMPANY

513 Brunner Street, Peru, Illinois

Jerseys Strong at Georgia Fair

The dairy cattle show held at the Georgia State Fair October 28th to November 6th was the best in its history. W. H. Howell, Georgia, acted as judge. There were 164 well fitted, good individuals exhibited, the Jerseys leading with 104 animals. Only 11 more head of Jerseys were at the 1920 National Dairy Show. The quality was as good as the numbers. Diggs Farm, North Carolina, won all the championships and many of the firsts. Raleigh's Farmer's Glory, 2-year-old shown by Diggs Farm, was the sensation of the show. He was made senior and grand champion. During 1918 and 1919 he was not defeated in class, winning every junior championship and all grand championships except one. This year he has shown at Richmond, Raleigh, and Columbia, and has been senior and grand champion each time.

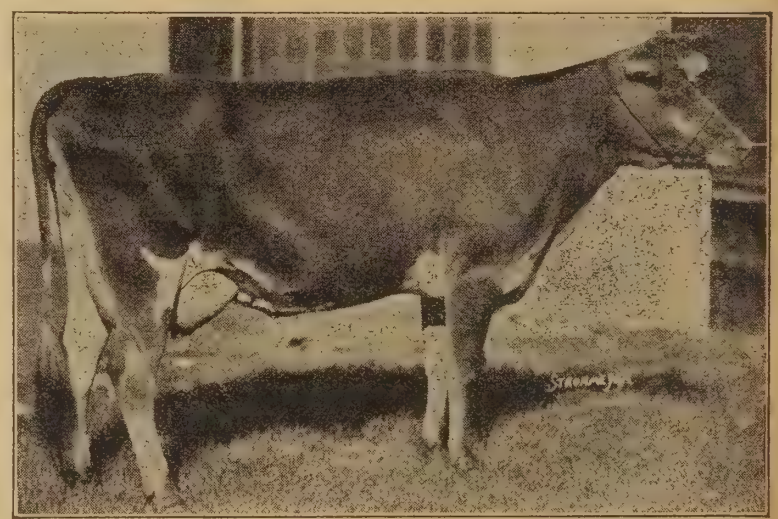
Rockdale Farm, Georgia, won first place in the aged cow class with Fairy Boy's Houssie 2nd. There were eighteen cows in the class. Several at the ringside wanted to see a very typy cow owned by Diggs Farm looked better every day. It stood high in the get of sire and produce of cow classes.

To the Georgia Jersey Cattle Club goes the credit for this Jersey show. Members exhibited ninety head. Mr. Harry C. Robert, secretary of the fair, told the Jersey breeders he would give them an entire building if they would fill it.

Two herds of Guernseys, totaling 30 head, were out. Killarney Farm, Indiana, had 14 good head and won all the championships. The interest in Guernseys in Georgia is growing. They are making good. Dr. Wm. Rawlings, Georgia, showed 16 head. Several of his animals were excellent but had not been well enough conditioned to win first place in closest classes. They will be strong next year, as they have some straight, typy youngsters.

Four herds of Ayrshires, 30 head, composed the best show ever held in Georgia. J. E. Burtis, New Jersey, won the senior and grand championship prizes with his bull, Stanley Howie, and junior championship with Iriquois Victor Hugo, a well grown, breedy, toppy, milky looking bull.

Rena Knox of Glimmer Glenn, owned by Burtis, won senior and



FAIRY BOY'S HOUSSIE 2D, OWNED BY R. S. TIPPIN, GEORGIA

placed first. Lack of size and a defective udder placed her lower.

There were four entries in the aged bull class, a better one than at the National. Tippin won first with Fairy Prince Raleigh, a bull of excellent breeding and wonderful quality. Mr. J. H. Hooks of Georgia stood second with Blue Fox of Warthen, a good son of Blue Fox's Eminent Junior, bred by J. A. Shanklin, South Carolina.

Meadow Crest Farm, Georgia, made another start in the show ring after a vacation of several years. In Atlanta and here the herd won well and grand champion honors. She is a living example of dairy temperament. Her top line is perfect, barrel ample, and mammary system well developed. R. A. Kinard of South Carolina won the junior and grand champion female prize on an excellent eighteen-month heifer just fresh. She was straight of back, deep of body, and carried the most typical Ayrshire udder of the show. Her tail setting was a little too high and her pin bones too low for a perfect score. She would have won by a larger margin if she had been better fitted.

Georgia. W. H. HOWELL.

Valuing Skimmilk

Farmers who are wondering what is the feeding value of skimmilk, will be interested in the rules which are approved by the animal husbandry men at the state college of agriculture at Ithaca, N. Y. One rule, known as Gurler's, is that a hundred pounds of skimmilk are worth, for making pork, one-half the price of a bushel of corn.

Hoard's rule, however, is better, think the college workers; it is: When fed alone, the value of a hundred pounds of skimmilk equals the market price of live hogs in cents per pound, multiplied by five. If fed in combination with corn or barley, it is worth the price multiplied by six instead of by five.

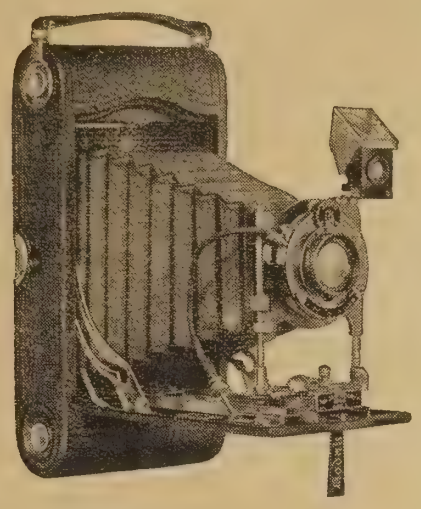
The following example shows how the rule works: If hogs are worth fourteen cents a pound, a hundred pounds of skimmilk would be worth for feeding fourteen cents times five, or seventy cents, if fed alone. If fed with corn or barley, as it usually is, it would be worth eighty-four cents.

A limited amount of skimmilk for feeding small pigs or brood sows is worth much more to the hundred pounds.

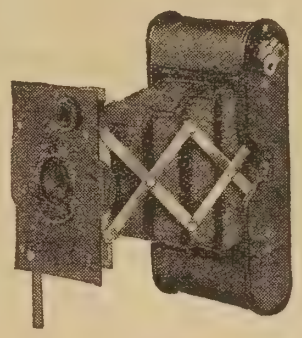
The larger the percentage that milk makes of the total feed, and the older the hogs, the less the milk is worth. The above rule is for pork production in general.—New York College of Agriculture.

Uncle Ab says: The man who knows what he needs and how to make it can do more with a jack-knife than an ignorant chap can do with a whole kit o' tools.

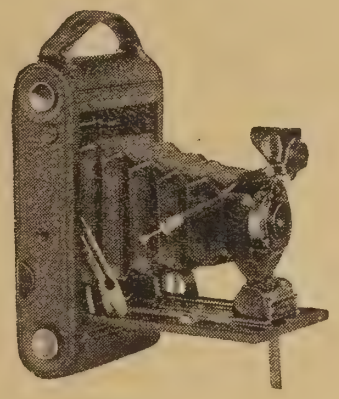
Among the Christmas Gifts



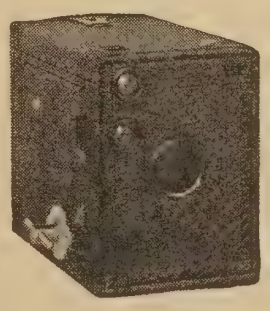
For the grown-ups or the nearly grown-ups, a Kodak for pictures of the post card size, 3¼ x 5½ inches. It is familiarly known to hundreds of thousands of enthusiasts as the "3A". It makes the largest picture available in "pocket photography". The 3A will really go into the side pocket of almost any coat. Frankly, however, it is more conveniently carried in an overcoat pocket—or slung over the shoulder in a case. Excise war tax and all, the Junior model, with a fine Rapid Rectilinear lens, sells at $24.64—and with the Kodak Anastigmat *f*.7.7 lens, at $30.62. There are other more expensive models—all have the Kodak simplicity—and they all make good pictures.



A gift for the one who already has a larger Kodak—the Vest Pocket. You don't carry a Vest Pocket Kodak—you wear it, like a watch. It is always ready to picture the unexpected and the unusual. The price, including the excise war tax, is $9.49.



For the boy or girl in high school—the No. 1 Kodak Junior. There's always room for it in the pocket, and the Kodak story of the school days is one that not only gives fun in the making but in its album form becomes a permanent delight to the whole family. The price of the No. 1 Autographic Kodak Junior is $16.67, including the excise war tax.



For the little folks—a No. 0 Brownie. These little cameras have good lenses and shutters and finders, and use the same film and make the same size pictures as the Vest Pocket Kodak. You will be astonished by the good work they do; you will be even more astonished at the intelligent way in which a youngster of seven or eight will go about picture-making with a No. 0 Brownie. The price, including war tax, is $2.86.

This page gives only a hint of the Kodak and Brownie line—there are Brownies for pictures of every size that Kodaks make, and there are Kodaks with high speed shutters and rapid lenses—there are folding Brownies as well as box Brownies—but they all have one common characteristic—they make good pictures. And all Kodaks (except Stereo and Panoram) and all *folding* Brownies have something else in common—they are Autographic, and when used with Autographic film provide for the instant titling of every negative at the time it is made. And the Autographic costs no more than other film.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y., *The Kodak City.*

Waukesha County Holstein Breeders'

WINTER SALE

Monday, Dec. 13

65 Pure-bred Holstein Cattle

There Will Be — 25 of Waukesha's Best Pure-bred Bulls of Serviceable Age and Younger. Ask for information

20 of Waukesha's Best Foundation Pure-bred Females Selected for Type and Breeding

If Interested in Show Cows or Heifers bred to 30, 40 or 1,000-lb. Bulls, ask for more information

20 Choice Unbred Heifers of all ages, representative of Waukesha s type and breeding

If Interested Send for Information

We are not looking for high prices —
We are looking for an opportunity
to let you determine the values

A number of our men had stock to sell. We have inspected their herds and have selected the animals in this sale. Each animal has passed the rigid Association inspection. Each animal comes from a state or federal tested herd and is sold subject to a 60-day retest.

List of Consignors —

Williams Bros.	Geo. Barte
Wis. Masonic Home	Peter Becker
Frank Ludwig	W. A. Dopke
Lee Thomas	W. D. McGill
W. J. Mann & Son	J. W. Burbach
Baird Bros.	Duke Burnell
W. J. Swartz	Gramling Bros.
H. W. Halbach	J. W. Howard
Robt. Green	Dr. M. W. Downing
Rust Bros.	Stewart Bros.

L. V. Garvens

Sale Commences at 10 a. m. in Heated Sale Pavilion at Waukesha

Write for information to

The Waukesha County Holstein-Friesian Breeders' Association

Waukesha Wisconsin

American Farm Bureau Federation Convention

"The most important agricultural event of the year," is the expression freely used in referring to the coming convention of the American Farm Bureau Federation to be held at Indianapolis, December 6, 7, and 9. Not only will this convention be a summing-up and inventory of the first year's work of an organization that has sprung into existence and passed the million mark in the short space of less than twelve months, but it will be made the occasion for the determination of policies and principles which will have a far reaching effect in both a legislative and economic way. This great organization is now generally recognized as the logical group to take the lead in formulating policies and principles on all subjects affecting agriculture. For this reason congressmen and business interests, as well as farmers, will watch the deliberations of this convention with unusual interest. The final formulation of the organization's statement of a national agricultural policy will be completed for presentation at the convention.

Monday afternoon will be given to discussion of rail, water, and highway transportation in their relation to the farmer. Henry Sherley, secretary of the Federal Highway Council, will discuss the Townsend Highway Bill and the present Federal Aid plan of road building.

Clifford Thorne will discuss certain features of railroad transportation. He will speak of the "Pittsburg Plus" case which was recently before the Federal Trade Commission.

Governor W. L. Harding of Iowa and Charles P. Craig of Duluth will have much to say of the advantages to be derived from the development of a deep waterway from the Great Lakes to the sea.

The question of finance and credit will be treated from two angles. W. P. G. Harding, governor of the Federal Reserve Board, will explain the functions of the Reserve System. A. L. Lever, father of the Smith-Lever Act, and now a member of the Federal Farm Loan Board, will discuss Rural Credits. Henry C. Wallace, editor of Wallace's Farmer, will speak Tuesday morning on "Fundamentals of Co-operative Marketing". Milo D. Campbell, president of the Michigan Milk Producers' Association, will also discuss certain features of co-operative marketing.

H. C. McKenzie of New York is chairman of the A. F. B. F. committee on taxation and has been making a careful study of the proposed repeal of existing corporation profits taxes. His address should prove interesting and highly instructive.

Gray Silver, Washington representative of the A. F. B. F., will speak on the subject, "The Washington Office and the Man Back Home". Sir Auckland Geddes, the British Ambassador, will discuss in his interesting way some of the world-wide phases of the agricultural problem.

A large share of the third day will be given over to discussion of the various angles of organization, based upon the experiences of the past year.

Ayrshire Breeders in Boston

The annual meeting of the New England Ayrshire Club will be held at the Quincy House, Boston, Tuesday, December 7th. Officers for 1921 will be elected and action will be taken on the report on by-laws. A banquet will be called at 12:30 o'clock.

When writing advertisers please mention Hoard's Dairyman.

Watertown, Wis., Semi-annual Holstein Sale

The Watertown Holstein Sales Company's eleventh semi-annual sale held November 23 at Watertown, Wis., included 93 animals that brought a total of $22,825, not a high figure, but a fair one.

Commander Harris of the Naval Academy Dairy in Maryland, Giltner Bros. of Kentucky, and Golden & Muehl of Wisconsin were the heaviest buyers. Among the Maryland purchases was Duke Matador Piebe, top price animal of the sale that brought $800, a grandson of Matador Segis Walker from a 24-lb. dam now on year test. He was consigned by the Carnation Stock Farms.

Mack, Haeger, and Cook did the selling with S. T. Wood in the box.

All animals selling for $300 or more and buyers are listed below:

Wis. Masonic Home Farm, Wisconsin	
Wisconsin Bess Gewina	$325
Segis Whitney Korndyke	500
Reuter Murray Nitt	475
Pleasant Posch Bonheur Star	625
Pleasant Bonheur Champion Star	550
Warner Heitz, Wisconsin	
Aaggie Greene Korndyke De Kol	$375
Naval Academy Dairy, Maryland	
Bessie Homestead Paul De Kol	$350
Queen Canary Johanna Pontiac	560
Westmoreland King Hartog Colantha	360
Duke Matador Piebe	800
Harvest Royal Aaggie	410
Pleasant Piebe Tritomia	350
Theo. A. Kuehn, Wisconsin	
Nixie Wayne Carnation Champion	$300
Truttschell Bros., Wisconsin	
Frost Farm Canary Fobes Mutual	$500
Sunnyside Jewel	305
Wheeler & Smith, Wisconsin	
Edelwild Netherland Fobes	$460
J. R. Wheeler, Wisconsin	
Hortondale Bernice Korndyke	$385
Rudolph Boehler, Wisconsin	
Wolverine Lady Ormsby	$305
Ormsby Fobes Homestead	310
Harry H. Ryan, Wisconsin	
Pleasant Baby Ormsby Girl	$400
Homestead Maud De Kol Gerben	340
Henry Lenz, Wisconsin	
Jessie Springwell	$350
N. O. Strous, Wisconsin	
King Pontiac Hengerveld De Kol	$300
Giltner Bros., Kentucky	
Babe Alcartra Pontiac	$300
C. B. Smith, Kentucky	
Harvest Sir Ormsby	$500
Golden & Muehl, Wisconsin	
No. 102	$340

Walworth County Holstein Sale

The Walworth County Holstein breeders' sale held at Elkhorn, Wis., November 15, was as successful a sale as any we have attended this fall, 54 head selling for $12,380. This is not a particularly high figure but it represents good, fair prices for the animals consigned.

Walcowis Farms topped the sale at $700 on Miss Walcowis Pontiac Netherland, a 16-lb. 2-year-old granddaughter of King of the Pontiacs. She is a splendid bodied heifer and, given a well balanced udder, would be among the tops in any national ring.

Mack, Beaumont, and Wiswell did the selling with J. G. Voss in the box.

Following is a list of all animals selling for $250 or more and buyers:

Fred Kindert & Son, Wisconsin	
Miss Ormsby Burke Perfection	$275
W. C. Van Pappelendam, Illinois	
Miss Walcowis Pontiac Netherland	$700
R. Minghall, Wisconsin	
Sir Ollie Ormsby Korndyke	$520
E. E. Canniff, Wisconsin	
Kayewood Queen Pontiac	$400
Harry Ellsworth, Wisconsin	
Kayewood Tessie Johanna	$355
R. E. Kimpel & Son, Wisconsin	
Ellsdale Beauty Colantha	$385
Bessie Viola De Kol	310
Rollingdale Model Bottels	260
H. M. Purinton, Wisconsin	
Lilith Pet De Kol Beauty	$250
M. J. O'Connor, Wisconsin	
Johanna Colantha Gracie	$330
B. C. Harter, Wisconsin	
Lady Rose Homestead De Kol	$305
Belle Longfield Kayewood	415
Lane J. Curtis, Wisconsin	
Jessie Ormsby Colantha	$330
J. G. & R. J. Bonner, Wisconsin	
Mercedes Burke McKinley Segis	$325
C. W. Wray, Illinois	
Rollingdale Pontiac Beets 3d	$300
Joe Nettesheim, Wisconsin	
Vevie Johanna Movie	$250
Wm. M. Bonner, Illinois	
Vevie Belle Duplicate	$275
Rollingdale Pietertje Bottels	305
Earl Pierce, Wisconsin	
Elsie Hengerveld Korndyke	$350
John Morrissy, Wisconsin	
Aaggie Orleans Pietertje	$255

New York Butter Market

NEW YORK CITY, NOVEMBER 23:—The arrival of several shipments of foreign butter is causing a temporary slump in the butter market at the present time. There have been no price declines as yet but the market is weaker than it has been for several days. Last week about 7,500 packages, principally casks, of Danish butter were unloaded. A like quantity are nearing port at the present time but that is unlikely to be ready for distribution before Saturday as the boats are being held back because of unfavorable winds. Two cars of boxed Canadian butter arrived yesterday, and more is expected. One car of New Zealand butter in boxes was due to arrive from the West Coast yesterday. While the quantity of foreign butter is not sufficient to cause more than a flurry in the market under ordinary condition, receivers and jobbers are very nervous and are quickly influenced by reports of foreign arrivals and proposed shipments.

One feature in the market stands out rather prominently this week and that is the quickened demand for fresh make, Danish butter. Practically all such butter has been absorbed during the past few days. There is a very good reason for that in that the butter is of uniformly good quality and is selling in wholesale lots at prices from seven to eleven cents below the quotation on domestic extras. There has been prejudice against Danish butter for some time for the reason that it is packed in casks which makes it harder to handle than tubbed butter. The difference in price is apparently helping to reduce that prejudice. There is good reason for the prejudice as jobbers must saw the casks in two in order to print the butter and in some cases it must be repacked in tubs in order to dispose of it in bulk. The two operations necessarily entail some loss and the labor cost is an item that must be considered.

The market, aside from the weakened condition, has changed very little from last week. Strong demand is only for strictly fancy butter. However, there is more inquiry than usual for butter that will score 90—91 points. For other classes, demand is absolutely lacking. During the greater part of last week, there was a marked scarcity of high grade butter but by piecing out their supplies receivers were able to satisfy the trade. At the present time, more fancy butter is arriving, which is responsible, to some degree, for the weakened condition that prevails at present. It is not anticipated that there will be any material break in prices in the immediate future although a slight decline may materialize. Established quotations at the close today were as follows: Extras (92 score), 65c; higher scoring than extras (93 score or higher), 65½@66c; firsts (90—91 score), 55@63c; firsts (88—89 score), 49@53c; and seconds (83—87 score), 41@47c.

There is a marked tendency at present for retailers to turn to storage butter. Fancy storage butter is quoted 6½@7c under corresponding prices of fresh butter, and, as much of the butter that went into storages in June is of excellent quality, it is in strong demand. Holders of storage butter are anxious to sell as they do not anticipate further advances in butter prices. W. B. LIVERANCE.

What the Dairymen Say



SLY PUSS P.

Grand Champion Jersey Cow, 1920 National Dairy Show. Owned by Longview Farm, Lee's Summit, Mo. Read their letter below:



BARCLAY'S NIGHTINGALE

Grand Champion Ayrshire Cow, 1920 National Dairy Show. Owned by Adam Seitz, Waukesha, Wis. Read his letter below:

Her Owners Clip to Keep Bacteria Count Down

LONGVIEW FARM

Lee's Summit, Mo., Oct. 17, 1919.

We keep the tail, udders and hindquarters of all our cows in milk clipped, for the reason that we produce certified milk, and find we can **keep the bacteria count down** by following this method. Of course the same thing would apply even if one were producing ordinary commercial milk.

C. J. TUCKER, Gen. Mgr.

Used on His Milking Cows to Keep Them Clean

SPRING CITY STOCK FARM

Waukesha, Wis., Oct. 29, 1920.

In the dairy we always clip the milking cows around the udders, underneath the bellies and up the flank in order to keep them cleaner. It is the easiest way doing it, and saves lots of valuable time.

We surely have had good service out of the Stewart Clipping Machine.

ADAM SEITZ.

Regular Clipping Is the Order of the Day

These letters are typical of scores received from large cattle breeders and dairymen all over the United States and Canada. These men clip their cows on udder and flanks regularly every few weeks—the parts are quickly cleaned before milking, and no filth drops into the pail.

Compulsory in many sections in production of certified milk—very desirable for ordinary commercial milk.

Clip with the Stewart No. 1—for years the world's standard clipping machine. Sturdily built, easily operated. Clips horses and mules also. Complete, $14 at your dealer's, or send $2 and pay balance on arrival.

Electric clipping machine, 110 volts A. C., $80.



Stewart No. 1 Clipping Machine

For Cows, Horses and Mules

Price $14.00

Chicago Flexible Shaft Company

Dept. A 156 5600 Roosevelt Road, Chicago

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STOP LOSING CALVES

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Stamp Abortion Out and Keep It Out

Ask for the "CATTLE SPECIALIST," sent free on request. Answers every question pertaining to ABORTION IN COWS. Tells how to treat your own herd at small expense. Write

Dr. DAVID ROBERTS VETERINARY CO., Inc. 638 Grand Ave., Waukesha, Wis.

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For Men or Women

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$4.50 Reduced to $1.98

No one has ever reduced price to this extent. It is the biggest money-saving bargain ever offered. We will sell only two to a customer and will not sell to merchants or wholesalers.

Delivery Free Just send your name and address, no money. When the sweater is delivered at your door by the postman, pay him $1.98 for the sweater. We have paid the delivery charges. Wear it. If you don't find it all you expect, return it and we will cheerfully refund your money at once. Order by No. 72.

Dept. X-1199

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at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog. Jones Nat'l School of Auctioneering, 38 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

HOARDS DAIRYMAN JUNIORS

Every One a Prize Winner in the Largest Junior Live Stock Show Ever Staged in Wisconsin















Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

Junior Letters

Hoard's Dairyman Juniors:—I have been busy going to school. My school began Aug. 16.

We are now milking nine cows. One is dry.

Tennessee had its share of rain during August. The rain broke the weather record.

We have raised five nice heifers. We also have a new male. He is surely a beauty.

Papa is road commissioner of the 12th district and many improvements are being made on the roads. Among the improvements is a fine grade being built between Rockford and Wildwood and goes near our place. There is also a public road being built through our place to the grade which is almost built.

Papa is away filling silos and will return the last of this week or the first of next week to fill ours.

We are going to have a pie supper at our school soon and the money will be used to make some improvements. Our school organized a literary society Sept. 13th with Mayme Glover president; Johnnie Shope, vice-president; Mac White, secretary; Dicie Bohanan, critic; and three program committees as follows: Elsie White, Neva Wolfe, and I. We had our first program Sept. 24.

I received my grade card for the first month. My best average was 100 on geography, which I like best of all my studies. I have eight studies in all. I am in the 6th grade.

I wish good luck to all of the juniors.

Tennessee. Hazel Trent.

Hoard's Dairyman Juniors:—I have been in the state clubs of Colorado for two years. This year I was sent to the Colorado State Fair to judge stock. I took ninth place for my county. I would have gotten a better rank than 83 per cent if I had been on time. I was cut fifteen minutes short from the ring of Duroc hogs.

I can give feed rations and judge stock. Last year I took third place in the two things just mentioned.

This year we are going to feed cattle. We live only one mile from the city and a quarter of a mile from the American Beet Sugar Co. We haul the beet pulp fresh from the factory each day.

This year we have had a good crop of corn. We planted twenty-two acres. It averaged about ninety bushels to the acre. We filled our new silo and the silage sure helps in feeding cattle. I will remain a booster of the club and try to get new members.

Colorado. Harold Dick.

Hoard's Dairyman Juniors:—I live on a farm of 60 acres. We have 13 head of cattle, 8 head of horses and colts, all the way from 45 to 75 pigs and hogs, 95 to 125 chickens, 4 rabbits, 1 dog, 2 cats, 8 to 12 geese, and 30 guinea pigs. I have 3 guinea pigs. My sister, Marion, 16 years old, also has a guinea pig and my little sister, Engenie, has 3 guinea pigs. My sister, Eva, two years older than Marion, has 23 guinea pigs. Eva also has 3 rabbits and Marion 1 rabbit. I have two cats. Their names are Bob and Jeff.

I am in the fourth grade and nine years old. Our hogs and pigs are big type Poland-Chinas. Our chickens are Barred Rocks. Our rabbits are New Zealands. Our dog is a Scotch Collie. Her name is Dach. Our geese are Embden and our guinea pigs are English.

Well I will close wishing some junior boys and girls would write to me. My address is R. 2, Union, Iowa. Addie Curless.

Hoard's Dairyman Juniors:—I am ten years old and in the fifth grade.

I have a Holstein cow that freshened this spring at the age of 17 months.

I also have a pig that my father gave me.

My father has 4 horses and 19 head of cattle.

I live on an 80-acre farm about 2½ miles from two small villages.

We filled our silo about two weeks ago with our own engine and cutter.

I would like to hear from some of the juniors. My address is R. 3, Baldwin, Wisconsin.

Harry Vruwink.

Hoard's Dariyman Juniors:—I received your fob, button, and creed. Thank you very much.

I am in the 7th grade. I am 11 years old.

I have a heifer. Her name is Blue Bird. I live on a farm of 88 acres. I tried to raise chickens but my luck was not good. We are milking 10 cows. We have all of our corn shocked; our oats went 35 bushels to the acre. I have a field of popcorn which is pretty good. I had good luck in pumpkins. I sold 75 of them. We are going to dig potatoes now.

I hope to hear from some of the juniors. My address is R. 1, Box 2, Pine Island, Minn.

Harold West.

Hoard's Dairyman Juniors:—I live on a 400-acre farm. We are milking a dairy of 25 cows. I am raising 5 calves and I have a Holstein heifer 2 years old. We have 6 horses and 5 hogs. My brother has a carload of apples or more on his farm. The wind destroyed many limbs on the apple trees.

I like to go coon hunting. We have a coon dog named "Bun".

Wishing the juniors much luck and also wish they would write to me.

My address is R. D., Falls Village, Conn.

Charles W. Hurlburt.

Hoard's Dairyman Juniors:—I received the fob, button, and creed and was very much pleased with them.

I feed my rabbit kale, cabbage, and rolled oats. She has little ones now. I haven't touched them yet because the mother will kill them.

I have a cow. We feed her butterfat and ground oats and Fishers' Dairy Feed or mixed. I have 28 chickens. They are White Leghorns. They are a little bigger than crows. I feed them wheat and seeds from the threshing machine.

Well, I guess I better close for this time. I wish some of the juniors would write to me. My address is R. A, Box 686, Portland, Ore.

Henry W. Meyer.

Hoard's Dairyman Juniors:—I am 13 years od and live on an 80-acre farm. We have 14 milk cows and three young heifers and one young bull. We have four acres of beets to work ourselves.

Wisconsin. Aaron Klug.

Hoard's Dairyman Juniors:—I have not written for some time, I have been so busy with my school work and the work at home.

I sold my pigs and my dad said he would give me a calf. My heifer is about 20 months old. She will be fresh about Christmas, then I will have 3 calves.

I am fourteen years old and am a freshman in high school.

If any of the juniors want to write to me my address is 503 East Foster Ave., State College, Pa. Frederick Markle.

Hoard's Dairyman Juniors:—This is my first letter to the juniors. I am doing eighth grade work this winter at school which opened Aug. 30. I am 13 years old. We have seven cows and are milking five of them. We sell two gallons of cream and five gallons of milk per day. We raised eighty bushels of wheat this year on four acres of ground. We live on a 130-acre farm.

We have a concrete road 9 ft. wide running through our place. It should be 14 ft. as it is not wide enough. We have a concrete block house and barn. They certainly are fine. We live two miles from town. We have a car. I do the driving.

West Virginia. Wendell H. Ferrebee.

Hoard's Dairyman Juniors:—I am a girl 13 years old and am in the 6th grade. I go to a public school and my teacher's name is Miss Nona Martin. I have not lived in Michigan very long but I like it fine. We bought a 160-acre farm here. There are 15 acres of timberland and a large lake on the place. We have a team of thoroughbred mares and about 20 chickens.

I have four sisters and four brothers. The smallest girls are twins and are two years old.

Michigan. Mary James.

Hoard's Dairyman Juniors:—This is my first letter to the juniors. I am 11 years old and in the 7th grade. I live on an 83-acre farm. I help my father. My brother and I have a sow. We keep 4 horses and 15 cows. My mother raises chickens. My father has started to plow for wheat. We had 8 acres of wheat and 160 bus. We had 3 acres of rye and 60 bus. and not quite 4 acres of oats and 238 bus.

Pennsylvania. Wallace Stouff.

Hoard's Dairyman Juniors:—I live on a farm of 134 acres. We keep registered Holstein cattle. We have many pets, some are rabbits. One is brown and white and the other ones are Belgian hares. Our pony's name is Maygo. Our pet lambs' names are Billy and Dolly.

My sister Frances and I raise ducks, but never have very good luck for they nearly always get killed by the horses.

We go to high school in Minerva. We have very good times at school. We are learning many yells for when we play games with other schools we want to make lots of noise.

We only had 100 bushels of wheat and 664 bushels of oats. We had the best wheat crop in our neighborhood. Some of the people only had five bushels of wheat.

Wishing good luck to the juniors.

I will tell you my address so some of the juniors can write to me. It is R. F. D. No. 2, Minerva, Ohio. Vesta Blazer.

Hoard's Dairyman Juniors:—This is my first letter to the club. I received my badge three days ago and think it fine, also my creed and fob. I am going to memorize the creed as I think it is very true.

I won the silver cup for my calf and also second and third prizes for my Shetland pony. My calf's name is 'Ginger" and the pony's name is "Tony".

British Columbia. Robert Hornby.

Hoard's Dairyman Juniors:—I feed my pet pigs. Their names are Harry, Dick, and Sally. We have four ponies and one colt and one driving horse. My brother and I take care of eleven young bulls, three cows, and we get up in the morning at five o'clock and take care of the stock before we go to school. We live on a 1,700-acre farm and most of it is hilly. We live in a bungalow. I am in the 6th grade and I am thirteen years old. I hope some of the juniors will write to me. I will give my address: R. R. 6, Box 54.

Martinsville, Ind. George Groenert.

S.C. White Leghorns

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OAK DALE BIRDS

Are noted for laying early in life. Frequently early-hatched pullets lay at five months of age and they lay well throughout the winter and summer months.

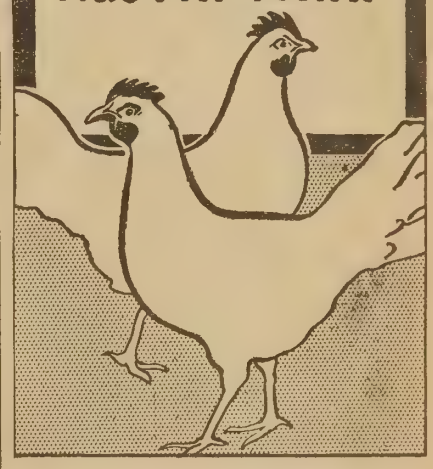
Many records of more than two hundred eggs per year from single birds are known.

The eggs are noted for their uniform size and pure whiteness.

Every OAK DALE (WHITE LEGHORNS) carries the blood of great winners.

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LADD'S ALUMINUM MILK STOOL



Light, Comfortable and Durable. Easy to Clean and Sterilize. Demountable Legs.

Ladd's Aluminum Milk Stool will last a life time if properly used and will relieve the milker of the back-breaking position of milking.

Packed in individual cartons.

Price, postpaid, anywhere in the United States, each, plain, $3.25, polished, $3.75.

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"Complete Outfitters to the Dairy Industry"
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FUR COATS AND ROBES

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The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows, fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Holstein bull ready for service, grandson of Wisconsin's only 40-lb. butter cow, 782 lbs. milk in 7 days. $200. ROY HARRIMAN, Appleton, Wis. 17-4

Holsteins. Yearling bulls, sire from a 30-pound daughter, Pontiac Korndyke, $150.00 up. DEWEY PIERSEN, Metamora, Michigan. 17*

Holstein—Registered and high grade heifer and bull calves, 2 to 5 weeks old, crated, $25.00 up. GRAND VIEW FARM, Solon Mills, Illinois. 17-4

For Sale—30 head of large, heavy producing Holstein cows. Also two registered sires. H. F. McNUTT & SON, Oxford, Wisconsin. 17-4

Registered Holstein bulls, sired by Sir Aaggie Rag Apple Johanna, $100 and up. L. B. ROESCH, Lancaster, Wisconsin. 18-3

We have for sale several grade Holstein bull and heifer calves, also two registered Holstein bull calves, ages two weeks to seven months. Prices $25.00 to $250.00 each. For further details address MILLS DAIRY FARM, W. W. Arnold, Jr., Supt., Manchester, Georgia. 18-4

High-grade Holstein heifer calves, from highest producing herd in the state in 1918. $18.00 and $20.00 Also a carload of Holstein springers. WM. MARTIG, West Concord, Minnesota. 19-3

A fine, registered year-old granddaughter of King Segis Pontiac Alcartra. A. B. ANDERSON, Route 4, Red Wing, Minnesota. 19-2

Holstein bull of serviceable age. More white than black. Sire is grandson of King Segis Pontiac Count, with Caroline Paul Parthenea, 1,208-lb. cow, on both sides of his pedigree. Dam is 23-lb. cow with 696-lb. record as three-year-old. Price $200. W. J. OSBORN & SON, Oxford, Wisconsin. 19-2

Registered Holstein bulls from two to fourteen months old. Ready for service. Prices right. M. H. PETERSEN, Libertyville, Illinois. 19-4

Large, young registered Holstein cows and bulls ready for service, out of good record dams, for sale. We always satisfy. DATE HOLSTEIN FARMS, Baroda, Michigan. 16-spl

For Sale—20 large registered Holstein cows, bred heifers, heifer calves, young bulls. Guaranteed to satisfy. Prices right. Overstocked. AUGUSTINE BROS., Pound, Wisconsin. 20-2

For Sale—From Federal Accredited Herd, 30 head high grade Holstein heifers, 2 to 3 years old, due to calve in January, February and March. 20 head unbred yearlings, all from heavy milking dams. One pure-bred bull calf from A. R. O. dam. LASALLE INSTITUTE, Glencoe, Missouri.

Serviceable Holstein bulls—30-lb. son of 37lb heads the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

A son of Ne Plus Ultra, good show bull. Also a son one year old by bull offered out of cow that made 40 lbs. milk a day and 50 lbs. fat in 30 days. H. C. HURLEY, Rockville, Md. 20-3

A real start for someone. Eleven head Holsteins. Ten head of nicely marked high grade yearling heifers. One registered yearling bull with 20-lb. grandam and 25-lb. sire. No relation to above mentioned heifers. Priced for quick sale. H. F. McNUTT & SON, Oxford, Wisconsin. 20-2

3 bull calves. Grandsons of Dutchland Creamelle Korndyke Lad. Dams have good A. R. O. records. Priced at $40.00, $60.00, $75.00 each, also 8 young A. R. O. cows. H. W. SCHULTZ, Middleton, Mich. 20-3

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS, Mankato, Minnesota. 19*

STOCK FOR SALE

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

Guernsey bull calves. World record breeding. Dams have official records. RICHARD F. KLEMM, Baraboo, Wis. 13-8

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Registered Guernsey bulls and females, with Advanced Registry breeding, at moderate prices. Herd is Federally inspected. Write for list. HELENDALE FARM, Athens, Wis. 17-spl

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Females for sale. A few pure-bred Guernsey cows and heifers. Every animal guaranteed. FRISSDALE FARM, Hopkins, Minn. 20-3

Son of 1st prize 4-year-old at Waterloo 1920 Dairy show. Dam made close to 550 lbs. fat at 3½ years of age, raised 2 calves in 10½ months and was 1 month on show circuit and record made on ordinary cow's feed. A fine son of a wonderful cow. Price for immediate sale, $500. We have several other well bred bulls from high producing dams. FRISSDALE FARM, Hopkins, Minn. 20-3

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. HOMER RUNDELL, Livingston, Wisconsin. 19*

Choice Guernsey yearling bulls, Glenwood breeding. A. R. sires and dams. Prices reasonable. A. W. HARGROVE, Ripon, Wisconsin. 19-4

35 fine grade Guernseys. W. C. WAITE, Burlington, Wisconsin. 19-3

Head your herd with a choice May Rose bull that is bred for production, with dam's records up to 700 pounds fat in B. B. KUHTZ BROS., Waukesha, Wis. 19*

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

For Sale—Young Guernsey bull calves by Saugerties Ultra Cavalier. Seventeen to nineteen crosses to May Rose 2nd. ORRA M. RHODES, Etna, N. Y.

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

High grade Guernsey cows. Can furnish carload lots. Address WM. LONSDORF, Sec'y, Athens Guernsey Club, Athens, Wisconsin. 20-3

Guernsey bulls—May Rose breeding, right in price and quality, write for particulars. GLEN-MEADOWS STOCK FARM, Long Prairie, Minn. 20-2

Guernsey bull ready for light service. Sire's 12 nearest dams average nearly 700 lbs. fat. Dam—Shoreland Daisy—just finishing an A. R. record of over 600 lbs. fat. Good individual with clean nose. Price $350.00. SHORELAND FARM, Hartland, Wis.

Two choice Guernsey bulls, 9 and 13 months, from dam with 501-lb. double letter record. SEYMOUR FARM, Osseo, Wisconsin. 20-2

Having sold my farm I will sell at public sale at Guernsey Dell Farm, 4 miles northwest of Plymouth, Indiana, on Tuesday, December 14, 1920, my entire herd of Guernsey cattle rich in Glenwood and Golden Secret blood, consisting of 10 cows and heifers giving milk, one of them imported with heifer calf by her side; 3 yearling heifers; 1 two-year-old bull; 1 yearling bull; 3 bull calves. The herd is on the Federal Tuberculosis Free Accredited herd list. Will also sell 4 horses, 30 hogs, feed, harnesses, farm implements, household goods, etc. A. E. ADAMS, R. D. 6, Plymouth, Indiana.

For Sale—Bull calf from cow producing 650 pounds of butterfat in twelve months. Price, $150.00. Calf born March 29, 1919, nearly black in color weighing about 750 pounds. Sire, a grandson of Sophie 19th, who holds the world's record for butterfat of all breeds. Dam, a seven-sixteenths Jersey cow weighing about 1,250 pounds. SHERMAN NURSERY COMPANY, Charles City, Iowa. 18-6

Jersey bull bargains. SHADELAND FARM, Carroll, Nebraska. 18-3

For Sale—Ten registered Jersey heifers one to two years old. Prices $90 to $135. M. C. VOSBURG, Ft. Atkinson, Wisconsin. 19-2

Sunny Crest Farm Jerseys—Federal, State Accredited herd. Bulls, 1 to 20 months, $25.00 to $50.00. Sire's dam Gold Medal cow, Edith Marigold; 819 lbs. butter, as 4-year-old. EMERSON & SON, Wheeler, Wisconsin.

Jersey bull calf, 7 months old. Solid color and a very handsome individual. Sire—a prize winning Raleigh bull. Dam and grandam are R. of M. cows and State Class Champions. Price $150. Fully guaranteed. LYDIA W. HELLINGS, Route 1, Trenton, New Jersey.

For Sale—One yearling registered Ayrshire bull. J. T. HAIGHT, Koshkonong, Wisconsin.

Herd for sale—Registered Ayrshires. Blood of bull includes three of ten leading bulls of America. Address HAMILTON & HACKWORTH, Mountain Grove, Missouri.

Ayrshire bull calves. Herd Federal Accredited. RUFUS A. JONES, Black River Falls, Wis. 20-2

Holsteins—5 registered cows; 17 high grade cows; 3 fresh, others springers. Bargain. HELM & HELM, Metropolis, Illinois. 20-2

STOCK WANTED

Wanted to buy—A herd of full blood or high grade Holstein cows or heifers. Must be cheap. Do not write unless your price is cheap. We will pay cash for the right kind. BARRETT & ZIMMERMAN, Midway Horse Market, St. Paul, Minn.

Wanted to buy—25 fresh Holstein cows with calves by side. State price, size and age. CARL ADAMS, Route No. 3, St. Joseph, Missouri.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

DOGS

Coon Hounds—Rabbit Hounds. Trial, Photos. Testimonials. Catalogue. KASKASKIA KENNELS, Herrick, Illinois. 18-4

Airedales—Puppies from registered parents for sale. FRED SCHROETER, Grafton, Wisconsin. 20-4

Few choice English Shepherd pups from natural heel drivers, one trained female. Also one English Fox Hound pup ready for hunting. GEORGE BOORMAN, Marathon, New York. 20-2

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

SWINE

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS De Graff, Ohio. 14-8

Big type Poland China Boars—7 to 8 months, well bred, splendid individuals. $35.00 to $50.00. OSWALD SLETTE, Blair, Wisconsin. 19-2

POULTRY

Large, vigorous, pure-bred White Rock Cockerels. Sired by National Show winners, $4.00 each. Also hens and pullets. URBAN STEIL, Fort Atkinson, Wisconsin. 19-2

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 19-5

Pure-bred Rose Comb Black Minorca cockerels. $3.50—$5.00 each. HENRY TIMM, Kasota, Minn. 20-2

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale—At a bargain. My entirely new Ann Arbor Fly Wheel Silo Filler complete with Blower and Distributor Pipe (never used). Cost me $485, will sell for $325 to move quick. Address BOX 102, Fond du Lac, Wisconsin. 17-6

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00, 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Victor combined churn and butterworker, in running order; capacity 20-225 lbs.; price, $75 f. o. b. Bliss, Oklahoma. Write to WM. SAALBACH, Mgr., Dairy Dept., 101 Ranch, Bliss, Okla. 19-2

For Sale—Empire Milking machine used about a year. Double unit outfit complete for 15 cows. R. E. BARRON, Howell, Michigan. 19-2

For Sale—1 old Fairbanks wind mill, pump and pump jack. $30.00 JOHN A. MULDOON, 1201 W. Lake St., Chicago.

Two-unit Hinman Milker complete for twelve cows. Check for $75.00 takes it. D. G. CORBIN, Winnebago, Illinois.

For Sale—Empire Milker. Two double units and pumping outfit. New (never used). $340.00. JACK TAYLOR, Elgin, Illinois. 20-3

For Sale—Empire double unit milker, with pipe, engine and belt. Used six months. Fine condition. Price $200.00 FRED J. WILSON, Litchfield, Mich.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected leading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Wire or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

Alfalfa hay for sale. A. B. CAPLE, Route 3, Perrysburg, Ohio. 17-4

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices.

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY

Clover Honey—Ten-pound pail $3.00 postpaid first and second zone. Larger sizes write for prices. SCHULTZ APIARIES, Ripon, Wisconsin. 18-3

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking. "The Tobacco of Real He-men." 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 18-4

SEEDS

Medium Red Clover, Alsike, Timothy seed. Try us with samples. DADMUN BROS., Whitewater, Wis. 19*

MISCELLANEOUS

The Finished Mystery—Key to these times—Every Christian should read. Magazine edition, postpaid 25 cents. Address MRS. CORA CARMICHAEL, Waukesha, Wisconsin. 19-3

Wanted—Ten thousand good dairy cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Orders handled. Leasing or feeding contracts available. Address NEWLANDS PROJECT ALFALFA ASSOCIATION, Fallon, Nevada. 20-4

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

PARTNER WANTED

Partner Wanted—Partner wanted to buy a part interest and operate an ideal dairy farm. Good location, fine buildings, flowing wells, abundance of alfalfa. About $6,000 needed. Write for particulars. T. L. KETMAN, Y. M. C. A. Hotel, Chicago, Illinois. 20-2

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

FARMS FOR SALE

Alfalfa, corn, grain and live stock farms. Best in famous prairie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 11

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin. 13-13

For Sale in Clark County, Wisconsin: 80-acre farm, 75 under plow, 5 acres timber. 1½ miles to town and high school, ¼ mile cheese factory. 2 silos, good buildings. 18 registered Holstein females, herd sire, horses and machinery. Terms easy. LOCK BOX 123, Granton, Wisconsin. 18-6

Fine stock and dairy farm of late Judge Ross. 188 acres, 6 miles from city of Superior, Wisconsin. $22,500. Easy terms. WHITMORE & BISHOP, Exclusive Agent, First Natl. Bank Bldg., Superior, Wis. 19-2

$44,000. Easy terms buys "Craigamoor", highest grade stock and dairy farm in frost proof belt on state highway, close to city of Superior, Wisconsin. 387 acres with modern expensive improvements. Also for sale the large pioneer herd of choice Guernseys. Failing health of owner forces prompt sale. WHITMORE & BISHOP, Exclusive Agent, First Natl. Bank Bldg., Superior, Wisconsin. 19-2

Must sell my excellent grain and alfalfa farm in Walworth County, Wisconsin. Address BOX 473, care Hoard's Dairyman. 19-3

New York state dairy farms for sale. Catalogue free. HILLIS FARM AGENCY, Hobart, Delaware County, N. Y. 19-6

Stock and dairy farm for sale. Good buildings, good soil. Terms. C. E. PEIRCE, 333 Garfield Ave., Eau Claire, Wisconsin. 19-4

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

Where dairy farming is profitable—There are localities in the South where, on account of the rapid development of industrial cities and towns, supplies of dairy products are short and prices are high. In these same localities long grazing seasons and winter cover crops cut down feeding costs and all conditions are exceptionally favorable for profitable dairy farming. Good improved farms can be bought at prices much lower than are asked for similar lands in other parts of the United States. Buy a Southern dairy farm now while prices are still low, make money and build up a valuable property. Forr full infromation write to J. C. WILLIAMS, Manager, Southern Railway Development Service, 1302 Pennsylvania Avenue, Washington, D. C. 14-spl.

Westerners are here, more coming! There's a reason. Investigate! NEW YORK FARM AGENCY, Westfield, N. Y. 20-spl

$1,500 cash secures 200 acres with 23 cattle, horses, wagons, threshing machine, engine, full line modern implements, hay, fodder and vegetables; only 2 miles thriving R. R. town; loamy big-crop tillage, large spring-watered pasture, woodland many cords, variety fruit, 800 sugar maples, complete equipment; warm 7-room house, running water; big slate-roof barn, silo, other buildings, all excellent condition; big value at $6,500, $1,500 cash, easy terms. Details this and farm, $5,400 year income, page 29 Strout's Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

Own a farm in South Dakota, the state that produces greatest per capita yield of crops. Land all ready for the plow at low prices. Come now while the opportunity is big. Write today for particulars to STATE IMMIGRATION DEPARTMENT, Irwin D. Aldrich, Commissioner, Capitol F-15, Pierre, S. Dak.

For Sale—Dairy farm, 305 acres, 225 tillable. Near railroad. Large dwelling. Stock barn, 70x80, 3 story silo. Running water buildings. Includes 62 head stock, 4 horses, machinery, tools, milking machine, crops, yearly income $13,000.00. Price, $19,000.00. Cash $6,000.00. CAMPBELL BROS., Oneonta, N. Y.

Will sell 200-acre Iowa upland farm with good buildings close to Sioux City for $125.00 per acre and 6% interest. No cash down. Nothing but interest to pay me for five years and at end of five-year period, buyer, at his option, may cancel the agreement. Milk station close, 30 cents per gallon. Fine for Holstein dairy. L. A. FOOTE, Sioux City, Iowa.

Write for our list of farms near Milwaukee and in Waukesha County. GEO. W. ADAMS CO., 330 Caswell Block, Milwaukee, Wisconsin.

Vermont farms all sizes and prices handy to select markets, fine educational and social advantages. Send for list and mention size of farm you are seeking. JAMES W. MADDEN, Burlington, Vermont.

FARMS WANTED

Farm Lands Wanted—Many Iowans will buy land in other states during the next few weeks. Why not sell your land to one of these buyers. Not long ago the Stoutenberg Land Company, Butterfield, Minnesota, sold three farms in a single day by our plan. Send us a complete description of the land you have for sale, the number of acres, its distance from town and school, what improvements it has, if any; how it is divided into fields; your price, terms, etc., and we will tell you, without obligation on your part, how little it would cost to get in touch with these Iowa buyers. At the same time we will send you our free booklet, "Farm Buyers and Where to Find Them." It will open your eyes. Write today, for the land buying season is on. THE DES MOINES REGISTER AND TRIBUNE, Dept. 83, Des Moines, Iowa.

Have several parties with cash and paying city property who want farms with stock. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

Owners and agents—Can sell or trade your farms or properties, if right. Send full particulars. CHARLES PETERSON, 2704 N. Hamlin Ave., Chicago, Ill.

WANTED TO RENT

Wanted—Man with small family wants to rent a one- or two-man dairy and grain farm with everything furnished. Life long experience with cows and general farming. Age 27, American, have references to prove that I am honest, industrious and practical. Might consider a straight salary proposition, but only where it would lead to something permanent. Address BOX 476, care Hoard's Dairyman. 19-2

Wanted to rent—Dairy farm, 160 acres, more or less, cash rent, good soil, and buildings. Lake County, plenty of own help. SKYRME, Barrington, Ill.

FARMS FOR RENT

For Rent—On half and half basis, dairy and stock farm, Waukesha County, Wis. Grade Holsteins. Renter must be reliable and experienced farmer furnishing own help, horses, implements, half the live stock, seeds, etc. Possession March first. Good opportunity for right party. Address BOX 487, care Hoard's Dairyman.

For Rent—Pure-bred Holstein farm of 200 acres. Pleasant location, good buildings, fertile land, share rent and a chance, to the right man, to buy a half interest in a herd of pure-bred Holsteins upon such liberal terms that the cattle will pay for themselves. You would either have your own horses and machinery or cash capital to buy them. We furnish the farm, you furnish horses, machinery and all labor. This is a real opportunity for an ambitious dairyman to become a Holstein breeder in our large Holstein organization operating twenty farms. Give us full particulars about yourself and family, dairy experience and your references in first letter. WOODLAWN FARM CO., Sterling, Illinois.



Advertising in this department is 7c per word. Remit in advance.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Young married man wishes position March 1 as manager of dairy farm. Ten years' experience with both pure-bred and grade dairy cattle, and over two years' training in the College of Agriculture, University of Wisconsin. Address BOX 462, care Hoard's Dairyman. 18-4

Manager—Desires position on high class dairy farm or estate. Married, small family, middle age, college trained, life experience. Advanced Registry work, and breeding high class dairy cattle a specialty. Address BOX 454, care Hoard's Dairyman. 17*

Experienced manager on Holstein or Guernsey farm. Have successfully tested and fed cows of both breeds and can handle men. Wants position where opportunity will be given to produce results. Best of references. Address BOX 475, care Hoard's Dairyman. 19-5

Wanted—Young married man would like place on large dairy as milker. Am clean dry hand milker and would milk three or four times a day and care for cows if desired. Experienced in all branches of dairy work. Good health and steady, willing worker. No tobacco. Sterling references. State wages. Address BOX 477, care Hoard's Dairyman. 19-2

Wanted—Position by experienced herdsman on pure-bred dairy farm. Guernseys or Jerseys preferred. Yankee, single, 25, agricultural college graduate. Have developed two class leaders. References. Address BOX 480, care Hoard's Dairyman. 19-2

Wanted—By American, 31, single, normal school education, position as dairy farm manager or herdsman. 10 years' experience fitting for shows, A. R. and A. R. O. records. Executive and mechanical ability. Competent to handle proposition economically, and in a practical and scientific manner. Will consider share basis. Address BOX 482, care Hoard's Dairyman.

Wanted—Work on farm by month or year. Experienced in any line, would prefer work as herdsman. Address BOX 484, care Hoard's Dairyman.

Position wanted as manager. Farm owners, do you know that the manager of your place must be 75 per cent of same, stock, land, etc., 25 per cent. Be particular about the man as the sires you buy. Give your sires, dams and land a chance by getting the right man to handle them. Life experience on leading places, now with the largest breeding and farming proposition in America. Well recommended by present employer. Considered one of the best judges of stock and grower of crops. Investigate. Address BOX 483, care Hoard's Dairyman.

Wanted—Position as herdsman on dairy farm; life experience, single, references. Wages, $100.00 per month. Address BOX 488, care Hoard's Dairyman.

Experienced dairyman desires southern position. Qualifications of the best. Address N. L. D., care D. I. Rencher, Uniontown, Ala.

Successful single dairyman wishes position January 1st as dairy superintendent, Guernseys or Jerseys. Years of experience and University training. Sanitation, breeding and record work thoroughly understood. Address BOX 486, care Hoard's Dairyman.

Wanted—Work on certified dairy by Catholic, age 20, single. Well experienced in balanced rations, Babcock test, calf raising and A. R. O. work. C. TRESCHER, care A. C. F. Witt, Route 2, Granton, Wisconsin. 20-2

HELP WANTED

Herdsman Wanted—A practical, reliable, single man over thirty, who has had experience in handling registered Holstein cattle. A steady position to a worker who can produce results. Also good second man as calf feeder. Give references, experience, wages expected. Board and good room furnished. R. A. ROLAND, 616 So. Michigan Av., Chicago, Ill. 19-2

Wanted—Herdsman and 2nd man in Holstein herd on large cattle ranch, 40 miles from railroad. Herdsman must be experienced in testing and caring for registered cows and able to get results in A. R. O. work. Herdsman's salary $125.00 a month and four-room cottage. If married would expect wife to board 2nd man. Wages for 2nd man, $85.00. Apply immediately to MRS. R. G. DOUGLAS, Sanborn Ranch, Rush, P. O. Colorado. 19-2

Wanted—Married herdsman to take charge of registered Guernsey herd. Must have experience in official testing and calf raising. Must be honest and have good character. Good proposition for right party. Only those qualified, need apply. F. E. FOX, Waukesha, Wisconsin. 19*

Wanted by March first. Single man to work with herd of A. R. O. Holsteins. Must be willing to help take care of cows on test as well as all other work in barn. Prefer young man with clean habits who is a hustler. Give references and salary expected in first letter. KILPATRICK BROS. CO., Beatrice, Nebr. 19*

Wanted—Man and wife for work on dairy and stock farm. 4 miles from city. Telephone after 6 p. m. LESLIE STAUDENMEYER, Route 7, Portage, Wisconsin.

Experienced herdsman wanted to take charge of good Holstein herd. Single man of good habits. College man preferred. Must furnish good references. State wages expected in first letter. M. C. KRONEMAN, Fergus Falls, Minnesota. 20-2

Wanted—Married couple or two single men. Would just as soon have a couple with boys or girls old enough to milk. Have house, garden, milk and wood. Can use a couple without children, wife to work in the house and man on farm. Must be clean milkers. State your wages. A steady job. Will hire as cheaply as I can as everything is coming down. EUGENE L. BELL, Tonganoxie, Kansas.

Wanted at once—Single man on large dairy farm. $50.00 per month and board. LOCK BOX 85, Livingston, Wisconsin.

Wanted—Good dry hand milker for barn work only. Prefer experienced test cow milker. Herd pure-bred Guernseys. Good wages and living accommodations. F. W. DUBOC, Herdsman, Fairydale Farm, Pawling, New York. 20-2

Wanted to hire—Good, reliable, married man to care for registered Guernsey herd. A worker with experience necessary. Furnish milk, garden, new house. Start by January 1st. Yearly employment. HOMER RUNDELL, Livingston, Grant County, Wis. 20-2

Wanted—Experienced, reliable, American, married man with small family (beginning April first) on 220-acre dairy farm. Modern barn. Owner is working into registered Guernseys and plans to do test work. Must be Protestant, have fair agricultural education, and be ready and anxious to co-operate in all farm operations. Must be willing to lodge owner, who is single and a Cornell graduate, and whatever month help the season requires. In reply, fully state minimum wage expected, reason for leaving present employment, health, past experience, education, number and age of children, if any, and enclose character references. BOX 489, care Hoard's Dairyman.

Wanted at once—Two good men thoroughly familiar with producing certified milk. Permanent position. Board and room and good wages. Write or wire ARDEN FARMS, St. Paul, Minn. 20-2

Sheep man wanted—Experienced sheep man (single) to take half interest in stocking large farm 840 acres, all woven wire fenced, in northern Minnesota, good buildings, plenty of water, excellent forage. Good proposition for sheep man with some money. W. H. HULL, Lumber Exchange, Minneapolis.

Wanted—Experienced, married man for work on dairy farm in Illinois. Address BOX 490, care Hoard's Dairyman.

Railway Mail Clerks Wanted. $135 month. Sample examination questions free. FRANKLIN INSTITUTE, Dept. F 118, Rochester, New York. 20-5

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Bradford County, Pennsylvania, "Bull Reception" Success

November 5th, on the farm of W. F. Bohlayer, Bradford County, Pennsylvania, there was staged what is believed to be the first official "Bull Reception" ever held in the United States. This aristocratic social fete was arranged by the eighteen members of the Troy-Canton Co-operative Holstein Bull Association. For this event breeders of pure-bred cattle throughout Bradford County and neighboring territory were invited to extend greetings to the four newly purchased pure-bred Holstein bulls recently secured by the association from Pinery Farms, Ohio.

The main feature of the "Reception" was a friendly greeting by each of the visitors to the new bovine aristocrats after which H. C. Gates, president of the association, gave a detailed description by charts of the remarkable line breeding shown in the pedigrees of these valuable young sires. Following Mr. Gates' remarks Mr. R. R. Welch, in charge of dairy husbandry extension of State College, gave a very excellent talk on dairy cattle improvement throughout the state. In his remarks he pointed out the very distinct advantages of co-operative bull association work.

A "mock sale" was then held with County Agent D. K. Sloan as auctioneer. Terms of the sale were that the visitors were to bid what value they would be willing to pay for these bulls on the market. The result showed a nice profit from the actual cost of the bulls, a fact which was particularly appreciated by the owners. All through the proceedings sweet cider and pretzels were freely consumed.

The four bulls now owned by this association were purchased in March from Pinery Farms, Ohio, with the understanding that they were to be retained at Pinery Farms until six months of age, when they were to be tested for tuberculosis and shipped with the privilege of a 60-day retest. All are sired by the noted King Hollingen Fayne Valdessa out of the world's record three-year-old cow, Finderne Hollingen Fayne. These bulls have been named using the prefix "Brad Co. Hollingen". One is from a dam with a two-year-old record of 10,000 lbs. milk, 420 lbs. fat, and whose dam made 985.6 lbs. fat in a year; the dam of one has a four-year-old record of 864 lbs. fat; one is from a dam whose six months' production with her first calf was 323.2 lbs. fat and whose dam made 1,057.6 lbs. fat in a year; and the fourth is from a two-year-old which has made 268 lbs. fat in 4 months and whose dam made 840 lbs. fat in a year.

These four bulls represent the best combination of Holstein blood that has ever been brought into Bradford County where there are over 150 active breeders of pure-bred Holsteins. In this association every member has had at least one test according to the accredited herd plan for the control of tuberculosis. All money due the association has been paid and a surplus for operaton is in the treasury.

The four bulls, after being kept in quarantine for 60 days, will be distributed to their respective blocks where they will be used, in accordance with the by-laws, by the members in proportion to their interest in the organization. The fortunate feature is that the owners of these bulls live very close together, thus making it possible for them to meet often and it is their present plan to hold consignment sales, offering individuals rich in the blood of the four bulls described above. They are now planning for the organization of a testing association for the purpose of conducting long and short time records.

Pennsylvania. D. W. SLOAN.

Waukesha Guernseys Average $545

Forty-four animals sold for an average of $545; two females sold for $1,000 or more, and a bull for $10,500 is in brief the story of the Waukesha County Guernsey Breeders' Association semi-annual sale held at Waukesha, Wis., November 17.

Geo. W. Broune topped the sale with a 16-month-old bull calf that was purchased by Wm. M. Jones & Son for $10,500, the highest price ever paid for a bull at public sale in Wisconsin. The calf is a son of Rex of Rich Neck from Marietta of Maple Hill (797.7 lbs. fat in Class A), a daughter of Langwater Hayes Rosie's King of the May. Fruit Bros. were the last contending bidders.

Geo. D. Lawson purchased the highest priced female, Beauty of Lynnhurst, for $1,005. She is a granddaughter of Galaxy's Sequel with 572.88 lbs. fat in Class A, and was consigned by F. E. Fox.

Fruit Bros.' Sweet Alice's Rival of Maple Heights, a 4-year-old daughter of Langwater Hayes Rosie's King of the May, with 549 lbs. fat as a 3-year-old, was the only other female to reach the $1,000 mark. She was purchased by Frank E. Swan, Wisconsin.

The following list includes those animals selling for $300 or more and the buyers:

Geo. W. Broune, Florida	
May Bird of Edgemoor	$410
Lakeshore's Countess	400
Lily Rose of Maple Hill	710
E. H. Mozey, Wisconsin	
Sella Daisy of Walnut Ridge	$420
Lady Tricksey of Tillyharden	330
W. A. Cook, Wisconsin	
Maternachene of Utility	$555
Belva of Aurelian Farm	560
Hilaria	495
Shoreland Lily	595
Wm. Jones & Son, Wisconsin	
Sweetheart of Maple Hill	$535
Rex of Broad Ripple	10,500
Geo. D. Lawson, Wisconsin	
Beauty of Lynnhurst	$1,005
Frank E. Swan, Wisconsin	
Sweet Alice's Rival of Maple Heights	$1,000
F. E. Fox, Wisconsin	
Sunnybrook Mignonette	$850
R. R. Schwartz, Wisconsin	
Tilden Farms Aarabella	$410
Frank W. Eighmy, Wisconsin	
Yeksa's Penelope of Echo Glade	$315
Dave Owen, Wisconsin	
Ultra's Dora	$300

Missouri Dairy Cow Race

Pure-bred dairy cattle breeders of Missouri are considering starting official testing in their herds and thereby entering the Missouri Dairy Cow Competition, or state-wide cow race for a number of valuable prizes both in the yearly classes and for highest productions of fat during each month.

The contest is open to all pure-bred cows in the state. Cows may start test at any time and the regular monthly official test will be made. In order not to place young animals at a handicap, records made by cows under two and a half years old at the beginning of the test shall be increased by 30%; senior 2-year-olds by 24%; junior 3-year-olds by 18%; senior 3-year-olds by 15%; junior 4-year-olds by 8%; and senior 4-year-olds by 5%. Prizes will be awarded on this basis. Breeders wishing complete information and prize list should write Chas. W. Turner, Supt. of Official Testing, Dept. of Dairy Husbandry, Columbia, Mo.

MARKETS

CHICAGO, November 25—Butter—Creamery extras, 53½c; standards, 52c; dairy, firsts, 42@52c; seconds, 38@40c.

Eggs—Ordinary, 59@63c; firsts, 70@71c.

Cheese—Twins, 26c; Young Americas, 24¼c.

MILWAUKEE, Wis., Nov. 25—Butter—Creamery, tubs, 59c; prints, 60c; extra firsts, 57@58c; firsts, 50@52c.

Eggs—Fresh firsts, recandled for city trade, 67@68c; current receipts, country candled, 62@64c; checks, 36@38c; dirties, 42@44c.

Cheese—Twins, 24c; Daisies, 25¼c; Longhorns, 26c; fancy Brick, 24c; Limburger, 1 lb., 22c; 2 lbs., 21c.

NEW YORK, Nov. 25—Cheese—Steady; state milk, common to specials, 20@29c; skims, common to specials, 10@20c.

Butter—Easy; receipts, 5,513 pkgs.; creamery, extras, 64½@65c; state dairy, tubs, 38@58c; imitation creamery, prints, nominal.

Eggs—Steady; receipts, 7,774 cases; nearby white, fancy, $1.06; nearby mixed, fancy, 67@93c; fresh firsts, 76@88c.

SILOS at Pre-War Prices

I will sell my present stock of silos, as long as they last, at PRE-WAR PRICES. Get your order in early and save money. Silos are all new, of well-known make, and furnished in the genuine Clear Oregon Fir, the most durable material used for silos. Quality guaranteed. You deal direct with me. No agents, no salesmen to come between us.

M. L. SMITH

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A Rare Opportunity

to buy a Federal Accredited Herd.
15 — A. R. O. cows in calf to a double 30-lb. son of King Segis Pontiac Alcartra, freshen fall and early winter. 4 heifers soon ready to breed.
1 — 20-month-old son of King Lyons, out of Julia Lyons Pontiac, ¾ white, seven nearest dams average 30.10, alone worth $1,000. Not related to any of the females.
These 20 head for $5,000, delivered free east of the Mississippi.
HENRY J. KARPINSKI, R. 7, Oswego, N. Y.

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Our last 9 official records average over 510 lbs. fat, including all ages. Our herd sire has 8 A. R. daughters, including one with 572 lbs. fat in Class GG. His three nearest dams average 822 lbs. fat. Send for pedigrees and prices on young bulls with this backing.
Folly Farm, Box 587, Libertyville, Ill.

Hillswold Farm

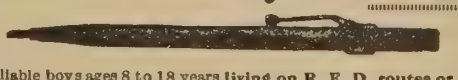
Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

AGENTS for FORD Permanent Non-Skid Chains. $4.00 delivered. Instantly on and off. Big Sales. Box A F, Plantsville, Conn.

Clutch Pencil Given For 8 Boy's Names



REGULAR size, 5 inches long, nickel plated. Complete with pocket grip. Should last a life-time. Always sharp and ready for use. No broken points. Pencil sent postpaid for names and addresses of 8 reliable boys ages 8 to 18 years living on R. F. D. routes or in the country. Give correct names and addresses. Write plainly. This offer is open only to one person in each family. Only one list of 8 names wanted from each person: no one person may receive more than one pencil. Offer not open to those who sent list of names previously unless different names are sent. SUCCESSFUL FARMING, 75 Success Building Des Moines, Iowa



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Martha Washington Comfort Shoes are made for the woman who is constantly on her feet.

For real foot comfort they have no equal. Forty years' scientific study of shoe needs is built into them.

Flexible in the sole where flexibility is most required. Shaped to give ample foot room but not clumsily loose. Soft and pliable leather tops.

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"Just Between You and Me"

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Here's genuine chewing satisfaction for you, hooked up with real economy.

A small chew of this class of tobacco lasts much longer than a big chew of the ordinary kind—that's because the full, rich, real tobacco taste lasts so long.

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Put up in two styles

W-B CUT is a long fine-cut tobacco
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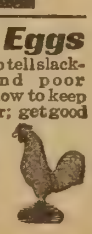
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Agents wanted. Write now.
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How To Get More Eggs and Save Feed! How to tell slackers and poor layers; how to feed to double egg yield; how to keep flock healthy; ventilate houses in winter; get good hatches, strong chicks—1,000 poultry secrets made plain in 38 lessons. Recommended by 25,000 students. Guaranteed to double profits. **FREE BOOK,** "Dollars and Sense," gives all the facts. Write today.
AMERICAN POULTRY SCHOOL
Dept. 1446 Kansas City, Missouri.



Missouri Holstein Association

On October 23rd, Mr. E. J. Alexander of Monroe City, Missouri, began work as field man for the Missouri State Holstein Association. He has already placed a car of fine grades in Johnson County. On October 23rd he met with the breeders at Versailles, Missouri, and organized the Benton County Holstein Club with fifty members. The members of this club already own a goodly number of pure-



E. J. ALEXANDER

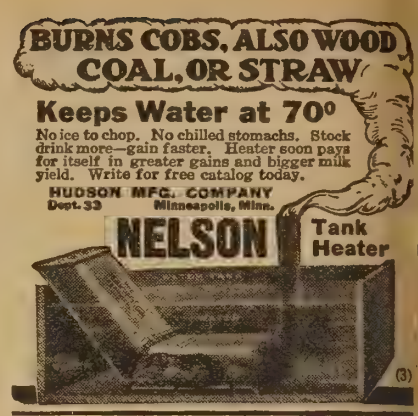
breds and a few grades and are preparing to bring in one or two car loads additional in a few months. Mr. Alexander is also working on a consignment sale to be held in November or early December.

The Association was fortunate in getting a man like Mr. Alexander. He has been a breeder of pure-bred Holsteins for several years. He organized one of the first Holstein calf and cow clubs in this state in his home county a few years ago. Last spring he was employed by this State Association to build up the membership of the Association. He was so successful in this work and met with the approval of the breeders to such an extent that he was considered the logical man for a fieldman.

The Missouri Plan

At the annual meeting of the members last January the President proposed that a membership campaign be inaugurated to finance a fieldman. It was proposed to charge a dollar a year for pure-breds and twenty-five cents a year for grades, each breeder signing up for three years and giving three checks. This plan was adopted. The question then arose as to how the membership could be reached as they were so widely scattered over Missouri. It was proposed to establish an honorary membership of $100 each for a three-year period, among the creamery men and milk companies and allied industries of the state, this money to be used in the membership canvass. The companies responded quite generously and Mr. Alexander as mentioned above was employed to put on the canvass. He went from breeder to breeder throughout Missouri and only four or five of the breed-

BURNS COBS, ALSO WOOD COAL, OR STRAW
Keeps Water at 70°
No ice to chop. No chilled stomachs. Stock drink more—gain faster. Heater soon pays for itself in greater gains and bigger milk yield. Write for free catalog today.
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ANTI-COW-KICKER
Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 9 lbs. Send for it **today,** when you need it you won't have time.
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The Improved Humane Stanchion

is the handiest, strongest, and most practica Stanchion on the market. Write to Human stanchion Works, Baraboo, Wis., for literatur on a complete line of barn equipment.

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FOR DAIRY COWS
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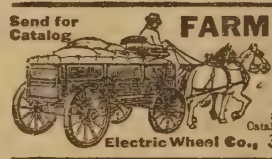
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Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.
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$44 Buys the New Butterfly Jr. No. 2½ Light running, easy cleaning, close skimming, durable.
NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on
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Sale Announcements

Dec. 7—Holsteins. D. V. Whiteleather Dispersion at Columbia City, Ind. F. G. Johnston, Columbus, O., Sale Mgr.
Dec. 9—Holstein Dispersal. Geo. P. Carver herd, Faribault, Minn. Minnesota Holstein-Friesian Breeders' Association, Inc., Sale Mgrs.
Dec. 16—Holsteins Phelps & McClure Herd, at Aurora, Mo. W. H. Mott, Sale Manager. Herington, Kansas.
Dec. 18—Guernseys. E. J. & Carrie Kantsky, Marsfield, Wis.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.

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QUALITY LIMESTONE always increases crops 50 per cent or more. In many cases the yield is doubled. Pays for itself and returns a profit the first year. Endorsed and used by State Agricultural Dept. Write for free book on "Increasing Production"—it will tell you all about QUALITY LIMESTONE and what it will do for you.

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Finely Ground
Raw Rock Phosphate
increases the fertilizing value of manure 60%.

Dairy Farmers
get particularly good returns from money invested in rock phosphate.
The car supply is much improved and we can now make immediate shipment. Write for our prices and free booklets.

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Phosphoric Acid
Finely Ground Raw Rock Phosphate is the cheapest source. Your inquiries solicited.
M. H. Gray, Mt. Pleasant, Tennessee

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Mechanically Inclined
—to send for my big illustrated 72-PAGE BOOK— FREE!
It tells how in a few weeks you can earn from $150 to $400 a month in the Auto and Tractor business.
Be Your Own Boss. At small cost learn to be an expert mechanic by the Sweeney System of working on real cars.
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ALL SIZES AND STYLES
2, 3, 4, 6, 8, 12, 16, 22 and 30 H-P.
at proportionately Low Prices. Above price for 2 H-P. is for engine complete on skids ready to use. From Pittsburgh add $5. Quick shipment. Write or wire for Big New Engine Catalog FREE.
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For bedding most convenient, serviceable and sanitary. Write for prices.
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DANA EAR LABEL
Stamped with owner's name or address and serial numbers. Send for free samples.
C. H. Dana Co., 55 Main St., W. Lebanon, N. H.

When writing advertisers please mention Hoard's Dairyman.

ers seen refused to take membership. The average annual dues under the plan is about eleven dollars. While the canvass is not yet entirely finished the board felt justified in starting this fieldman to work.

Missouri was the first state to adopt this plan of membership and Mr. Pollock of the National Association said at the Missouri Sale Banquet last spring that he considered it the best plan he had seen so far. He later recommended it to New Jersey and New England breeders and they adopted it. It is certainly equitable. If a man has a large herd he is able to pay more dues and will get more benefits from the association.

The most important work for the Missouri fieldman will be to get more Holsteins into the state. There is a big demand for them here and as most of this demand comes from beginners they need assistance in buying good healthy cattle. In some counties the sentiment has not yet crystalized and he will organize the counties for Holsteins. There are three very definite pieces of work he will attempt, of those he will write later.

The State Association will hold its next annual meeting in January at Columbia at which time it will be addressed by Senator Hackney of Minnesota. Its next state sale will be May 23-24, place undecided as yet.—Missouri Holstein Association.

Dusting and Dairying

HOARD'S DAIRYMAN: — Dairymen, above all other farmers, should be interested in dusting their trees instead of spraying. At least, that is the conclusion I am forced to draw after talking with dairymen in the East and Middle West. Nearly every dairyman has an orchard, either large or small.

"But why dusting instead of spraying?" you ask. Because dusting takes less time. And if any dairyman has time to spare, I have never heard of him.

Besides being a quicker method than spraying, dusting has other advantages that will win favor with dairymen. Dusting is not so disagreeable as spraying, and the work is not so hard. The labor of mixing materials is reduced, even done away with entirely. There is no heavy tank of liquid to haul over the hills, with danger of upsetting. One horse can draw the dusting machine; it takes two for a sprayer.

But what about the results? Some growers are getting splendid results, others not so good. C. H. Deur, an Iowa grower that I have talked with about the practice, had good results dusting apples for four years, then struck a bad year and gave it up. Growers in the Ozarks refuse to give up the practice (dusting really was born and grew up in the Ozarks), even though some unfavorable reports get out. It seems that for every man who tries dusting and quits, three disciples are gained, for the practice is more widespread than ever. New Jersey peach growers swear by their dusters, and New York apple growers use dust on their apples. Some of the poor results are traceable to poor mixing of dusting materials. Commercial firms sell good mixtures.

Boiled down to a practical application, the facts are as follows: Dusting effectively controls biting and chewing insects, such as codling moth, on apples. It is less efficient on apple diseases. If the apple orchard is comparatively free of scab, leaf spot and sooty blotch, dusting is a pretty safe thing for a busy dairyman to use. Peach diseases and insects are controlled by dusting.

Pennsylvania. MARTIN GLEN.



A year's record of this BROWN SWISS: 16,538 lbs. milk, 646 lbs. butter fat. A good example of carefully safeguarded health.

Dairy Profits Depend On—What?

GOOD feeding and good breeding, partly, of course. These are routine considerations every dairyman knows. But, after all, the health consideration is the real fundamental.

As a milk-making machine, the dairy cow's production must depend on her bodily health—entirely. Actual or approaching disease can soon wipe out a cow's profit balance.

Because the hard-worked organs of production and reproduction are a natural prey of disease, the medicinal properties of Kow-Kare have been designed especially to tone up and strengthen these organs. Such cow ailments as Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches can be prevented or successfully treated by cow owners with the aid of this wonderful medicine.

A trial will cost little; results will be conclusive. Sold by feed dealers, general stores and druggists, 70c and $1.40 packages. Write for free book "The Home Cow Doctor."

DAIRY ASSOCIATION COMPANY
Lyndonville, Vermont

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of both the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.

KOW-KARE
FOR COWS ONLY
KOW-KARE
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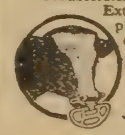
Cow Waters Herself

with this wonderful new Libbey Automatic Water Bowl. Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.
15% More Milk
Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.
Libbey Automatic Water Bowls
are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.
If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.
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Water in the Stable a Necessity

THE "BUCKLEY" DEVICE
Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.
Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

"Kant-Suk" Calf Weaner
LIGHT—strong—humane! Cannot possibly injure cow or calf. Being made with a hinge-joint, it swings out of the way when calf eats or drinks, but absolutely prevents sucking.

PAT'D AUG. 15, 1910
Extremely easy to put in place. Endorsed by dairymen everywhere. At dealers.

Sent Prepaid: Calf size 45c; Cow size 60c
Wagner Specialty Co.,
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$4,000 from 4 acres of apricots
$7,500 from 20 acres of peaches
$25,000 from 35 acres of grapes
(Cut these figures in two, to be safe, and returns still are large)

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California

There is but one California. It is a garden. It is a scenic paradise. It is the place of no winter. You get the most out of life for yourself and family. See it, this winter, when the East is snowbound.

You Can Farm All Year in California

Santa Fe

No storing costly fodder for months of snow and ice. Here you can profitably raise alfalfa, grain, fruit, stock and poultry. You have benefits of established communities. Schools are ready, and fine roads. The various fruit associations have a remarkable marketing system. You raise the fruit; no bother about markets. That problem has been worked out for you.

Land values still are within reasonable bounds—considering what you get in return. The San Joaquin Valley can support many thousands of families, on twenty and forty acre tracts. The world competes for what you raise, because of superior quality.

The Santa Fe operates *five trains a day* from Chicago and Kansas City to winterless California. Two of them—the California Limited and the San Francisco Limited—are *solid Pullman trains* with dining cars all the way. The Navajo, Scout and Missionary carry standard and tourist sleepers and chair cars; meals in dining-cars east of Kansas City and at station dining rooms west. Meal service for all trains by *Fred Harvey*. The two Limiteds and the Missionary have through sleepers by way of *Grand Canyon of Arizona*, the world's scenic wonder. The Santa Fe *tourist sleepers* are comfortable and you save half on the berth rate. Station meals also are economical—a "square meal" for a dollar.

Our illustrated folders, descriptive of California lands, and the trip there, mailed on request. Let me help you plan your trip, and advise about places worth looking over.

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5 daily trains to California

From the FACTORY!
Direct to You at
$2.00 Less than Cost



Here's the biggest saving opportunity you'll find in the Shoe Market! This is such a good bargain that we will send a pair for your inspection direct from our factory—you need only write your name, address and size on coupon below, don't send any money.

When you try these shoes on you will agree that to get work shoes as strong and substantial as these you would have to pay at least $2.00 a pair more.

A SUPER WORK SHOE

Uppers are extra heavy waxed veal, exceedingly tough and durable re-enforced tips—guarantee counters and insoles—heels that won't come off—heavy oak tanned soles, sewed and clinch nailed—dirt excluding bellow tongue.

If you need a good pair of work shoes don't miss this exceptional bargain. Order quickly. Fill out coupon now! Don't send any money—just pay $2.98 when shoes arrive. If you are not more than satisfied we will cheerfully refund your money at once.

Don't Send Any Money Just Mail Cupon To-day

SIZE 6 to 10 Style 83 H. D.

CHARLES DANNER & CO.
Guaranteed Chippewa Shoes
Chippewa Falls, Wis.

Name.....Size.....
Address .....

Second Iowa Guaranty Holstein Sale

The Iowa Breeders' Second Guaranty Sale held at Des Moines, Nov. 16—17 was very successful from at least two standpoints. It was a sale of healthy, well bred, good individuals that were largely purchased by new breeders throughout the state, so that the ultimate benefit of such a sale to Iowa breeders generally will undoubtedly be greater than as if the same cattle had been purchased by established breeders at higher prices.

The 69 head sold for an average of $327 with $675 the top figure. This was paid for one of the first animals in the ring, Home Farm Sadie Vale Mercedes, a yearling granddaughter of K. K. S. V. bred to King Pietertje Ormsby Piebe. She was consigned by Hargrove & Arnold and purchased by H. Schroedermier.

As at earlier sales bulls moved slowly and for low figures. Iowana Farms sold the best bull buy of the sale for $600. He was a 22-month-old grandson of that great cow, Fryslan Waldorf and from a 20,000-lb. 2-year-old daughter of Sir Johanna Fayne. The Independence State Hospital was the purchaser.

Mack & Krause did the selling with B. D. Scott in the box.

Following is a list of all animals selling for $350 or more and buyers:

Porter Farming Co., Iowa	
Pietertje Burke Korndyke	$510
Iowana Mercedes Ollie Homestead	$550
F. H. Heidman & Son, Iowa	
Miss Wopin Josephine	$385
Iowana Friend Homestead	355
H. C. Missly, Iowa	
Hyacinth Nelle De Kol 2d	$400
Pet Pontiac Dublin	375
Double E. Holstein Farm, Iowa	
Elsie Urmagel Hester	$450
Beryl Korndyke Lockhart	450
Pietertje Walker Korndyke	375
Flo Walker De Kol	445
G. Zwaagstra, Iowa	
King Violet Ormsby Pietertje	$500
Independence State Hospital, Iowa	
Iowana Waldorf Lad	$600
Clarinda State Hospital, Iowa	
Iowana Korndyke Ormsby	$400
Paul W. Anderson, Minnesota	
Miss Johanna Segis Korndyke	$450
W. C. Van Popplendam, Illinois	
Iowana Waldorf Cornilla	$500
W. A. Hooper, Iowa	
Anna Pet	$375
Burr Oak Tritomia	450
Wm. Murdoch, Iowa	
Ormsby Lass	$355
Prairie Ridge Farm, Iowa	
Corwin Aaggie Beets	$525
Corwin Princess Beets	360
Cass Farm Co., Iowa	
Friend Colantha Burke	$350
Royal Miller, Iowa	
Aaggie Pontiac Butter Boy Pett	$375
Princess Lady May 2d	410
H. Schroedermier, Iowa	
Home Farm Sadie Vale Mercedes	$675
J. A. Peters, Iowa	
Lillie Mona	$650
W. S. Leaverton & Son, Iowa	
Lady Hengerveld Forum De Kol	$510

Three Michigan Holstein Sales

October 19, 20, and 21 Michigan held three notable Holstein auctions, the Michigan Holstein Breeders' Second State Sale, the Central Michigan Holstein Breeders' Third Annual Sale, and the Shiawassee County Holstein Breeders' First Annual Sale.

In the first, 54 animals sold for $26,255, making an average of $486. E. G. Stevenson of Ontario was the heaviest purchaser, taking seven animals. He purchased the highest priced animal of the sale, Traverse Segis Johanna Hartog, a six-year-old daughter of King Segis De Kol Paul Netherland. This cow has a five-year-old seven-day record of 26.33 pounds of fat and a two-year-old seven-day record of 16 pounds of fat. She brought $4,000. The second highest priced animal of the sale went to the Michigan School for the Deaf at $1,100. This is a three-year-old cow with a seven-day record of 16 pounds of fat. The only other animal to bring $1,000 or more was Traverse Korndyke Girl, purchased for that price by E. G. Stevenson. The following lists the animals selling for $500 or more:

E. G. Stevenson, Ontario, Canada	
Traverse Segis Johanna Hartog	$4,0
Traverse Korndyke Girl	1,0
Traverse Inka Korndyke	
Traverse Ninnetta Segis	
Beach Segis Pontiac Queen	
Burtondale Lady Pietertje 2d	
Michigan School for Deaf, Michigan	
Rainbow Hengerveld De Kol Meredith	$
Alcartra Pontiac Elzevere Vale	
Aaggie Texal Segis Pieter	1,1
Grandview Ormsby Segis	
Belle Perfection De Vries 4th	
W. L. Rundel, Michigan	
Sir Pieter Korndyke Lyons	$7
W. H. Wernett & Son, Michigan	
Belle Bernardo Segis Pieter	$5
Butter Maid Segis Pieter	7
E. M. Starkweather, Michigan	
Segis Pieter Butter Girl	$5
Stoneacre Lunde Pontiac Canary	5
J. M. Williams, Michigan	
Count Veeman Hengerveld De Kol	$5

In the Central Michigan Sale, animals sold for $11,960, an avera of $206. The highest priced anim was Itsamere King Cantrilla, co signed by C. A. Daniels & Son a bought for $450 by J. B. McCulle The only other animal to reach $4 was Jolie Sarcastic Dutchess 2n consigned by Wesh and Higimire. A mals selling for $300 or more were:

Edwin Vanderbeck, Michigan	
Rose Fern Butter Boy	$3
Frank Witz, Michigan	
Maple Fern Korndyke Pietertje	$3
C. Severance, Michigan	
Unnamed Male	$3
Mark H. Piper, Michigan	
Queen William Abbekerk 2d	$3
Lady Ophelia of Cornelian 2d	3
J. B. McCollum, Michigan	
Hartog Content Segis	$3
Itsamere King Cantrilla	4
Canary Johanna Mapleside	3
Hypatica Pauline De Kol Posch 2d	3
Colver Farms, Pennsylvania	
Lady Mercedes Houwtje 2d	$3
E. M. Moore, Michigan	
Jane De Kol Hengerveld Korndyke	$3
G. T. Warren, Michigan	
Jolie Sarcastic Duchess 2d	$4

In the third sale, that in Shiawa see County, 81 animals brough $19,290, an average of $238. T highest priced animal was Rosy Me cedes Butter Boy, bought by G. Spillane & Son for $1,000 and co signed by H. A. Smith. The Detro Creamery Company paid $530 eac for Belle Barnum Canary Scott, four-year-old cow consigned by Fre E. Martin, and Elzevere Rosa Bo heur 2nd, consigned by Charles Payne. The following lists the an mals selling for $300 or more:

Musolff Bros., Michigan	
Lowland Allie Lass	$3
Lowland Dolly Johanna	3
Huron Hill Pontiac Korndyke	3
De Kol Feldora Lass	5
G. L. Spillane & Son Co., Michigan	
Rosie Mercedes Butter Boy	$1,0
Baldwin & Nowlin	
Tirania Calamity Wayne 5th	$4
Smithfield's Mercedes De Kol	3
Maple Side Agatha	3
De Kol Canary Lass	4
M. J. Roche	
Huron Hill Pontiac Winona	$3
Bonnymaple Canary Grant Korndyke	4
Jas. B. Jones, Michigan	
Oakhurst Inka Sharp 3d	$3
Susie De Kol Jewel Segis	3
Bonnymaple Pet Application	3
Detroit Creamery Co., Michigan	
Lottie Owosso Pontiac	$4
Annie De Kol Banostine	4
Belle Barnum Canary Scott	5
Elzevere Rosa Bonheur 2d	5
Floyd G. Pierson, Michigan	
Meyd Hengerveld Canary Korndyke	$3
Bonny Maple Canary Application	3

Holstein Grades Average $240

The old adage, "There is alway room on top", has been well illustrat ed in a Holstein dispersion sale at th farm of J. C. Paige, Massachusetts Despite the fact that good grade cow in that section are averaging $125 22 grade Holsteins averaged $240 The cows were all handsome individu als, the result of many years' selectio of pure-bred sires on grade cows. Th top price was $365 and two other sold for more than $300. It merel proves the public is always ready t pay for commodities which excel th general run which is offered on th market.

Massachusetts. ERNEST RITTER.

For Barrenness in Cows, Mares and Sows, Use Hood Farm Breeding Powder

Astonishing Success in Making Barren Animals Breed — Indispensable After Abortion — Invaluable Where Cows do not Clean — Profitable to use on Every Cow After Calving.

Read what they say:
Hood Farm Breeding Powder is great and has been a God-send to me. I cannot be without it.
SULZER BROTHERS,
R. F. D. No. 2, Box 42, Hillsdale, Ore.

I have been using your Breeding Powder for eight years, when needed, and am well pleased with it.
HENRY C. STRIEKER,
R. F. D. No. 1, Germantown, Ill.

Prices of Hood Farm Breeding Powder prepaid, $1.15, $2.75 and $5.00. Price of Hood Farm Flexible Injection Tube by mail, 90c., or with a $5.00 order 75c. Please mention this paper.

C. I. HOOD CO., Lowell, Mass.

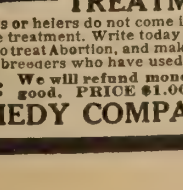
DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

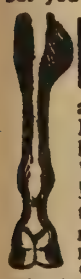
Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.



Write for free booklet with guarantee and letters from farmers and dairymen

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

YOU CAN'T CUT OUT A BOG SPAVIN OR THOROUGHPIN but you can clean them off promptly with



ABSORBINE
TRADE MARK REG. U.S. PAT. OFF

and you work the horse same time. Does not blister or remove the hair. $2.50 per bottle, delivered. Will tell you more if you write. Book 4 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Wens, Cysts Allays pain quickly. Price $1.25 a bottle at druggists or delivered. Made in the U. S. A. by

W. F. YOUNG, Inc., 254 Temple St., Springfield, Mass.

Don't Wear a Truss



Mr. C. E. Brooks

Brooks' Appliance, the modern scientific invention, the wonderful new discovery that relieves rupture, will be sent on trial. No obnoxious springs or pads.

Brooks' Rupture Appliance

Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. Sent on trial to prove it. Protected by U. S. patents. Catalog and measure blanks mailed free. Send name and address today.

Brooks Appliance Co., 467 B State St., Marshall, Mich.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Determining Pregnancy

To decide whether a cow is in calf or not often is a matter of much moment to the owner or prospective buyer and he should know the various indications of that condition and the methods by which pregnancy is determined by manipulation as well as observation.

When conception has occurred periods of heat fail to recur in a majority of instances; but it is possible for a cow to come in heat although pregnant and if bred a double conception or fetation occasionally occurs. In many cases, however, the bull does not serve a cow that apparently is in heat after having been bred at a previous period of heat, and that may be taken as highly indicative of the pregnant state. The cow that has conceived usually quiets down and gains in flesh or fat during the first few months of pregnancy, but may lose in condition when parturition time is approaching and the udder begins to enlarge.

Increase in the size of the udder after service usually is a sure sign of pregnancy and the abdomen also will gradually become more and more prominent, especially toward its rear parts, and this is best noticed when standing behind the cow. In some poor milkers the secretion of milk soon shrinks after conception has taken place and the tendency is for such a cow to "dry off" several months before calving. The udder in such cases also gradually shrinks in size.

Manual methods of determining pregnancy used to include pouring water into the ears, the supposition being that a non-pregnant cow would shake her whole body to get rid of it. That, of course, is not a sure sign; but examination by feeling or palpatation through the abdominal wall or by way of the rectum or vagina gives definite results. After five or six months it is quite possible to feel the fetus in the womb by pressing the closed fist into the abdomen at a point on the right or milking side, under the body, 8 or 10 inches in front of the stifle, below the flank and above the udder. When the fist or palm of the hand is partially withdrawn the fetus follows it and may be felt as a firm mass. Movements of the fetus also may be felt in some cases, or they are seen when the cow drinks cold water or eats heartily. Cold water thrown on the belly may have a like effect. During the last two months of pregnancy movements of the fetus usually are vigorous and quite noticeable.

The trained veterinarian can definitely determine pregnancy by rectal examination of the womb 60 days after conception, or earlier in some heifers. Fluid is felt in the horns and they have lost their cordlike feel. Later one horn, containing the fetus, is found larger than the other and the expert may even be able to detect the cotyledons. This becomes easier later and then the parts of the fetus may also be made out. In all cases the veterinarian should be employed to make such critical examinations as he alone is able to do it correctly and safely and arrive at reliable conclusions. The bungler may cause abortion.

ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis

Bone Spavin Even established cases yield to Fleming's Spavin and Ringbone Paste, or money back. $2.08 a bottle postpaid. Send for FREE Vest-Pocket Veterinary Adviser. Describes Spavins and 200 other horse and cattle ailments.

FLEMING BROTHERS, 255 Union Stock Yards, Chicago

ABORTION IN CATTLE



CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A, 398-408 Columbus Ave., New York City, Reference—Colonial Bank.

Strong Milk

I have a cow that calved in May last and for some time gave about three gallons of very good milk a day; she now gives less than two gallons. She is fed on dairy feed, hay, beet pulp, and the little grazing she can get on a small lot. She appears to be in good condition; but the milk has a strong and offensive odor and nauseating taste, especially when heated. When strained through a cloth, stringy and curdy masses are left on the cloth. Can you tell me the cause of the condition, how it can be remedied, and whether the milk is fit for use?

Portsmouth, Va. W. G. M.

Set a sample of milk from each quarter of the udder in separate sterilized vessels. By this means you can determine if one quarter is giving abnormal milk, as a result of garget, or if all samples are abnormal. If the latter is the case, bacteria in the milk utensils, wash, or cooling water or dust from the udder, stable, or rooms in which the milk is handled may be the cause and the exact one should be found and removed.

Indigestion is another possible cause. If no other cause is found, give the cow a pound of Glauber salts and a cupful of blackstrap molasses in 3 pints of warm water, slowly and carefully from a long-necked bottle, to clear the bowels. Then mix in each feed a tablespoonful of a mixture of two parts of powdered wood charcoal and one part each of powdered nux vomica, bicarbonate of soda, and ground gentian root. Stop feeding beet pulp. Feed mixed meals, bran, and dried brewers grains or gluten meal. Add clover or alfalfa hay to the ration.

Warts on Teats

We have a cow that has almost a solid mass of warts on one of her teats. Could you give information how to cure them? The cow is milking at present.

Sumner, Wash. J. W.

Twice daily saturate the warts with water containing all the bicarbonate of soda it will dissolve when hot. If that does not suffice, use a strong solution of washing soda. Warts that have narrow necks may be snipped off with scissors, a few at a time; then apply pine tar next day. If a wart starts growing again, rub it lightly with a lunar caustic pencil two or three times a week.

Warts on Head

Kindly advise one how to remove warts from pure-bred Holstein bull? They look like blossoms. One large one on forehead, a smaller one under eye, and several on body. They don't seem to bother him any but detract from his appearance quite a little.

Kane, Pa. W. H. B.

If the warts have narrow bases, they may be twisted off at once, or caused to drop off in time by ligating tightly with a fine cord. Or they may be cut off with scissors and Monsel's powder applied to stop the bleeding. Masses of small warts will disappear in time if wetted daily with a strong solution of washing soda. Pine tar is useful as an application for masses of warts on the body. It should be well rubbed in with an old, stubby paint brush and the application repeated at intervals of a week.

Ayrshires Win Oregon Milknig Contest

Six Jerseys, one Holstein, and five Ayrshires participated in the annual two-day milking contest at this year's Oregon State Fair. The Ayrshires were much in the limelight, winning first and second places for Lathrop Bros. of Oregon. The Holstein entry placed third. Lathrop Bros.' third entry placed seventh. In computing the results, butterfat was estimated at thirty cents per pound and solids not fat at two and one-half cents per pound, the same figures as in previous years. The cattle were handicapped as to age and periods of lactation.

W. D. Pine of the Dairy Division of the Oregon State College supervised the contest.

Vermont. J. G. WATSON.

Uncle Ab says: It's only the fellow who is already wise that knows enough to realize that he needs to know a lot more.

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

BROWN SWISS



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows — profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.

William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Twenty Brown Swiss

bred cows and heifers for sale. Also a few bull calves. Cows bred to a grandson of College Bravura 2.

Ayers Stock Farm

R. F. D. No. 6, Burlington, Wisconsin

Brown Swiss Heifer Calves

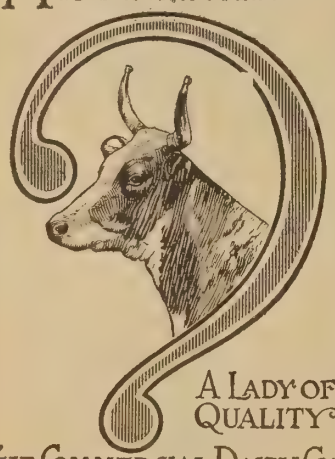
from descendants of registry of production stock. We have been breeders of Brown Swiss continuously since 1877.

GEORGE W. HARRIS & SONS, Wethersfield, Conn.

Handle makers, and the vehicle and agricultural implement industries have found no substitute for high grade hickory and ash. In the future the farm woodlot will be called on more and more to furnish this material.

AYRSHIRES

HAVE YOU MET MISS AYRSHIRE



A LADY OF QUALITY

THE COMMERCIAL DAIRY COW

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

Aldebaran Farms
Racine, Wis.

AYRSHIRES

FOUR BULLS 15 to 18 Months Old
They are in pink of condition and ready for immediate service. They are from choice stock. Priced reasonable.
FRED TSCHUDY & SONS, Monroe, Wis.

Pure-bred Ayrshire Cattle For Sale
Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis

Ayrshire Stock
of all ages for sale. Satisfaction guaranteed
L. W. McCONNELL, Wellington, Ohio

Delchester Farms Ayrshires
Tell us your wants and we can supply them at prices you can afford to pay.
Aged cows, bred to Glenury, an A. R. son of Finlayston.
Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.
Heifers, bred to these two great sires.
Young heifers.
Bull calves.
All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.
Herd free from tuberculosis
DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Addington's Champion
No. 19561
Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk
FOR SALE—Sons and Daughters from high milking dams.
Tuberculin Free Herd
BLACKBURN FARM Sewickly, Pa.

WORLD'S CHAMPION AYRSHIRES
Fully accredited tuberculosis free herd.
A mature cow made 25,329 lbs. milk, 895 lbs. fat.
A 4-yr.-old made 21,820 lbs. milk, 856 lbs. fat.
20 cows average 17,074 lbs. milk, 682 lbs. fat.
10 4-yr.-olds average 14,908 lbs. milk, 635 lbs. fat.
10 3-yr.-olds average 12,340 lbs. milk, 519 lbs. fat.
20 2-yr.-olds average 11,885 lbs. milk, 495 lbs. fat.
PENSHURST FARM, NARBERTH, PA.

Bensalem Ayrshires
For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

ELKHORN FARM
"THE AYRSHIRE HERD of the WEST"
Exceptional Offering of
BULL CALVES
Out of A. R. Daughters of Imp. Finlayston, Baron's Best of Bargenoch, Beuchan Peter Pan and Substantial of Highland.
Write for list.
J. Henry Meyer, Owner L. W. Wing, Mgr.
Watsonville, California

Lippitt Farm Ayrshires
For the first time we offer females for sale. They are producers with type.
Write for prices to Hope, R. I.



We Have For Sale
the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.
Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.
BARCLAY FARMS, John Cochrane, Manager. ROSEMONT, PENNSYLVANIA

Middlesex Meadows Ayrshires
No matron stays in our herd that does not make an A. R. record of 10,000 lbs. or better.
We offer Nona's Chancellor of Middlesex, the six month's grandson of a champion out of Nona 2nd of Avon, whose 12-year-old record is 14,013 lbs. milk, 542.78 lbs. fat.
A. Henry Higginson
SOUTH LINCOLN, MASS.



ALTA CREST AYRSHIRES
Special Offering of
Ayrshire Bull Calves
Imported — Home Bred
which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.
Write for Sale List
Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.
ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Weymouth Farms
"Ayrshires of Quality"
All cows on Advanced Registry Test. Herd Tuberculin Tested.
We can supply you a herd sire of choicest breeding.
MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

JERSEYS

Jersey Bull Calves and Heifers
Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

Raleigh Bulls For Sale
2 are ready for heavy service, others younger, all from Register of Merit cows with one exception. Also a 2-year-old heifer just fresh and some Register of Merit cows with records from 400 to 500 lbs. butterfat.
P. G. Warmington, Honey Creek, Wis.

Dunn and St. Croix Counties Jersey Breeders' Ass'n
have a few choice bulls and several pure-bred and grade cows and heifers for sale.
S. A. B. AUSMAN, Secy. Elk Mound, Wis.

Serviceable Bulls From R. M. Dams
We have a few very good individuals 6 to 13 months of Majesty and Raleigh breeding. A tuberculosis free herd. Every animal guaranteed right.
Your inquiry promptly answered.
E. E. HILL & SONS, Tomah, Wis.

JERSEYS—DUROCS
TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys
Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd
At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

Six Splendid Jersey Bulls
FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON. - Edgerton, Wisconsin

JERSEY BULLS
Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avondale 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY. BLACK EARTH, WIS.

I Am Offering
my undefeated show bull, Rose's Elmhurst Jolly, No. 142213, and one of his sons of serviceable age for sale to the highest bidder.
Address all inquiries to
Hazeltine Lake Jersey Farm
H. C. Wagner, Excelsior, Minn.

31,763.9 lbs. milk
1,786.8 lbs. fat
Made in one year by the two grandams of
Jersey Bull
No. 281 dropped March 7, 1920
Solid Color—Price $250.00
We offer bulls and bull calves ranging in price from $150 and up.
Write us for extended pedigree, description, etc.
HOOD FARMS, Inc.
Lowell - - Mass.

158 R. O. M. records made by
AYREDALE JERSEY COWS
Average 10,503.6 lbs. milk, 582.5 lbs. fat.
We offer bulls and bull calves from these cows, sired by
CARRY-ON of AYREDALE (164012). His dam and two grandams average 17,151.2 lbs. milk, 928.4 lbs. fat.
SOPHIE GILSLAND TORMENTOR (123584). Dam made as a 4-year-old 15,952 lbs. milk, 888 lbs. fat.
SOPHIE 19TH GRANDSON (165221). Dam made 15,578.7 lbs. milk, 809.5 lbs. fat.
The bulls we offer are close up to the World's Champion producer Sophie 19th of Hood Farm. Correspondence solicited. We would appreciate information about your herd, so as to price you bulls calculated to add size, type and increased production.
Write F. W. AYER
AYREDALE STOCK FARM, Bangor, Maine

Montpelier Jerseys
Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

For Better Jerseys
We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.
We have a few young bulls for sale.
THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Cedar Crest Farms Offer Jersey Bull
A fine individual, Nation's Raleigh, (185639), dropped August 14th, 1919. His grandsire Imp. Hauteville Fairy Boy (90952) had twenty daughters in Register of Merit, his dam, Nation (256031) entered Register of Merit at seven years, producing 8,850.7 lbs. milk, 503.64 lbs. butterfat. Also a few first class Jersey cows.
J. K. Dering, Owner, Lake Villa, Ill.

POLLED JERSEYS
Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio



For Sale—Eight New Milk Cows
These cows have type, breeding and are real producers. Guaranteed right in every way. If you are looking for good cows, come and see them or write for particulars.
W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.



Economy in Production ← GUERNSEYS → Quality of Products



"Why wiggle and wobble?" Guernseys produce more butter and at less cost. The average Guernsey in the Wausau-Marathon (Wisconsin) Cow Testing Association produced 41 pounds more butterfat than the average cow of the breed next in rank. Moreover, she produced butterfat at a cost per pound of 3¼ cents less than the average cow of another dairy breed. Send for our free information.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H8, Peterboro, N. H.



GRETCHEN'S ANTON MAY KING OF PROSPECT (61176)
Dropped October 30, 1919

SIRE — Anton's King Confidence No. 43517. DAM — Gretchen of Prospect No. 72341. An excellent individual. He has a good barrel, an excellent top line and a fine head. This young bull will do himself credit when given the opportunity.

His sire, Anton's King Confidence, traces six times to May Rose 2nd, the great foundation cow of the May Rose family. The dam of Anton's King Confidence recently finished a year's test with a record of 764.65 lbs. of butterfat as a junior four-year-old.

Gretchen of Prospect is now on test and in 182 days has made 230.57 lbs. of fat. She is running with the herd and receiving the regular herd rations and care — and twice a day milking.

This bull is priced so that the average dairyman can easily buy him.

Hoard's Dairyman Farm
Fort Atkinson - - - Wisconsin

For Sale — A Bull Calf of Real Merit

Dropped Aug. 28, 1920, and Sired by **Langwater Cavalier 21012**, whose daughters have put him to the front as one of the great bulls of the breed. His highest record daughter made 734 lbs. fat in F.

The dam of the **Bull Calf** is Georgette of Edgemoor, who is on test and is a daughter of Mildred II of Les Godaines (55120), who was the **Grand Champion** Cow at the **National**. Her record is 14,890.9 lbs. milk, 702 lbs. fat. Her daughter **Century Girl** was first prize two-year-old.

The **Bull Calf** is a fine individual and splendidly marked. Send for extended pedigree and full description. A few choice females to offer.

Upland Farms, Inc., Ipswich, Mass.
F. P. Frazier & Son, Proprietors, W. K. Hepburn, Manager

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

Falcon's Grenadier (65834)

Dropped Feb. 12, 1920

Sire: *Falcon's Proud Warrior* (*47559*). Pronounced by many experts as "the greatest son of Langwater Warrior".

Dam: *Stockbridge Olive* (*30883*), from a noted family of high producers. Olive has an A. R. record of 11,503.2 lbs. milk, 617.36 lbs. fat and dropped two calves during the year.

Grenadier is a high class, well grown bull; priced very conservatively at $600 f. o. b., Litchfield.

Write about him today.

Falcon's Flight Farms, Litchfield, Conn.

May Rose Bull For Sale

Exceptionally fine individual, 10 months old.

Sire: Superb of Edgemoor (49590)—Dam: Imp. Cypress of Sarnia (53729). Sire out of Imp. Donnington Goldie 5th (3rd place Class E) with 796 lbs. of fat. Also the 1st prize junior A. R. cow N. D. S. 1920. His grandsire is Imp. Itchen May King, Grand Champion N. D. S. 1920.

His dam has 423 lbs. of fat Class C and is due to freshen January 13th. She is a fine individual, will be re-entered on test and capable of 700 lbs. of fat.

Corium Farm, F. J. Rueping, Owner. Fond du Lac, Wis.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

Meadowland Guernseys

Sixty-five females, priced conservatively, are offered from which to make selections.

MEADOWLAND FARM, Litchfield, Conn.

Dispersal Sale

Entire Herd
Registered Guernseys

13 head of stock: 9 females, 2 sires and 2 young bulls

The stock has the combined Glenwood, Yeksa and May King breeding. 3 A. R. cows.

Sale at Marshfield, Wis.
December 18th, 1920

Send for catalogue

E. J. & Carrie Kautsky, Owners, Colby, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

HERE'S YOUR OPPORTUNITY---BULLS

Middle aged, serviceable age and younger. Well bred and good individuals. Prices reasonable, breeding considered.

Harry Leppla, Sec'y., Fox River Valley Guernsey Breeders' Association Appleton, Wis.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

Masher's Galore 8572 A. R.

Increased the Average Production Credit of 12 A. R. daughters out of A. R. dams by 181 lbs. We offer his double grandson out of another daughter also making a better record than her dam.

C. H. Hechler, Superintendent
Box 30, Roslyn New York

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45829, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by
RADISSON FARM, ANOKA, MINN.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection
OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

For Sale

Two Advanced Registry Guernsey Bulls of excellent breeding and conformation. Tuberculin tested. One 2-year-old and other a yearling. Dams' records over 515 lbs. per year as 3-year-olds.

Address
Emil Walther. Medford, Wis.

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS
James H. Murphy, Mgr. Delavan, Wisconsin

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

We Offer For Sale

Simplicity's Winner of Iowanola (54404)

Born August 25, 1918. A show bull. First prize in class and member 2nd prize get of sire, Waterloo Dairy Congress, 1920.

Sire, Cherub's Winner (34180). The sire of all the animals that won all of the cups and trophies awarded at the N. D. S., 1920.

Dam, Simplicity of Haddon (47876), A. R. 7607. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. A big, strong, typy cow, a very easy milker and a good breeder.

Write for further information. We have a few younger bulls.

Mountain Bros., Carrier 403, Des Moines, Ia.

Stop! Look! Listen!

And you'll not be missin'
Your choice of 25 females
(We're telling no tales),
Of popular May Rose lines.
Fine type, and great dairy signs.
Also 2 males, one 18 months,—
The other still bunts.
$250 takes the older.
For the rest, send for folder.

Forestdale Farm, Richard D. De Forest, Amsterdam, N. Y.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

A Correction

An error in the issue of Hoard's Dairyman for November 26 gives two splendid producing cows a mistaken presentation through an interchange of legends to cuts from their photographs. One is Pilot's Rockland Beauty, a Jersey from the Waikiki Farm of Washington. This good cow produced 13,288.8 lbs. milk, 766.91 lbs. fat in a year. Chilmark Rival Antoinette, a Guernsey owned by W. C. White, Ohio, is the other victim of our error. As a three-year-old she has made 11,221.1 lbs. milk, 580.71 lbs. fat, and now holds tenth place in Class CC.

Idaho Dairy Excursion

On November 6th a calf club and dairy excursion was held in Gooding County, Idaho. Thirty-five or forty dairy farmers and club members took part. The herds of Hasting and Anderson, A. S. Reams, W. H. Fowler, L. S. Perry, Riley Thorpe, Traville's Dairy, and Saum and Son were visited.

Gooding County is the first county in Idaho to have a testing association so large as to require two testers. It is one of the first counties to have excellent herds of each of the four dairy breeds. F. R. CAMMACK.

Sheboygan County Holsteins Average $340

One of the most successful Holstein sales held in Wisconsin this fall was the Sheboygan County Breeders' Sale at Plymouth on Nov. 20.

Sixty animals, practically all of them good ones and many with good records, brought $20,370, a $339 average, with 3 of them going for $1,000 or more.

Carl Swartz, Wisconsin, purchased the top of the sale, Neith Champion Witteen De Kol, a 31-lb. 1,045-lb. 6-year-old daughter of a 32-lb. cow for $4,000. She was consigned by Carl E. Brickbauer.

Another of the good ones offered was Clearland Hengerveld, a 2-year-old granddaughter of King Segis Pontiac Veeman that had just completed a 24.47-lb. record. She was consigned by D. E. Vanderhoof and purchased by the Pinehurst Farm Co. for $1,500.

Mack & Laux did the selling with Sale Manager F. H. Everson in the box.

The following list includes all animals selling for $300 and buyers:

Wm. Fenner, Wisconsin	
Elenora Lady	$500
F. W. Fisher, Wisconsin	
Segis Jane	$490
Spotty Careme De Kol	400
Jas. Ogle, Wisconsin	
Unnamed male	$500
Isaac De Munk, Wisconsin	
Violet of Spring Valley	$1,000
Truttschell Bros., Wisconsin	
Melchior Clarissa De Kol	$310
Lucy Neeltje Burg De Kol	300
J. H. Harder, Wisconsin	
Unnamed male	$325
J. E. Strauss, Wisconsin	
Rose Mercedes Pontiac Ormsby	$410
Lady Bumble Bee Pontiac Longfield 2d	670
Carl Swartz, Wisconsin	
Neith Champion Witteen De Kol	$4,000
Wm. Warner, Wisconsin	
Queen Mechior Beauty	$300
Geo. Buelke, Wisconsin	
Unnamed male	$375
W. L. Holbrook, Wisconsin	
Johanna De Kol Segis 2d	$370
T. R. McGrath, Wisconsin	
Duchess Tinia Ripon 3d	$300
O. C. Nehring, Wisconsin	
Bessie Jewel Johanna	$410
Pinehurst Farms Co., Wisconsin	
Clearland Hengerveld	$1,500
Hand & Traxler, Wisconsin	
Clearland Pietertje Segis	$325
Hulbert Lampleer, Wisconsin	
Urania Yeslet De Kol	$300

A Grandson of

King of the Pontiacs

For $100 — Eight Weeks Old

Bellwood Pontiac Ormsby Veeman

Sire—King Pontiac Pondyke No. 180976, a son of, and from a 32-lb. granddaughter of King of the Pontiacs.

Dam—Bellwood Ormsby Crissie No. 399607. A. R. O. 16.32 butter in seven days at 3 years. She is a daughter of a 25-lb. cow and Ormsby Pontiac Hengerveld 141144, a son of King Korndyke Hengerveld Ormsby and K. P. Kate, a 25-lb. daughter of King of the Pontiacs. Good individual guaranteed to please. About ¾ white.

Herd under Federal Supervision

Bellwood Farm

C. W. Bray, R. D. 1, Fredericksport, Pennsylvania

Photo and pedigree on request.

Bull for Sale

Having been authorized to sell this bull at a very nominal price, I will give you a brief outline of his breeding.

SIRE—Sir Ormsby Banostine Champion. "The only son of Duchess Skylark Ormsby, the only 1,500-lb. cow." This is enough regarding the sire's breeding.

DAM—A 34-lb. cow with two A. R. O. daughters, and she out of a 29-lb. dam and she out of an A. R. O. cow.

This cow and her dam are individuals, and the dam of the bull is a sister to one of the present day sensational sires in regard to individuality and production of his offspring. Every cow in pedigree is an A. R. O. animal.

This wonderful son of this large producer is offered only for the fact that the herd is small and he is a bull that needs an opportunity.

Guaranteed for 60 days and right in every way. No abortion or T. B. in herd. He is dark, three years old, and weighs 2,400 pounds. Will sell outright or trade for stock of equal breeding.

Address Box 485

Care HOARD'S DAIRYMAN

A Son of the 37th that is "CARRYING ON"



SIR BESS ORMSBY MERCEDES (184275)

He has:

A 14.7 senior yearling daughter,
An 18.4 junior two-year-old daughter,
First Prize two-year-old daughter at Northern Wisconsin State Fair. More coming.

Choice bulls for sale

SILVER SPRING FARM

W. S. Comings, Prop., Eau Claire, Wis.

FOR SALE

A DIAMOND IN THE ROUGH

R. C. MARATHON

BESS BURKE



298911

Born Dec. 29 1919

Backed YEARLY With PRODUCTION

His Sire MARATHON BESS BURKE

His four nearest dams average the highest in the WORLD MILK and BUTTER COMBINED. By a son of QUEEN PIEBE MERCEDES, *WORLD'S RECORD 4-YR.-OLD*, and out of a 42—1,164-lb. daughter of SPRING BROOK BESS BURKE, "The Greatest Mother of the Breed."

His Dam BURKE PIEBE ORMSBY

At 3 yrs., 20.55 butter from 442.4 milk. SOON TO FINISH A YEAR RECORD. Sired by a son of a 35—1,136-lb. daughter and out of a 24—797-lb. daughter of SIR P. O. M.

A Double Cross—Sir P. O. M. and Springbrook Bess Burke—Blood

Five of the dams appearing on his chart have semi-official records which average: Butter, 365 days, 1,116.29; milk, 24,611.14.

Priced to Sell *Write for a Pedigree*

RAMSEY COUNTY HOME

J. E. McMahon, Superintendent North St. Paul, Minnesota

King Segis Pontiac Count

"The Marvel of All Sires"

Continues to "Out-Distance" All Other "Long-Distance" Sires of the Breed

Twenty-Five Per Cent of His Daughters are Over the 1,000-Lb. Mark

We Build for the Future

During this period of adjustment following the world-wide war, we are quietly working right along, making records and building a foundation for the future, in the greatest business on earth — the one that has weathered the test of trying business conditions — the one that is bound to be the first to come back to a normal basis.

There is Always a Market for Pure-bred Holsteins

The day of the scrub cow has been dying for some time. It is dead now. There never was much money in them — there is less now than ever. It does not pay to keep anything but the best.

There will probably never be another time when you can fill your barn as advantageously as now. Because of the scarcity of pure-breds and the fact that breeders are declining anything but the best — the future is assured.

Buy now — you'll not repent at leisure

We Have a Wonderful Line of Bulls and Heifers Ask Us About Them

ARDEN FARMS

J. M. Hackney, Owner

602 Merchants Bank Building, St. Paul, Minnesota

WILSONDALE FARMS

Young Holstein Bulls Backed by Yearly and Seven-Day Records

Herd under Federal Supervision

We have several young bulls up to 17 months of age, sired by Maplecrest Sir De Kol, whose dam made 31.07 lbs. of butter and is a daughter of Daisy Grace De Kol, former World record Junior 4-year-old in the yearly production division.

These bulls are all well grown, and are of show type individuality. They are from dams with records up to 31.70 lbs. of butter in seven days, and 640 lbs. of milk.

Included in the above are a few young calves from 2 to 4 months of age from untested dams, which I will price very reasonable for immediate acceptance.

Prices and full description, with photographs will be furnished upon application.

These calves should be seen to be appreciated.

C. A. WILSON, Prop., Decatur, Illinois

Edinboro Lake Farm

Low Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

ERNLESS HOLSTEINS, Registered and R. O. Animals, all ages, for sale. Federally ted.

O. E. STEVENSON, Scranton, Penna.

Rhoda Echo Prince

leven months old. A choice son of Radi-, the wonder bull, son of May Echo Verbella a of May Echo Sylvia. His dam, a wonder-producing daughter of Pietje Korndyke Lad sire of more 25-lb. three-year-olds than any le living. Federally tested and crated ready ship. Price $250.

J. C. Eyre, Chantry, Ontario, Canada.

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ol-ie, sire of world's youngest 1,000-b. 2-year-old, good individuals rom tested dams, some with year-y records. These calves grow in-o profitable sires. Write

WALCOWIS FARMS

Lake Geneva, Wisconsin

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

e what we are offering just now. The heif-are registered two-year-olds, bred to fresh-this fall. The bulls, old enough for fall ser-e, are from A. R. O. dams and by Sir Orms-Homestead Butter Boy, a 35-lb. bull. One is a 42-lb. grandson of S. P. O. M. Come and them.

ANDREW FRANK. FOX LAKE, WIS.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and Octo-r, 1919, and that many satisfied customers that time. A life time experience raising d selling live stock. Write or wire early for tes as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

RELIANCE

Holstein Stock Farm

Is offering 9 registered Holstein bulls for sale. Also some very fine heifer calves and cows.

rs. W. H. Ascott, Sparta, Wisconsin.

Sons of a 36-lb.—1315-lb. Sire

ey are sons of Dutchland Creamelle Denver Prince. sire is a 30-lb. 1,028-lb. grandson of Colantha Jo-na Lad and his dam, the highest record daughter the same sire, with 36 lbs. in 7 days, 1,315 lbs. in ear.

ey are from tested (records up to 20 lbs.) and un-ted dams — Good producers rich in the blood of oie Mutual De Kol and King Segis Pontiac.

e calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

$100 to $200

ys a good bull. Sired by very typy, 26-lb. ll and from tested dams up to 25.46 lbs. tter in seven days.

Tuberculin Tested

W. Crawford, R. 5, Campbellsport, Wis.

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

A Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 lbs. as a heifer; second dam 24.79 lbs.; third dam 28.88 lbs. Bull mostly white, very good individual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record 19.75 lbs.; second dam 18.75 lbs.; third dam 21.45 lbs. Half white. A show bull. Price $200.

For complete information and pedigree write

A. M. Anderson, Whitewater, Wis.

Millar Farm offers:—

Five Months Old Bull Calf

Light in color, straight and right. Will weigh about five hundred or better.

Sire — Finderne Netherland Korndyke, the 31-lb. son of the former World's Champion Junior two-year-old. Dam — Colantha Hengerveld De Kol 5th. Record: 2 years, 5 months, 17.3 lbs.; 4 years, 7 months, 20.24 lbs.; 6 years, 2,172 lbs.

Priced at $300.00 and guaranteed to please.

WM. MILLAR, JR., Menomonie, Wis.

Wayside Lawn Farms

offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

Two Good Bulls For Sale

One Ready For Heavy Service

No. 1, a 3-year-old grandson of Johanna McKinley Segis from a heavy producing granddaughter of King Segis.

No. 2, an 8-month-old grandson of Johanna McKinley Segis from a good producing dam.

Both bulls are light in color and splendid individuals. They are priced right.

F. W. Sinnamon, R. 1, Palmyra, Wis.

Mr. Dairyman—

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
D. W. Norris, Owner. E. Lochndorf, Herdsman

Just What You've Wanted—

A Son of

Sir Bess Ormsby Fobes



SIR BESS ORMSBY FOBES—$30,000 SON OF S. P. O. M. 37TH AND WISCONSIN FOBES—NOW HEADING THE GUSTAVE PABST HERD

We Have Several of His Good Sons For Sale

They range in age from calves up to yearlings. Every one of them is from an A. R. O. dam that either has a year record or is now on semi-official test.

These are show type bulls too: — No sloping rumps or shallow bodies. They're the kind you want to head your herd.

We guarantee every animal sold to be exactly as represented. Their health is guaranteed, too.

Write for complete information today

Linden Lawn Stock Farm, R. 1, Jefferson, Wisconsin

B. W. Rabenhorst, Proprietor

Just a Few of His Sons Left

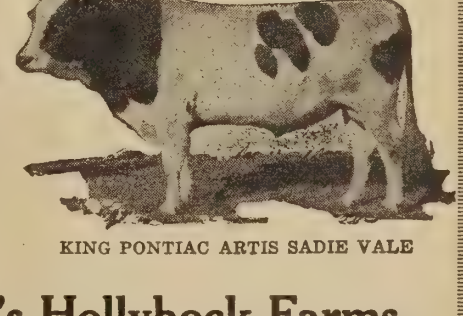
1 or 2 of Serviceable Age

King Pontiac Artis Sadie Vale, our former herd sire, is a 34-lb. son of the great King Korndyke Sadie Vale. His daughters are being kept as part of our foundation herd.

You can't go wrong on one of his sons. You'll find them good individuals and they'll sire good productive individuals.

We have a few from good 7-day and yearly record dams for sale. They are priced to sell because just now we're crowded for room.

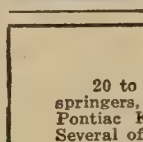
Remember they're guaranteed to be right. Write or come and see us.



KING PONTIAC ARTIS SADIE VALE

Gustave Pabst's Hollyhock Farms

Fred J. Southcott, Manager Dousman, Wisconsin



HILLSIDE HOLSTEINS FOR SALE

5 Record cows, 5 A. R. O. 2-yr.-olds, 5 Sr. yearling heifers all sired by, or bred to, our 31-lb.—1100-lb. Show Bull or the 39-lb.—1100-lb. Jr. Sire. Bulls ready and younger, good individuals, light colors. T. B. tested clean and right. Come or write your wants.

Farm one and one-half mile S. (Sauk Co.) KIRKPATRICK BROS., Reedsburg, Wis.

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio

A Few Splendid Young Bulls

ZEHRINGHURST HOLSTEIN FRIESIANS

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

25 Holstein Cows For Sale

or exchange. 23 are high grades, 2 are registered. Also my herd bull, a grandson of K. S. P. A., the $50,000 bull. This bull is from a 27-lb. cow. Most of the cows are bred to him. All are young cows, well marked, heavy producers. Price, $200 per head if entire herd is purchased.

Will take 2 good teams of draft mares or mules as part payment or might consider a good used automobile as partial payment.

O. A. HIGGINBOTHAM, Rossville, Kas.

Complete Holstein Dispersal

The well-known Geo. P. Carver Herd

Faribault, Minnesota

Thursday, December 9

In Heated Armory

50 HEAD Including the herd sire, ORMSBY KORNDYKE LAD 7th, a 34-lb. son of ORMSBY KORNDYKE LAD

THE OFFERING INCLUDES

45 females, of which 33 are bred to the great ORMSBY KORNDYKE LAD 7th and 13 are due to freshen this winter. Daughters and granddaughters of such noted bulls as Aaggie Cornucopia Johanna Lad Jr., King Korndyke Colantha Ormsby, De Kol 2nd's Butter Boy 3d, King Korndyke Sadie Vale, Johanna Bonheur Champion, and Ormsby Korndyke Lad, and

Two yearling sons of ORMSBY KORNDYKE LAD 7th.

An opportunity to get the benefit of years of constructive breeding.

A Chance to get Foundation Animals

Sale Under Management of

Minnesota Holstein Breeders' Ass'n

406 Market Bank Building Minneapolis, Minnesota

Six months' time at 7% to buyers with bank references



The Whole World

is talking about

Carnation Holsteins

The Only Herd of cows where the blood of the highest milk producing cows, 7 and 365 days, can be crosssed.

Introduce this milk flow into your herd by using a Carnation bull as your herd Sire.

Every bull sold under a guarantee that protects you.

Prize Winners in the Show Ring — World's Champion Producers.

Send for information, pictures and pedigrees.

Prices $350 and up

Eastern Office: 1211 Consumers Bldg., Chicago, Ill.
Western Office: 1211 Stuart Bldg., Seattle, Wash.

Carnation Stock Farms

FARMS
Western Farm, Near Seattle, Wash.
Eastern Farm, Oconomowoc, Wis.

Home of Contented Cows

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Young Bulls $200 to $500

I have for sale a few splendid young bulls 6 to 7 months old sired by Sir Aaltje Pontiac Hengerveld, my 33.68-lb. herd sire. They are very good individuals from A. R. O. dams with records of from 17 lbs. as 2-year-olds to 28-lb. aged cows. Can also offer a few good cows bred to "Sir Aaltje". Satisfaction guaranteed.

J. D. McDONALD, - - WEST SALEM, WISCONSIN

HOLSTEIN BULLS AND HEIFERS ! !

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Old Deerfield Herd

Headed by King Piebe Korndyke Johanna. Bulls from one to six months of age for sale. Prices $50 to $75.

CARL FOLL, Deerfield, Wisconsin

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

WAUPACA COUNTY HOLSTEINS

The Home of Healthy Holsteins

More Federal Accredited Herds than any other County in Wisconsin

200 Grades and Pure-breds ready for immediate shipment

WAUPACA COUNTY HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, A. B. Rowe, Secretary, Waupaca, Wis.



The Dairy Division at Washington says:

"As the production of a cow is doubled, profits increase three times. As production is trebled, profits increase six times.

"The average cow in the United States yields 1,823 quarts of milk yielding 207 pounds of butter a year. Average profit per cow $20 over cost of feed."

The average production of all purebred Holsteins that have been officially tested for a year is 629 pounds of butter from more than 7,000 quarts of milk.

In yielding more than three times as much as the scrub cow, the purebred Holstein yields six times the profits.

As production is tripled, profits increase six times.

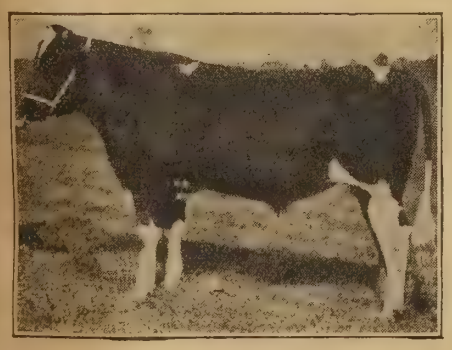
Send for free illustrated booklets.

The Holstein-Friesian Association
101 Hudson Street, Brattleboro, Vermont.

PRICE—$750.00

Sired by a 40-lb. Bull and out of a cow with year records of:—

	BUTTER	MILK
5 years —	925 lbs.	23,600 lbs.
4 years —	867 lbs.	21,705 lbs.



Ready for Service

BORN October 13, 1919

His dam is sired by Sir Inka Prilly Segis (30-lb. son of King Segis) and has 20 sisters with year records and 15 others on year test. Her 7-day record is 27.38 lbs. butter and 665.8 lbs. milk made in connection with her largest year record.

His sire is Johanna King Segis, who is out of a 40-lb. dam and by a yearly record son of King Segis. He has 8 daughters with year records, and these average over 700 lbs. butter and 18,000 lbs. milk. One of these is now making close to 1,100 lbs.

60-day Retest Guarantee

WINTERTHUR FARMS, Winterthur, Del.

Federal Accredited Herd

Why Buy a Son of King Pietertje Ormsby Piebe?

Because he is one of the very best long distance bred sires in the country.
Because he not only is backed by show ring individuality but is himself siring show ring winners.
Because he will be given every chance as a sire and his daughters will all be given the best possible chance.
Because his sons are always in demand. If you have one he will actually increase in cash value during the next several years.
We have several good youngsters for sale by him from good 7-day and year-record dams.

Hargrove & Arnold Holstein Co., Norwalk, Ia.

Ormsby Bulls—

The 30-lb.—1000-lb. Kind



If you want one of that kind—a real individual—write for our sale catalog.
We have left just a few sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, from cows with 7-day records up to 40 lbs. and that have made or are making year records.
Have also a few splendid grandsons of S. P. O. M. from the same kind of dams.

MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA
Address all correspondence to Garden Court Apts.

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21, 465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

HOME FARM HOLSTEIN FRIESIANS

Home Farm Korndyke Sir Clyde

a light colored son of Woodcrest Sir Clyde we offer, just a year old. His dam is a 16-lb. 2-year-old daughter of K. K. S. V. 24th. She will have over 525 lbs. butter for the year; second dam, an 18-lb. 2-year-old daughter of Sir Sadie Cornucopia. He is given a federal certificate of health. Write today.

W. B. Barney & Sons - - - Chapin, Iowa

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

THE TRAVERSE HERD

We have what you want in
BULL CALVES
the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

EVENTUALLY, WHY NOT NOW—

Buy A Son of a 30-lb. Cow

Born October 2, 1919

A fine individual, straight and well built, about ⅔ white. Sire, son of Colantha Johanna Champion, 57 A. R. O. daughters, and Duchess De Kol Korndyke, 21.65 lbs. at 9½ yrs., having a world champion daughter. Dam, a 30.48-lb. daughter of Johan Hengerveld Lad, 65 A. R. O. daughters, full sister to a twice 30-lb. cow. Have two more of similar breeding. Pedigrees and prices on request.

Ontonagon Co. Farm - Ontonagon, Mich.
T. G. Roberts, Herdsman. J. S. Netterarer, Sec.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.
BLUEBELL FARM, RICEVILLE, IOWA.

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to
McKAY BROS., - - CADDOA, COL.

Another Good OHIO Sale—

Seneca County

Holstein Breeders' Sale

Dec. 8, at Tiffin, Ohio

A Sale Where You Can Buy Just What You Want From Among

40 Registered Holsteins
25 Good Grades

This is a sale of high class cattle — the best that could be selected from the good herds of Seneca County.

The Grades are young cows — straight, typy, good producers — all of them carrying the blood of first class registered sires.

The 40 registered animals are not just "pure-breds". They are quality cattle fit to serve as foundation animals in any herd. They represent some of the very best 7-day and yearly record breeding in this section of Ohio, much of it 30-lb., 1,000-lb. breeding.

The Sale is under the management of the State Association — It Must be Right.

Every animal sold subject to a tuberculin retest guarantee.

For Catalogs Write

Ohio Holstein Breeders' Association

H. C. Barker, Field Secretary **Tiffin, Ohio**

A Good Sale to Attend—

The Wayne County Holstein Sale

December 13, at Orrville, Ohio

To be held at the farm of Reece and Tschantz
4 miles north of Orrville

Two Complete Dispersions — 9 Other Consignors

22 A. R. O. Cows **21 Daughters of A. R. O. Cows**

8 Good Bulls from A. R. O. Dams

Including:

Snow Drop of Gerster, 28 lbs. butter, 596.8 lbs. milk, and her daughter.
Daisy Mink Korndyke, 25-lb. 4-year-old.
Aron Clothilde Model Fayne, 23-lb. cow.
Lady Pauline of Sunny Side, 19-lb. 2-year-old.
Anita Nikola Hengerveld, 21.91-lb. daughter of a 24-lb. cow.
Gerster Segis Korndyke, 21.79-lb. cow.
Pietertje Hengerveld Nudine, 19.55 lbs. butter in 7 days, and her 3 daughters.
Several daughters of and cows bred to Ormsby De Kol Korndyke, a three-fourths brother to Ormsby Korndyke Lad. Also a daughter of Fairview Pontiac Beets Korndyke and one sired by Risinghurst Johanna Ormsby De Kol, he a son of a former world record cow.

The bulls include:

A son of Hester Pietertje Champion Ormsby, 17 lbs. butter, 380 lbs. milk as a 2-yr.-old.
A son of Pietertje Hengerveld Nudine 3d (21.88 lbs. butter, 524 lbs. milk).
One from Netherland Ophelia Queen, 20.1 lbs. butter, 532.2 lbs. milk.

Remember:—That every animal will be sold subject to a 60—90-day retest. That the sale is under the state association management.

Write for your catalog.

Ohio Holstein Breeders' Association

H. C. Barker, Field Secretary **Tiffin, Ohio**

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. **LISLE FARMS CO., LISLE, ILL.**

Whitehurst Farm

Offers for sale Holstein bull one year old. Sire has four A. R. O. daughters and is a son of Canary Homestead Oak De Kol. Dam has 18,000 lbs. of milk in 365 days at four years of age. Grandam has 19,600 at five years and great grandam has 19,800 at five years old. Grandam has two A. R. O. daughters, one with 16,000 at 2 years and the other with 18,000 at four years. Dam has one daughter with 12,000 at two years. These records were all made under ordinary dairy conditions.

A. F. Randolph, Proprietor

Canton **Illinois**

The Complete Dispersion

of Phelps and McClure Herd

90 Registered Holsteins at Aurora, Mo. Thursday, Dec. 16th

One of Missouri's Greatest Herds

The most outstanding lot of individuals ever offer in one sale in Missouri.
40 great cows, with size, capacity, quality, dai temperament and with udders that will cause one wonder how they can carry them.
30 bred heifers, especially good ones, many of the daughters of the 30-lb. son of King Segis Ponti Alcartra, the $50,000.00 bull.
A few yearling heifers and heifer calves. 2 herd sir and 7 young bulls ready for service.

Some of the Real Attractions

The 30-lb. Senior Herd Sire.
The Junior herd sire, a son of King Korndyke Sad Vale.
12 daughters of a 31-lb. grandson of Cornucopia Jo hanna Lad.
2 granddaughters of Johanna McKinley Segis.
3 daughters of King Mutual Korndyke.
2 daughters of King Pietertje Ormsby Piebe.
16 A. R. O. heifers.
1 cow with yearly record, 723.12 lbs. butter.
1 Junior four-year-old record 22.53 lbs. butter and of her daughters.
1 daughter of a 946-lb. yearly record cow.
1 daughter of a 723-lb. Junior two-year-old.
11 daughters of 30-lb. bulls.
3 daughters of 36-lb. bulls.
13 daughters of bulls whose dams' records range fro 31 to 36 lbs. butter in 7 days.
3 daughters of a 1,200-lb. yearly record bull.
2 daughters of bulls whose dam's yearly record 1,389.45 lbs. butter.

A Federal Accredited Herd

Sold with 60- to 90-day retest privilege.
Where can one get more than in this dispersal of th great herd? Individuality, breeding, production a HEALTH? THAT'S ALL, THERE IS NO MOI TO BE HAD.

Write today for catalog to W. F. Phelps, Aurora, Mo.

W. H. Mott, Sales Mgr., Herington, Kans.

Aurora, Missouri, is located on Frisco and Missou Pacific. All trains arrive before 11 a. m. Sale sta at 11:30.
Arrange to attend our sale, then the State Sale t following day at Springfield, Missouri.

Wooddell Farm

Offers a Few Serviceable Bulls

Sons of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.

Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS **Lakeland, Minn.**

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

RICHLY BRED

HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes**, a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby**, a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.
Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

Yearling Bull

Ready For Service

Here is a show bull whose dam has a 3-year-old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.

The first check of $150.00 takes him.

G. G. Burlingame, Cazenovia, N. Y.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Registered Holstein Females

Your choice of 85 head, all ages. Priced to sell. Some bred to our 34-lb. sire and other good sires. Several A. R. O. cows. **BLACK AND WHITE STOCK FARM, Route 3, Melrose, Minn.**

DON'T PUT OFF

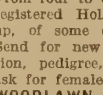
Seeing your friends and having them join in for a club of subscribers.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke.

Wm. N. Osborn, Wanatah, Ind.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

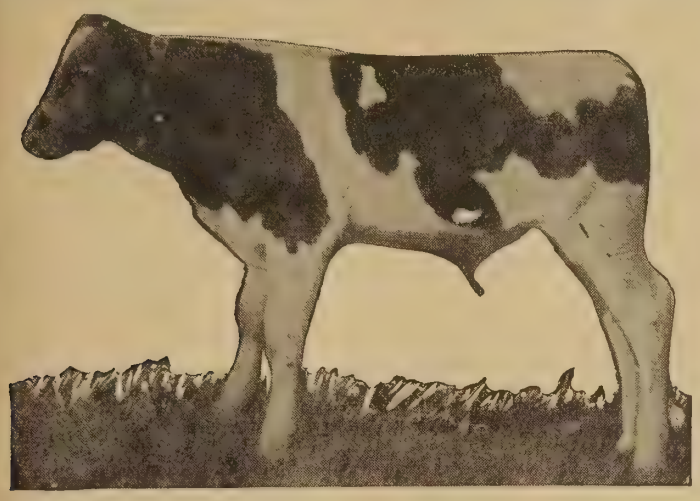
The Purebred Live Stock Sales Company

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

This Son of a 31-lb. Junior Three-Year-Old For Sale



KING ORMSBY ACMEANNA (313160), Born June 17, 1920

His two nearest dams average: Butter, 33.26 lbs. and milk, 663.30 lbs. in 7 days. He is a splendid individual, well grown and of a rugged type. He carries a splendid combination of breeding and will make some small breeder a real herd sire.

HIS DAM

LADY ACMEANNA ORMSBY DE KOL, is an outstanding individual. As a junior three-year-old she made 31.14 lbs. butter from 502.3 lbs. milk. Her sire is SIR MUTUAL ORMSBY DE KOL, a son of Duchess Ormsby Butter King and the 31-lb. cow, Maid Mutual De Kol. This cow is the dam of KING PONTIAC CHAMPION, the famous PABST FARM herd sire.

HIS SIRE

SIR COLLEGE CORNUCOPIA 2D, has a splendid list of A. R. O. daughters. His dam is College Belle Wayne, the famous South Dakota College producer. In 7 days she made 35.38 lbs. butter and 824.3 lbs. milk. She has a daughter with 989 lbs. butter for the year.

Price $1500.00

Guaranteed sound in every way. Will hold until six months of age and ship subject to 60- to 90-day retest

E. C. Schroeder Farms - Moorhead, Minnesota

Federal Accredited Herd

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.

"The Home o the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Lake Shore Holsteins

0 pure-bred heifer calves, 6 months to one r, $150 to $200 this month. Good type, good king.

J. Oppliger, Forest Lake, Minn.

ave you talked with your neighbors about scribing for Hoard's Dairyman? Why not it now? Make up as large a club of sub- bers as you can and send them in.

Female Holsteins for Sale

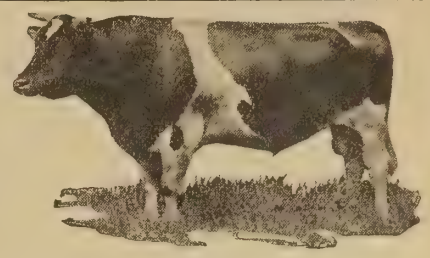
Pure-bred cows and heifers of choice breeding. Bred to our herd bull, "Sir Ormsby Segis Korndyke". Also fifty high grade cows and heifers, fresh and springers.

ISLAND PARK STOCK FARM,
Hanscom and Anderson, Props.,
R. F. D. 1. St. Cloud, Minnesota.

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

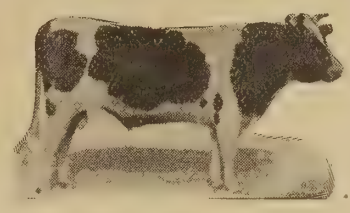
Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Just About Ready for Service — $500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.

(A Federal Accredited Herd)

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**

H. R. Searles, Mgr. Rochester, Minn.

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

In Our Bull Circular

are listed sons of King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired," from large record cows and heifers of high individual excellence. If you want this blood better write today for the circular.

Flecks Farms, Faribault, Minn.

Registered Holsteins For Sale

Heifer, 18 months old, $250.00
Cow, three years old, $350.00
Two bull calves, 6 and 8 weeks, $50. each. Must sacrifice to make room.

Elm Hurst Farm, Robbinsdale, Minn.

It "Stays Satisfactory"



John H. Lentell

Well Known Wisconsin Breeder speaks from 3 years Pine Tree Experience

Three Years Ago!

Beloit, Wis.

Pine Tree Milking Machine Co.
Chicago, Ill.

Gentlemen:
"Having used the Pine Tree Milker on my herd for a few months, will say I am much pleased with it. I could not get along without it. My cows show that they like it better than hand milking. There is very little stripping to be done after it."
(Signed) JOHN H. LENTELL.

Today!

Beloit, Wis.
Oct. 21, 1920.

Pine Tree Milking Machine Co.
Chicago, Ill.

Gentlemen:
"After using the Pine Tree Milker about three years I can say I am well pleased with it, and have added another double unit. I find the Pine Tree cuts labor costs in half. The cows still insist on the machine in preference to hand milking—not only the cows—but we do also. We would not try to keep a herd without the Pine Tree."
(Signed) JOHN H. LENTELL.

Other Evidence from the West

Worth 5 Times Its Cost

Bonner Springs, Kan.
July 10, 1920.

"Our machine is sure a dandy, have not had a minute's trouble. Would not have it taken out for five times the price it cost."
C. C. DUNBAR.

Son Now Milks 30 Cows

West Union, Ia.
Oct. 8, 1920.

"We are more than satisfied with the Pine Tree Milker. It did *more* for us than was claimed by the salesman. Our 19 year old son, Harold, has taken care of thirty cows since installing the Pine Tree Milker. We would not take it out for any price, if we could not replace with another PINE TREE at once. We cannot speak too highly of the Pine Tree."
(Signed) J. O. LARSON.

Upkeep 5c a Month

Elmwood, Wis.
Oct. 22, 1920.

"I purchased my Pine Tree Milker July 1, 1919. During the sixteen months of use, I have never missed a milking. During that time the upkeep has cost me just 80c. The machine has proven to be satisfactory in every respect. With the use of the Pine Tree Milker it has been possible for me to do my work alone."
(Signed) LESLIE HOLT.

HUNDREDS of splendid letters come to us from Pine Tree users from Coast to Coast.

They are not written in that burst of enthusiasm on being released for the first time from the drudgery of hand milking. But from the experience of months and years.

They come from men who have used the Pine Tree through one or more full milking periods. Their records show increased production. They know whether it has saved money in time and labor—whether they have had to fuss and spend money for repairs—how easy it is to keep their machine in condition to make clean milk. And the thought between the lines in all these hundreds of letters is this:—*"It Stays Satisfactory".*

This is the greatest thing which can be said of any milker. The few letters we can print here are typical of all the others. They are a man's surest guide in selecting his milker.

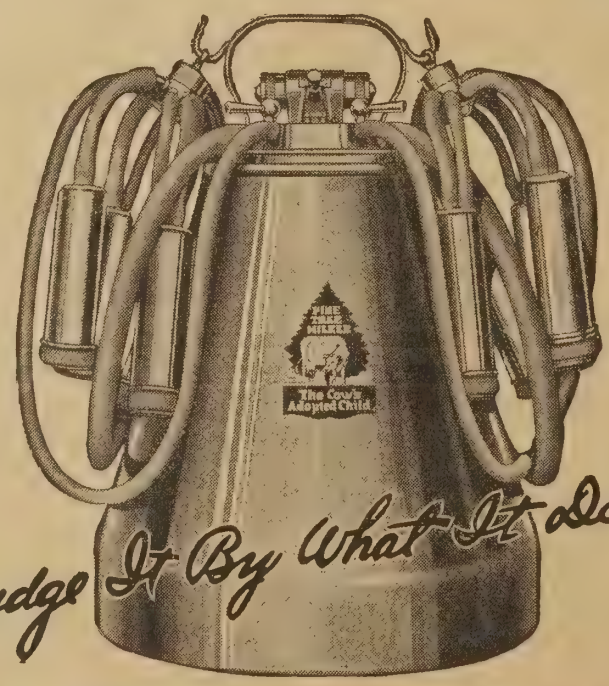
Get the facts from your Pine Tree dealer. Let him show you local installations. Catch the enthusiasm of your neighboring Pine Tree users. Also write today for the "Book of Experience" in which 43 practical dairymen tell you how they cut expenses and increase production.

Pine Tree Milking Machine Co.

Dept. 2859

2843 West 19th Street, Chicago, Illinois

110 Montgomery Street, Syracuse, N.Y. — **319 Second Avenue, South, Minneapolis, Minn.** — **346 Washington Street, San Francisco, Cal.**



"Judge It By What It Does"



Dayno J. Pennock

Prominent New York Pine Tree owner tells of his experiences

First Impression

Chaumont, N. Y.
Nov. 20, 1918.

Pine Tree Milking Machine Co.
Syracuse, N. Y.

Gentlemen:
"The Pine Tree is giving me the best of satisfaction. Several hard milking cows in my herds are milking perfectly. I am satisfied I have the easist miker to operate and keep clean. Milking with a Pine Tree is a pleasure where by hand it was hard work."
(Signed)
DAYNO J. PENNOCK.

Two Years Later

Chaumont, N. Y.
Oct. 15, 1920.

Pine Tree Milking Machine Co.
Syracuse, N. Y.

Gentlemen:
"After two years my Pine Tree is giving the best of satisfaction. I was about the first one to install a Pine Tree in this section. I would not be without it and I would not exchange it for any milker I have ever seen."
(Signed)
DAYNO J. PENNOCK.

Word from other Eastern Boosters

Pulsator Never Failed

Cornwall, Vt.
Nov. 1, 1920.

"We have used the Pine Tree Milker about two years and it certainly has given us good service. The pulsator works to perfection, never has been once out of commission. The machine is very easy to keep clean. If we were to buy another Milker tomorrow it would be a 'Pine Tree.'" (Signed) A. J. and B. R. FIELD.

Not One Penny for Repairs

Edinboro, Pa.
Sept. 29, 1920.

"Last spring I purchased a PINE TREE for my herd of 28 grade and pure bred Holsteins. Have experienced the most satisfactory results. I consider this far ahead of hand milking. The cows stand better and give more milk. Have had no udder trouble. I have not spent a penny for repairs as yet. When I cannot use a Pine Tree I shall quit dairying."
(Signed) J. E. HARNED.

2 Years Perfect Satisfaction

So. Kortright, N. Y.
Sept. 28, 1920.

"After using our Pine Tree Milker for two years we are perfectly satisfied with same and fully believe that it is the best milker that has yet been put on the market."
(Signed) ROSE BROS.

PINE TREE MILKER

4 C
Urbana Ill.
AGRICULTURAL LIBRARY

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX FORT ATKINSON, WIS., DECEMBER 10, 1920. Number 21

BANISHING MILKING TROUBLES

Power Milking Reduces Labor and Production Costs

C. A. LECLAIR, WISCONSIN

"I WOULD no more think of resorting to the cutting of grass with a scythe, harvesting small grain with a cradle, or skimming milk by hand than I would of returning to hand milking since seeing how well a mechanical milker serves on my farm. It not only gives me two hours more time to work in the field each day, but it is now possible for me to be away at milking time when occasion demands. My wife and boy are able to run the equipment fully as well as myself. Milking is no longer a tied down proposition for me and we are able to produce more and better milk."

This is the testimony of Julius Pohl, Outagamie County, Wisconsin, only one of the most satisfied users of milking machines in this country. I have yet to find an instance where a standard machine in the hands of an intelligent operator has been displaced. Yet in spite of the fact that nearly every mechanical milker on the market today is a more perfect substitute for the calf than hand milking, there are at present not more than ten per cent of the dairymen in the United States using power milkers. Of those using mechanical milkers, about 90 per cent bought their equipment within the past ten years. In other words, the swing of the pendulum toward power applied to milking has just begun in America. Nothing can now stop the interest in a machine which is actually capable of taking the drudgery out of the dairy business. The subject of milking machines is a topic of conversation now whenever two or more farmers who keep cows meet. Farmers have come to realize that the use of milking machines is the next step in the economical management of all but the very small sized herds. The old conservatism is gone. It is today quite generally understood that the occasional cases where unfavorable results from the use of such machines are reported reveal a fault other than the equipment. In other words, standard milking machines have passed long since beyond the experimental stage so that when somebody knocks them it means that they failed to operate them properly or had unadaptable cows.

In the application of power to farming, America has for the most part led the world. In the case of the mechanical milker we have let Australia and New Zealand set the pace for us. In these countries today there are few farmers milking as many as thirty cows who do not have mechanical milkers. Several things have heretofore prevented a more general use of power milkers in America. At present these conditions have been largely altered and as a result there are going to be more dairymen investing in mechanical milkers from now on than in any other form of modern equipment. This is only to be expected when one considers that a milker is about the only machine on a farm that is put to use at least twice every day of the year.

Poor salesmanship, more than anything else, was responsible for the past slow growth in popularity of mechanical milkers. Not only did agents fail to overcome the natural conservatism of farmers with respect to these machines, but in many instances incompetent dealers unintentionally blocked embryonic interest on the part of dairymen in such equipment. In speaking of this situation, a prominent manufacturer of a standard make of milker said:

"Up to very recently the milking machine business was as rotten as the lightning rod game. Salesmen of certain companies have actually killed rather than made new business. In their selling methods some have not only been unbusinesslike enough to apply a hammer where they should have used a saw, but they have stooped to the unwarranted practice of knocking competitor's machines on the false grounds that these lacked certain essential parts which are in fact non-essentials."

Another thing that has caused unwarranted disappointment regarding milking machines is that some agents have been so anxious to place their outfit that they foolishly made extravagant claims for it. In certain instances dealers have gone so far as to state that hand stripping was not necessary after machine milking. This is an absolute mistake. Although the amount of stripping is usually very small it should nevertheless be thoroughly done. Other agents have minimized the necessity of daily cleansing of the equipment. The truth is that with power milkers it is possible to produce the very cleanest or the very dirtiest milk, depending upon the care of the machine.

Today there is growing to be a better understanding among the trade, and companies are beginning to realize that a good machine poorly placed not only does not bring future business but stops the advance of the trade more than it can be pushed by one hundred satisfied users. Few if any machines are now sold to men who appear as though they would be incompetent operators. Farmers who keep herds of a nondescript character, poor milkers that would not yield to a calf, are not looked upon as desirable men with whom to place a mechanical milker. The dairyman who feeds marsh hay to his cows and who has a record of breaking more fork handles on their backs than he does forking manure is also in the class of undesirable prospects.

What Farmers and Specialists Say

If the truth about mechanical milkers is anywhere to be found it should be in the verdict of the unbiased agricultural college experts. In answer to the question, "What type of mechanical milker shall I buy?" investigations by one of the leading experiment stations of the country reveal that a simply constructed milker does as good if not better work than a complex outfit. In an article published from the South Dakota College of Agriculture it was emphasized that if a close fitting rigid cup is placed over a cow's udder, air tight at the base and open at the other end, and a calf allowed to nurse, the milk will be extracted as rapidly and with no more discomfort to the cow than when the calf nurses as nature intended. This means that proper suction applied by a machine is the main requisite to good milking. Milkers of simplified construction, consequently, ought to be the cheapest and the least costly to maintain. A properly operated milker of this type is really a better substitute for the natural calf milking than is hand milking. It is a known fact that many highly productive cows have been ruined by tired or careless employees. In this connection Pro-

(Continued on page 924)



MRS. JULIUS POHL, WISCONSIN, SAYS IT'S FUN TO MILK COWS WITH A MACHINE

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
H. L. HOARD, A. R. HOARD, F. W. HOARD
EDITORS
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C. L. BURLINGHAM

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Subscription in United States and Mexico $1.00 per year; 3 years, $2.00; Canada, $1.50 per year.

FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

World's Record Quality Milk Producer

Princess of Meadowbrook, a Guernsey cow owned by the Brant Rancho, California, has a most remarkable record as a quality milk producer. At the Liberty Fair held in Los Angeles in 1918 her milk and cream were awarded the two highest scores ever given up to that time. At the National Dairy Show her milk and cream received the two highest scores ever given in the world and the first and only 100 per cent score ever given in the world. At the San Fernando Valley Fair, California, she received the Globe Cup for the "highest quality cow any breed, cow and her product considered." In this contest her milk received the score of 99.4 per cent, the highest ever given in any contest except at the National Dairy Show where her milk won first place and a gold medal.

Besides producing quality milk she does it in large quantities. Her first record was for 14,560 pounds of milk and 722.24 pounds of butterfat, the highest record for the breed in the West when made. The following year she increased this record to over 745 pounds of butterfat. She was first prize aged cow, senior and grand champion female at the California State Fair in 1919 and 1920; also first prize Advanced Registry cow and member of the first prize aged herd and first prize dairy herd in 1920. She and a sister were first prize produce of dam at the 1919 California State Fair.—AMERICAN GUERNSEY CATTLE CLUB.

Jersey Cattle Notes

For week ending November 19:

Number of animals registered: Bulls, 202; cows, 465; total, 667. Number of transfers recorded: Bulls, 209; cows, 722; total, 931.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Gifts We Want

Some gifts I'd like on Christmas morn,
To make my dairy life complete.
A patent sheller for the corn,
A modern plant for winter heat.
I'd like two silos of the best,
Cream separators—well, say two.
(They'll give us all a needed rest.)
It's what progressive farmers do.

I want electric lights this year,
And power—and a tractor fine,
Macadam roadways running near,
A telephone—my private line.
I'd like a slicked-up motor car,
To take me to the movie show,
Where all those other racers are,
A handsome motor truck or so.
New cows to make a wonder herd,
All pedigreed and milking-wise.
My heart then, like a singing bird
Will raise its pean to the skies.

Hang on the tree these minor gifts,
These little things I want and need,
And, when the day its glory lifts,
'Twill find me worthy of the deed.
May boughs be strong and purses wide,
And may your Christmas list be long.
Contented, will I here abide,
Head high in air—soul filled with song.

⚜

"There's one thing that would make my wife completely happy and satisfied, Bill."

"What's that?"

"If she could have a ring put in my nose and a rope fastened to it."

⚜

When the herd goes into winter quarters there is no reason to let the cows think that summer has gone forever and that there will never be any more clover. I always liked Jim Allen's way: his dairy barn is so all-fired cozy and snug and comfortable, that if you close your eyes, you can almost think you are driving the cows to pasture, down some shady lane.

⚜

When Little Eloise, from town, saw the hired man headed for the barn with a bucket of mash on his head, she wanted to know if that was the "balanced ration" she had heard so much about?

⚜

"Did you ever work on a dairy farm before?"

"No, sir."

"Ever milk a cow?"

"No, sir."

"Then what makes you feel you can get a job here?"

"Well, it's just like this. I always liked the country and I'm mighty fond of milk."

⚜

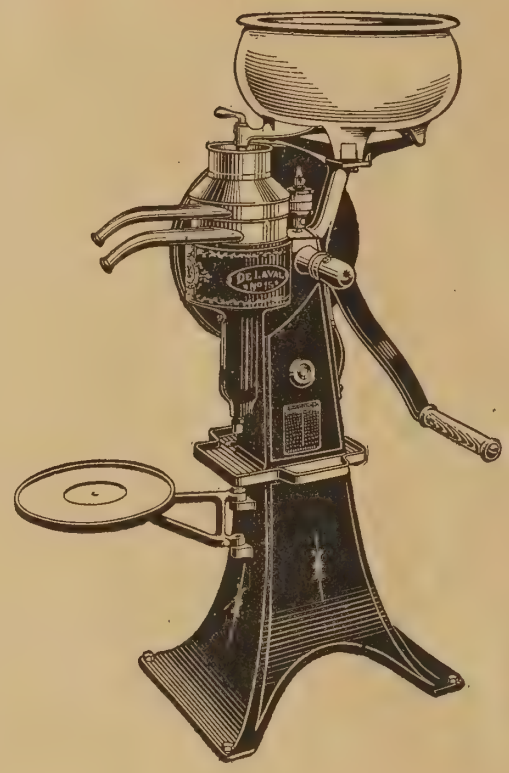
If the average city woman could look down into the average farm cellar and see the jams and jellies and potatoes, and apples, and goodness-only-knows how many other things, she would swoon away from sheer jealousy.

⚜

Nearing Christmas

It's on days like these
That I'm happy
Over being farm-raised.
Somehow,
I link Christmas and good things to eat,
And happiness of the heart
And contentment
With the farm.
I speak from experience,
For I have been far
Into the city paths,
And always, my heart was back
To a little country mother
And to God, and the stars and the fields.

Wherever there are cows there should be a DE LAVAL SEPARATOR



A DE LAVAL Cream Separator is an essential piece of equipment on every farm where there are two or more cows. Even though you sell whole milk you should have a De Laval to protect you against changing market conditions. It will turn the surplus you sometimes have into a readily marketable product.

Thousands of De Lavals have been installed to meet such emergencies and each one has paid for itself many times over In all, there are more than 2,500,000 De Laval Separators in use throughout the world — each one giving its owner service and profits that he could get from no other machine.

The De Laval skims cleaner, turns easier and lasts longer. Therefore it is the most economical and most satisfactory separator to buy.

Ask the De Laval agent nearest you for a demonstration, or write nearest De Laval office.

The De Laval Separator Co.

New York	Chicago	San Francisco
165 Broadway	29 East Madison Street	61 Beale Street

Defeat in New Orleans Milk Strike May Benefit Louisiana Dairymen



Dairy of F. E. Briggs who keeps 18 cows on 12½ acres and makes a go of it. Crab grass and cottonseed hulls are fed for roughage. The present concentrate mixture is 400 lbs. cottonseed meal, 200 lbs. bran or alfalfa meal, and 100 lbs. hominy feed. As much as 1 lb. of grain is fed for each pound and a half of milk.

MANY a year will pass before the events of nineteen twenty are forgotten in the Louisiana Dairymen's Association. For the twelve-month has shown that organization little favor unless a goodly invoice is given the intangible benefits from costly experience. A milk strike called was promptly and decisively lost, dissatisfaction and dissension have spread among its members, and the year ends with a federal indictment over three of its officials. Hardly a cheering situation, yet the promise of 1921 is one of optimism rather than pessimism for the dairy farmer of Louisiana.

The trouble began when the association called a milk strike May first on New Orleans, its principal market. The price paid to that date was $5.34 for 4 per cent milk, f. o. b., New Orleans. That was for the regular supply—surplus was paid for at butterfat prices and not welcomed at that. The season of heavy flow was on and producers needed a larger market. In an informal conference it was unofficially agreed, by the producers present and the representatives of the distributors, that the price should be temporarily cut to $4.41 and reduced two cents per quart to the consumer in an effort to increase consumption sufficiently to handle the surplus. The distributors accordingly set the price at $4.41 and the association, in session the next day, voted to strike!

Strike Called Against Advice

This action was taken against the advice of conservative members and of those who had served as leaders in times past. They emphasized that in a time of surplus and with the price favorable, as compared to that in other sections, a strike should be employed only as a last resort. It was urged that the producers should accept a reduction, advertise their decision to the consumer, and then increase the price when the supply was reduced. But feed prices were exorbitant and not on the decline, labor was scarce and costly, and farm expenses were very high even though pastures were bringing some relief. The producer could not see why milk should go down in price when its production cost stayed up. He declared that selling prices should follow costs and that returns to the producer should be on the "cost plus" plan. He did not realize that neither the distributor nor the consumer of New Orleans cares what it costs Louisiana dairy farmers to furnish the city with milk—that they want milk at the lowest possible price. When he decided to strike, he failed to consider that universal law—in operation long before milk was sold for city distribution—the law of supply and demand.

Chicago Milk to New Orleans

At once Mississippi increased her daily shipment of milk to New Orleans, thereby lessening the effect of the strike. To prevent this, effort was made toward organization of the producers of that state with the resulting indictment of I. S. West, Peter Fabacher, and J. P. Wallace for "willfully, knowingly, and unlawfully conspiring to restrain trade and commerce among several states". The case has not come to trial. Meantime pasteurized, iced milk in carload lots came from Chicago in such quantities as to make the distributors entirely independent of Louisiana producers in the quantity of milk supplied. Moreover, city health authorities approved the quality of the imported product. The cost of this milk is disputed, distributors claiming it was cheaper than the price demanded by the local association. At least its continued flow into New Orleans made the strike hopeless. An effort to prevent the re-sale in Chicago of milk purchased from the Chicago Milk Producers' Association failed—the Chicago buyer claiming the right to sell wherever he could get the best price. It was apparent that New Orleans distributors could outlast the association. A producers' committee sent by the secretary made an agreement with the distributors which led to discontinuing the strike—thirteen days after it was begun—and accepting the price of $4.41. This price was continued throughout the summer until September, when the present price of $5.34 was again paid.



A dairy farm supplement who will have much to do in the success of dairying in the South.

Strike Weakened Association

The association lost in strength and influence in the experiences of the period of thirteen days. However, the strike brought out two valuable conclusions concerning the milk prices. It proved that the "cost plus" plan fails to work—that supply and demand set the price. It demonstrated that refrigeration and transportation facilities greatly increase the territory in which supply must be considered and that, for the time at least, the price of milk in New Orleans was the price in Chicago plus railroad charges.

Work for the Association

There is no general feeling of discouragement among Louisiana dairymen because of the defeat of their association. Rather, there is a prevalent opinion that the lessons taught in the failure of the strike may operate to the organization's advantage in the future. There is a determination to strengthen the producer's position and a readiness to follow constructive leadership in improving both the production and the marketing of milk.

In the city: In the first place increased recognition for the producers' association is needed. At present the distributor insists on dealing directly with the producer. A strong organization can better represent the producer than can individuals. The producer demands a voice in determining the price to be paid for his milk. He can only secure this right when he has a well directed organization.

Some plan must be perfected for disposing of surplus. It has been badly handled. There are no creameries and too few hogs on the farms to make good use of skimmilk. The whole production is shipped, regardless of the demand. The largest distributor has turned a considerable quantity into a drip-clabber cheese, a strictly southern product, selling as much as 10,000 lbs. per day. This company has made some plans for constructing a condensery. The producers are contemplating half ownership of a creamery in New Orleans where milk will be handled and sold to distributors and where they can take care of surplus. A campaign is now on for the sale of $100,000 worth of stock, enough it is said, that the producers would control the plant.

Milk needs advertising in New Orleans. The present daily consumption is only about 18,000 gallons. The consumer is not informed of the food value of milk or of its relative cheapness. Neither has he been told the producer's side of the strike last spring which resulted in Illinois and Wisconsin milk and cream replacing the Louisiana product on his table in May. Increased consumption would take care of surplus—and advertising will bring that increase. The condenseries, seeking new markets, advertised widely in New Orleans this fall and so greatly increased the use of their product as to markedly affect the consumption of whole milk. If the distributors join in a publicity campaign, so much the better; if they will not, the association can well afford to carry it on alone.



Barn on quarter section operated by L. Anthon. Because of labor shortage, no crops were raised this year; the silo lays piled at the right. Twenty years ago 50 cows were milked in this barn when milk sold for 14 cents per gallon. Fifty gallons are produced daily now and a profit of $175 per month is being made.

In the country: The Louisiana Dairymen's Association has good opportunities in reducing the cost of milk to its members. Even with ten months of pasture, mild winters, low building costs, and cheap labor, milk is not made cheaply. This year on many farms no crops were raised, not even to fill the silos, the only production from the land being native grasses. Scarcity of labor is blamed. All concentrates and much of the roughage is purchased for many herds. This answers the question, "Why must milk sell so high in the South?" An authority on Louisiana dairying gives three reasons: Soil less productive than in older dairy sections; too little home grown feed; and lack of experience in handling the dairy cow. These facts outline a great need for activity in the producers' association in improving dairy farming conditions. C. H. Staples writes, "Success in dairy farming does not depend altogether on the price of whole milk. Other factors are of equal importance."

There is much need for better shipping service. Milk is placed in cars with products which contaminate it and it is carried in temperatures so high that its quality is greatly injured. By establishing cooling stations, milk could be delivered to the city at much lower temperatures.

So, the promise of 1921 is one of optimism for the Louisiana Dairymen's Association. Its members realize the work before it and know the mistakes in production and marketing in the past. The defeat in the 1920 milk strike may well be turned to victory through a strengthened and rejuvenated organization.



House and part of the dairy barn on the Louisiana farm of Geo. L. Gaden—an encouraging demonstration of what can be done with cows in the South. All the lumber used in this thoroughly modern home was cut on the farm. The barns are planned to hold 240 cows. There is a refrigeration plant for use in summer, electric lights, and sanitary equipment for producing clean milk and getting it to the shipping station at the barn in excellent condition. An accredited herd of 500 head of Jerseys is maintained, 150 of which are now in milk. About 200 gallons of milk were shipped daily in November when many cows were well along in lactation. The price received was 46 cents per gallon for 4 per cent milk and the daily returns totalled about $100. Mr. Gaden bought the first Jersey he ever saw, 34 years ago. More than fifteen years ago he owned 60 cows. He knows southern dairy[illegible] His silos and his improved permanent pastures are evidences of his solution of the feed problem. He states that a mixed pasture of Bermuda grass, vetch, and canary grass will easily carry t[illegible] to the acre. He is enthusiastic over the possibilities for dairying. He says of his 3,000 acres: "The farm couldn't run without the cows."

DAIRY CATTLE VALUATION

G. C. WHITE, Professor of Dairy Husbandry, Connecticut Agricultural College

FOR five or six years a live stock judging demonstration and judging contest has been one of the features of the summer program of the farmers' meetings at the Connecticut Agricultural College. The idea has also been carried out into the state quite extensively, at field meetings, and much benefit has been derived, especially by beginners. More recently much interest has developed in pure-bred cattle and many farmers are desirous of finding just what factors influence their value and why some animals sell for several times more than others. The idea of a mock sale was conceived to take the place of the judging demonstrations. The results showed that the mock sale provided even greater interest and educational value than was anticipated.

Those who discussed it afterwards declared it to be the finest demonstration they had ever participated in. A pedigree and other necessary information for each animal was provided to all present. An experienced auctioneer cried the sale and those present bid on the animals. One of the rules was that no bid could be started at more than $200 and a raise of no more than fifty nor less than five dollars was accepted. The purchaser was required to give reasons for his bid. Others who dropped out in the bidding before the final price was obtained also gave their reasons and all were free to criticize the animal or the price in any way they desired. Herein lies the success of such a program and the sales manager is an important cog in the wheel. The sale was very lively at all times and the audience entered into the affair freely.

Before the sale all the animals were gone over carefully by a committee which placed a conservative price on them. Each animal was selected with some idea in view to bring out. Four Guernseys, four Ayrshires, three Holsteins, two Jerseys, two Shorthorns, and four draft horses went under the hammer, 19 in all. This consumed about two and one-half hours.

Only one animal sold for less than the estimate of the committee. One sold for the same figure and the others sold higher. The average valuation of the committee was $423. The average price they sold for was $695. Evidently the committee was too low in their estimate; possibly some of the animals sold for more than the purchaser could make a profit on. However, it demonstrates the value of the public sale for, if the right kind of crowd is present, and the sale properly conducted, the animals will generally bring all they are worth. In order to discourage overbidding, a blank was put in the hands of each person upon which they recorded the price they would like to buy at, as well as the maximum price they would pay if forced to go higher by some other bidder. Hence each person participating made up his mind before the animal was sold. Also the giving of reasons tended to keep the bidding within bounds.

The traffic in pure-bred live stock in this country is very large indeed. Approximately 300,000 registered dairy cattle changed hands last year which represents a value of at least sixty million dollars. Since many new men are becoming interested in owning pure-breds it is very important for them to become familiar with the factors which determine values.

Pedigree

Pedigree is the main advantage which the registered animal enjoys over the grade. In the first place the pure-bred as a rule is more productive. Not only is a man willing to pay for the prospective milk returns of the individual but he will often pay several times more than this for the prospective transmitting powers of the well bred animal. This influence can be carried over to future generations and it is a dominant force in herd improvement. On account of this influence upon the progeny more money should be paid for a bull than for a female of the same breeding, the bull being able to transmit his qualities to many more progeny. This of course depends upon the desirability of the bull for a herd header and the demand for bulls. Careful breeders, however, do not lose sight of the importance of the good mother. At a recent sale a man who was much pleased with a bull so remarked to one of the most successful breeders in this country, who replied, "Yes, he is very nice but I knew his mother."

Grades sell almost entirely upon unofficial records, or more generally upon their looks. For this reason they will sell better when fresh if they have a good udder development. The highest price for a Holstein grade cow that has been recorded is a little over $500 in California. The highest price for a pure-bred Holstein cow is $30,000. This was paid at the National sale of 1920. Of course this pure-bred will not produce sixty times as much as the grade; it is doubtful if she will produce twice as much. The difference in price in this case is largely due to breeding.

Advanced Registry

Originating just previous to 1900 the Advanced Registry system has developed into a large institution in the affairs of the cattle breed associations. Previous to 1900 a few cattle were tested privately but most of the records were churned butter tests as the Babcock test was not in use until after 1890. Some of the records made were splendid but, as there was no reliable check on them, the public gave them little credence. The Babcock test has greatly simplified record work and increased the reliability of the records. Seeing the value of the record of production for breed and herd improvement, but realizing the weakness of private records in the eyes of the public, some far sighted breeders, through their breed association, enlisted the aid of the state experiment stations as a disinterested party to conduct their tests. Since the inception of this work more than 15,000 yearly tests have been made, over 50,000 short time tests are recorded; and about 20,000 cows are at present under test.

Like most big things of value the Advanced Registry system has weaknesses. Its greatest faults are that many splendid cows, or even whole herds, have never been put on test, and that some of the inferior progeny are either not tested or are not accepted because of failure to make the required production.

Properly interpreted, the Advanced Registry is now recognized as the greatest of all institutions for herd and breed improvement. Great strides have been made in twenty years through the selection of better breeding animals, in feeding and in their care. Yearly records are more reliable as a rule although with one breed seven-day records are very largely relied upon. In the short time record more emphasis should be placed upon the milk than upon the fat yield, although breeders have not always taken into consideration that the fat yield is more abnormal, and therefore less indicative of actual ability than the milk produced.

The Advanced Registry record is unquestionably a big factor in price determination, not only of the cow herself, but of her progeny and all near relatives. With production records as a basis, prices that a few years ago would have been considered fabulous are now common. One bull has sold for over $100,000, a half dozen have sold for over $50,000, and perhaps more than a score have sold for $25,000 or over.

But how has the Advanced Registry influenced the ordinary breeder? One man in Pennsylvania says that he sold a bull calf for $25. He then tested the dam, she making 585 lbs. of milk and 25 lbs. of butter in seven days. The next calf, a full brother, he sold for $150. Another man bought some pure-breds and was glad to get rid of the bulls at $50 each. When the cows were tested the demand and price both materially increased. When the daughters of the tested dams came into milk and were tested their bulls sold for still more, averaging $190 for the year 1919. This man says he made a mistake in not buying heifers from tested cows to start with as it gives a better pedigree, one of known merit further back.

A number of Holstein sales were reported in 1919 as follows:

Cows without records—$150 to $250	
Up to 22 pounds butter weekly	$ 300
22.5 to 27.5 " " "	436
27.5 to 32.5 " " "	960
32.5 to 37.5 " " "	1,950
9 over 37.5 " " "	10,100

Some sales of Jerseys at Waterloo, Iowa, follow:

Year of sale	Cows tested	Not tested	Difference
1911	$	$ 161.61	$
1912	235.71	198.19	36.52
1913	320.00	203.47	112.53
1914	323.00	173.13	149.87

Twenty-one Guernsey sales in 1919 as reported from 10 states:

121 females with records	$1,255
183 females without records having A. R. dams	607
435 females without records and without A. R. dams	438
4 bulls with A. R. progeny	2,240
85 bulls with A. R. dams	740
56 bulls without A. R. dams	193

An Ayrshire sale reported from New York follows:

5 cows with A. R. records average	$1,945
40 cows with no A. R. records average	154
12 animals with A. R. dams	376
39 animals, dams not tested	107

It is safe to assert that Advanced Registry records increase the value of cows and their progeny from 25 to 200%. The better the records and the farther they go back in a continuous line, the better. The greatest emphasis is placed upon the first two generations, however.

Private records or cow testing association records do not add greatly to the value of the pure-bred, especially outside of its own locality. Cows not tested should be sold when fresh to show best evidence of their productive capacity.

Individuality

The animals possessing good breed type and conformation always command the highest price. It is not alone desirable that they have good records of production back of them

(Continued on page 928)



COW STABLE, TILE SILOS, MANURE PIT, NEW STORAGE BARN, AND BULL BARNS AT THE CONNECTICUT AGRICULTURAL COLLEGE



GRASSLAND COMET, SELLING FOR $1,800 IN THE MOCK AUCTION DURING FARMERS' WEEK AT THE CONNECTICUT AGRICULTURAL COLLEGE. FOUR HUNDRED PEOPLE WERE PRESENT



DORINDA STORRS DE KOL, SOLD FOR $2,750 AT THE MOCK SALE

She produced 18,523 pounds milk and 624 pounds fat as a 4-year-old. Her dam has 22,041 pounds milk and 807 pounds fat and her maternal grandam has 23,176 pounds milk and 831 pounds fat. All bred by the Connecticut Agricultural College.



THE DAIRY FARMER HAS MANY USES FOR MECHANICAL POWER. HE PLOWS, CULTIVATES, HARVESTS, THRESHES, PUMPS WATER, GRINDS FEED, FILLS SILO, AND THERE ARE AN INFINITE VARIETY OF USES FOR THE GAS ENGINE

LEAKS IN THE TRACTOR ENGINE

R. U. BLASINGAME, Pennsylvania College of Agriculture

UNDOUBTEDLY, dairy farming is one of the most remunerative, most attractive, and at the same time most exacting lines of farming in the United States today. There are no particular rush seasons on the dairy farm. Every day requires special attention if this line of farming is to pay its maximum returns. It is true that the dairy farmer is one of the greatest users of mechanical power. It is, therefore, right and proper that a discussion of the repair of the gas tractor be a consid-

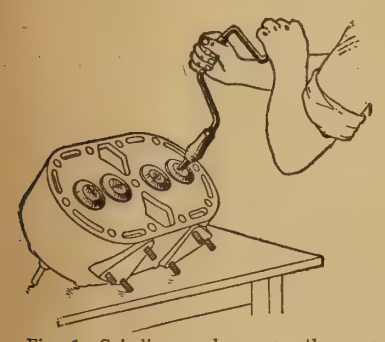


Fig. 1—Grinding valves on the gas tractor.

eration on the "work-of-winter-on-the-dairy-farm" calendar.

Why should the dairy farmer be one of the greatest users of farm power? In the first place his income is in cash every week or so, therefore the risk and interest accumulation on borrowed money for purchasing mechanical power is not necessary for this type of farmer. He has to grind, shred, and crush feed every few days. The dairy farmer uses a great deal of straw and he generally does his own threshing. The dairy farmer generally has several silos to fill which takes power; he has a water system to furnish his cows with an ample supply of clean, fresh water which requires power. The dairy farmer often uses power for milking purposes. A great many dairy farmers use motor trucks for transporting milk and cream to market. Besides all of these uses of power, he has the usual round of farm work such as plowing, clod crushing, distribution of manure and fertilizer, planting and sowing seeds, cultivation of crops, the harvesting, hauling and threshing of crops, grinding, shredding, and elevation of the products of the farms, etc. All these require machines and the efficiency of these machines depends almost directly upon the amount of speed, strength, and reliability of the power unit which operates these machines. In 1910, one man was able to harvest about 12 acres of grain per day with a binder and a team. In 1920, one man was able with the same binder attached to a gas tractor to harvest 25 to 30 acres of grain per day. This is merely one example of what one man is able to do with an efficient machine operated by an efficient power unit. This man is able to triple the amount of work which he is able to do per day, thereby tripling his income.

When the time of seeding is right and when the time of cultivation, harvesting, etc., is right, every minute during the day counts for a great deal in insuring a particular crop. It is, therefore, highly desirable that the gas tractor which is used for so many purposes about the dairy farm should be in excellent working order every day.

As a general rule, the motor of the gas tractor requires more attention probably than any other part of the machine in order to keep it ready for the various jobs alluded to above. One of the greatest difficulties with the gas tractor truck and automobile comes from leaks at the spark plugs, at the valves, at the cyclinder head gasket and between the piston and cylinder walls. If a man operates a tractor which cost $1,200, the interest on this at 6% is $72. If this tractor begins to lose power on account of leaks about the motor as have been mentioned above, the interest on his investment immediately becomes greater. If there is a leak between the piston and cylinder, on every intake stroke of this piston air will have a tendency to leak into the combustion chamber, thereby weakening the explosive mixture to the point that the gas will not explode, or if it does explode will weaken its energy materially. If this were the only loss in a leak of this kind, it would be more tolerable; however, this same leak on the compression stroke will cause a loss of the power giving gas and air mixture which has been prepared at the carburetor. This leak will also cause a loss of the explosive power of the mixture. It is, therefore, highly important to keep the gas tractor motor as air tight as possible at the various joints where leaks may occur.

It is an easy matter to remedy the leaking spark plug by installing a new one or repairing the one which may leak. It is also an easy job to repair the gasket between the cylinder and the cylinder head by removing the head and repairing the old one, or installing a new gasket.

The matter of leaking valves may be remedied by grinding them in. Grinding valves is an easy job if a few fundamentals are adhered to. The first of these is to be clean about this job; that is, when the grinding process is over every part of the valves and the cylinder which has come in contact with the valve grinding material should be thoroughly washed with kerosene or gasoline. The valve grinding material which is generally employed has very rapid grinding qualities and a small particle left on any moving part may cause that part to be damaged beyond repair in a short time. Another requirement in valve grinding is to only oscillate the valve about one-fourth of a turn with the brace and screw driver bit as seen in the illustration, Fig. 1, and as the valve grinding material grinds very rapidly it is only necessary to put a small amount of pressure against the valve when grinding. Valve grinding material comes in a box that is generally divided into halves, coarse material in one end and fine material in the other. The coarse material should be used first until all of the pits and dark spots are ground out of the valve and valve seat at which time this should be entirely washed off and the fine material used for polishing up the job. While grinding the valve, it should be only oscillated about one-fourth of a turn for about ten or twelve times, then it should be raised entirely off of the seat and turned about one-fourth to one-half of a turn and oscillated again. This process should continue until the valve is smooth. The valve should be replaced and a little grease applied to the valve guide to keep the valve from sticking when it is in operation.

If a leak develops between the cylinder wall and the piston, one of three things may be the trouble: first, the rings may be worn; second, they may be stuck in the piston grooves; or, third, the rings may be broken. One may easily determine the trouble by removing the piston from the cylinder and then removing the piston rings from the piston. It is rather a particular job to remove a piston ring from a piston without breaking the ring. If one attempts to pry the ring from the piston with a screw driver and remove it by main strength and awkwardness, the ring is likely to be broken or slightly ruptured at a point opposite the opening in the ring. The ring may be removed as shown in Figure 2, by the use of three pieces of tin, cut from a tomato can. One piece of tin is placed under the ring opposite the opening and the other two pieces placed near the opening as shown in the illustration. In this way the piston ring may be removed without difficulty and without any damage to the ring. If the rings are worn or broken, they should be replaced with new ones. Very often new rings are a little bit rough and sometimes are slightly too wide to fit freely in the groove on the piston. In this case the rings should be ground down as shown in Figure 4. A small amount of valve grinding material is placed upon a glass plate and the ring moved around on this valve grinding material on the glass plate until all rough places are removed and the ring fits loosely in the piston groove. Sometimes, it requires considerable pressure on the ring to cause the sufficient grinding to reduce the size. When the ring has been ground to fit the groove and before it is placed on the piston, it should be fitted in the cylinder. If the ring is shoved into the cylinder and if it is too large for the cylinder, the two ends will come together and have a tendency to overlap slightly. In this case, a file should be used to reduce the length of the ring by filing down its ends at the joint. When the ring has been fitted to the cylinder and to the piston groove, it should be placed on the piston, using the three pieces of tin just as in removing (Fig. 2).

If the piston ring is in good shape and it is losing compression because of being stuck in an accumulation of grease and carbon in the groove, the grease and carbon may

(Continued on page 925)



Fig. 2—Method of removing or replacing piston rings by using three strips of tin.



Fig. 3—Cleaning ring groove on piston with screw driver.



Fig. 4—Grinding piston ring to fit.

PACIFIC LIVE STOCK SHOW

THE tenth annual Pacific International Live Stock Exposition distinguished itself by bringing together one of the largest, if not the largest, shows of live stock ever held in this country. Its growth has been phenomenal. The new building, used for the first time in 1919, was altogether too small to house the flocks and herds that were seeking distinction. Large tents were brought into use and it was reported that more than 3,500 head of cattle, horses, sheep, and swine were on exhibition and of which there were about 815 head of dairy cattle. This was a larger number of dairy cattle than was shown at the National this year.

From the standpoint of entries and quality of animals exhibited, the Tenth Pacific International Live Stock Exposition was a large success and so far as we could observe the attendance of breeders and dairy farmers was very good. The ringside at all times was crowded with persons interested in the placing of animals and anxious to learn all they could.

The western breeders may well be proud of the showing they made, for not only were these large classes but the quality was excellent. The dairy cattle would be a credit to the National and there were classes which have never been equaled in the show ring of this country. The get of sire in the Holstein class had thirteen entries and a more uniform, typy class, backed by high yearly records, has never been presented to the public. The only dairy breed that did not have a large representative of choice animals was the Ayrshire, but it should be said that every breed had a few animals on exhibition that could have been left at home and a few bulls that belong in the hands of the butcher.

It should be borne in mind that many of the exhibitors are not professional showmen but come with their cattle to learn their defects and to train themselves to understand the proper type animals to breed. All these men were benefited by the show and we predict that next year there will be fewer animals of the undesirable type. The Pacific States have splendid producing cattle as their records show, but some breeders have not appreciated the necessity of breeding for beauty of form, uniformity of type as well as for large production. It would seem that some have not conceived the proper dairy type, but had a chance to observe great dairy animals and of good conformation which is held to be desirable by the best informed breeders. Herein lies the value of the show ring.

The West grows large and well developed cattle and the splendid records which have been made lead us to believe that the Pacific Coast States will be looked upon as one of the great breeding sections of our country and that breeders elsewhere will be seeking the blood developed in this section. It would seem that there must be something in the feed, some element or elements which are highly desirable for the proper development of dairy cattle. The climate is admirable for dairy stock. The extremes of heat and cold are not so great here as in the Central West and East. In other words, natural conditions are well suited to the dairy cow.

The Pacific International is preeminently a live stock show, and there were only a few exhibits of machinery and dairy equipment which are prominent features of the National. The several dairy breed associations had their booths and there were a few educational exhibits. In time this part of the exposition will be developed as there is need of educational demonstrations, displays of machinery, and dairy equipment. The splendid progress which the Pacific International has made shows that the men back of it have a vision and an understanding of what is essential to develop the live stock industry of the Pacific States. Special credit is due to Mr. O. M. Plummer, secretary and general manager of the show, as to him the credit is given as being a good "beggar" and the result is a large and well appointed show building. He not only has the faculty of getting men to subscribe their money, but is a capable and congenial manager which is essential in the successful development of an enterprise of this character. He has been able to unite the breeders and business interests of Portland to support and work for the development of live stock in the Pacific Coast States and he has succeeded.

Ayrshires

The Ayrshire exhibit was not up to its usual standard. We look to the Ayrshire to present the most uniform type of animals, but this cannot be said of those shown at the Pacific International. The mature cows shown by VanTassel of Washington were good, but his younger stock lacked in type and many were not in show condition. It may be said that there were a number of very good Ayrshires among the younger animals, but their poor fitting and development did them injustice. Willowmoor Peter Pan 25th, senior and grand champion, is a bull of great dairy qualities and has proven himself a good breeder. He was an easy winner in his class. The total number of Ayrshires exhibited was 59. The Ayrshires were judged by John L. Smith, Washington. The awards are as follows:

Bull 3 years or over—1, E. W. Van Tassell, Washington, on Willowmoor Peter Pan 25th; 2, E. B. McFarland, California, on Steybrae Improver; 3, W. J. Domes, Oregon, on Belle's Triune. Bull 2 years and under 3—1, Washington State College on Queen's Scottish Cavalier. Bull 1 year and under 2—1, McFarland on Ayrmont; 2, Domes on Grand Champion Washington State Fair. Senior bull calf—1, State College of Washington on Chinook Peter Pan Ben; 2 and 4, Van Tassell on Wenatchee Robin Hood and Stewart of Wanatchee; 3, McFarland on Steybrae Ayrmont. Junior bull calf—1, State College of Washington on Chinook Cavalier Caddy; 2, McFarland on Steybrae Inuchy; 3, Van Tassell on Stewart Robin of Wenatchee.

Cow 4 years or over—1 and 4, Van Tassell on The Belle of Wenatchee and Lady Bruce of Wenatchee; 2, McFarland on Willowmoor Vista 4th; 3, Domes on Beauty Barboigh of C. H. A. F. Cow 3 years and under 4—1, Van Tassell on Bruce Belle of Wenatchee; 2 and 3, McFarland on Steybrae Grace Darling and Steybrae Ellen; 4, Domes on Happy Clent. Heifer 2 years and under 3—1, McFarland on Steybrae Nona; 2, Domes on Dolly Edgewater; 3, Van Tassell on Queechie of Wenatchee. Junior yearling heifer—1, McFarland on Steybrae; 2 and 3, Van Tassell on Lady Scott of Wenatchee and Scottish Queen of Wenatchee; 4, Domes on Ben Hur Sadie Netherall. Senior heifer calf—1 and 3, McFarland on Steybrae Happy Girl and Steybrae Vista; 2, Van Tassell on Lady Bruce of Wenatchee 4th; 4, Domes on Happy Daisy. Junior heifer calf—1, McFarland on Steybrae Darling; 2, 3, and 4, Domes on Miss Sentinel Fjalyston, Ben Hur Saide Netherall 2nd, and Belle of C. H. A. F.

Exhibitor's herd—1, Van Tassell; 2, McFarland; 3, Domes. Young herd—1, McFarland; 2, Van Tassell; 3, Domes. Calf herd—1, Domes. Produce of cow—1, McFarland; 2 and 3, Van Tassell; 4, Domes. Get of sire—1, McFarland; 2 and 3, Van Tassell.

Senior and Grand Champion bull—Willowmoor Peter Pan 25th. Junior champion bull—Chinook Peter Pan Ben.

Senior and grand champion cow—The Belle of Wenatchee. Junior champion cow—Steybrae.

Guernseys

There was deep interest and keen competition in the Guernsey classes. The admirers of this breed were not disappointed in the showing it made, for in every class there were many splendid type animals backed by creditable yearly records. In the mature class of cows nine animals were shown. Wilson's Pet won first and grand champion. She is an unusually well developed cow and has an official record of 648 lbs. fat in a year and is in the AA class. Her head was plain, and she is a little u-necked, but outside of this she was hard to fault. In the essentials she is highly developed. Veda's May King of Edgemoor was grand champion bull. He is an animal of splendid breeding and a son of Itchen May King, a bull that has won many laurels in the show ring. The bull, Jolly Fermain, contender for grand champion, is an animal of great dairy qualities, but did not have quite the quality of refinement as did his contender, Veda's May King. Both bulls had their following, but when the judge placed the purple ribbon on Veda's May King it seemed to meet the approval of the ringside critics.

The exhibitor which received the most comment on his exhibit was W. A. Goodin of Oregon. He showed ten head and he only owns twenty in all. He won three firsts, two seconds, two thirds, and one fourth, and a grand championship on Wilson's Pet. His second cow, Yeksa Snowdrop, has a record of 806 lbs. fat and his heifer, Yeksa Queen of Rose City, won first in the two-year class and has a record of nearly 600 lbs. as a senior yearling. His herd is noted for records and type and this is what every breeder should seek. It must be remembered his competitors had splendid animals and each one could well be given special mention, but space does not permit. Mr. Goodin, being a small breeder and winning so many prizes in keen competition and with animals of good records, gives opportunity to drive home what constitutes good breeding.

It was most fortunate for the Guernsey that the judge, Mr. Hope, of New Jersey, passed on their cattle for he holds fast to characters which indicate production, but does not neglect type and the characteristics essential to the Guernsey breed.

The awards follow:

Bull 3 years or over—1, Watson and Hunter, Oregon, on Jolly Fermain; 2, A. I. and J. Hughes, Oregon, on Red Wing's Monogram Sequel; 3, F. H. Stangel, Oregon, on McDonald's Makefield Prince; 4, A. L. Gile, Washington, on Chicona Buster. Bull 2 years and under 3—1, H. E. Angel, Washington, on Rex of Willow Brook; 2, W. A. Goodin, Oregon, on Langwater Khedive. Senior yearling bull—1, Winsor Ranch, California, on Veda's May King of Edgemoor; 2, Gile on Chicona Lover Bold; 3, John Berns, Oregon, on May Rose Count; 4, R. Zweifel, Oregon, on Tillamook Buster. Junior yearling bull—1, Gile on Chicona Corsair; 2, Stangel on Red Wing Jennie Van's May Rose Yeksa Starlight; 3, R. McClay, Oregon, on Fern's Glen; 4, J. Durrer, Oregon, on Red Wing's Model's May Rose Starlight. Senior bull calf—1, A. M. Smith, Washington, on Woodvale Radium; 2 and 3, Gile on Chicona Peter and Chicona Luesta; 4, Goodin on Duke of Midvalley. Junior bull calf—1, Gile on Chicona Viking; 2, W. Harvey, Oregon, on Royal Knight of Imp. Beauty; 3, Hawley and Son, Oregon, on Landon's Lad; 4, Angel on Starlight of Ruby Dell.

Cow 4 years or over—1 and 2, Goodin on Wilson's Pet and Yeksa Snowdrop; 3, Gile on Lucilla of Chicona; 4, Hughes on Modele's Jolly Lass. Cow 3 years and under 4—1, Angel on Raider's Minie of Muskego; 2, L. G. Perry, Idaho, on Edna of Mt. View, 3, H. Mason, Oregon, on Butternut Bessie of Fairlea; 4, Smith on La France of Bralee. Heifer 2 years and under 3—1, Goodin on Yeksa Queen of Rose City; 2 Jewel of Rose City; 3, H. W. Bateman, Washington, on Kulshan Hayes May Rose 2d; 4, Gile on Linnie of Chicona. Senior yearling heifer—1 and 2, Gile on Marjorie of Chicona and Helen of Chicona; 3, Goodin on Governor's Yeksa Hope of Rose City; 4, Angel on Sweet Dame of Muskego. Junior yearling heifer—1, Goodin on Jasmine of Rose City; 2 and 4, Mason on Julia's Alma of Few Acres and Ethel's Evangeline of Few Acres; 3, Hughes on Red Wing Starlight's Gypsy. Senior heifer calf—1, C. Ringo, Oregon, on Clearbrook Starlight's LePort; 2 and 3, Gile on Pride's Peggy of Chicona and Pearl of Chicona; 4, Hughes on Red Wing Doctor's Phillipa. Junior heifer calf—1 and 2, Gile on Lustre of Chicona and ——; 3, Goodin on Dairymaid of Rose City; 4, Mason on Beth's Rosette of Few Acres.

Exhibitor's herd—1, Goodin; 2, Gile; 3, Angel; 4, Hughes. Young herd—1 and 3, Gile; 2, Goodin; 4, Mason. Calf herd—1, Gile; 2, Mason.

Senior champion bull—Jolly Fermain, junior and grand champion bull—Veda's May King of Edgemoor.

Senior and grand champion cow—Wilson's Pet. Junior champion cow—Marjorie of Chicona.

Holsteins

This breed made a very fine showing and especially with its younger animals. We believe no greater display was ever made with any breed or at any exposition than that made in the get of sire class. There were thirteen entries in all and a more uniform type and well developed lot we have never seen and Mr. Moscrip of Minnesota, their splendid judge, said it was the best class he had ever seen, numbers and everything considered. The get of the noted bull, Judge Segis of Hollywood Farm and Matador Segis Walker of Carnation Farms, were the chief contenders in this great class. The get of Matador won 1st and 3rd and that of Judge Segis 2nd. But the owners of the other bulls, which won top places with their progeny, need not be discouraged for it was an honor to have recognition in tenth place.

There were ten bulls shown in the aged class and they made a fine exhibit. Matador Segis Walker 6th, owned by J. L. Simpson, Oregon, won first and later senior and grand champion. He is a remarkable bull; has great quality and a fine system of veins which stick out all over. He has refinement and good dairy qualities and was the easy winner notwithstanding he is only three years old, and that is against him, especially in a class of bulls noted for show ring successes. Hollywood Farm's noted bull, Judge Segis, had to take 3rd place as he is 10 years old and age has begun to show itself. He did not show his usual form in body and the bull that won second was exceptionally good in this respect, especially in depth of body. Merci Lad Korndyke Burke, winner of second, is a bull of not only good depth and length of body, but of high refinement, especially in the head. He was a little too fat and heavy in shoulders and in hind quarters, not well cut up in thighs.

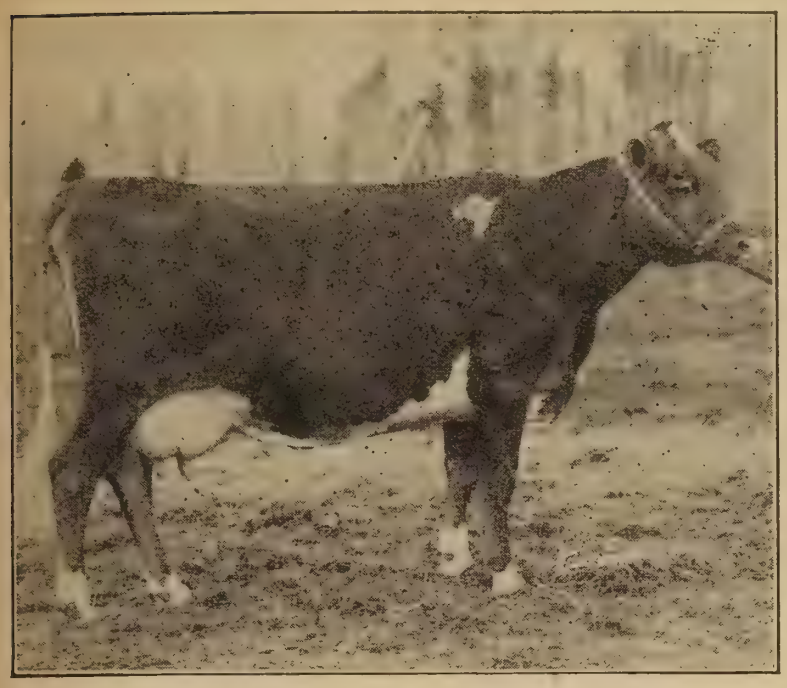
The aged cow class was not exceptional; rather common for so large a showing of Holsteins. Mutual Clothilde Segis Walker was senior and grand champion. She is an exceptional cow, or rather heifer, and by the famous bull, Matador Segis Walker. Her system of veining is simple and teats a little small and close together, but outside of this she is nearly a perfect individual. She has a record for 10 months as a senior yearling of 17,021 lbs. milk containing 561.6 lbs. fat so her veining is sufficient to supply her udder with nourishment for making milk even though it scarcely measures up to the ideal.

Winnifred Hengerveld Walker was junior champion and a great heifer. Matador Segis Walker's progeny won 10 firsts out of a possible 18, and grand champion male, grand champion female, and junior champion female. Junior champion bull was Chi-

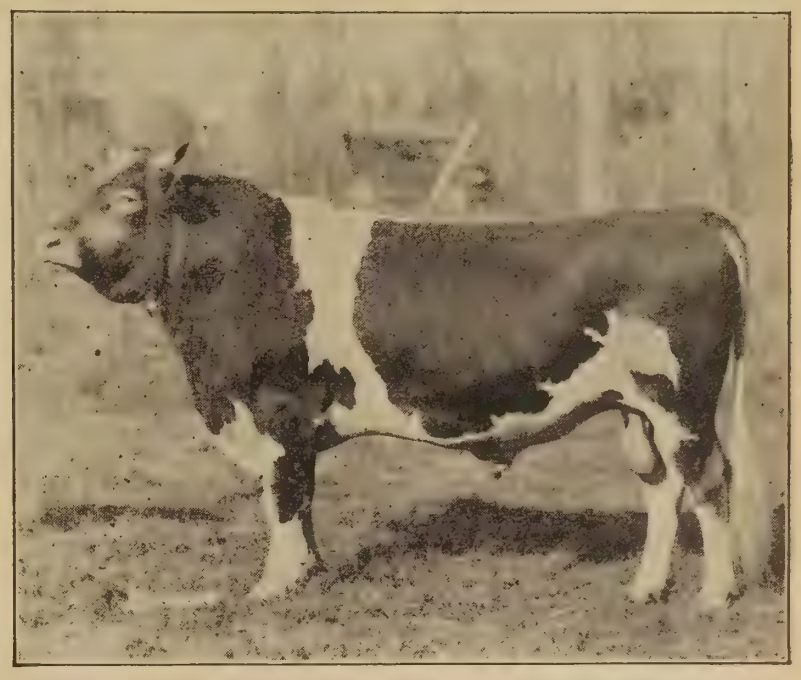
(Continued on page 918)

CHAMPIONS AT PORTLAND

Where Season's Largest Dairy Show Was Held



AGED GUERNSEY COW, WILSON'S PET, OWNED BY W. A. GOODIN, OREGON



SENIOR YEARLING GUERNSEY BULL, VEDA'S MAY KING OF EDGEMOOR, OWNED BY WINSOR RANCH, CALIFORNIA



AGED HOLSTEIN BULL, MATADOR SEGIS WALKER 6TH, OWNED BY L. J. SIMPSON, OREGON



HOLSTEIN COW, MUTUAL CLOTHILDE SEGIS WALKER, TWO-YEAR-OLD OWNED BY CARNATION STOCK FARMS, WASHINGTON



THREE-YEAR-OLD JERSEY BULL, CAPTAIN TRISTRAM, OWNED BY D. C. HOWARD AND R. C. WILLIAMS, OREGON



AGED JERSEY COW, EMINENT'S JIMP'S OWL, OWNED BY GLEN TANA FARM, WASHINGTON



Weigh Your Feed— Weigh Your Milk

That's the way to put your dairy on a business basis—find out exactly how much you are feeding each cow and exactly how much milk she is giving. It has been our advice to dairymen for eleven years.

Pick out one cow—any cow you choose—and let the gain in her milk yield prove how cheap Larro really is.

If you don't get more milk than before, and if you don't make more profits from Larro (never mind what you paid for it), take the two empty sacks and any Larro you have left back to your dealer and get your money back.

Write for names of Larro users in your neighborhood and your nearest dealer.

The Larrowe Milling Co.

203 Larrowe Bldg., Detroit. Mich.

(3)

Larro-feed

Many Imitations Prove Its Superiority

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Pa.	Laurel Hill	Wm. H. Cole	Sept.	370	33	64.2	Wm. C. Hurley
"	Towanda—Wilmot	Leslie Warren	"	327	3	46.1	Keeney Bros.
"	Canton	B. E. Whitney	Oct.	345	39	67.7	H. A. Taylor
Ia.	McGregor	E. A. Stacy	"	267	16	72.0	Kinsley Bros.
Wis.	Empire	Palmer Simonson	"	450	19	74.2	Frank Mertes
"	Leopolis—Tilleda	Thos. R. King	"		17	59.2	L R. Shanger
"	Rock Prairie	W. J. McKee	Nov.	485	32	67.7	H. H. Little
"	Rockfield	Wm. F. Liesener	Oct.	260	23	80.0	Paul J. Past
Ill.	Macoupin Co.	H. R. Fletcher	"	329	17	63.5	Victor Baxter
Ida.	Weiser—Payette Co-operative	G. E. Hardin	"	220	25	67.9	Inter-Mountain Inst.
Ky.	McCracken Co.	Ben G. Marsh	"	314	2	43.8	H. C. Hines
Ill.	Effingham Co.	F. W. Schwarzlose	"	176	3	55.1	E. O. Ramsey
Tenn.	Wilson Co.	H. L. Brown	"	291	10	91.9	C. P. Moser
Colo.	Douglas Co.	R. E. Sherman	"	415	20	63.5	E. J. Lindquist
"	Johnstown	Walter Guerkink	"	288	69	80.7	W. A. Purvis
"	Platte, Boulder & St. Vrain Valleys	Lloyd Simpson	"	323	29	68.2	H. H. Ewing
"	Arkansas Valley	D. H. Burwell	"	224	23	71.7	Model Dairy
Ohio	Geauga Co.	C. M. McEwen	"	227	15	96.6	P. H. McNish

Association Notes

Laurel Hill, Pennsylvania:—During September 3% market milk sold for $3.61 per cwt. and 4c per point above. The creamery paid 72c per pound for fat. Feed prices were: Gluten, $52 per ton; bran, $50; oil meal, $70; Tioga Dairy Feed, $77; ground oats, $55; corn meal, $3 per cwt.

Towanda—Wilmot, Pennsylvania:—Three per cent milk sold for $3.33 per cwt. in September. Tioga Dairy Feed sold for $3.95 per cwt.; wheat bran, $3; cottonseed meal, $3.50.

Canton, Pennsylvania:—A number of the members are connected with the local Holstein bull association. This association has recently received four well bred bulls which were purchased last spring for fall delivery. Conditions have made it difficult to dispose of surplus stock, but it is believed the market will improve later this autumn. The refusal of the manufacturers to purchase milk has affected a number of our members, but the majority either sell fluid milk or patronize the local creamery. Three per cent market milk sold for $3.65 in October. The creamery paid 69c per pound for fat. Milk retails for 14c per quart and butter for 65c per pound. Feed prices are: Cottonseed meal, $72; oil meal, $72; gluten, $58; corn meal, $56; ground oats, $56; hominy, $62; Unicorn Dairy Feed, $76; wheat bran, $54.

McGregor, Iowa:—This association purchased a carload of cottonseed meal at $63 in October. The McGregor Association had the high grade herd average of the state last year and the same herd is making good progress this year.

Sullivan, Ohio:—The high cow for October is owned by A. C. Snoddy. This cow produced 52.06 lbs. fat in 1,407 lbs. milk. The seven other cows which produced more than 40 lbs. of milk are owned by the same dairyman.

Empire, Wisconsin:—October milk sold for $2.50 per cwt. at the condenseries and butterfat sold to the creameries for 60c to 68c per pound. Feed prices are as follows: Silage, $8 per ton; alfalfa, $24; bran, $40; oats, $30; barley, $40; oil meal, $70.

Rock Prairie, Wisconsin:—Five pure-bred Holstein cows were purchased during November. Two cars of alfalfa hay have been bought. Market milk testing 3.5% sold for $3.05 per cwt. and 4c per point above. The retail price of milk is 14c per quart; butter, 69c per pound, or storage, 64c; and cheese, 38c per pound. Bran is rated at $36 per ton; oil meal, $68; barley, $1.90 per cwt.

Rockfield, Wisconsin:—The association has purchased two carloads of bran at $35 per ton, one carload of oil meal at $68 per ton, and one carload of gluten at $44 per ton. September market milk testing 4% sold for $2.80 per cwt. and 6c per point above.

Macoupin County, Illinois:—This association has no scrub sires and has five 100% pure-bred herds. A carload of hominy feed and linseed oil meal has been bought co-operatively. Milk sold for $3.75 per cwt., a test of 3.6% being required and 5c paid for each point above. Feed prices are: Bran, $2.25 per cwt.; hominy, $3; linseed oil meal, $3.40; malt, $3.35; corn, $1.16 per bushel; oats, 75c per bushel.

Weiser—Payette Co-operative, Idaho:—Several unprofitable cows were disposed of during October. Milk testing 3.4% sold for $3.75 per cwt. The creamery paid 60c per pound for fat. Milk retails for 14c per quart, butter for 65c per pound, and cheese 38c per pound. Feed prices are as follows: Rolled barley, $2.90 per cwt.; linseed, old process, $90 per ton; soy bean meal, $79; molasses meal, $59; bran, $48; ground corn, $2.60 per cwt.

McCracken County, Kentucky:—Three unprofitable cows were sold to the butcher during the month of October. A carload of 41% cottonseed meal was bought co-operatively by the dairymen and cattle feeders of the county through the farm bureau. The price quoted by feed merchants in Paducah was $63 per ton and the carload was bought at $44 per ton laid down in Paducah. Dairymen received $4.50 per cwt. for 3.6% milk and 6c per point above this test. The creamery paid 57c per pound for fat. Milk retails for 17c per quart and butter for 70c per pound. Silage is rated at $8 per ton; cottonseed meal, $44; bran, $42—$44; sorghum hay, $15—$18; clover and red top, $22.50—$25; mixed feed (mill run), $50; soft corn, 55—60c per bushel.

Effingham County, Illinois:—Two unprofitable cows were sold and two pure-breds purchased during October. The members are giving up the use of commercial feeds and are mixing their own rations from home grown feeds. The result is a much better feed at a cheaper cost. For milk testing 3.5% dairymen received $3.55 per cwt. and 4c per point above this test. The creamery paid 50c per pound for fat. Milk retails for 15c per quart and butter for 65c per pound. Feeds are listed as follows: Corn, $1 per bushel; oats, 73c; bran, $2.10 per cwt.; cottonseed meal, $3.40; oil meal, $3.50; Purina Cow Chow, $3.50; alfalfa, $32 per ton; silage, $7 per ton.

Wilson County, Tennessee:—October feed prices are as follows: Schu-

macher, $63 per ton; cottonseed meal, $60; bran, $45; Dairy Feed, $50; silage, $5; oats, 75c per bushel; pasture, $1 per month. The creamery paid 58c per pound for fat during the month.

Douglas County, Colorado:—About forty cows were sold during October. Several members plan on purchasing cows in the near future. The average production per cow for October was 536.5 lbs. milk containing 20.8 lbs. fat. Feed prices are: Alfalfa, $16 per ton; silage, $8; bran, $2—$2.35 per cwt.; linseed, $3.60—$4; oats, $2—$2.90; barley, $2.20—$3; corn chop, $2—$3.

Johnston, Colorado:—Rocabie, a pure-bred Holstein owned by W. A. Purvis, is high cow in the association and in the state this month. She produced 1,903 lbs. milk and 80.7 lbs. butterfat. Brown Bros. have the high herd, averaging 40.8 lbs. fat and 1,009 lbs. milk. The average production of the association per cow for October was 801 lbs. milk containing 30.4 lbs. fat. The condensery paid 65c per pound for fat. Milk retails for 14—15c per quart. Feeds are rated as follows: Alfalfa, $10—$13 per ton; silage, $6—$8; beet pulp, $1.75 per cwt.; bran, $1.90; cottonseed meal, $3.50; linseed meal, $4.40; oats, $2.30; barley, $2.20; corn chop, $2—$2.60; maize, $2.80.

Platte, Boulder, and St. Vrain Valleys, Colorado:—The average association production per cow for October was 24.5 lbs. fat in 598 lbs. milk. Twelve cows produced over 50 lbs. fat. The creamery paid 75c per pound for fat and the condensery paid 65c per pound. Milk retails for 14—15c per quart. Feed prices are: Alfalfa $8—$12 per ton; wet beet pulp, $2 per cwt.; bran, $2.05—$2.25; cottonseed meal, $4; linseed, $4.50; oats, $2.75; barley, $2.50—$2.75; corn chop, $2.30—$2.75.

Arkansas Valley, Colorado:—Three members have purchased bull calves for their herds. The Prowers County breeders and Lamar bankers have placed a hundred choice heifers with reliable farmers. The association average per cow for October was 516 lbs. milk containing 16.9 lbs. fat. The September average was 433.4 lbs. milk containing 15.5 lbs. fat. Milk testing 3.5% sold for $2.75 per cwt. in October and 5c per point above this test. Feed prices are: Alfalfa, $7—$10 per ton; beet pulp, $2 per cwt.; bran, $1.35; cottonseed meal, $3; linseed, $5; barley, $1.40; corn chop, $1.85; maize, $1.50; shorts, $2.75.

Geauga County, Ohio:—During October 3.5% market milk was sold for $3.35 per cwt. Gluten is rated at $2.50 per cwt.; bran, $2.10; oil meal, $3.25; hominy, $2.50.

Dairying Thirty Years Ago

Taken from the Issue of Hoard's Dairyman of December 12, 1890

In answer to the question—"How many pigs can be kept to a cow?" Col. F. D. Curtis, of New York, who is a very successful dairyman and pig raiser, replies as follows:

"The old rule was one. It depends somewhat on the cow. I say three, because no farmer can afford to give a pig nothing but milk. The milk is worth too much as an aid in the digestion of solid foods and in making succulency, which is an important part of a successful system of feeding. So I say add enough bran, middlings, linseed meal, and corn meal or other meal to the milk and keep three pigs to a cow, and so make valuable manure and more pork."

A Big Family of Milk "Cranks"

HOARD'S DAIRYMAN:—I have twelve living brothers and sisters—all milk cranks. Their first meal on earth was milk, and I believe they will call for it about the last thing. The youngest is over 40 years old.

Father, fifty years ago, gave milk as a medicine. The doctors said he was crazy on the subject of milk. I do not think a doctor was called in twenty years for one of those thirteen children. Rice mush, samp, johnny cake, sweet apples, etc. were served with milk, some of them every day in the year. A fever was not expected or feared. Some of us would occasionally have the stomach ache, but we would lay across a rail fence a few minutes and go to work again. Impure or diluted milk was not thought of or feared, fifty years ago, in the highlands of the Hudson. It was as pure as the water that bubbled from a thousand springs.

If I was threatened with fever, if I could not break it with nicely loppered milk I should send for a notary—or a preacher. Rheumatism can be driven from the blood with buttermilk as easy as driving a pig to market.

I chewed tobacco seventeen years and drank some beer. I have quit them both and take milk instead, and feel better.

When milk is fully understood—and the time is coming speedily—people will never die—not from disease.

A glass of beer, father, will buy your dear family a quart of milk. Deny yourself your cigars for a year and take milk in their place and raise some boys that nothing less than a cyclone will kill. I wanted some advice from Dr. Clark, of Sheboygan, the other day. He says, "Can't you cure it with milk?" I have.

Wisconsin. A. X. HYATT.

⚜

At a state meeting of the dairymen of Connecticut, held the 19th ult., they resolved that an entirely new law on the subject of oleomargarine was needed, and they were unanimous in the view that it should be made the same as that of New Hampshire and Vermont on the same subject—the manufacturers should be compelled to color it pink. That, it seems, does the business as nobody yet has a stomach fixed over to crave pinky butter.

Dairymen's Remedy

Last spring I asked a successful dairy friend why he did not get more cows, as he could easily do the additional head work and his team could take a few hundred pounds more milk to the station without any more wagons or drivers than at present. He replied that he didn't want to increase his number, but was constantly increasing his milk by getting a better class of cows and already nearly doubled the quantity of ordinary dairies. His receipts for eighteen cows for the seven months ending April 30 were over $1,100. He said that with the help of one hand he could milk and feed eighteen cows with comfort to himself and the cows, but an increase of the number meant a larger stable and extra help, and he much preferred to draw the increase from the present number of udders. This idea is in the direction of progress and in the coming dairy millennium will be so universal as not to suggest a newspaper item. The common cow gives 3,000 pounds of milk per annum; the uncommon one 18,000 pounds, or six times as much. To care for three cows would only give one man healthy exercise, while eighteen, as we have seen, gives work for two. Then the accidents of maternity and of disease are reduced in the ratio of 3 to 18, as in the stable-room.—L. B. PIERCE.





These Wrappers Advertise Your Butter

YOUR butter wrappers are your own *paid* advertising space! Use them. Make them pay a profit. Use Paterson Vegetable Parchment wrappers because they not only preserve butter but make your package attractive to the butter buyer.

The sanitary, clean appearance of butter in these wrappers is a mighty factor in the final choice of the fastidious customer.

If you buy Paterson Parchment Paper Wrappers in lots of 5000 or more, we will print your advertisement on them in attractive display and positively guarantee the printing will not stain the butter.

PATERSON PARCHMENT PAPER CO.
Passaic, N. J.

Paterson vegetable parchment wrappers





"Pedigreed" Feed? Why Not?

Ce-re-a-lia Sweets is like a pure bred cow. Its past history is an open book and you read the future from it.

Ce-re-a-lia has made good for 8 years like this: "I strayed away for a while but can't get results I got with Ce-re-a-lia. Send me 10 tons." And this: "Increased butter yield of five cows from 18 lbs. to 32½ lbs." Thousands get results like this. So will you.

Feed One Cow Four Weeks at Our Risk. Write for details of trial offer.

THE EARLY & DANIEL COMPANY
301 Carew Building, Cincinnati, Ohio

I believe in lookin' backward as well as forward when I buy dairy feed, same as when I buy "pedigreed" cows.
EARLY DAN

D3178
Ce-re-a-lia Sweets



Don't Split With the Miller

Grind your own feed at home. Save miller's profit and long haul to town. Feed efficiently and economically.

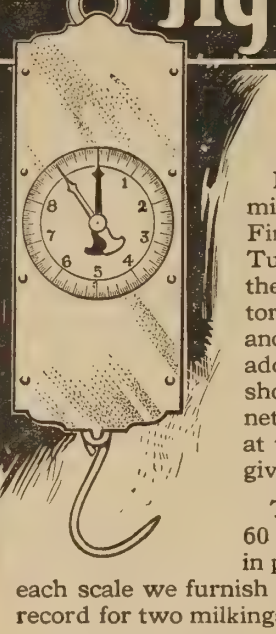
HOWELL *Roller Feed Mills*

grind stock feed, rye or graham flour easily, cheaply—a wagon load in an hour at a cost of 15 cents. Grind twice as fast as buhr mills at one-half expense. No buhrs, no stones to wear out. Guaranteed to get the wild oats. Scientifically built, Last a lifetime. 13 Sizes—any capacity—a size for any engine.

FREE complete catalog and Famous Roller Mill Puzzle. Write now. R. R. HOWELL & CO, 4 Malcom Ave. S. E., Minneapolis, Minn.

When Writing to Advertisers, Mention Hoard's Dairyman

Yield of Each Cow Figured for You



By the *CP* Pail Balancing Scale

Has two indicators. Weighs the milk in the pail. Eliminates errors. First hang the empty pail on the scale. Turn the thumbscrew in the center of the dial, which moves the red indicator until it is at the 0 mark, thus balancing the weight of the pail. Then add the milk or cream and the result shown by the red indicator gives the net weight of the milk or cream, and at the same time the black indicator gives the gross weight of pail and milk.

The capacity of these scales is 30, 60 and 120 pounds, according to size, in pounds and tenths of pounds. With each scale we furnish special blanks that will contain the record for two milkings a day for one week for 14 cows.

The scale can also be used for all weighing purposes.

Price each, 30 lbs. capacity by 1-20 lb. $4.85, 60-lb. $5.65, 120-lb. $8.85. Extra records per dozen, 15c.

Price each Postpaid (East of the Rockies)

4.85

Send for Big Dairy Mail Sales Catalog

The Creamery Package Mfg. Company

68 W. Kinzie St., Chicago



"Dandelion Butter Color" Is Big Prize Winner

Be sure and use Dandelion Brand Butter Color and give your butter that June golden shade which brings top prices —pleasing the eye and tempting the palate.

The High Scores of 1920

In many of the State Buttermakers' Shows, first awards were won by users of old reliable "Dandelion Brand." You can't miss by giving a trial to the butter color which helps 90% of the successful buttermakers of America.

Never gets rancid. Doesn't affect flavor.
Doesn't color the buttermilk. Leaves no sediment.
Colors more butter to the gallon.

Dandelion Brand Butter Color is purely vegetable and fully meets requirements of all Food laws—State and National. Ask your jobber for prices.

WELLS & RICHARDSON CO., Inc. BURLINGTON, VERMONT

PACIFIC LIVE STOCK SHOW

(Continued from page 914)

nook Segis Pontiac David and is owned by the Washington College of Agriculture.

The awards follow:

Bull 3 years or over—1, L. J. Simpson, Oregon, on Matador Segis Walker 6th; 2, A. M. Baldwin, California, on Merci Lad Korndyke Burke; 3, Hollywood Farm, Washington, on Judge Segis; 4, California Geo. Jr., Republic, California, on Dechuter Spofford Korndyke Lad 5th. Bull 2 years, under 3—1, Carnation Farms, Washington, on Pietertje Prospect Colantha; 2, Yakima Valley Holstein Breeders' Association, Washington, on Sir Bessie Rags; 3, Rupp on Hollywood Lilith Adventuress; 4, Wm. Bishop, Washington, on Riverview Sir Fellinga. Senior yearling bull—1, W. J. Higdon, California, on Prince Bonnie Walker; 2, Carnation Farms on Shadford Segis Hartog; 3, Bishop on Canary Paul Ormsby Poach; 4, Yakima Valley Breeders' Association on Sir Cascade Ormsby Blossom. Junior yearling bull—1, T. J. Owens, Washington, on Hollywood Veeman Segis; 2, Hollywood Farm on Hollywood Fayne Segis; 3, J. A. McCormick, Washington, on King Segis of Nooksack. Senior bull calf—1, State College of Washington on Chinook Segis Pontiac David; 2, Hollywood Farm on Hollywood Illustrites Fayne; 3, Yakima Valley Breeders' Association on Sir Ormsby Duchess Segis; 4, W. Martin, Oregon, on Aaggie Colantha Gerben. Junior bull calf—1, Yakima Valley Breeders' Association on Sir Cascade Johanna Pietertje; 2 and 4, F. R. Beals, Oregon; 3, Carnation Farms on Walker Matador Prince.

Cow 5 years or over—1 and 4, Bishop on Hazelwood Ormsby Posch 2d and Hazelwood Pietertje Jewel; 2 and 3, Carnation Farms on Bahama Cornucopia and Nena Kaan Selah. Cow 3 years and under 5—1, State College of Agriculture on Maple View Myra De Kol 2nd; 2, Rupp on Irene Countess of Somerset; 3, Bishop on Daisy Perfection De Kol; 4, A. E. Smith, Washington, on Nooksack Sundy Organdy De Kol. Heifer 2 years and under 3—1 and 3, Carnation Farms on Mutual Clothilde Segis Walker and May Walker Skylark; 2, Bishop on Chimacum Andy May; 4, Smith on Korndyke Greenback. Senior yearling heifer—1, Carnation Farms on Winnifred Hengerveld Walker; 2, D. McKeown, Oregon, on Reka Segis 2d; 3, Baldwin on Anoakia Burke Cornucopia; 4, Hollywood Farm on Hollywood Segis Phoebe Veeman. Junior yearling heifer—1, ——; 2, McKeown on Hazelwood Heilo Spofford Queen; 3, Bishop on Chimacum Mollie 2d; 4, Baldwin on Burbank Aaggie Lincoln. Senior heifer calf—1 and 2, Carnation on Carnation Colantha Ciruela and Carnation Matador Pontiac; 3, Beals on Hengerveld Burton De Kol Hartog; 4, Martin on Colantha Johanna Prilly Canary. Junior heifer calf—1 and 2, Carnation on Carnation Sylvia Queen and Carnation Matador Clementine; 3, Martin; 4, Simpson.

Exhibitor's herd—1, Carnation Farms; 2, Boner and Son; 3, Smith; 4, Bishop. Young herd—1, Carnation Farms; 2, Hollywood Farm; 3, Bishop; 4, Smith. Calf herd—1 and 3, Carnation; 2, Hollywood; 4, Bishop. Produce of cow—1, Hollywood; 2 and 4, Carnation; 3, Bishop. Get of sire—1 and 3, Carnation; 2, Hollywood; 4, Bishop.

Senior and grand champion bull—Matador Segis Walker 6th. Junior champion bull—Chinook Segis Pontiac David.

Senior and grand champion cow—Mutual Clothilde Segis Walker. Junior champion cow—Winnifred Hengerveld Walker.

Jerseys

The most difficult breed to judge was the Jerseys as the classes were not only large, but a great variation in type. Oregon and Washington are noted for their big Jerseys of large dairy capacity and vigor, but lacking in many instances in uniformity of type and refinement. The judge, Mr. Geo. W. Sisson, Jr., of New York, gave very good satisfaction and we believe selected the right animals for the ribbon class. He believes in good sized Jerseys, in type that indicates production, but with it he desires refinement and symmetry. To our knowledge he sent one animal to the barn, characterizing it as a watch charm. The aged class of cows created the most interest and brought forth the largest amount of comment. There were 20 entries and the judge said if he had 15 ribbons he would award them. This class made a wonderful showing; it had exceptional udder development and was of high dairy quality and as Mr. Sisson said "there were no watch charms among them." The people of Oregon and Washington may well be proud of their Jerseys, for there is seldom seen in a show ring twenty cows equal to these.

The blue ribbon went to Eminent's Jimp's Owl owned by Glen Tana Farm, Washington. Later she won senior and grand champion. The most striking thing about this cow is her great udder development. It seems too large for her body, but a record of 16,000 lbs. milk containing nearly 800 lbs. fat shows that her digestive and assimilative powers are well developed.

The senior heifer class was the largest at the show. It contained 33 animals and a splendid lot they were. Their development, like that of the older animals, speaks much for Oregon and Washington as being ideal states for the Jersey:

The awards follow:

Bull 4 years old or over—1, B. C. Altman, Oregon, on La Belle's Oxford Lad; 2, N. C. Sears, Washington, on St. Mawes of Grasmere; 3, F. Vincent, Oregon, Clarissa's Dulcet King; 4, P. Meenderinck, Washington, on Sunlight's Chief. Bull 3 years old or under—1, D. C. Howard and R. C. Williams, Oregon, on Captain Tristram; 2, J. M. Heldt, Washington, on Noble's Majesty of L.; 3, J. Donaldson, Oregon, on Golden St. Mawes Rosaire; 4, L. C. Daniels, Oregon, on Belle's St. Mawes Lad. Bull 2 years and under 3—1, Waikiki Farm, Washington, on Manna Lad of Waikiki; 2, Glen Tana Farm on Glen Tana Golden's Lad; 3, Ice and Spangler, Oregon, on Creampot's Fortune; 4, W. Robitsch, Oregon, on Susy's St. Mawes Apex. Senior yearling bull—1, Waikiki Farm on Count's Foxy Owl; 2, N. H. Smith, Oregon, on Picabo's Wonder Boy; 3, F. Loughary & Son, Oregon, on Leda's Golden Prince of L.; 4, F. E. Butler, Oregon, on Joy's St. Mawes. Junior yearling bull—1 and 2, Waikiki Farm on Esther Pilot of Waikiki and Bonny's Pet of Waikiki; 3, L. A. McCormack, Oregon, on Damsel Mawes Poppy; 4, V. Forrest, Oregon, on St. Mawes Bright Lad. Senior bull calf—1, McArthur & Stauff, Oregon, on Sophie's Oregon Tormentor; 2, Waikiki Farm on Waikiki's Morocco Duke; 3, Glen Tana Farm on Glen Tana Golden Boy; 4, M. C. Sears, Washington, on Champion of Midfields. Junior bull calf—1, McArthur & Stauff on Sophie's Chief Engineer; 2, Waikiki on Belle's Pilot of Waikiki; 3, A. Johnson, Oregon, on Emerald Kilches Joe; 4, Wm. M. Ladd, Oregon, on Vive Glow Senna Chief.

Cow 5 years or over—1, Glen Tana Farm on Eminent's Jimp's Owl; 2, Smith on Western King's Delight; 3, Waikiki on Mourier's Golden Maid; 4, Loughary on Eminent's Daisy of L. Cow 4 years and under 5—1, Loughary on Luckiamute's Noble Lou; 2, Altman on La Creole's Oxford Millie; 3, Howard and Williams on St. Mawes Beauty's Gertie; 4, Waikiki on Indiana Lady Diana. Cow 3 years and under 4—1, Loughary on Luckiamute's Queen Vidette; 2 and 3, McArthur and Stauff on Hood River's Lenore and Thora of Ashwood; 4, McLeod on Double St. Mawes. Heifer 2 years and under 3—1, Altman on Helier's Queen Maid; 2, C. L. Mulkey, Oregon, on Maggie of Laurchester; 3 and 4, McArthur and Stauff on Holger's Madam Butterfly and St. Mawes Hazel. Senior yearling heifer—1, Mulkey on Verna of Lancaster; 2, H. L. Weister, Washington, on St. Mawes Lady Etta; 3, B. Olsen, Washington, on Fern's Nehalem Goldie; 4, Waikiki on Pilot's Duchess of Waikiki. Junior yearling heifer—1, Mulkey on Fairy's Queen of Laurchester; 2, Altman on Helier's Lady of Ingleside; 3, Cary on Susy's Maiden Beauty; 4, Glen Tana on Glen Tana Sultan's Nelly. Senior heifer calf—1, A. Malar, Oregon, on La Coneyella; 2, Waikiki on Pilot's Trilby of Waikiki; 3, Glen Tana on Glen Tana Dorothy; 4, Altman on Empress Lass of Ingleside. Junior heifer class—1, O. P. Dosland, Washington, on Miss Pogis of St. Mawes; 2, Glen Tana on Glen Tana Morocco Lois; 3, Sears on Peggy Annabel; 4, Cary on St. Mawes Poppy 3rd.

Cow having Register of Merit record for one year to be judged on conformation only, producing 600 lbs. fat or over in tests begun at 5 years or over—1, Glen Tana on Eminent's Jimp's Owl; 2, Loughary; 3, D. Perkins, Oregon, on Rosaire Chimes; 4, J. M. Dickson & Son, Oregon, on Lulu May of Ashburn.

Cows producing 400 lbs. fat or over in tests begun at 2 years and under 5—1, Altman on a Creoles Oxford Millie; 2 and 4, Loughary; 3, Watt & Acree, Oregon, on Brilliant Jersey Queen.

Exhibitor's herd—1, Altman; 2, Glen Tana; 3, Waikiki; 4, McArthur & Stauff. Breeder's young herd—1, Loughary; 2, Glen Tana; 3, McArthur & Stauff; 4, McCormack. Calf herd—1, Waikiki; 2, Glen Tana; 3, McArthur & Stauff; 4, Loughary. Dairy herd—1, Loughary; 2, McArthur & Stauff; 3, Dickson & Son; 4, Ladd. Get of sire—1, Loughary; 2, Altman; 3, McArthur & Stauff; 4, Mulkey. Produce of cow—1, Loughary; 2, Altman; 3, Glen Tana; 4, Malar. Cow having Register of Merit record for one year, shown with two of her progeny—1, Glen Tana; 2 and 3, Loughary; 4,



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I used two boxes of your tablets. Before using them got only 6 eggs a day. Within two weeks was getting 12 to 15 eggs a day. In seven months I got about 350 dozen (4,200) eggs from my 48 hens. I did not have any Roup. I give your tablets the praise.
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I found the tablets were fine to start hens to laying. Before using the tablets I wasn't getting any eggs. Within 10 days after using tablets increase started. I was finally getting 75 eggs a day and fed the tablets until spring.
MRS. R. H. TULTZ, Scranton, Kans.

Makes 'Em Lay in Coldest Weather.

Last winter I fed two boxes of your tablets mixed with feed. Before using tablets got only 12 eggs a day—afterward 30 to 36 eggs a day. This was within three weeks. After feeding the tablets six weeks got 50 and 60 eggs a day and in the coldest weather in winter.
MRS. ELMER HOTTMAN, Ridgeway, Wis.

Best Tablets Made.

The Buttermilk Compound Tablets I think are better than the common tablets. I got more eggs within two weeks after using them. I have some other tablets but the "Buttermilk" are the best. I fed three boxes last winter. My flock did not have the Roup. Will send for more tablets.
MRS. WALTER ELLIS, Gypsum, Kans.

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Because I want one million new users of these wonderful tablets I am willing to send you a big triple size box if you will just write me. Your name and address is all I need. Use a postal card if you wish—I'll send the tablets by return mail, post paid. You use the tablets 30 days then report results to me. If you are not satisfied in every way—if you are not more than pleased—the tablets are to cost you nothing. But if you do find that you get many, many more eggs—probably three to five and even seven times as many—and your flock is healthier than ever before—full of pep and strutting around with healthy red combs—the tablets cost you only $1.00. No matter what you have tried before, I want you to remember that my secret formula is absolutely different from anything else—that it has been known to succeed where others failed. Not only that—you must remember that I send you a big triple size box—nearly three times as big as the ordinary box of tablets.

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Dickson. Bull entered in Register of Merit, shown with four of his progeny, at least two of which must be females in milk—1, F. E. Lynn, Oregon.

Senior champion bull—Captain Tristram. Junior and grand champion bull—Esther Pilot of Waikiki.

Senior and grand champion cow—Eminent's Jimp's Owl. Junior champion cow—Verna of Laurchester.

Students' Contest in Judging Dairy Cattle

This is the third dairy cattle judging contest of the kind held under the supervision of the Western Dairy Instructors' Association. Four teams were entered in the contests this year, representing the University of British Columbia, University of Idaho, Washington State College, and the Oregon Agricultural College.

The scores made were very close and the contestants demonstrated the excellent training they have received from their instructors.

The following are winners in individual prizes: Alfred W. Loy, Oregon Agricultural College, was high man of the contest; Bert Sweeting, University of British Columbia, second; and A. L. Leonard, Washington State College, third.

The high students in Holsteins were: A. J. Leonard, first; and W. T. Putman, Washington State College, second. The high students in Guernseys were: Alfred W. Loy, Oregon Agricultural College first; and Carl L. Patch, University of Idaho, second; and the high students in Jerseys were: Bert Sweeting, University of British Columbia, first; and Herbert Nelson, Oregon Agricultural College, second.

The Oregon Agricultural College team made the highest score, all breeds considered and were highest on Guernseys; the best total on Holsteins was made by the Washington State College; and the University of British Columbia made the best rating on Jerseys.

Students' Dairy Products' Judging Contest

The standing of teams in this contest, in which butter, cheese, and milk were scored, is as follows: First, University of California; second, Washington State College; and third, University of Idaho, and the plaque offered by the Pacific International Live Stock Exposition was won by the University of California for having the highest total score.

In judging butter the Washington State College made the best score; in cheese, the University of California; and in milk, the University of Idaho.

G. R. Jaehnig of the University of California was high man of the contest and his team mate, L. H. Nielson, was second. Robert Tucker of the Washington State College was third.

Ames Dairy Short Course

A three months' course in dairying, beginning January 10, is offered by the Iowa State College, Ames, Iowa. It is offered to men who are interested in taking up buttermaking, ice cream making, cheese making, and market milk work, and is a part of the regular six months' dairy course.

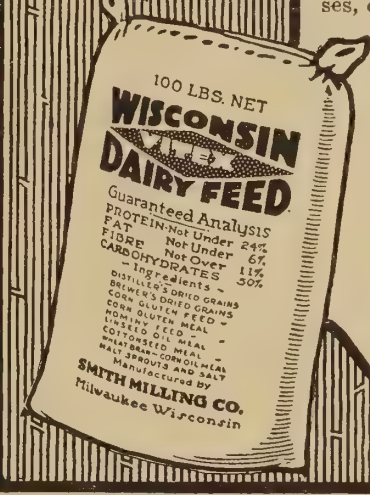
Students entering in January can secure positions in dairy factories where they can work during the summer months and obtain valuable experience and at the same time receive full compensation for service rendered. They may then enter for the second term's work in September and have the six months' course completed by January.

Iowa. M. MORTENSEN.

Tile drain those places where wheat, alfalfa, and clover were heaved out last winter by frost. This work can be done during the late fall and winter months when general farm work has slacked up somewhat.

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COWS eat Vitex eagerly. They digest it thoroughly and pay you dividends in the form of greater milk production.

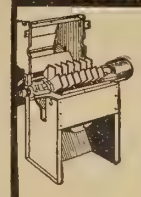
Vitex keeps the cows in better condition and gives you a bigger daily milk yield at lower feeding cost.

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EDITORIAL COMMENT



DRY GRASS

There is a strong tendency to consider that hays and grasses of the same kind have the same kind of nutritive properties. That is to say, alfalfa would be identical in composition with all alfalfa cut at the same time and cured in the same way, and grass grown for pasture would have the same feeding value. Close observers have discovered that this is not true. Soil and perhaps other factors cause plants of the same kind to vary in composition and in feeding value.

In the Middle West we do not look upon dry grass as being very nutritious or a desirable feed, especially for milking cows. In the West, however, the grass which has been frosted and dried is a very nutritious feed—if the condition of cattle and horses may be used as a basis of judgment. In passing through Montana recently, we were struck by the high condition of the live stock seen along the way. Many of the cattle were apparently ready for market, the horses were fit, and the dairy cows in exceptionally good condition.

The animals were grazing among the sage brush and there was nothing but the dry grass. There is seemingly something in the soil of this section that produces a grass of high nutritive properties and it shows conclusively that in the older sections the soil may be so fed as to improve the quality of feed for our live stock. It suggests, too, that the making of certain combinations of feed is highly desirable to obtain the best results. Some day we shall know how to make better combinations of feeds so as to nourish our cattle better. This will mean larger milk records and better developed calves.

The dry grass of the plains country may hold a valuable lesson for us.

CUTTING ALFALFA

Cutting alfalfa at the proper time is more important than is appreciated by a majority of growers. When alfalfa is cut too late in the fall it is likely to winter-kill, unless there comes an early fall of snow and it lasts until late in the spring to protect it. A growth of from 8 to 12 inches will help hold the snow and keep the ground from thawing and freezing.

In the north latitudes we do not consider it a good practice to cut alfalfa after the first week in September for after that date the weather conditions are not likely to produce a sufficient growth to protect the roots of the alfalfa. Cutting alfalfa too late in its maturity we know weakens the plant and makes winter-killing easy. When alfalfa is ready to cut the crown is sending out little shoots and if permitted to stand long after this the mower will cut the ends of these shoots and growth is stopped. New shoots are sent out and this requires strength from the roots.

Late this fall we visited the farm of J. Q. Emery of Wisconsin and noted that his alfalfa was apparently divided into two fields. It appeared as though the field might have been seeded at different times. Upon inquiry we learned that one-half of the field was cut late in the previous fall and the other half was not cut. The half that was cut late in the fall was decidedly a poorer stand than the other half. The plants were not so vigorous, June grass was coming in, large patches were bare of alfalfa, in short, it was fast reaching a stage when it should be plowed up. The half that was not cut late in the fall was almost a perfect stand and showed in every way, by its color and growth, to be a well established and properly treated field of alfalfa.

It was an open question with Mr. Emery whether cutting late in the season or late in maturity caused the difference or rather weakened the growth of the alfalfa plants and caused many to die. Before the late cutting this part of the field had the better stand. The difference in these fields may be attributed to cutting the alfalfa too late for the line of demarcation between them is distinct. Whether the plants died because they were weakened by clipping the new shoots or by exposing the crowns and roots to freezing and thawing is a question which cannot be definitely answered. It matters little which was the cause of so many plants dying, the results told the story of bad practice. This field shows conclusively that unless proper attention is given to cutting alfalfa at the right time that it is likely to be killed.

ANOTHER VICTORY FOR DAIRY FARMERS

"The dairymen of California have just won a sweeping victory in a suit brought by our enemies, in which an attempt was made to take away our charter." This message from the Associated Dairymen of California is one of good cheer for all those interested in co-operative marketing. The court decision is the first ever made in that state on the points involved—fundamental principles in the co-operative movement among producers.

It was claimed that the Northern California Milk Producers' Association is so organized and so conducted that it should "be excluded from all corporate rights, privileges, and franchises", that it should "be dissolved and its franchise revoked and cancelled". It was charged that the association has conspired with others and formed a trust which unlawfully controls the purchase and sale of milk in California—that through this trust competition in the sale of milk is prevented and the price of milk and milk products is increased to the public.

The association was successful in having the court "strike out" this charge. That left, in the opinion of Peter J. Shields, Superior Judge, "a confused charge, too vague to be made the basis of inquiry". He states: "A great industry should not be called upon to defend itself against charges so uncertain and impermanent as the record discloses in this case. . . . With this charge removed the case loses all character as a public action, and completely fails to state a cause for action for the relief asked for."

This court opinion is further legal vindication of the effort of dairy farmers to take part in the work of marketing of their products. It is a notable addition to the number of court victories already won by co-operative organizations.

EGGS AND MILK

Along the coast of Alaska fish eggs are an important food, especially among the people who have little or no milk supply. We are informed by a person engaged in government service that when the fish fail to come up in the spring thousands of babies die. Eggs are used to feed babies where a supply of milk cannot be obtained and where the mother fails to provide enough for her baby.

It was discovered by Dr. E. V. McCollum that the fat of a hen's egg contains a vitamine or an unknown substance which he has termed soluble A. He proved that a young animal denied this substance, soluble A, would not make proper growth and in time death would ensue. This substance is found in grass, leafy vegetables, and roots of yellow color. Some nations get it principally from these sources. But in Alaska the supply of vegetables is not always abundant, especially among the Indians. Moreover, vegetables for an infant could scarcely be considered good food. These people are forced to feed fish eggs to their infants and we surmise that they contain this life giving substance, soluble A, for it has been well demonstrated that it is essential to young and we know no reason why the young fish should not require it as much as the chick or the baby.

How fortunate we are to get an adequate supply of this substance in milk—cheap, wholesome, and nutritious. We do not have to resort to fish eggs, to carrots, or grass for our supply. The cow will eat the carrots and grass and refine them into the best of human foods. Yet there are thousands of persons who are denying their children and themselves an adequate supply of milk.

The Indians of Alaska learned from sheer necessity the value of fish eggs to their infants, but it took a scientist to give the reasons for their value. This same scientist has explained the relation which eggs have to milk. Both were created to supply food to the young.

TAKE TIME TO KNOW

It is wrong to accuse a person or firm of underreading the Babcock test for fat or giving improper weights unless the accuser knows that cheating has been done. Every dairyman should weigh his milk and cream and know their tests before he charges the person or firm to whom he sells it with making false returns. It pays a dairyman to weigh and test each cow's milk occasionally for the purpose of determining what each cow is doing. If care is taken it can be determined how much total fat and milk a herd is producing. To be exact, a farmer should weigh his milk or cream when he has it ready for market; then he will know just what amount he is selling.

A well-to-do farmer recently called our attention to a neighbor of his who claimed the company to whom he sold his milk cheated him out of 80 pounds a day. This man was asked if he weighed his milk, and he said, "No," and then added, "but each can holds 10 gallons and a gallon of milk weighs 8.6 lbs. I should have 86 lbs. of milk in each can, and I ship 15 cans of milk per day." Here is the reply from the man to whom these remarks were addressed, "You are mistaken about a ten-gallon can holding 86 lbs. of milk. When new and carefully filled a can seldom holds over 84 lbs. of milk and the most of them less. In shipping the can becomes jammed and that makes them hold less, and further care must be taken to fill a can full of milk. The only way for you to determine whether you are getting honest weights is to weigh your milk when it is ready to ship. It is nothing short of criminal to accuse someone of cheating you when you have never weighed your milk."

This was straight talk from one neighbor to another, but it set forth facts, gave good advice on what to do before accusing another person of stealing. There would be less fault finding, fewer accusations, and more confidence in others if every person took the time to know.

Crops on Tile Drained Marsh

I have just completed a job of tile drainage of a marsh on my farm and I am not clear as to what should be done with the land next spring by way of cultivation, cropping, etc. The peat and muck range in depth from 8 inches to 3 feet, according to location with a sandy subsoil. I would like to know how deep the soil should be plowed the first year and what crops can be successfully grown the first season. Some farmers often sow flax or buckwheat on such ground while others seed it to grasses and occasionally oats, rye, or corn is planted the first year but I am afraid that the soil would be too cold for such crops the first season. Flax or buckwheat is hard to harvest and does not, as I understand it, improve the fertility of the soil. I presume the ideal plan would be to fertilize the ground with manure or some commercial fertilizer, but I am not in position to do either next spring and am seeking something that would take its place and at the same time benefit the soil.

Illinois. C. J. M.

The choice of a crop to grow upon the tile drained land should be made upon the basis of its adaptability and its effects upon the soil rather than upon the economic use to which it may be put. The choice, for these conditions, is necessarily limited to a rather narrow range. Crops which will make a fairly good growth and which will tend to make the peaty condition of the soil decompose are the ones to look for. The crops mentioned are the ones from which to make a choice.

We are inclined to believe that corn and buck-

wheat would be among the best ones to select, as both have certain advantages for conditions such as described. Buckwheat is a very vigorous feeding plant and will stand both an infertile and an acid condition of the soil better than most other farm crops. It is quite possible that this soil may be somewhat acid or sour owing to the presence of an accumulated amount of partially decomposed organic matter. Corn, likewise, will handle this condition fairly well, and the cultivation which it would receive during the summer would aid in a rapid decomposition of the pea. It is quite possible that corn would serve best of the crops. As suggested, an application of stable manure would do a great deal toward a successful crop of corn. It is also barely possible that soy beans might do fairly well, since crops like this and corn have an advantage in being planted later than other spring sown crops. Oats might also be tried since this crop is also a vigorous feeder and stands an acid condition of soil very well. We would not advise seeding the land down for a few years at least. It will be much better to keep it growing the regular cultivated crops in order to get the soil in good condition. Eventually it might be profitably laid down as a permanent pasture.

For the coming season seed portions of the field to the crops suggested. This would give a line on those that will do best. In the matter of plowing, we would say that our inquirer should plow at least from six to seven inches deep. Follow the plowing with thorough cultivation, working up as good a seed bed as is possible.

Sugar Beet Information

1. Can sugar beets be grown successfully on old meadow sod not very rich?
2. What distance should the rows be apart?
3. What distance apart should the plants be in the rows?
4. How early in the season should sugar beets be sowed?
5. How often should sugar beets be cultivated during the season and should they be hilled the last cultivation?
6. At what stage of the plant should the beets be blocked or thinned out?
7. Should sugar beets be raised on the richest land of the farm?
8. Will commercial fertilizer be beneficial, if the land has been well manured with barnyard manure this fall and plowed under?
9. Should sugar beets be cultivated and handled differently in dry seasons like this last season?

Milwaukee, Wis. W. C. O.

1. Yes, it is best to plow the meadow in the fall so as to start decomposition of vegetable matter early, so as to compact the soil and to expose the plowed soil to freezing and thawing during the winter months. Plant food is rendered available and usually one good crop can be raised on such a field under ordinary conditions of weather.

2. The rows should be from 20 to 22 inches apart.

3. The plants should be from eight to ten inches apart in the row.

4. Plant sugar beets just as soon as the soil is warm and dry—about corn planting time. Generally the earlier the beets are planted the more vigorous their growth.

5. After the beets are planted and as soon as the beetlets show up above the ground in rows begin to cultivate. After thinning, cultivate frequently so as to keep the field clean of weeds. Cultivation will hasten the early rapid growth of the plants so that the tops will cover the ground between the rows before the usual hot, dry weather begins. The leaves protect the soil moisture from evaporation which promotes the healthy growth of the root. After 8 or 10 leaves are formed do not cultivate too close to the plant nor too deep. Close, deep cultivation checks growth by cutting too many side roots which serve as feeders to the plant. Cultivate from three to five times during the spring and early summer and until the tops meet between the rows. We do not recommend the killing of beets at the last cultivation.

6. When the beets are from two to four inches high they should be blocked, leaving two or three inches of beets in each block. This work can be done by using a hoe about 7 inches wide. Thin out to one plant in each block leaving the moist, vigorous plant to produce the beet, every 8 or 10 inches apart in the row. This work should be done with care and, above all, it must be done on time. The condition of the crop at this time and the evenness of the stand will largely determine the success or failure of the crop.

7. Yes, sugar beets will grow best on rich land. They will do particularly well on rich, sandy loam soils. However, we would not attempt to grow sugar beets on any kind of low and poorly drained soils, although rich in plant food.

8. Sugar beets are generous feeders of nitrogen and potash and an application of these two fertilizing ingredients in the form of commercial fertilizer would favorably supplement the plant food derived from barnyard manure. Our best results on sandy, loam soil were made by the application of 150 lbs. of sulphate of potash, 300 lbs. of acid phosphate, and 150 lbs. of sulphate of ammonia to the acre.

9. Usually in times of dry weather, cultivate frequently so as to conserve moisture. Cultivate more frequently under such conditions than you would under the average conditions. Cultivation will form a moisture at the surface and will conserve the moisture which the sugar beets so much need for their best growth.

Wisconsin. J. F. WOJTA.

Flaxseed Too High to Feed

I have about 25 bushels of flax. What would be the result of the flax in the ration? Should it be ground and mixed with other grains, should it be fed whole, or shall I boil it and feed it?

Hartford, Wis. M. M.

If a market can be found for this flaxseed, the oil usually brings so good a price that it is best to sell the flaxseed and purchase oil meal. If it is desired to feed flaxseed, it is very high in feeding value and serves an excellent use in dairy feeding. It should be ground. As compared to oil meal it is very much higher in fat content and contains only about half as much digestible proteins and carbohydrates on the average. One hundred pounds of flaxseed contain 20.6 lbs. of protein, 17 lbs. of carbohydrates, 29 lbs. of fat, and equivalent in the total digestible nutrients of 102.8 lbs. This compares with the average analysis of oil meal which gives the digestible contents as 31.7 lbs. of protein in each 100 lbs. of meal, 37.9 lbs. of carbohydrates, 2.8 lbs. of fat, and a total of digestible nutrients of 75.9 lbs.

In feeding, attention should be given to the difference in nutrient contents. We recommend that this feed be used rather as a conditioner than as a part of the regular ration. Small calves will bring good results if a little flaxseed is fed. Also heavy milking cows will do well for having consumed one pound, or even one and a half pounds, per day in the grain mixture. It combines well with such grains as corn, oats, and cottonseed meal, a good mixture with usual farm roughages being: 400 lbs. ground corn, 300 lbs. ground oats, 100 lbs. cottonseed meal, and 100 lbs. flaxseed.

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Steam Sterilizer

Am considering the installation of a dry heat sterilizer in our new dairy. Sterilizer will be six feet long, four feet deep, and five feet high, constructed of two layers of "tongue and groove" between which will be a layer of 85% magnesia boiler insulation. Door of same construction. Wish to obtain a temperature of about 300 degrees F. in a comparatively short space of time after steam is turned into coils. What length of one inch pipe (or square feet surface area) will be required with steam at 80 lbs. pressure? What size boiler would be required, making due allowance for other uses, such as steam turbine bottle washer, water heating, etc., for a dairy of 1,000 quarts daily capacity, no pasteurization, nor power required therefrom?

Hilo, Hawaii. R. E. C.

A temperature of 300 degrees F. is dangerously near the melting point of solder, it being about 304 degrees F. Experiments here demonstrate that a dry temperature of 230 degrees F. when held for 30 minutes gives satisfactory results, or a temperature of 284 degrees held for 2 minutes, or a temperature of 266 degrees held for 4 minutes. A temperature of 270 degrees F. dry heat, when held for 5 minutes gives as good results as a temperature of 212 degrees F. produced by flowing steam for the same time.

It is, therefore, recommended that you maintain a dry temperature of 270 degrees F. in your sterilizer for 10 minutes. By so doing you will effect satisfactory sterilization, and at the same time avoid the possibility of melting the solder of the utensils and greatly reduce the pipe area required.

The area of pipe required depends upon how well the chamber is constructed and the method of connecting and draining the pipes. With a well constructed chamber and the pipes connected to a header and properly drained, the number of linear feet of one-inch pipe required is 200.

For a non-pasteurizing plant of a 1,000 quarts capacity a 10 H. P. boiler should be used. It would be possible to get along with a smaller boiler, but a 10 H. P. would be the most economical.

U. S. Dairy Division. J. T. BOWEN.

Beet Tops for Dairy Feed

HOARD'S DAIRYMAN:—Where sugar beet tops are grown for the factory, the tops form an important by-product that is sometimes not appreciated. I am not aware that any accurate test has been made to determine their relative feeding value but many dairymen consider them equal to corn ensilage, weight for weight, and the cows of at least one feeder I know showed a small gain in milk when taken off from prime corn ensilage and given the beet tops.

The cheapest way to feed the tops is from the field. In the sugar beet districts of the north, however, the tops usually freeze before many of them are fed. These frozen tops should not be fed to calves or young stock as they are likely to cause poisoning. The old cows do not seem to be much affected by this. If possible, what cannot be fed in the fall should be put into the silo. If this cannot be done, they should be hauled into the barn several days before feeding, and the frost will go out of them.

To ensile the tops they may be put in whole or they may be chopped. The whole tops will settle down and make a compact mass which will exclude the air and keep a long time, except a foot or so on top. The air will penetrate for this distance down and cause them to rot down. When rotted, this seals the silo and prevents further spoiling. To avoid such a lot of waste, corn ensilage may be placed on top of them or wet pulp from the factory will answer the same purpose. If the silo is already partly full of corn or other ensilage, the beet tops may be put on top of it without any bad results.

Michigan. HARRY L. SPOONER.

Fat Percentage Not Changed by Feed

In feeding dairy cattle can you supply a cow feed that will make her milk richer in butterfat?

Bolivar, Mo. C. E. C.

The per cent of fat in a cow's milk is characteristic for the animal and is not affected for any considerable period of time by the ration supplied; that is to say, a cow whose normal fat percentage is 3.5 cannot be made into a 5 per cent cow simply by a change in feed. A cow can be made to produce more fat by liberal feeding, but this increased quantity comes through the fact that the production of milk is greater with well fed cows and not through increased fat percentage. Over short periods it is possible to increase the fat percentage. It is thought that certain manipulations of the ration may be used to give abnormal tests in semi-official record making, this change lasting, however, for a very short time. In the seven-day test records with Holsteins, cows which have been put into a high condition of flesh produce milk which has an extra high fat content for a few weeks after the cow freshens. In a short time, however, she comes back to her normal fat percentage.

CONTENTS

Banishing Milking Troubles - - - 909
World's Record Quality Milk Producer - - 910
The Dairy Optimist - - - 910
Defeat in New Orleans Milk Strike May Benefit Louisiana Dairymen - - - 911
Dairy Cattle Valuation - - - 912
Leaks in the Tractor Engine - - - 913
Pacific Live Stock Show - - - 914
Champions at Portland - - - - 915
Cow Testing Associations - - - - 916
Dairying Thirty Years Ago - - - 916
Ames Dairy Short Course - - - - 919
Dry Grass - - - - - - 920
Cutting Alfalfa - - - - - 920
Another Victory for Dairy Farmers - - 920
Eggs and Milk - - - - - 920
Take Time to Know - - - - 920
Crops on Tile Drained Marsh - - - 920
Sugar Beet Information - - - 921
Flaxseed too High to Feed - - - 921
Steam Sterilizer - - - - 921
Beet Tops for Dairy Feed - - - 921
Fat Percentage not Changed by Feed - - 921
Slashing of Prices for Feeds Becomes General - - - - - - - - 922
Oregon Farm Bureau Organized - - 922
Wisconsin Milk Prices - - - - 922
An Opportunity for American Stock Breeders - - - - - - 922
Western Guernsey Breeders' Sale - - 922
Washington D. C. Weekly News - - 923
Exports of Dairy Products - - - 923
November Milk Prices - - - - 926
Wisconsin Holstein Meeting - - - - 926
Bulletins of the Week - - - 928
California Dairy Manufacturers Meet - - 930
Portage County Wis., Guernsey Meeting 930
Quebec Ayrshires Sell Well - - - 930
Cheese Markets Steady - - - - 931
Waupaca Co., Wis., Holstein Sale - - 931
Butter Markets Break Sharply Under Light Demand - - - - - - 931
Junior Club News from Sheboygan Co. - 932
Junior News from Harford Co., Maryland 932
A Jersey Calf Club Wins at Wisconsin - - 932
Junior Letters - - - - - 933
Land Clearing and the New Settler - - 935
Milk a Factory Lunch - - - - 935
Middlesex Meadows' Quartette - - - 936
National Board Calls Meeting for St. Louis 936
Jefferson Co., Wis., Holsteins Average $309 936
Veterinary—Development of the Fetus—Acute Indigestion—Impotent Bull - - 937
Third Guernsey Field Man Appointed - 940
Fond du Lac Co., Wis., Third Guernsey Sale - - - - - - - - 940
New York Butter Market - - - 942

Coming Events

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

Slashing of Prices for Feeds Becomes General

Declines in Prices for Coarse Grains Affect Market for Feedstuffs—Demand Continues Dull

[From Report by U. S. Bureau of Markets]

The inability of jobbers to dispose of transit offerings promptly during the week ending Nov. 27 accelerated the decline in the value of feedstuffs. Slashing of prices became general because of the decline in coarse grains and the prevailing belief that prices of feedstuffs are out of proportion with those of coarse grains. For example: A ton of corn in the Chicago market was worth about $24, while hominy and gluten feed were selling at $8 to $10 and $20 to $23, respectively, higher.

With bran selling in the majority of the markets at higher prices than are asked for 36% cottonseed meal and linseed meal containing a lower protein content than 36% cottonseed meal selling at $10 to $15 per ton higher than that commodity, country buyers are reported to be showing an increased tendency to compare costs per unit of available nutrients before placing their orders.

Pittsburg, Cincinnati, St. Louis, and several other important markets report available supplies of feeds in excess of the demand. In the Minneapolis market where prices for bran and middlings were pegged during the last three weeks around $31.50 and $29, jobbers quoted $30 and $26.50 on Nov. 27, because of oversupplies, especially of middlings.

Quotations on bran were $30 in Minneapolis and Kansas City, $34 in Chicago, $39 in Pittsburg, New York, and Boston, $51 in Los Angeles, and $55 in San Francisco. In general middlings were $3 to $4 under bran except in the East and far West where prices on these two feeds were about the same.

Cottonseed meal (41%) was $46 in Minneapolis, $45 in San Francisco and Los Angeles, $41 in Chicago, $43 in Pittsburg, Philadelphia, and Boston, and $33 in Memphis. The 36% meal ranged about $3 under these prices. Texas shippers quote 43% meal at $31 f. o. b. common points or $43.50 delivered Chicago.

Linseed oil meal was quoted at $48 in Minneapolis, Omaha, Philadelphia, and New York, at $50 in Chicago, $53 in Pittsburg, and $54 Boston. (Retail dealers in Southern Wisconsin were able to buy on December 2 at prices permitting them to sell to farmers 33% meal at the car for $50 cash.)

Gluten feed was quoted as low as $31 in Minneapolis, but Chicago quoted $48 and eastern cities were selling at around $52. Hominy feed sold for $27 in Minneapolis, $33 in Chicago, $39 in Pittsburg, $29.50 in Omaha, and up to $44.50 in Boston.

Beet pulp was quoted at $44 in Chicago and dealers were offering it delivered in carload lots in southern Wisconsin at $46.80. Velvet bean meal was quoted at $36 in Jacksonville a d dried brewers grains at $45.50 in New York.

Hay was in heavier receipt, and prices declined slightly. No. 1 timothy was quoted at $24 in Minneapolis and Kansas City, $30 in Chicago and Philadelphia, $37.50 in Boston, New York, and Jacksonville. Mixed clover was about the same price as straight clover, prices ranging from $2 to $4 under timothy.

The general market on alfalfa is about $2 higher than a month ago, the average at eight important markets being $30.75 for No. 1. Quotations on No. 1 alfalfa are $26 in Omaha, $26.50 in Kansas City, $23.50 in San Francisco, $28 in Minneapolis, $32 in Chicago, and $31 in Cincinnati.

Oregon Farm Bureau Organized

Representatives of the county farm bureaus in Oregon recently met in Portland and outlined a tentative state federation. This action followed a meeting in Eastern and in Western Oregon, where it was decided to proceed with such an organization plan. A committee was appointed to draw up preliminary plans, which were accepted at the Portland meeting and will become permanent upon ratification of the constitution by twelve county farm bureaus.

Chester H. Gray, president of the Missouri State Federation and a member of the executive committee of the American Farm Bureau Federation, was present and outlined the work of the National organization. George A. Mansfield of Jackson County, was elected president of the temporary organization and W. W. Harrah of Umatilla county vice-president.

The growth of farm bureaus in Oregon has been conservative. None were organized previous to 1919. Organization developed gradually as the farmers became familiar with the progress of the movement. Eighteen of the twenty-six counties in the state now carrying on extension work have organized farm bureaus, while the remaining eight are in various stages of organization.

Oregon. F. L. BALLARD.



W. W. Weir, formerly instructor in the soils department of the University of Wisconsin. He has recently been appointed managing editor for the Soil Improvement Committee of the National Fertilizer Association with headquarters in Washington, D. C. Readers of Hoard's Dairyman will remember the excellent series of articles from Mr. Weir's pen on soil problems, which was published in issues of volumes 58 and 59.

Wisconsin Milk Prices

There have been numerous inquiries as to prices paid for milk by condenseries in Wisconsin during the month of November. The State Bureau of Markets has furnished us with the following table showing the prices paid by condenseries in various counties of Wisconsin:

County	Price per 100 lbs.	Test basis %	Differential per 0.1% test
Clark	$2.40	4	
Dane	2.52	4	$.05
Dunn	2.60	4	.05
Green	2.90	4	
Jefferson	2.15	3.5	.04
Manitowoc	2.60	4	
Racine	2.50	3.5	.04
Sauk	2.60	4	.05
Vernon	2.00	3.6	.04
Walworth	2.70	3.5	.04
Washington	2.80	4	.06
Waukesha	2.40	4	.04
Waupaca	2.50	4	

An Opportunity for Ameriean Stock Breeders

American stock breeders and distributors of dairy appliances who are looking toward the Argentine market will be afforded opportunity for demonstration at the annual international dairy exhibition of the Argentine Rural Society to be held at Palermo, a suburb of Buenos Aires, May 8-27, 1921.

The exhibition will be divided into three sections: the first for breeding and dairy cattle, sheep, and goats; the second for dairy machinery and appliances; and the third for dairy products. Applications for space should be addressed to the manager of the society, Sarmiento 834, Buenos Aires, where they will be received up to April 10.

Two representatives of the United States Department of Agriculture, David Harrell and H. P. Morgan, visited the exhibition last year while on a tour of investigation of live stock and dairying conditions in South America. They report the farmers of Argentina to be deeply interested in improving the dairying industry, which is still in a primitive condition in many parts of the country, and to be friendly toward American breeders and manufacturers. They suggest that much more rapid progress in establishing American agricultural relations with South America can be made by practical demonstrations than by correspondence or advertising, declaring that so much erroneous advertising has been done by importers of stock and other merchandise that the people are skeptical of printed matter. They express the belief that there is an opening for the sale of American cattle and equipment, remarking that, "it is impossible that this good cattle country should stay permanently in its present condition, which is about that of the Southwest 40 years ago."

The Argentine Ambassador at Washington is manifesting much interest in the exhibition, and information regarding it can be obtained direct from him without the delay of writing to Buenos Aires.—U. S. Department of Agriculture.

Western Guernsey Breeders' Sale

The second annual sale of the western Guernsey breeders was held at the Pacific International Stock Show sale pavilion at Portland, Ore., November 18th. Twenty-five animals were sold for an average of $444.60. The sale was attended by over two hundred and fifty people, but the buyers were rather few. It had been rather difficult to secure enough animals from the different breeders to hold a sale so that the quality was not as high as it might have been had the animals been more plentiful. The fact that several animals of very plain breeding were brought into the ring in rather poor condition lowered the average of the sale very much.

Edna of Mountain View 70827, a cow owned by Leslie G. Perry of Idaho, topped the sale at $950. She was purchased by Wallace and Fordyce at Washington. The senior champion bull, Jolly Fermain, sold for $700 to Ira G. Lance and E. Harrison of Oregon.

The list of buyers and animals sold follows:

Ira G. Lance and E. Harrison, Oregon	
Jolly Fermain	$700
Frank A. Rowe, Oregon	
Red Wing Starlight's Acorn	$500
M. Ryan, Oregon	
Landom's Beauty	$410
Alvin E. Hornshirk, Oregon	
Ra's Spotswood Sweet Brier	$405
H. E. Angel, Washington	
Hambro's Deriloffa	$575
R. H. Thomsen, Washington	
Middle Dale Golden Maid	$460
W. H. Evans, Oregon	
Cascade Trixey	$400
Wallace & Fordyce, Washington	
Chicome Loven	$435
Edna of Mountain View	950
Homer Mason, Oregon	
Linnie of Chicona	$500
Wm. Bues, Washington	
Nedra of Chicona	$900
F. S. Peer, New Jersey	
Merle of Chicona	$700
J. F. Patty, Washington	
Sara of Mountain View	$525
A. E. Engbretson & V. H. Harwood, Ore.	
Hope of Mountain View	$425
W. O. Reith, Oregon	
Elaine of Chicona	$800

Jersey Cattle Notes

For week ending November 26: Number of animals registered: bulls, 163; cows, 545; total, 708. Number of transfers recorded: bulls, 148; cows, 545; total, 693.



AYRSHIRE CUP TO UNIVERSITY OF VERMONT

One of the greatest forward steps ever taken by the dairy breed associations was the establishment of the various Advanced Registry and Register of Merit systems. When Advanced Registry was inaugurated by the Ayrshire Breeders' Association the cow, Rena Myrtle, bred by C. M. Winslow and owned by the University of Vermont, was the first to complete a record. Rena's Myrtle's record of 12,172 lbs. milk and 467.92 lbs. fat was unexcelled and she stood as champion of the breed for some ten years. Thus the honor of completing the first Ayrshire record fell to the University of Vermont.

In recognition of the issuing of this first certificate of Advanced Registry the Ayrshire Breeders' Association recently presented the University of Vermont with a silver loving cup. The University appreciates this gift both for its historical significance and the distinction it brings the University.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, D. C., DEC. 2—George E. Flanders, attorney for the Division of Agriculture of the State Department of Farms and Markets of New York, has recently called attention to the danger to dairy interests found in the bill now pending in Congress pertaining to the labeling of package goods in interstate commerce. This bill, he says, provides that package goods in inter-state trade shall not be interfered with by the states. This, in the case of oleo and similar preparations, would result in the state assuming police control only of goods made within the state where offered for sale, but this control would be of no effect on goods made outside the state and shipped in. "It is necessary," said Mr. Flanders, "for the dairy interests to be watchful if they are to be protected against the clever designs of the manufacturers of imitation butter, imitation milk, and similar products."

This measure has had careful attention by the House committee on interstate commerce, and is still before that committee. It, along with a good many other pending matters both of legislation and in the courts, hinges on the conflicting rights of state and federal governments in inter-state commerce. Dairy interests, neither more nor less than many other interests, are much concerned. Mr. Flanders is a former president of the National Dairy Union, the national dairy protective association, and in that position and in his present position as attorney for the New York State Department charged with the enforcement of pure food laws, has proven that he is one of the best and most watchful friends of the dairymen in the United States. If it it dangerous in his judgment, it means that this legislation should be promptly opposed by everyone with the best interests of the dairy industry at heart.

⚜

Secretary and Manager Warber of the National Milk Producers' Association has started a bulletin service for the interchange of items of information as to the activities and work of the various milk producers' associations federated with the National. His last bulletin contains references to numerous recent happenings in a number of the important associations, which makes it most interesting to the producers of fluid milk everywhere. Coming as it does so quickly after his very complete report of the recent three-day session of the association in Chicago, this indicates that Manager Warber has his office and its work well organized, and is ready to go on and do a big year's work in the interest of the dairy industry.

⚜

A steady undercurrent is manifest here just now, on the eve of the return of President-elect Harding to the United States and to Washington, in favor of bringing sufficient pressure to bear on him to cause the appointment of a secretary of agriculture to serve agriculture, not to serve political purposes. People close to the President-elect say it will not be difficult to get his approval providing two qualifications are possessed by the man or men brought to his attention, one real qualification as a farmer, administrator, and man of outstanding ability; the other that the man, or men, suggested be free from personal or political animosities or relationships incompatible with the Harding policies. The dairy industry stands so large among the subdivisions of agriculture that it ought to be able to suggest from among outstanding representatives of the industry some man or men big and able enough to become secretary.

⚜

One resolution passed by the National Grange has more public interest than appears on the surface. It is the proposal adopted at Boston last week to assemble the various public welfare activities of the government under a woman secretary of public welfare, with a seat in the cabinet. A study of this proposal shows that it is intended to take the social service work now under extreme radical leadership in the Department of Labor and put it, along with the narrow and unprogressive bureau of education from the Interior Departmen , and the hospital and public health services from the Treasury and Interior Departments, and the home economics work now misplaced in the Department of Agriculture, and put them under a broad and progressive department. It was a coincidence that just one week after this was adopted by the Grange, Senator Medill McCormick of Illinois should come out with a fully matured plan to enact a law not only carrying out this plan in its full details, but also reorganizing the Interior Department as a Department of Public Works. These two plans, if they can be put into effect by Congress, will strengthen what is now the weakest, least efficiently organized, and most radically handled departments in the federal government, and work economies which are badly needed.

Exports of Dairy Products

The total exports of dairy products for the ten months ending October 31, 1919 and 1920, were as follows:

	1920 lbs.	1919 lbs.
Butter	16,676,775	29,687,470
Cheese	14,645,414	11,090,861
Cond. and Evap. Milk	374,542,930	705,803,814

This shows a decrease of nearly 50 per cent in the exports of butter and condensed milk, but exports of cheese are approximately 30 per cent greater. Figures are not yet available on the imports of dairy products, but they will unquestionably be considerably higher. These two items, while not relatively large as to our total production, doubtless explain in part the decreased prices now prevailing. There are so many factors involved, however, that it is well not to speak with too great positiveness as to what the future may have in store.

If we were to venture an opinion it would be that with the present prices of grain and feed, the dairy cow will buy these at a better return to the farmer than direct sales of grain on the market will bring. Despite all pessimistic forebodings and despite the unquestionably hard position many producers now occupy, we believe dairy farmers as a whole are now in a better position than a year ago and that the immediate future is full of promise. General business conditions will have a large effect in establishing the buying power of the wage earner, and this tends to make the future somewhat uncertain. Insofar as exports and imports are concerned, as well as stocks on hand, we see no present occasion for anxiety.

His Necessity Your Privilege

Railroad men live with one eye on the dials of their watches, making every effort to have trains leave and arrive on time. Conductors and engineers *must* carry reliable and accurate timepieces.

Farmers, also, are relying more and more on the Hamilton—"The Watch of Railroad Accuracy." On the farm, exact time may not be a matter of life or danger; but there is no place where time counts more than on the farm.



Engineer Frank R. Lippincott pilots the "Twentieth Century Limited" out of Chicago on its first lap to New York. Engineer Lippincott is a veteran of forty years, and has been a pilot of the "Century" since that famous train was first inaugurated. He carries a Hamilton and has done so for ten years.

Hamilton Watch

"The Watch of Railroad Accuracy"



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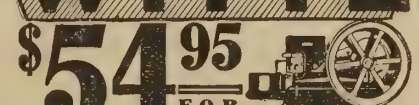
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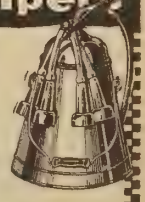
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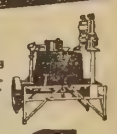
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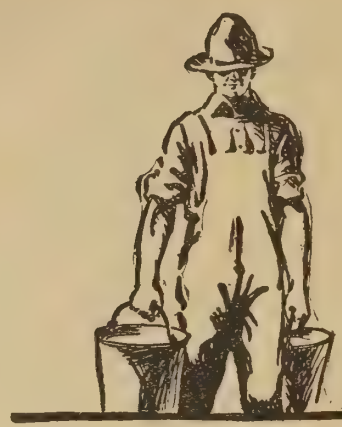
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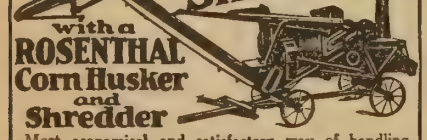
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Banishing Milking Troubles

(Continued from first page.)

fessor E. S. Archibald of the Ottawa Agricultural Experiment Station, who has tested more extensively and thoroughly the merits of mechanical milkers than any one else in America, says, "After many years of experience with various types of milkers, we have found that the mechanical milker properly handled is preferable to the average available hand milker."

Conclusions of this sort are not snap judgment but are based on the test of time. There are numerous cases where machine milking in herds has been practiced for a quarter of a century. Thousands of dairymen have measured the success of machine milking through several generations in their herd. The evidence they offer has been laying a foundation for an unparalleled interest in machine milking on the part of others. Power milking most certainly reduces the cost of production and from this standpoint alone farmers most eventually consider it. Greater profits in dairying can be attained in two ways, namely lessening the operative cost of the dairy or increasing the output. The employment of a mechanical milker enables a farmer to attain both of these ends. It is not surprising, therefore, to hear a man say when asked how he liked his milking machine, "If I had to do without it I'd quit the cow business."

I put the same question to T. R. Jones who with his father is working two large farms near Arena, Wisconsin. Mr. Jones said, "Father and I came to the conclusion that we were wasting time when both of us sent men to pasture to drive the cows home. We have now worked out a system which enables us to combine our herd. Instead of two men going to the pasture for the cows only one is now required. We house all of the milk cows in one barn and a milking machine is employed to do the milking. In this way we have been able to save the wages of at least one hand."

I asked a county agricultural agent of one of the foremost dairy counties of Wisconsin what he knew about milking machines and his reply was, "I know that the farmers in my county are investing in them more and more every year and they seem to be giving entire satisfaction." Cases like this so generally prevail that it is practically certain more than 100,000 mechanical milkers will be bought by farmers of the United States during the coming year.

Efficient Operation Necessary

Milking machines if properly operated pay from the standpoint of economy of labor. The time spent in milking a herd about equals that spent in feeding and otherwise caring for the animals. In other words, milking is half the work of producing milk. A milking machine is therefore practical on any farm where more than ten or twelve cows are kept. When a man operates a double unit milker he is able to handle twice as many cows as would be the case with hand milking. If he is alert it will not be difficult to connect the machine, care for the milk, and do the stripping. Working in this way a man can take care of twenty or more cows in an hour. On the average dairy farm, it normally requires two men to do the same amount of milking when the work is done by hand. Thus, by employing power it is possible for dairymen to reduce their help, and at the same time increase the size of their herds. Carefully kept records on 100 herds by the Michigan Agricultural Experiment Station brought out the astonishing fact that machine milking reduced the time spent in care of utensils and product fully one-fourth. Frequently, the number of cows in a herd governs the size of the profits of the business and for this reason the use of power equipment has a direct influence on the farm income. From the standpoint of cost of installation a standard outfit entails less expense than the purchase of an automobile or farm tractor. After the initial investment there is no other great expense connected with the upkeep. The useful life of a carefully handled plant is about 12 years, although many machines have served still longer. Good milkers require few repairs and necessitate only a small expense for fuel and lubrication when operated. It has been estimated that a good milking machine will work at 10 cents a day. If in addition to the cost of operation the labor of the operator is considered as being worth 40 cents an hour, the cost of milking 30 cows with the machine should not exceed $375 a year as compared with $875 if hand milking is practiced. It is possible, therefore, to almost pay for the equipment from its earnings the first year.

Farmers who bear in mind that a mechanical milker is designed to work on a living object and adjust it to the habits of each cow in the herd, rarely encounter trouble. Ordinarily, it takes only a few milkings to accustom cows to power milking. When breaking the animals in, some farmers alternate hand with machine milking until the animals get accustomed to the latter. Young animals are easier to break to machine milking than old ones. If the milker in use does not have universal teat cups, care should be taken to use cups of the proper size to fit the udders of the different cows. Every bit of the range and adaptability of the machine to the individual animal should be made use of, especially as the cows advance in the lactation period. Every operator knows whether his cows give down their milk slowly or readily and it takes only a simple adjustment of the machine to fit it to their comfort. The cups should never be placed on the teats without first massaging the udder to get the udder in normal condition and the milk flow started. This is particularly necessary in cold weather. Then the suction should be applied gradually. The machine should be run no longer than is nec-

essary to extract the milk when the cups should be removed as carefully as they were attached. The very best types of milkers will fail to do good work if the operators fail to observe these points. On the other hand, if the machine is properly adjusted to the comfort of the animal, the milk will flow into the apparatus normally. In fact, some of the foremost dairymen claim that the milking machine actually increases milk production. Noted herdsmen are authority for the statement that udder trouble is actually less frequent with properly operated machine milked cows than when the same animals are milked by hand. Many of the finest herds of pure-bred cattle in America even where the animals are on official test are machine milked. As a matter of fact, mechanical milkers are known to work most satisfactorily on high producing individuals having well formed udders. Progressive dairymen who use mechanical milkers make it a point to adapt their herds to efficient machine milkers. Only about three out of four cows in the average herd are perfectly adapted in shape of udder and temperament to machine milking. For this reason breeding for the type of animal which responds to machine milking and the weeding out of animals with irregular shaped udders and nervous disposition improves the herd and simplifies the work of milking.

Mechanical milkers can be installed and work well at all seasons of the year in any barn that is built to comfortably house cows. The equipment should, however, be kept clean and sanitary at all times. I have talked to a number of farmers' wives regarding the amount of time required to cleanse the machine milker as compared with the utensils when hand milking is practiced. In no instance have I been told that more work is expended in cleaning the former if the work is done promptly after use. The teat cups and tubing can be cleansed by lifting them up and down in lukewarm water with the suction applied. The pail can be cleansed similarly to any other utensil. The teat cups and tubing can be kept sweet and sterile by placing them in an antiseptic solution between milkings. Special brushes are supplied for more thoroughly scouring the parts. Most machines are constructed with rounded corners and of a metal which does not rust. When the working parts of the milker are kept clean and sanitary it is not only possible for a dairyman to prevent sediment from getting into the milk but a low bacterial count will be attained as well.

Milking machines are here to stay. They are capable of lightening the work of producing milk without curtailing the milk flow when properly used on efficient dairy animals.

Leaks in the Tractor Engine

(Continued from page 913)

be removed from the groove with a screw driver as shown in Figure 3. When a piston ring sticks on the piston, it is a good indication that too much oil has been used in the engine or the oil may have been of incorrect grade. The tractor operator should pay particular attention to the matter of the use of the right amount of a correct grade of gas engine cylinder oil in the tractor. There is no other point more important in the operation of a gas tractor than "correct lubrication".

Not only does a leak in a gas engine cylinder cause a loss in power and poor operation of the engine, but a leak has a tendency to overheat when the engine is in operation. At every explosion, a thin live flame shoots through the leak and in this way has a tendency to heat this part extremely hot and may cause preignition, which in turn causes a loss in power and it is detrimental to the bearings of the engine.

In this day of high prices, there is a great need of efficiency in power to operate the numerous farm machines and it is highly desirable that every man who operates a gas tractor, which is coming to be the fundamental farm power, should learn not only to start, steer, and stop his tractor but he should learn the lesson of maintenance and proper management and should learn that it pays to patch correctly.

The simplest way to make sure your body is getting the foods it needs is to use plenty of milk.

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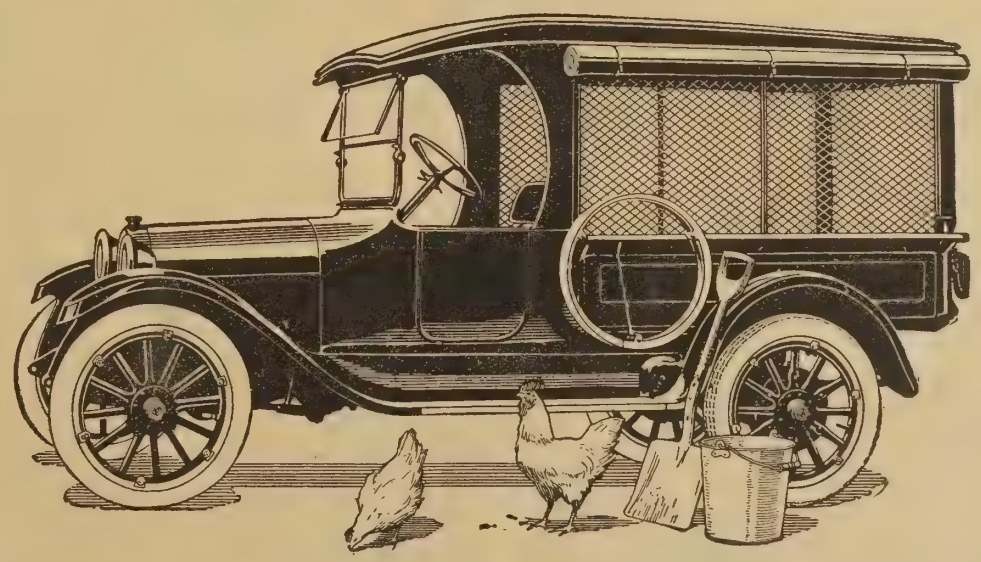
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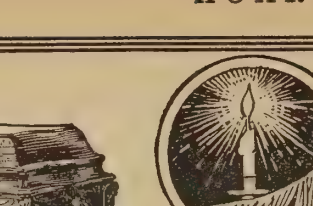
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November Milk Prices

The following table from the **U. S.** Bureau of Markets' report presents a comparison of the net prices received during November by producers for fresh milk (test 3.5%) f. o. b. local shipping points or milk plants operated by fluid milk dealers:

Sections	Range of Nov. prices per cwt.	Comparison of average prices 1920 Oct.	1920 Nov.	1919 Nov.
United States	$2.45— 5.82	$3.79	$3.72	$3.74
New England	3.50— 5.05	4.29	4.30	4.17
Middle Atlantic	3.56— 4.14	3.86	3.86	3.51
E. N. Central	2.45— 4.09	3.57	3.30	3.63
W. N. Central	2.50— 3.86	3.18	3.24	3.31
South Atlantic	3.26— 5.82	4.43	4.37	4.43
E. S. Central	2.73— 4.68	3.53	3.46	4.06
W. S. Central	3.22— 5.24	4.54	4.59	4.35
Mountain	2.45— 3.82	3.11	3.08	3.14
Pacific	3.05— 4.44	3.97	3.88	3.39

Producers' and Consumers' Prices

The following table shows for certain representative city markets the prices of standard grade milk (Grade B, test 3.5%) received by producers f. o. b. city and paid by consumers during the month of November:

	Producer receives per cwt.	Consumer pays per qt.	Butterfat allowance per lb.*
Birmingham, Ala.	$3.15	$.20	$ .90
San Francisco, Cal.	4.51	.17	.29
San Diego, Cal.	4.71	.19	
Denver, Colo.	2.98	.13	.85
New Haven, Conn.	4.85	.16–.17	.40
Washington, D. C.	5.10	.17–.18	.46
Jacksonville, Fla.	5.99	.20–.25	.58
Atlanta, Ga.			
Chicago, Ill.	3.52	.15	flat
Indianapolis, Ind.	2.98	.14	.85
Des Moines, Ia.	3.75	.16	.50
Kansas City, Kans.	3.36		flat
Louisville, Ky.	3.34	.16	.50
New Orleans, La.	5.23	.19	.45
Portland, Me.			
Baltimore, Md.	4.25	.16	.58
Boston, Mass.	4.88	.18	
Detroit, Mich.	3.80	.16	.40
St. Paul, Minn.	3.68	.14	.50
Kansas City, Mo.	2.80–3.92	.16	.50
St. Louis, Mo.	3.60	.16–.17	.30
Butte, Mont.	3.38	.15	flat
Lincoln, Neb.	2.98	.15	.85
Carson City, Nev.	3.49	.12	flat
Trenton, N. J.	4.40	.15	.40
New York, N. Y.	5.05	.18	.40
Ashville, N. C.	4.50		.40
Fargo, N. D.	4.07	.17	flat
Cleveland, O.	3.90	.15	.58
Cincinnati, O.	3.90	.15	.45
Oklahoma City, Okla.	3.50	.17	1.00
Portland, Ore.	3.40	.14½	.50
Pittsburg, Pa.	4.36	.16	.58
Philadelphia, Pa.	4.40	.15	.40
Providence, R. I.	4.88	.18½	
Sioux Falls, S. D.	3.75	.14	flat
Memphis, Tenn.	4.80	.20	flat
Dallas, Tex.			
Salt Lake City, Utah	3.49	.12½	flat
Burlington, Vt.	3.50	.14	flat
Seattle, Wash.			
Wheeling, W. Va.	4.36	.18	flat
Milwaukee, Wis.	2.75	.11	flat
Cheyenne, Wyo.			

*In actual practice this allowance is made on the basis of a certain price per hundred of milk of a certain test, one-tenth of the price per pound fat being paid or deducted for each one-tenth per cent above or below the stipulated basic test. Where the word "flat" appears in this column, it means that no allowances are made for butterfat content but the milk must not be lower in test than legal requirement and must not be adulterated or skimmed.

The prices quoted for producers are for milk testing 3.5 per cent and delivered f. o. b. city, from which must be deducted the various transportation costs in order to get the actual price. In certain cities the prices given apply only to that portion which is considered as the producers' average production, the surplus being either handled by the producers' association or the dealers at somewhat lower prices.

The prices given are here reduced to the comparable basis of 3.5% fat, as different cities vary from 3% to 4% as the basic fat test. To reduce the prices per hundredweight to either a gallon or a quart basis divide by 11.63 or 46.33, respectively.

The prices paid by consumers are for average testing milk delivered in quart bottles. It is the grade of milk most generally sold in these cities and in most cases is for pasteurized milk.

Country Shipping Stations

Prices per cwt. paid at the dealers' country receiving stations or at producers' railway shipping plants are given as follows for November:

New Haven	$4.07	Omaha	$2.50
Washington	3.50–4.19	Newark	3.85
Jacksonville	3.67	Buffalo	3.69
Chicago	3.05	New York	3.85
Indianapolis	2.45	Albany	3.94
Baltimore	3.30	Cleveland	3.35
Boston	4.09	Cincinnati	3.30
Kansas City	2.45–3.45	Toledo	3.30
St. Louis	3.10	Pittsburg	3.50
Lincoln	2.62	Philadelphia	3.81

Retail Prices

The following table gives for a few cities the retail prices of special milk, certified milk, cultured buttermilk, cottage cheese, and cream for November, 1920:

Cities	Special milk per qt.	Certified milk per qt.	Butter milk per qt.	Cottage cheese per lb.	Light cream* per ½ pt.
	Cts.	Cts.	Cts.	Cts.	Cts.
Boston	21.25	28	22	26	16
New York	21	28	12	20	22
Buffalo	17	26	10	15	23
Philadelphia	17	30	13	8	18
Pittsburgh					19
Cleveland	20	32	15	18	20
Chicago	22	25	10–13	20.8	17
Milwaukee	14	25		12	15
Detroit	22	25	17	15–16	16
Minneapolis		22	15	24	16
St. Louis	20	25	20	18	17–18
Des Moines	18	25	10–12	20	16
Washington	18	30	14–18		18–20
Richmond	17		16		16
Jacksonville	30		12	30	
Baltimore	20		16		20
Louisville			16		16
Memphis		35			22
New Orleans	22	30	17		18
Colo. Springs	15			12	13
Salt Lake City	15		7	20	15
Portland		21			
Spokane			11–15		15–17
San Francisco		25	17	20	17

*Cream testing 18–20 per cent butterfat.

Wisconsin Holstein Meeting

Wisconsin Holstein breeders held an informal get-to-gether meeting at Milwaukee on Nov. 26. The meeting, called by State Secretary Oldham for a round table discussion of state association policies and of the relationship between the state and county associations, was voted a success by the representatives of 21 counties that were present.

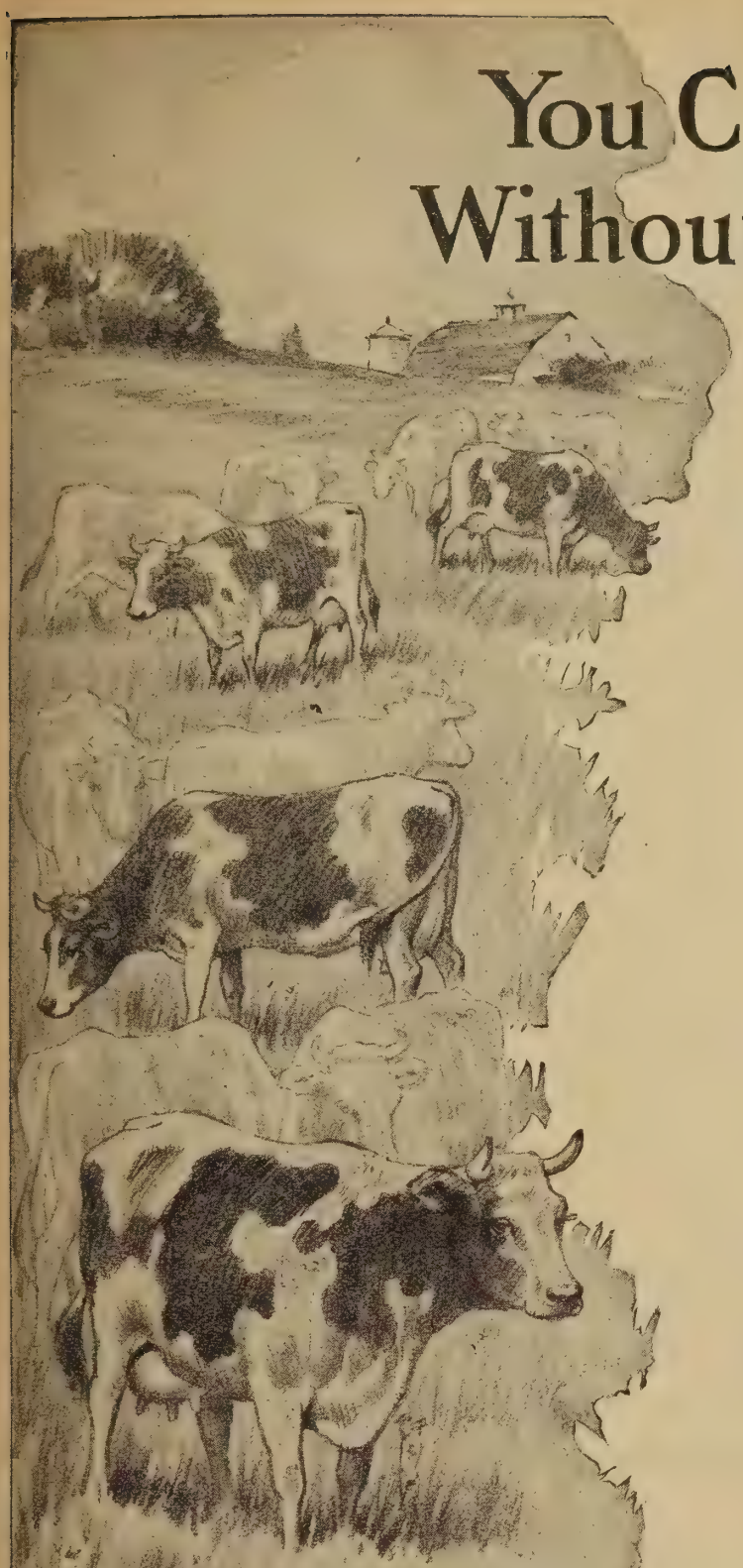
The question of local consignment sales and what the state association can do to better those sales was first brought up. Wisconsin undoubtedly has more such sales than any one other state, and while there is no desire on the part of the state association to take over the management of such sales, it does want to better them in any way possible. The discussion finally ended in arrangements being made for a conference of local sale managers with Secretary Oldham, at which it is hoped a definite and uniform policy for most of the sales in the state will be worked out.

A call for Holstein bulls to be sent to the devastated region of France has recently been made by Dudley Waters of Michigan, and the Wisconsin breeders voted to donate 150 bulls, their allotment, and defray shipping expenses to the seaboard.

R. T. Harris, in charge of official testing for the state, reported the progress of the work and asked for the appointment of a committee to represent the Holstein breeders of the state, with whom he could at any time confer on questions relative to A. R. O. work. Such a committee was appointed.

Uncle Ab says: The man who always finds fault with the weather won't have any real indignation when he needs it for a cause that he can do something about.

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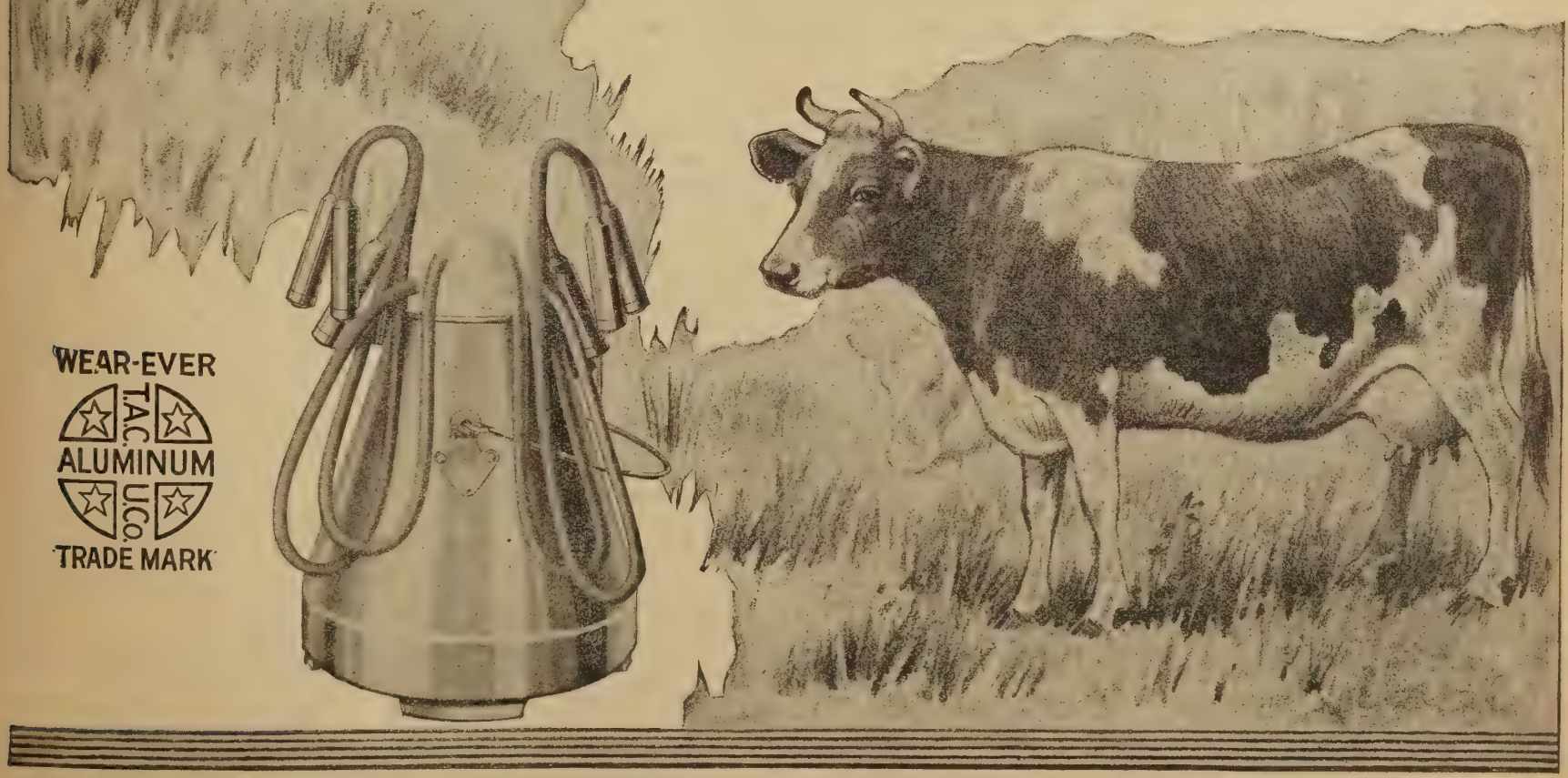
CANNOT RUST and are made SEAMLESS—no places for bacteria to gather. A low bacterial count means a higher price for the product.

"Wear-Ever" Aluminum Pails are easy to keep clean, are light weight, durable and require no tinning.

They are made of the same metal and in the same factory and bear the same trade mark as the millions of **"Wear-Ever"** Aluminum cooking utensils used in American homes.

The Aluminum Cooking Utensil Company
New Kensington, Pa.

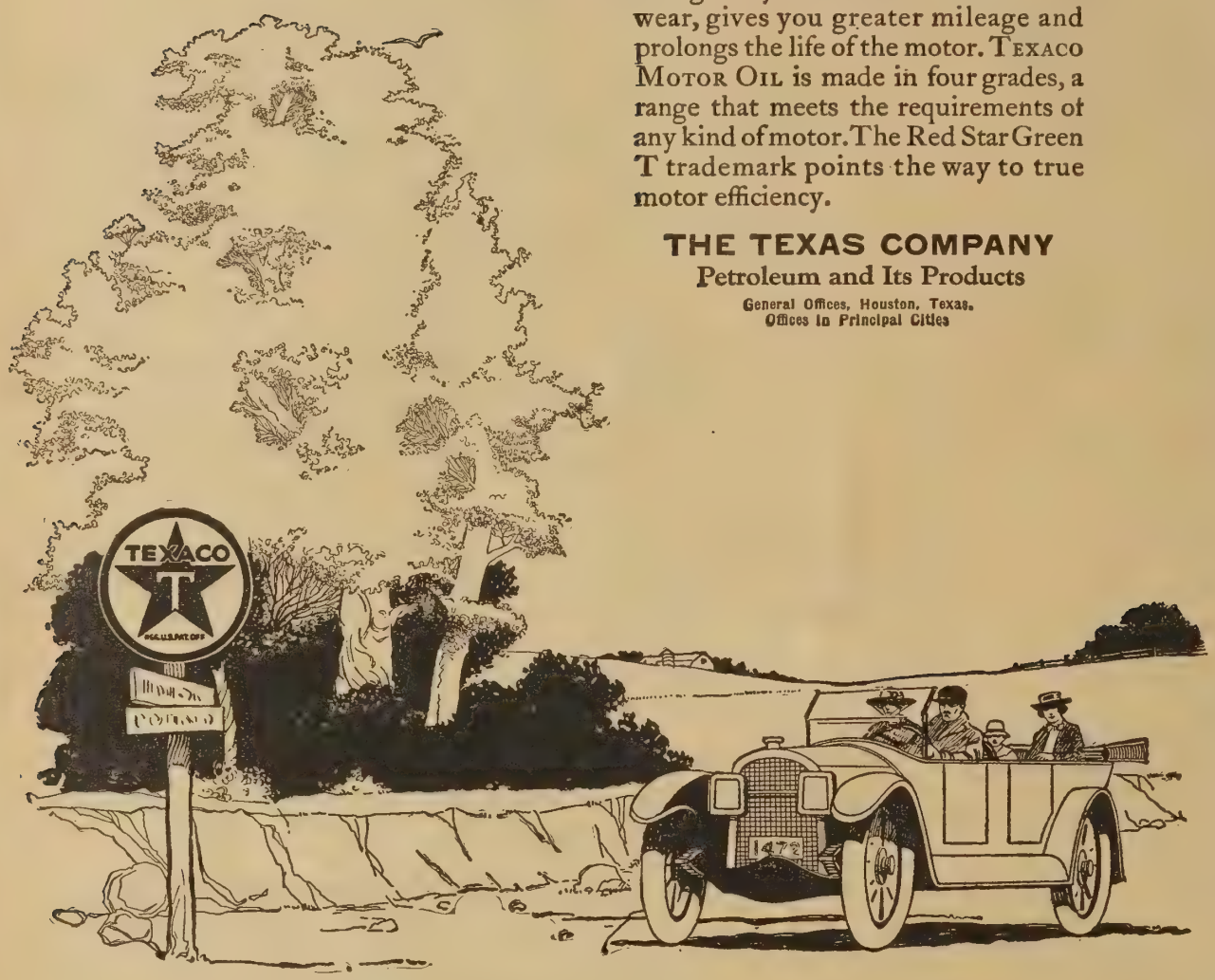
In Canada "Wear-Ever" Utensils are made by the Northern Aluminum Co., Limited, Toronto, Ontario



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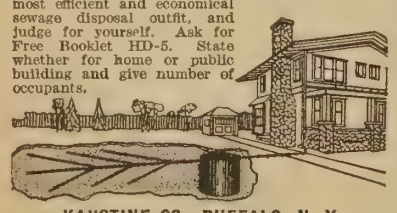


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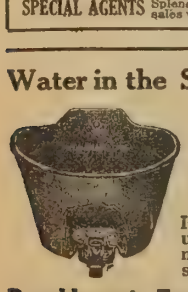
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No Operating Cost Designed on approved principles; built of enameled Armco iron; ready to set up; operation guaranteed. But let us tell how our tank, and a little tiling will build a most efficient and economical sewage disposal outfit, and judge for yourself. Ask for Free Booklet HD-5. State whether for home or public building and give number of occupants.



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Manufacturers and Sanitation Engineers
SPECIAL AGENTS Splendid opportunity for live men. Easy sales work. Write for territory.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

Dairy Cattle Valuation

(Continued from page 912)

but they must look the part if their value goes much beyond the five hundred dollar mark. Bearing in mind that such animals are sold for breeding purposes, the buyer wants the kind that makes a good pattern for his future herd.

An animal with a very poor conformation is not much sought and will not bring a large price even when backed by good ancestry or showing considerable indication of production. On the other hand, an animal with breed character and pleasing appearance will generally bring all that its breeding will warrant.

Health and Condition

Animals must be up in good condition to sell well as it is very difficult to see through the features of animal form when in the rough. Injuries, defective quarters, and defects of a permanent nature usually bring an animal of exceptional breeding near the common cow in value.

Indications of poor health or disease greatly detract from the value regardless of the good points. Tuberculosis is one of the great price controlling factors among cattle today. An animal, not having been tested, regardless of pedigree or individual merit, will today rarely rise above the $500 mark. There is a growing demand everywhere in this country for tubercular free cattle. Those sold on a 60- or 90-day retest guarantee bring much the highest figures, especially when backed by pedigree and individuality.

Breeding Condition

If a female is of breeding age it is important to know the date of last calving and date of service, if supposedly pregnant. In paying high prices on the basis of the foregoing factors the buyer wishes to be as certain as possible of getting an animal with normal reproducing powers. Reliable breeders will stand behind females which they believe to be in calf at time of sale. Not infrequently high priced animals cause much disappointment and loss by aborting. This is one of the great obstacles today. Eventually breeders will no doubt sell with a guarantee against this great live stock scourge. Reliable breeders in selling young bulls will stand back of the buyer if the male fails to develop his full powers of reproduction.

In case the evidence points to uncertainty with respect to the breeding powers the price paid should be fixed accordingly. If pregnant, the pedigree of the service sire is important. Ordinary females sometimes sell for twice their value if pregnant from the service of an especially preferred sire.

Age

A pure-bred female is worth about 20 to 25% of its mature value at birth, i. e., a new born calf from a herd of about $300 value for the mature cows will be worth about $60 to $75. At six months they are worth about 30%; at one year, 40 to 45%; at two years, 60 to 65%; at three years, 85%; at four years, 90 to 95% and at 5 and 6 years, about 100%, or full value. From this time on they decline in value. At eight years they have dropped only to 85 to 90% of their maximum value. From this time on the decline is rapid, reaching 65% at 10 years, and 20 to 25% at 14 years, when the chance for another calf and a profitable production is not promising.

Naturally other factors enter into the price in special cases. Geographical location may be an important factor, especially with certain breeds. The reputation of the herd and advertising are also matters that cannot be measured. Advertising brings more people into competitive buying, that is, it creates a demand and causes people to want the animals in question.

It is true that many cattle have sold for prices that would hardly seem justified from the standpoint of the factors enumerated. We all know instances where animals brought high prices purely for advertising purposes, for breed boosting, or because of the psychological influence of the sale ring. Some of these, however, have resulted in good. The writer knows of a man without extraordinary means, making his living off the farm, who paid $5,000 for a bull at a big sale. He had no intentions of buying such a bull before that time. Everybody thought he was "stuck" and probably the buyer thought so too, in his sober moments. But he got busy. He tested his cows, advertised, and applied energy and good business sense to his establishment. His bull turned out well and in three years he was able to announce that he had paid for him and he has the bull and the best herd he has ever owned left. Many such high priced animals have proved wonderfully good investments.

In spite of some glaring instances to the contrary, live stock is being bought and sold more and more upon its merits. An animal which has the breed's best blood in its veins, which is nearly perfect in type, in the prime of its life, free from disease, and with the bloom upon it, is most desirable, and it will bring a high price at any time that two or more breeders who recognize such rare traits may come into competition.

Bulletins of the Week

Wisconsin Live Stock Shipping Associations, by B. H. Hibbard, L. G. Foster, and D. G. Davis. Bulletin 314, Wisconsin Experiment Station, Madison, Wis.

Squab Raising, by A. R. Lee. Farmers' Bulletin 684, U. S. Dept. of Agriculture, Washington, D. C.

Report on Soil Experiment Fields and Maintenance of Fertility, by Geo. Roberts and A. E. Ewan. Bulletin 228, Kentucky Experiment Station, Lexington, Ky.



From an actual photograph taken in Mr. Rachmaninoff's home, in New York City

Go and Hear Rachmaninoff on the New Edison

NOW you can make a straightforward comparison and find out which is the best phonograph. Rachmaninoff himself, the great Russian pianist, will give you this opportunity.

He has made recordings for one of the standard talking-machines. We are very glad that he has done so. For now you can compare.

Your Edison dealer will gladly play Rachmaninoff's RE-CREATIONS on the New Edison for you. Watch for his announcements in your local newspaper. You *must* hear this most astonishing phonograph comparison,—before you buy your Christmas phonograph.

The photograph, from which this illustration is reproduced, was taken in Mr. Rachmaninoff's home, in New York City. It shows the great Russian pianist playing the Second Hungarian Rhapsodie *(Liszt)*, while the New Edison RE-CREATED his previous rendition of the same composition.

The three music experts who listened from behind the screen, were amazed and astounded at the absolute fidelity of the RE-CREATION to the artist's original performance. Once more, the New Edison's perfect Realism triumphed in the test of direct comparison.

Be sure to look for your Edison dealer's announcements. Hear Rachmaninoff on the New Edison. THOMAS A. EDISON, INC., Orange, N. J.

Edison
Rachmaninoff RE-CREATIONS
Now on Sale

No. 82169	Second Hungarian Rhapsodie *(Liszt)* Part 1
No. 82169	Second Hungarian Rhapsodie *(Liszt)* Part 2
No. 82170	Second Hungarian Rhapsodie *(Liszt)* Part 3
	(With Mr. Rachmaninoff's Cadenza)
No. 82170	Pastorale *(Scarlatti-Tausig)*
No. 82187	Prelude in C Sharp Minor, Op. 3 *(Rachmaninoff)*
No. 82187	Polka de W. R. *(Rachmaninoff)*

(Others to be released later)

The NEW EDISON *"The Phonograph with a Soul"*

Insures Cow Health

THE insulating blanket of still air in a Natco stable wall prevents sudden temperature changes. It protects the health of your cows and keeps up the milkflow in uncertain weather. Natco Hollow Tile walls do not gather moisture as do walls of solid masonry, nor do they absorb grease, dirt or foul odors.



Section of Natco wall showing still air spaces

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are a permanent *investment*—not an expense. They need no painting and very seldom require repairs. They withstand severest windstorms and are fire-safe, being constructed of burnt clay tile. Natco walls are exceedingly strong. Masons lay up these walls very rapidly, easily handling the large-size units.

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F-2



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Send for catalog No. 6
W. S. Dickey Clay Mfg. Co.
Kansas City, Mo. Chattanooga, Tenn.

California Dairy Manufacturers Meet

The fourth annual convention of the California Butter, Cheese, and Ice Cream Makers' Association was held recently at the University Farm, Davis. The convention was well attended. A special feature of the day was the competitive judging contest, in which twenty-one members competed for prizes. The winners were as follows:

L. H. Nielson was the best judge of butter; G. Jaehing, second; and O. Berroth, third. The best cheese judge was Wm. Glass; E. Hyatt placed second; and Wm. Halde, third.

T. J. Harris of the San Francisco Exchange was the principal speaker at the afternoon program. His comments on the butter quality desired on the San Francisco maket proved to be interesting and valuable information for the Association members. J. I. Worswick gave a very instructive description relating to the manufacture and use of various types of thermometers.

C. L. Roadhouse reviewed some of the work undertaken by the Dairy Industry Division of the University of California. Besides giving instruction to a large number of students, and doing extension work, the Dairy Industry Division is conducting experiments with various kinds of wood for butter boxes, cheese mites, butterfat tests for butter, the methylene blue test for detecting milk quality, and recording data on other major and minor projects which are under investigation. Other speakers at the afternoon session were Mr. Inman of the Creamery Package Company and H. S. Baird of the Northern California Milk Producers' Association.

At the business meeting the following officers were elected: President; Louis Diamond; vice-president, J. S. Palmer; and secretary-treasurer, J. C. Marquardt.

Twenty-four members were voted into the association at the business meeting, making the membership seventy-six at the close of the fourth annual session. The banquet held in the evening was the largest and best in the history of the organization. S. H. Greene of the California Dairy Council gave a very interesting account of the dairy industry from an international point of view. The members present received a very vivid impression of the magnitude and importance of the National Dairy Show by listening to its description by Dean H. E. Van Norman.

California. J. C. MARQUARDT.

Portage County, Wis., Guernsey Meeting

The Portage County, Wisconsin, Guernsey Breeders' Association met at Nelsonville, November 20th. The present membership numbers 105. Fifty pure-bred herds are owned by members and the rest are grades. About 60 members were present at the meeting. The officers elected were: L. E. Gordon, Jr., president; E. L. Leppen, vice-president; R. K. McDonald, secretary-treasurer.

It was decided to hold a bull sale December 16th, when some grade heifer calves would also be sold. The annual sale of the association of pure-bred males and females will be held May 25, 1921, at Stevens Point. On the 26th a grade cow and calf sale will be held. A show circuit within the county will be held next fall, from which the winners will be sent to the Wisconsin State Fair. L. H. Gordon was appointed supervisor of this circuit. A. H. Peterson was named to act as Junior Calf Supervisor.

Quebec Ayrshires Sell Well

There was great enthusiasm among the Ayrshire breeders at the Allancroft sale of Ayrshires held at Beaconsfield, Que., on November 24th. This herd is owned by H. Montagu Allan of Montreal. Having certain theories in breeding, he wanted to try them out in Ayrshires and, despite the fact that he was not able to give the herd any personal attention during the war, his manager knew what was wanted and "carried on" at Allancroft. They built up an exceptionally strong herd largely by the use of two sires on good imported and home bred females. The bulls used were Finlayston San Toy and Barwheys Flashlight. The former has 11 daughters qualified in the R. O. P. with most creditable records and has now another daughter in the test that has given over 16,000 lbs. milk in 8 months. Finlayston San Toy was sire of most of the older matrons sold and Flashlight sire of the younger ones. The herd was true to Ayrshire type—large, roomy, fine quality cows and heifers capable of big production.

The herd had show yard winnings in 1914 and a number of good R. O. P. records and had passed successfully the second tuberculin test in the accredited herd plan. This was largely the reason why there was such keen bidding and Auctioneer C. A. Gavin of Huntingdon sold the 43 registered and 12 high grades in exactly 2 hours.

The first twenty animals sold averaged $525. Eighteen cows, 4 years and over, brought $8,295, an average of $460. Forty of the animals sold realized $14,420, an average of $360—the best average at an Ayrshire sale here for some time.

Adam Seitz, the celebrated Ayrshire breeder from Wisconsin, who knows an Ayrshire from the ground up and also her value, was present and was a keen contender for several of the best ones. William Hunter representing Alta Crest Farms, Massachusetts, purchased 5 head. A. E. Fish & Son of Ayer's Cliff purchased several choice ones and R. R. Ness of Howick secured a few of the best. The Experimental Farms secured a prize in Allancroft Ada, out of San Toy, for $800. Seitz and Hunter were both after this heifer and the former chased her to $775. For Allancroft Mildred there was also keen bidding and she was knocked down to Hunter for $750. Mr. McRobbie, manager for A. R. Martin of Bonnybrook, Thetford Mines, Que., pinned his faith to Allancroft Kate and followed her to $650, but knocked down to Gilbert McMillan for $700. One of the surprises of the sale was when Auchenloich Mina was knocked down to R. R. Ness at $675, as it was thought she would reach $800, at least, but her age, 9 years, may have been against her. The sensation among the young things was when the yearling heifer, Allancroft Susanna by Springburn Ringmaster, a heifer of wonderful quality and great outcome, reached $355, and was knocked down to George H. Montgomery, Quebec.

The secretary, W. F. Stephen, opened the sale with a few remarks as did also Mr. McMillan. At the close three cheers were given for Montagu Allan who in responding expressed himself as being well pleased with the result of the sale and encouraged to continue along the lines started and possibly hold such a sale every two years. He reserved 35 head of various ages of "San Toy" and "Flashlight" breeding as a nucleus to build up the herd.

Quebec. W. F. STEPHEN.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Cheese Markets Steady

[Report by U. S. Bureau of Markets.]

The holiday during the week ending Nov. 27 caused somewhat lighter trading in cheese than usual but otherwise reports from markets indicate that business was fairly satisfactory. Early in the week asking prices at primary markets in Wisconsin were generally advanced slightly following the meeting of the Plymouth Cheese Exchange, although there was some hesitancy at following the advance and considerable price cutting actually took place at some country markets.

In the distributing markets trading is still mostly of a jobbing nature and involves small lots. Much of the wholesale buying so far this year seems to have been done in the country. Prices on both fresh and held advanced slightly during the week and the firm tone of the markets was fairly well maintained after the advances although trading became somewhat quieter. Receipts of fresh cheese are becoming lighter, and further decreases from New York State are expected following reports that a number of factories are closing for the winter.

No export business of importance has developed as yet, but there is a noticeably better feeling in that direction. A good many of the trade expect larger export demand after the first of the year. Inquiries for Twins were received during the week, but no actual business resulted, principally on account of a shortage of shipping space. Some Skims have moved for export at around 17c.

The average wholesale prices on American cheese (style Twins) for the week ending Nov. 27, 1920, and for the corresponding week last year, were as follows:

	Week ending Nov. 27 1920	1919
	Cts.	Cts.
New York	28.0	31.7
Chicago	25.5	31.1
Boston	25.7	32.7
San Francisco	30.3	29.9
Wisconsin Board	25.3	31.4

The receipts of American cheese at the four markets first given and at Philadelphia totaled 3,026,240, lbs., as compared with 3,300,581 lbs. a year ago, and 3,309,126 lbs. last week.

Waupaca Co. (Wis.) Holstein Sale

Waupaca County Holstein Breeders held their first annual sale at Weyauwega, Wis., November 24, selling 45 head for $10,025. A. E. Smith topped the sale with a 3-year-old granddaughter of Pontiac Aaggie Korndyke that went to L. L. Raisler, Wisconsin, for $410.

Mack & Pohlman did the selling with F. H. Everson in the box.

Following is a list of those animals that sold for $250 or more and buyers:

Robert Ferg, Wisconsin	
Clara Pontiac De Kol Korndyke	$310
H. C. Johnson, Minnesota	
Mechthilde Canary Alcartra 2d	$310
Oscar Pryse, Wisconsin	
Allie Mona Hengerveld	$380
John Hofberger, Wisconsin	
Countess Juliana Belle De Kol	$290
Emil Seibel, Wisconsin	
Fobes Pontiac Korndyke	$260
J. L. Dopp, Wisconsin	
Maple Grove De Kol Belle	$285
C. L. Raisler, Wisconsin	
White Star Bonnie	$410
May Johanna Pietertje	280
Canary Fobes De Kol Homestead	350
Harry O. Allen, Wisconsin	
Ponderosa Jessie Johanna 2d	$320
Lewis Bauer, Wisconsin	
Ponderosa Lilly Fobes	$355
Mike Paltzer, Wisconsin	
Unnamed Male	$350
F. W. Prill, Wisconsin	
Netta Pontiac Colantha Lass	$400
John Rolland, Wisconsin	
Johanna Alegra De Kol	$325



The engine stalled but the wheels didn't spin

The driving wheels of a new one-ton truck were equipped with Caterpillar tires.

The truck was then loaded to capacity and driven into soft, sandy plowed ground.

Again and again this test was repeated and each time the engine stalled but the wheels did not spin. The Caterpillars stuck to the ground with bulldog tenacity.

This is just an example of every-day Caterpillar performance. They get traction on almost any kind of road. They carry the truck wherever the engine will pull it.

Caterpillars will solve your traction troubles. And they will give you almost double the mileage of any other truck tire you can buy.

Kelly - Springfield Tire Co.
GENERAL SALES DEPARTMENT
1710 Broadway New York

Butter Markets Break Sharply Under Light Demand

[Report by U. S. Bureau of Markets.]

The market at New York for the week ending November 27 offers an excellent example of the manner in which a shortage of fine butter will support an otherwise weak and unsettled market often for a period of several days. Examples of this sort have not been lacking on the general market at any time this year, but this is a particularly good illustration. Chicago started the decline last week, Boston weakened as early as Tuesday, and Philadelphia was supported only by the steadiness at New York.

Foreign Butter Aids Weakness

The arrival of two steamers carrying about 6,000 casks of Danish butter added to the weakness of the domestic market. This Danish butter, however, has practically created a market of its own and when prices on domestic fell away, Danish butter sold as firmly as ever. Prices on fresh Danish ruled around 55 to 58c and on storage at 51½ to 56c. New Zealand butter scoring from 88 to 92 was reported on eastern markets. Sales were made at New York at 62c for the best. Canadian butter was also offered at New York and sales were reported up to 61c. The large stocks of Argentine butter now in this country are being moved with great difficulty because of poor, irregular quality and lack of demand. There has been a little improvement in exchange rates the past week and some traders are still looking for export orders for domestic butter, but as yet none of this business has materialized.

Net losses in quoted values were high during the week, the New York and Chicago markets closing at prices 8c and 6c respectively, below the prices of the previous Saturday.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending November 27, 1920, and the corresponding week last year were as follows:

	Week ending Nov. 27 1920	1919
	Cts.	Cts.
New York	62.4	73.3
Chicago	55.0	70.9
Philadelphia	63.6	72.3
Boston	59.2	70.8
San Francisco	53.7	64.6

The receipts of butter at these markets for the week were 6,065,074 lbs. as compared with 7,261,831 lbs. a year ago and 6,001,680 lbs. last week.


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Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.
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Dept. H. Topeka, Kansas.

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The most serviceable farm fence on the market. Built to outlast all others. Write for our fence book now and you'll get the Calculator too.


KEYSTONE STEEL & WIRE CO.
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Peoria, Ill.

HOARDS DAIRYMAN JUNIORS

Junior Club News From Sheboygan County

Edward Crosby and Marion Rock Get Special Mention

Three years ago Edward Crosby of Waldo and Marion Rock of South Prairie were pioneers in calf club work in Sheboygan County. When, for the first time in the history of the county fair, entries were made by members of calf clubs, Marion captured the first prize with her heifer and Edward took second honors. At that time few people knew what the calf club was, or realized that it would grow to its present proportions. Neither did they know what an important factor the calf club would become in raising the standards of dairy cattle in the county, and, what is no less important, the parents of these youngsters never imagined what the club would mean to their children.

Keep Up Consistent Work

As the calf club work has grown in the county with an initial exhibit of thirty-two calves three years ago to an exhibit of nearly a hundred calves last year, so have Edward Crosby and Marion Rock continued to grow with it. Each year they have exhibited calves and each year Miss Rock has captured a prize while Edward, though losing out the second year, staged a come-back and captured first prize in the heifer class at the last county fair.

More Than Prize Winners

We believe the boys and girls of Sheboygan County who live in the country, and the grown-ups, too, for that matter, will be interested in just a peek at the history of pioneers of of calf club work here. Looking at the illustration you will find pictured with Miss Rock the calf and the mother of the calf she exhibited this year. The mother is the first she raised in calf club work and on which she received first prize. It is here that we like to emphasize the fact that the winning of the prizes is not the important thing in this work, but it is rather to continue right along giving the same careful attention to the animal that it received while being groomed for the live stock show. You cannot help but note that Miss Rock has taken good care of both the cow and the calf. Doubtless you will be interested in knowing that the cow pictured here made more than nineteen pounds of butter in seven days as a junior two-year-old and she has a number of full sisters who have also averaged more than nineteen pounds as two-year-olds. Both mother and son are prize-winners at the county fair and, with his grandam having a record of more than twenty-eight pounds as a four-year-old, it can be readily seen that the young fellow is more or less an aristocrat so far as breeding and type are concerned.

Edward Makes Fine Progress

Three years ago Edward Crosby bought a young heifer calf from Gust Brickbauer of Elkhart Lake, paying Mr. Brickbauer $125 for the animal, the animal being backed with excellent breeding on both the dam's and sire's side. It is this calf, now grown, that is pictured here with Edward.

He was unfortunate in having her freshen a little under two years. Being anxious to put a record on his heifer he made an application for an official tester. Milking the animal four times a day he was prepared for the coming of the tester when he received word that the tester could not come.

Makes 17-Yearling Record

Putting the heifer back to two milkings a day he continued on this plan for about a month when he learned that the tester could pay him a visit. Though it was but a month after freshening and despite the changing from four to two and back to four milkings a day, Edward made a seventeen-pound yearling record with his heifer.

Sells Bull Calf for $310

Perhaps Edward was unfortunate in another respect, in that the first calf from his heifer was a bull, but he had shown forethought and wisely bred his heifer to a very high record sire, realizing that the heifer might give birth to a bull calf for which he would naturally want to receive a good price. When this calf, shown in the picture, was about a month old, Edward disposed of him to one of the neighbors, receiving $310.

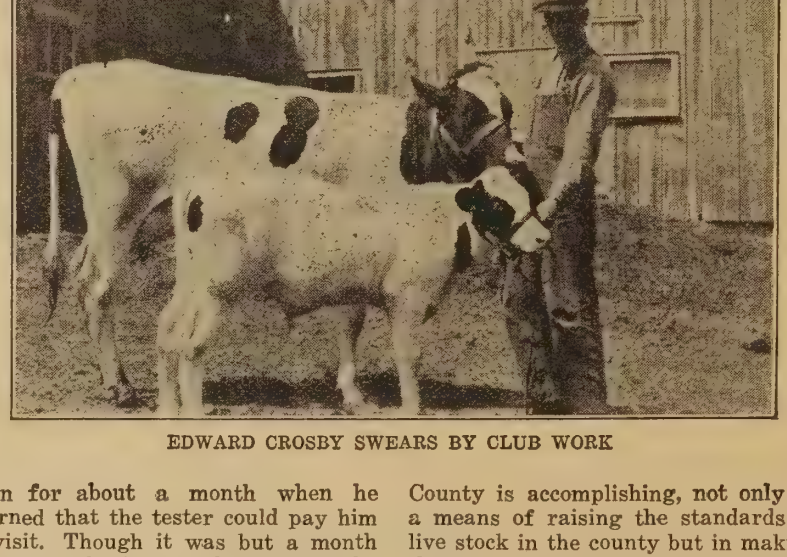
With this money he bought another heifer calf which he turned over to one of his brothers to raise, later placing it in the calf club contest.

Calf Every Year

Edward has bought a pure-bred heifer every year since calf club work has been instituted and gradually but surely he is replacing the grade cows on the farm with pure-breds of a good type backed by official record.

Do you think that Edward's father is going to have a hard time keeping his son on the farm? The question is a pertinent one, one that is of interest to everyone who wants to see the business of farming placed on a basis whereby it will be more attractive to the farm boy, and as the success of all of our business and all of our jobs is more or less dependent upon the success of farming the question is naturally of interest to all of us.

The story of Marion Rock and Edward Crosby is a mighty fine example of what the calf club of Sheboygan County is accomplishing, not only as a means of raising the standards of live stock in the county but in making the job of farming interesting to the boys and girls best fitted to do it.—Plymouth Reporter.



EDWARD CROSBY SWEARS BY CLUB WORK



MARION ROCK WITH HER HOLSTEINS

Junior News From Harford County, Maryland

Harford County boys have been very successful in their judging work in that three boys from this county won the first place at the state fair, among the sixteen other teams represented, and were successful in having two boys among the first six boys making the best record. These first six boys making the best record at the state fair were chosen to constitute a preparatory team to go to the National Dairy Show. When three boys were selected to go on this team, two Harford County boys were fortunate enough to be placed on the state team. Assistant County Agent, W. C. Snarr of Harford County, accompanied the boys on the trip to Chicago. The boys won fourth place in the junior judging teams.

While these boys were at Chicago, the boys who were not fortunate enough to go on the trip to Chicago, did not lose sight of the fact that it was necessary for them to do preparatory work in order to make the team the next year. To this end a judging contest was staged at the Harford County Fair where 28 boys took part in the judging of Guernsey cows, Guernsey bulls, Jersey cows, Durc hogs, and Berkshire hogs.

The Harford County Fair Associa tion offered liberal prizes for thes junior judges. The Highland Clu was fortunate enough to win firs place, Bel Air second, and Perryma third. The boys are being give every opportunity to make good i their judging work. This year the exhibited seventy head of mature hog and about 65 head of pigs and tw calves among the live stock. It i hoped that next year even a large number of hogs will be exhibited, in cluding at least thirty pure-bre calves which will be given out in pure bred calf club work.

B. B. DERRICK, County Agent.

A Jersey Calf Club Wins a Wisconsin

HOARD'S DAIRYMAN JUNIORS:—Th history of the Mondovi High Schoo Calf Club dates back through severa years of active competition in junio agriculture. Last year a high schoo judging team from this little Buffal County city won over all agricultura high schools in Wisconsin. Ever sinc the first baby beef exposition at Mad ison in 1916, we find that live boys an girls from this live stock center hav taken part. However, this particula paper is concerned with Mondov since it gave up the idea of being th draft horse center of the state an began to pay more attention to th dairy cow as a mainstay of its leadin industry.

Late in the winter of the past yea Mr. Walter L. Houser, president o the Wisconsin Live Stock Breeders Association, took his neighbor, James Dillon, to one side and suggested tha a Jersey calf club was an absolute necessity to put Buffalo County at the head of the territory that the little fawn butter cow had mapped out fo herself in the western part of the state. Money was raised with which to purchase fifteen head of calves for boys and girls most interested in Jerseys. The two above named men, after some search, went down to Fred Stubley's Jersey farm where fifteen baby calves were purchased at a very nominal price, considering that they were mostly of straight island breeding and were all sired by either Kilda's Royal Majesty or his sire, Golden Maid's Viscount.

Throughout the spring and summer Mondovi Jersey enthusiasts watched the progress and development of the junior show men and show women who took the most faithful care of their charges. Shortly before the state fair at Milwaukee, show blankets were bought for each calf, not cheap covers, but uniform tan canvas affairs with name of the club neatly stencilled on both sides. After clipping, brushing, and grooming, an elimination contest was staged where the best of the fifteen calves were taken aside; then additional calves of the same quality and uniformity were added to make up the fifteen to represent the county and state at Milwaukee.

At the latter show for four or five years past, due to the efforts of Professor T. L. Bewick, state club leader, the boys' and girls' calf club exhibit has been one of the most interesting features of the fair. This year two hundred and ten dairy calves stood around the ring of the judging pavilion while Judges Van Pelt and Axel Hansen rendered their decisions.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am ——— years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. ——— State ——— R.—



THE JERSEYS WON THE CLUB PRIZE

The two judges, together with Mr. Moscrip, had reckoned with Wisconsin junior farmers earlier in the week in the open classes and knew that many had out-stripped their dads with calves of quality. Stanley Melrose of Mondovi had won first on a senior bull calf called Ethelwold Warder, in the open class; he won first over all breeds in the senior division in the club class. Ralph Seyforth lead his little dark fawn heifer up to the head of a line of twelve juniors and took his stand just ahead of the peer of Wisconsin show men, Jack Dixon of McClenahan & Dixon. Margaret Dillon stood third in the senior calf division of the open class and her fellow schoolmates, Wesley Smith and George Helwig, stood better than sixth in the same division. The above winnings indicate that the Mondovi Club had quality and type; Jersey uniformity added the needed dairy essential to place this calf club first over all other groups of fifteen calves in the great arena of over two hundred club calves.

The Winnings

Junior Jersey heifer calves—1, Ralph Seyforth; 2, Julius Hangland; 3, Charles Wittwer; 4, Harley Knight; 5, Aubrey Helwig; 6, David Bartlett; 7, Percy Gullickson; 8, Margaret Dillon; 9, James Hill; 10, Iva Viola Johnson.

Senior Jersey heifer calves—1, Aubrey Helwig; 2, Margaret Dillon; 3, Wesley Smith; 4, George Helwig; 5, Dorothy Helwig; 6, Olive Wilms; 7, James Anderson; 8, Kenneth Evjen. (Four others shown.)

Senior bull calves any breed—1, Stanley Melrose (Jersey); 2, Reuben Johnson (Jersey). (Sixteen senior bulls shown.)

First prize group of fifteen calves from any one club—First, Mondovi High School Jersey Calf Club.

Wisconsin. G. W. VERGERONT.

Junior Letters

Hoard's Dairyman Juniors:—I live on a 283-acre farm and we have 4 horses and a tractor and 2 milch cows and 4 heifers. We have about 200 Minorca chickens and 7 Bantam chickens and 2 White Leghorn chicks. One of them is mine. I have 2 Pekin ducks. We have 15 geese and one of them is mine and we have one ewe lamb.

My letter is getting long so I guess I'll close. If any of the juniors wish to write I will be glad to answer them. My address is R. 2, Strawberry Ridge, Pa.

Fannie Linskill.

Hoard's Dairyman Juniors: I live on an 80-acre farm 2½ miles south of Green Forest, Ark. I have a calf which is 16 months old and looking fine. We have 18 head of cattle which are all Jerseys. We are milking 8 now and sell cream. We have 2 mares and 3 mules. I have 4 pigeons, 1 dog, and 1 cat. My dog's name is Rover and my cat's name is Joe. My father has a 30-ton silo.

I have 4 sisters and one brother. Two of my sisters and I go to school at Green Forest. One of them is in the eighth grade and the other is in the fourth. I am in the sixth grade. I am 13 years old.

Arkansas. Onnis Youngblood.

Hoard's Dairyman Juniors:—I have one grade Holstein heifer I bought from my father for $10. The regular price was $25 when it was born but papa gave it to me for $10. And I have a full blooded Berkshire pig. I tried to put some rings in 3 of the pigs' noses.

We have a pedigreed bull and 27 cows with the calves and 5 horses. We are going to get some chickens pretty soon. We have only lived on our farm of 320 acres since last spring.

I am 11 years old and am in the fifth grade in school. My calf is 3 weeks old this Saturday.

If any of the juniors wish to write to me I will be glad to answer their letters. My address is Gully, Minn. Archie Currie.

Hoard's Dairyman Juniors:—We are milking five cows. We have three yearlings and three calves, four horses and three colts, and two sows, ten spring pigs, and three last fall pigs. We butchered three pigs today. We worked 120 acres. Papa and I did the work on the farm this year.

I am ten years old and am in the fifth grade at school. I wish that some of the juniors would write to me. My address is R. 3, Flint, Mich. Courtland Hugan.

Hoard's Dairyman Juniors:—I have a grade Ayrshire calf. I have named her Josey. I am now in the seventh grade. For studies, I have spelling, history, arithmetic, geography, English, and reading. I hope some of the juniors will write me. My address is Box 134, No. 1, Warren, Maine. Merrill Payson.

Hoard's Dairyman Juniors:—I am a boy of 12, living on a 100-acre farm in Northern Wisconsin. I help with the chores and can help in the field driving machinery, etc. We have six cows that milk at present and I help milk nearly all the time. Pa gave me a calf for milking. She is not a full blood. Can you guess her name. It is "Sweat Heart". We don't get a very large cream check, as we do not patronize Mr. Oleo, but we surely patronize our cream and butter.

I have completed the common school and am intending to take up higher grades in our neighboring town. I live 2¾ miles away from town.

I would like to hear from boys in the western states.

Wisconsin. Palmer Hanson.

Hoard's Dairyman Juniors:—I live on a farm of 160 acres. We have 17 head of cattle, 5 head of horses, and 10 hogs. I hope some of the juniors will write to me.

South Dakota. John F. Feeney.

Hoard's Dairyman Juniors:—I am eleven years old and in the sixth grade. Our teacher's name is Miss Holle.

I live on a 100-acre farm and like cattle and other dumb animals very much. We have 14 milk cows, six of which are dry, and one pure-bred bull whose name is King Beryl Korndyke.

I have six ducks. I am going to have ducks again next year until I have to buy a calf.

Wishing all the juniors good luck. Hoping some of the juniors will write to me. My address is Route 3, Box 13, Baldwin, Wis.

Walter D. Klanderman.

Hoard's Dairyman Juniors:—I live on a farm of 126 acres. I am eleven years old and in the 6th grade in school.

I have a registered Holstein cow. I bought her two years ago. She will be four in January. I paid $150 for her. We have 11 milking cows and 9 calves.

I have 35 rabbits now. I would like to have some of the juniors write to me. My address is Sunny View Stock Farm, Route 3, Howell, Mich. William Gilkes.

Hoard's Dairyman Juniors:—We have a cow, a horse, and some chickens and a dog. That is about all the animals we own, but that doesn't stop me from being a junior. Our cow is a full blooded Jersey and our chickens are Plymouth Rocks. My brother tends to the horse and I tend to the cow. We ride to school in busses. There are five busses that go to Gaines School.

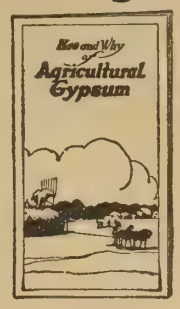
I did not trap much last year but will trap more this year.

We have a county feeding club.

I play in the high school band. I play a clarinet. There are 22 members.

Michigan. Harold Bronson.

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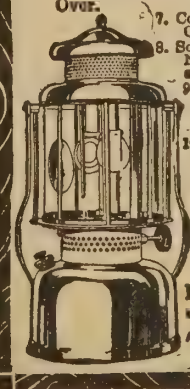
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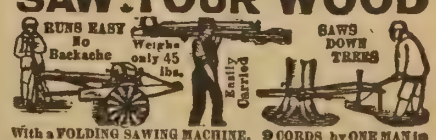
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STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows, fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Holsteins. Yearling bulls, sire from a 30-pound daughter, Pontiac Korndyke, $150.00 up. DEWEY PIERSEN, Metamora, Michigan. 17*

We have for sale several grade Holstein bull and heifer calves, also two registered Holstein bull calves, ages two weeks to seven months. Prices $25.00 to $250.00 each. For further details address MILLS DAIRY FARM, W. W. Arnold, Jr., Supt., Manchester, Georgia. 18-4

High-grade Holstein heifer calves, from highest producing herd in the state in 1918. $18.00 and $20.00 Also a carload of Holstein springers. WM. MARTIG, West Concord, Minnesota. 19-3

Registered Holstein bulls from two to fourteen months old. Ready for service. Prices right. M. H. PETERSEN, Libertyville, Illinois. 19-4

For Sale—20 large registered Holstein cows, bred heifers, heifer calves, young bulls. Guaranteed to satisfy. Prices right. Overstocked. AUGUSTINE BROS., Pound, Wisconsin. 20-2

Serviceable Holstein bulls—30-lb. son of 37th heads the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

A son of Ne Plus Ultra, good show bull. Also a son one year old by bull offered out of cow that made 40 lbs. milk a day and 50 lbs. fat in 30 days. H. C. HURLEY, Rockville, Md. 20-3

A real start for someone. Eleven head Holsteins. Ten head of nicely marked high grade yearling heifers. One registered yearling bull with 20-lb. grandam and 25-lb. sire. No relation to above mentioned heifers. Priced for quick sale. H. F. McNUTT & SON, Oxford, Wisconsin. 20-2

3 bull calves. Grandsons of Dutchland Creamelle Korndyke Lad. Dams have good A. R. O. records. Priced at $40.00, $60.00, $75.00 each, also 8 young A. R. O. cows. H. W. SCHULTZ, Middleton, Mich. 20-3

Holsteins—5 registered cows; 17 high grade cows; 3 fresh, others springers. Bargain. HELM & HELM, Metropolis, Illinois. 20-2

Holstein bull 9 months old, 30-lb. sire, 12-lb. junior 2. dam. An exceptional bargain. WM. MIELENZ, 425 E. Water, Milwaukee, Wisconsin.

For Sale—Twenty-three head high grade Holstein cows and heifers bred to thirty-five-pound May Echo Sylvia bull. Due to freshen this winter and spring. Good, big, growthy individuals and a bargain for quick sale. EDMUND RISELAY, 739 Main St., Buffalo, New York.

Holstein bull, ready for service, 4 dams averaged 105 lbs. milk in 1 day, 38 lbs. butter 7 days, $150. ROY HARRIMAN, Appleton, Wisconsin. 21-3

8 registered Holstein yearlings, $135.00 each. ORRIE STEELE, Evansville, Wisconsin.

High grade Holstein heifer calves, four to six weeks old, thirty dollars delivered C. O. D. Registered bull calves $50.00 up. All calves tuberculin tested. Satisfaction and safe arrival guaranteed. A. L. RASCHE, Lake Mills, Wisconsin.

For Sale—Pure-bred bulls, serviceable age and younger. Good individuals. Farmers' prices. Write for prices and descriptions. C. H. JOHNSTON, 177 So. Franklin St., St. Paul, Minn.

Do you want the very best? I offer beautifully marked high grade Holstein heifer calves at only $25. Registered bull calves $40. Will ship C. O. D. and if calves don't satisfy don't take them. J. M. McFARLAND, Watertown, Wisconsin. 21-2

For Sale—Pure-bred Holstein bull, two months old, from record bull and a very high producing dam. Price $40.00. FERN FINDLAY, Fort Atkinson, Wis.

For Sale—Thoroughbred Holstein bull calf. Choice dam and sire. All papers furnished $25.00, or without papers $20.00. LITTLE'S DAIRY FARM, Kewaunee, Illinois.

If you want the very best, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves. $25.00 each. I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 21-4

STOCK FOR SALE

Registered Holstein bulls, old enough for service. Fine individuals. Best of breeding, $100. Yearling heifers, $100. Older heifers bred to 36-lb. bull at low prices. My 36-lb. herd sire at a bargain. DR. BLACKBURN, Cuba, Ohio. 21-5

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Females for sale. A few pure-bred Guernsey cows and heifers. Every animal guaranteed. FRISSDALE FARM, Hopkins, Minn. 20-3

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc. Wisconsin. 14*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Son of 1st prize 4-year-old at Waterloo 1920 Dairy show. Dam made close to 550 lbs. fat at 3½ years of age, raised 2 calves in 10½ months and was 1 month on show circuit and record made on ordinary cow's feed. A fine son of a wonderful cow. Price for immediate sale, $500. We have several other well bred bulls from high producing dams. FRISSDALE FARM, Hopkins, Minn. 20-3

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS, Mankato, Minnesota. 19*

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. HOMER RUNDELL, Livingston, Wisconsin. 19*

For Sale—Registered Guernsey bulls and females, with Advanced Registry breeding, at moderate prices. Herd is Federally inspected. Write for list. HELENDALE FARM, Athens, Wis. 17-spl

Choice Guernsey yearling bulls, Glenwood breeding. A. R. sires and dams. Prices reasonable. A. W. HARGROVE, Ripon, Wisconsin. 19-4

Serviceable grandsons of Langwater Rosie. A. R. sire and dams. C. M. McCONNELL, West Salem, Ohio. 15-spl.

35 fine grade Guernseys. W. C. WAITE, Burlington, Wisconsin. 19-3

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

High grade Guernsey cows. Can furnish carload lots. Address WM. LONSDORF, Sec'y. Athens Guernsey Club, Athens, Wisconsin. 20-3

Guernsey bulls—May Rose breeding, right in price and quality, write for particulars. GLEN-MEADOWS STOCK FARM, Long Prairie, Minn. 20-2

Two choice Guernsey bulls, 9 and 13 months, from dam with 501-lb. double letter record. SEYMOUR FARM, Osseo, Wisconsin. 20-2

For Sale—Guernsey bulls, ten and twelve months old. Good individuals, sired by Leader of Prospect and dams by Tom Rilma. J. D. WELBORN, Owensville, Indiana.

Having sold my farm I will sell at public sale at Guernsey Dell Farm, 4 miles Northwest of Plymouth, Indiana, on Tuesday, December 14, 1920, my entire herd of Guernsey cattle, rich in Glenwood and Golden Secret blood, consisting of 10 cows and heifers giving milk, one of them imported with heifer calf by her side; 3 yearling heifers; 1 two-year-old bull; 1 yearling bull; 3 bull calves. The herd is on the Federal Tuberculosis-Free Accredited herd list. Will also sell 4 horses 30 hogs, feed, harnesses, farm implements, household goods, etc. A. E. ADAMS, R. D. 6, Plymouth, Indiana.

Public Sale—I will sell at my farm, 1 mile north and ½ mile east of Wakarusa, Indiana, on Tuesday, December 14, twenty registered Guernsey cattle. Also horses, hogs, and farming implements. Write for sale list. S. S. WENGER.

For bargains on May Rose bulls with type and production, write KUHTZ BROS., Waukesha, Wis. 21*

Guernseys. Three bred heifers, two bulls serviceable age. Very promising prospects. FLORENSERD GUERNSEYS, Plainsfield, Ind.

Registered Guernsey bulls. Good breeding. Bargains. FRED RAY, Lake Mills, Wisconsin. 21-3

For Sale—Bull calf from cow producing 650 pounds of butterfat in twelve months. Price, $150.00. Calf born March 29, 1919, nearly black in color weighing about 750 pounds. Sire, a grandson of Sophie 19th, who holds the world's record for butterfat of all breeds. Dam, a seven-sixteenths Jersey cow weighing about 1,250 pounds. SHERMAN NURSERY COMPANY, Charles City, Iowa. 18-6

Jersey bull calves for sale, sired by Oxford Gipsy Knight, whose sire is by half brother to twenty-five thousand dollar Golden Fern's Noble and out of National Grand Champion 1917—1918 Oxford Majesty's Gipsy. His dam, half sister to Gold Medal bull Oxford You'll Do. Her dam, half sister to Gold Medal bull Royal Majesty. Calves' dams rich in blood of famous Golden Jolly, good, economical producers. Herd Federal Accredited. Write for description, pedigree and prices. J. J. NURRE, Bancroft, Iowa. 21-2

STOCK FOR SALE

To make room for registered stock will sell few choice grade Guernsey young cows and bred heifers sired by and bred to registered A. R. bulls, from heavy milking dams. QUINEILO FARMS, 297 East Water, Milwaukee. 21-3

Jerseys—Three yearling Majesty bulls. Register of Merit and tested dams. Priced according to breeding and quality. ROMANS STOCK FARM, Cardington, Ohio. 21-2

For Sale—Grade herd Jersey cattle, 19 head cows, heifer and calves. Tuberculin tested. Some of the cows due to freshen this month, others later. Testing Association records. At a bargain if taken soon. F. ROCKWELL & SON, Mondovi, Wisconsin.

Ayrshire bull calves. Herd Federal Accredited. RUFUS A. JONES, Black River Falls, Wis. 20-2

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

HORSES

For Sale—Black, yearling stallion, registered Percheron. ARTHUR ROBERTS, West Bend, Wisconsin.

DOGS

Coon Hounds—Rabbit Hounds. Trial, Photos. Testimonials. Catalogue. KASKASKIA KENNELS, Herrick, Illinois. 18-4

Airedales—Puppies from registered parents for sale. FRED SCHROETER, Grafton, Wisconsin. 20-4

Few choice English Shepherd pups from natural heel drivers, one trained female. Also one English Fox Hound pup ready for hunting. GEORGE BOORMAN, Marathon, New York. 20-2

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

SWINE

Duroc pigs, $25.00 pair. Pedigreed. S. WEEKS, De Graff, Ohio. 14-8

Tamworths for sale. Champion stock, young bred sows and three-month pigs. WALN, Westtown, Pa. 21-4

Registered Berkshires—April boars, open and bred gilts. Harpending breeding, reasonable prices. QUINEILO FARMS, 297 East Water, Milwaukee. 21-3

POULTRY

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 19-5

Pure-bred Rose Comb Black Minorca cockerels. $3.50—$5.00 each. HENRY TIMM, Kasota, Minn. 20-2

Pure-bred Plymouth Rock cockerels; $2.00 to $4.00 each. HENRY KRENKE, Fremont, Wisconsin.

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale—At a bargain. My entirely new Ann Arbor Fly Wheel Silo Filler complete with Blower and Distributor Pipe (never used). Cost me $485, will sell for $325 to move quick. Address BOX 102, Fond du Lac, Wisconsin. 17-6

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00. 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Empire Milker. Two double units and pumping outfit. New (never used). $340.00. JACK TAYLOR, Elgin, Illinois. 20-3

For Sale—Avery 12-25 Tractor, new. Best reason for selling less than cost. Address BOX 617, Marengo, Illinois. 21-2

For Sale—One six-unit Sharples Milker, double action pump, everything complete for 62 cows (capacity 100) used nine months with entire satisfaction, milked fifty cows in fifty minutes and washed machine ready for next milking. Cost, $1,000.00 will take $500.00. Nineteen James' individual watering cups, complete with pipe to erect, never been unpacked, $50.00. All f. o. b. Tazewell. Have sold my farm and cows. SUN RISE DAIRY, Tazewell, Va.

Perfection double unit for sale, used but little. FLOYD CANFIELD, Canaan, Conn.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

No. 1 Alfalfa hay, $18.00 per ton, immediate shipment. BROOKSIDE FARM, Buffalo Gap, S. D. 21-3

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 20-10

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY AND CHEESE

Honey and cheese of superior quality in family size packages. Price list free. I. B. ROSA, Monroe, Wis. 21*

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, "The Tobacco of Real He-men." 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 18-4

Kentucky Natural Leaf Tobacco, 10 lbs., $3.00; 20 lbs., $5.00. FORD VEAL, Sedalia, Kentucky. 21-2

SEEDS

Medium Red Clover, Alsike, Timothy seed. Try us with samples. DADMUN BROS., Whitewater, Wis. 19*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

DAIRY FEED BAGS

Bags—We buy second-hand bags; pay one-half freight on 200 or more. LINCOLN BAG CO., Springfield, Illinois. 3-spl

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

FARMS FOR SALE

For Sale— Choice dairy farms in the dairy cent of the world. R. B. HELLEN, Jefferson, Wis.

137 acres fine land. 17 miles macadam roads City Hall, Philadelphia. Owner's residence, tena houses, stone stable, modern cow barn, 48 standi and 4 box stalls. Large implement and tool hous chicken houses. Macadam roads each side a through farm. $50,000.00—less than cost of t buildings alone. FARM 2024 N. Tenth St., Phil delphia, Pennsylvania.

160 acres. 2 miles, county seat. Dark clay loa high state fertility, good 9-room house, 2 good barn plenty out buildings, excellent 10-acre orchard, $1(per acre. Write us for farm bargains in southe Michigan. MICHIGAN FARMS AGENCY, Box 92 East Lansing, Michigan.

Free Wisconsin Bulletins, soil, climate, crops. D MIGRATION BUREAU, Wisconsin Dept. of Agricu ture, Capitol 125, Madison, Wisconsin. 18-

For Sale in Clark County, Wisconsin: 80-acre farm 75 under plow, 5 acres timber. 1½ miles to tow and high school, ¼ mile cheese factory. 2 silos, goc buildings. 18 registered Holstein females, herd sir horses and machinery. Terms easy. LOCK BOX 12 Granton, Wisconsin. 18

Must sell my excellent grain and alfalfa farm Walworth County, Wisconsin. Address BOX 47 care Hoard's Dairyman. 19

New York state dairy farms for sale. Catalog free. HILLIS FARM AGENCY, Hobart, Delawa County, N. Y. 19-

Stock and dairy farm for sale. Good building good soil. Terms. C. E. PEIRCE, 333 Garfield Ave Eau Claire, Wisconsin. 19-

Farm Bargains—60 miles Twin Cities. Free lis man. BAKER O 76, St. Croix Falls, Wisconsin. 8-s

200 Acres, $2,300 with horses, 3 head cattle, pi wagons, sleighs, sleds, harnesses, complete farm m chinery, hay for stock, 50 bushels potatoes, 2 bushe beans, vegetables, stove-wood for comfortable winte convenient R. R. town; big fertile fields, 20-cow pa ture, estimated 500 cords wood; quantity apple grapes, berries; warm cottage house, 2 big barn poultry house, sheep shed, etc.; owner called awa everything $2,300, easy terms. Details this and fru and timber farm $1,400, page 7 Strout's Big Illu trated Catalog 33 States. Copy free. STROUT FAR AGENCY, 150 D L Nassau St., New York City.

For Sale—Stock farm, 220 acres, splendid conditio JAMES W. GRAVES, Owner. American Nation Bank, Richmond, Virginia. 21

Best Southern Dairy Opportunity. 200 acres, ne city of 20,000. Two modern homes, 150-cow bar concrete silos, running water. Electric milker, ligh power. Unlimited demand, good prices. Owner h business elsewhere. Bargain $30,000. F. DOYL 224 Gazette Bldg., Little Rock, Arkansas.

Get rich farming in South Dakota, the state th helps her farmers by her own system of rural credit the state that has the record for the greatest p capita production of food crops and now wealt Write today for official bulletins. STATE IMM GRATION DEPARTMENT, Irwin D. Aldrich, Cor missioner, Capitol F-15, Pierre, South Dakota.

Dairy, stock, fruit and general farms. We ha them at bargain prices. NEW YORK FARM AGE CY, Westfield, N. Y. 21-s

Alfalfa, corn, grain and live stock farms. Best famous prarie belt for the money. Write me wh you want. H. H. HANSEN, Macon, Miss. 21-s

FARMS FOR RENT

Wanted—A good opportunity for a man who kno how to farm and make money out of pure-bred ca tle. The farm is stocked with pure-bred cattle a equipped with good buildings and machinery. Appl cant must be willing to invest some money as the d vision of the proceeds will include equal shares of li stock raised and sold. Do not answer unless y can furnish proof of ability to accomplish result Address BOX 492, care Hoard's Dairyman. 21

Excellent proposition for a young couple with expe ence in dairying on a good irrigated farm of 160 ac that will produce the best kind of pasture and fee Near Bozeman, Montana, where State Agricultu College is located. Must have capital of $2,000. A dress DR. JOS. PIEDALUE, Bozeman, Mont.

WANTED TO RENT

Young married couple, Swiss, want to rent 100 120-acre farm for cash or share. Southern Wiscons preferred. State price if in cash. Address BOX 48 care Hoard's Dairyman. 21

PARTNER WANTED

Partner Wanted—Partner wanted to buy a part in terest and operate an ideal dairy farm. Good loc tion, fine buildings, flowing wells, abundance of a falfa. About $6,000 needed. Write for particular T. L. KETMAN, Y. M. C. A. Hotel, Chicago, Illinois. 20

Partner wanted to operate 200-acre farm on sha plan. Must have own help and be capable. Ho steins or Guernseys. Fine location in city limit Good buildings. Close to school, church and chee factory. Address BOX 398, care Hoard's Dairyma 13-

MISCELLANEOUS

The Finished Mystery—Key to these times—Eve Christian should read. Magazine edition, postpaid cents. Address MRS. CORA CARMICHAEL, Wauke sha, Wisconsin. 19-

Wanted—Ten thousand good dairy cattle to con sume our surplus alfalfa hay. Dairy opportuniti unexcelled on the Newlands Irrigation Project. Nev failing water supply. Adequate storage. Mild cli mate. Good dairy market. Great variety of crop Our alfalfa hay unexcelled in feeding value. Orde handled. Leasing or feeding contracts available. Ad dress NEWLANDS PROJECT ALFALFA ASSOCIA TION, Fallon, Nevada. 20-



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted by March first. Single man to work wit herd of A. R. O. Holsteins. Must be willing to hel take care of cows on test as well as all other wor in barn. Prefer young man with clean habits who i a hustler. Give references and salary expected in firs letter. KILPATRICK BROS. CO., Beatrice, Nebr 19

Experienced herdsman wanted to take charge good Holstein herd. Single man of good habits. Col lege man preferrred. Must furnish good references State wages expected in first letter. M. C. KRONE MAN, Fergus Falls, Minnesota. 20-

Wanted—Good dry hand milker for barn work bnly Prefer experienced test cow milker. Herd pure-bre Guernseys. Good wages and living accommodation F. W. DUBOC, Herdsman, Fairydale Farm, Pawlin New York. 20-

Wanted to hire—Good, reliable, married man to car for registered Guernsey herd. A worker with experi ence necessary. Furnish milk, garden, new house Start by January 1st. Yearly employment. HOME RUNDELL, Livingston, Grant County, Wis. 20-

Wanted at once—Two good men thoroughly familia with producing certified milk. Permanent position Board and room and good wages. Write or wire AR DEN FARMS, St. Paul, Minn. 20-

Railway Mail Clerks Wanted. $135 month. Sam ple examination questions free. FRANKLIN INSTI TUTE, Dept. F 113, Rochester, New York. 20-



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted Immediately—Married herdsman to work ·h registered Guernseys. Must be willing worker, ictly honest, good habits. Prefer experience in ding for records. Would consider someone willing learn who would be anxious to make good. Steady for right party. F. E. FOX, Waukesha, Wis. 21-2

Man wanted on dairy where milking machine is d. Some experience in feeding dairy cattle. Good ges to right party. G. C. LINDSEY, Route 3, rdeen, South Dakota. 21-2

Wanted—Single herdsman in good Illinois Jersey d doing testing, showing. Only experienced and ling worker considered. Also second man for ming and help milking. State experience, refer- e and wages in first letter. Address BOX 496, care ard's Dairyman. 21-2

Herdsman Wanted—One who understands A. R. O. ting and the care and feeding of pure-bred Hol- in-Friesian cattle. LONG LAKE LIVE STOCK ., 668 Cable Ave., St. Paul, Minnesota.

Wanted—Competent, practical single man on gen- l farm as choreman. Five grade Guernseys to be veloped into selected herd for cream production; at sent twenty fat hogs marketed per month. Fore- n in charge. Write giving references, experience d wages asked. COASTWAYS RANCH, Pesca- ·o, San Mateo Co., California.

Wanted at once—Man and wife (no children), man do general farm work. Must be good hand milker. man to do house work. Good wages and steady ployment. MORGAN HEIGHTS SANITARIUM, rquette, Michigan. 21-2

Wanted—Man for general farm work. Must under- nd hog raising. Will hire by year. "SWEET- IER", Round Lake, Illinois.

Wanted—A single man at once, experienced in dairy rk and pure-bred Holsteins. A permanent position d a good home for a steady and responsible man. ite wages in first letter. TUEY J. STOCKERT, Jr., X 384, Churubusco, Indiana.

Wanted—Test cow milkers. Pay $70.00 to $80.00 a nth and board, depending on experience and ability. rge herd, modern barns, excellent accommodations men. GOSSARD BREEDING ESTATES, Mar- sville, Ind.

Herdsmar wanted at once—Practical, reliable, single n to take charge of herd registered Holsteins. ust be able to get results in A. R. O. work and d calf raiser. Good habits preferred. Send refer- es and state wages expected. JOHN L. CHAP- AN, Jr., River Falls, Wisconsin.

Wanted—Single herdsman, of good habits, to take ire charge small herd of pure-bred Holsteins; A. O. work, calf raising, etc. References, wages nted and full particulars in first letter. ADAMS RM, E. B. Adams & Sons, Racine, Wis.

Firemen, brakemen, for railroads nearest their nes, everywhere. Beginners $200, later $300 nthly (which position?). RAILWAY ASSOCIA- ON, Desk, W5, Brooklyn, New York. 21-4

Wanted—By January 1st, herdsman for a Guernsey eding establishment in Western Pennsylvania, who s experience in testing and feeding cows for A. R. rk and high production. Must be of steady habits, d worker, have unquestionable references and be e to produce results. State all particulars in first er and if married how large family and how soon u come. A good proposition to the right party and y those qualified and willing to stay long need ap- . Address BOX 498, care Hoard's Dairyman. 21-2

Wanted—Single man to milk Holsteins on semi- cial test, three milkings; good opportunity for ht man. Institution herd of two hundred and fifty id. Annual vacation with pay; good place to rk. State wages and send references. K. N. ITE, Farm Mgr., State Hospital, Warren, Pa.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Young married man wishes position March 1 as manager of dairy farm. Ten years' experience with both pure-bred and grade dairy cattle, and over two years' training in the College of Agriculture, University of Wisconsin. Address BOX 462, care Hoard's Dairyman. 18-4

Experienced manager on Holstein or Guernsey farm. Have successfully tested and fed cows of both breeds and can handle men. Wants position where opportunity will be given to produce results. Best of references. Address BOX 475, care Hoard's Dairyman. 19-5

Wanted—Work on certified dairy by Catholic, age 40, single. Well experienced in balanced rations, Babcock test, calf raising and A. R. O. work. C. PRESCHER, care A. C. F. Witt, Route 2, Granton, Wisconsin. 20-2

Farm and dairy manager, with energy, push and proven ability, desires position on large, modern, certified milk or stock farm, institution or private estate where results will be appreciated. Seventeen years' experience in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and dairy. Breeding for results a specialty. No proposition too large. Married. Age 38. Excellent reference. Address FARMER AND DAIRYMAN, 4463 North Uber Street, Philadelphia, Pa. 19-spl

Wanted—Position on large dairy farm. Life experience. Expert with tractors and farm engines. Address BOX 493, care Hoard's Dairyman. 21-2

Wanted—Place as feeder and caretaker of cows on dairy farm. I am 61 years, single and lifelong experience with stock. Cannot milk much. CHRIST KLEIN, Phillips, Wisconsin.

Wanted—Position as manager on modern dairy farm in Carolinas or Georgia by experienced northern dairy farmer. 34; married. References. 1607 EDGEWOOD AVE., Richmond, Va.

Single man wants position as herdsman. 12 years' experience with A. R. O. work. Good calf raiser, not afraid of hard work. Scotch born. Will exchange references. Address BOX 495, care Hoard's Dairyman.

Farm manager or superintendent of long experience now engaged desires change. Fully understand modern farming in its various branches and all up-to-date farm machinery. Would prefer place where a Holstein herd is being built up as I know breeding and development for both production and show. Address BOX 491, care Hoard's Dairyman.

Manager—Desires position on high class dairy farm or estate. Married, small family, middle age, college trained, life experience. Advanced Registry work, and breeding high class dairy cattle a specialty. Address BOX 454, care Hoard's Dairyman. 21-spl

Position wanted as herdsman. JOSEPH VAUGHN, North Madison, Indiana.

Practical, experienced dairyman and poultryman, age 30, married, no children, wants a position on farm. Understands farming, stock raising and farm power. W. E. GROVER, Intervale, N. H.

Position wanted as Jersey herdsman, creamery man or manager of dairy. Married, 2 children, age 32. 15 years' experience, dairy school course. Understand buttermaking, testing, market-milk and machinery. Also care and breeding of pure-bred Jersey cows and feeding for good R. of M. records. GEORGE R. FOSTER, Glendale, Ohio. 21-2

Young, experienced dry hand milker wishes permanent position at once on pure-bred dairy farm. Write for particulars FRANK A. THOMAS, R. F. D., New Madison, Ohio.

Herdsman—Long experience in practical dairying, single, capable producing results, A. R. O. work, best references. Address BOX 497, care Hoard's Dairyman.

Dairying a specialty—Production, official testing, progressive breeding, paying proposition, place looking for big things in the end is what I want. Single, 18 months as official tester, always absorbed in dairy work, worked way through 3-year college course. Will consider either salary or share proposition. This notice appears but once. Act immediately. E. M. WEAVER, Marysville, Ohio.

Milk a Factory Lunch

In modern factories an increasingly ·mmon sight is a push cart loaded ·th half-pint milk bottles being heeled down the aisles about the iddle of the forenoon. The Dairy ivision of the United States Depart- ent of Agriculture has been doing uch educational work on the value milk as a food in the factories with- the past 18 months, and the amount milk now being drunk by factory nployees is good testimony to the ct that the beverage is all that is aimed for it.

The conditions found in one ringfield, Mass., factory which has 0 employees are typical of many her places. The milk specialist in at county spoke to the factory rce, which consists of both men d women, during the latter part of ly. The manager stated that he d been considering the proposition d was willing to have milk distri- ted throughout the factory during rking hours. The next day the an was put into operation. The lk costs the company 4 cents a half- nt bottle, and to cover the cost of stribution was sold for 5 cents. For e first day 100 bottles were or- red. This proved insufficient and 0 were ordered for the second day. is still proved too small a quantity, d 500 were ordered. After a week two, 700 bottles a day were being nsumed. In August the price of e milk was raised to 5 cents a bot- , and 6 cents was charged the em- yees for it. There was a falling in the demand; so the manager, convinced of the value of the lunch to the men and women, put the price back to 5 cents; and the factory paid for the cost of distribution.

The efficiency of the force is much increased by the milk lunch, the manager states, for many of the men come to the factory having had no breakfast. Less time, too, is lost from the machines than when the men left them and went to their lockers for sandwiches.—U. S. Department of Agriculture.

Land Clearing and the New Settler

Perhaps the first effect of cleared land on the new settler is the inspiration it gives. Like many before him, he hauls his household goods, machinery, etc., out to the new farm-to-be, unloads, and begins work. He clears up around the house, puts in a garden, erects a little stable, and starts developing. He looks out over an uninviting view and resolves to make it attractive and profitable.

Getting rid of the brush, cutting, piling, and burning it probably is new work. But every blow of the axe and every stroke of his scythe overcomes an obstacle preparing the way for the things we need to eat and wear. A man's job in a real man's country.

But every brush pile set aflame and every stump blown high celebrates an event today in which he himself is the principal actor. He meets all the grime and hard, muscular work of the game. If so situated that he does not have to work at outside employment, every day's labor shows a greater amount of land available for crops. That increased acreage is his inspiration. He is conscious that he is doing a work without which there would be no progress in building a bigger and richer state.

Another effect of cleared land on the new settler is the superior security he is able to present for a loan. It too often is true that in the early development period when he is most in need of a loan he may have difficulty in getting it. But we are making progress in remedying this condition. More money is coming into the country as more outlets are found for mortgages on partly improved farms. This increased acreage of cleared land on the settler's part not only enhances his security, but the fact that he has increased it is evidence that he is a worker and demonstrates his ability to carry a loan.

Bring out the yard-stick! Chalk it off in dollars and cents instead of inches and feet. Measure for us the worth to the state of the early pioneer in southern Wisconsin. They are not all gone, not yet—but they are fast dropping away—brave-hearted men and women who migrated to Wisconsin, to get it ready for you and me. They, too, built strong log cabins, and killed deer and bear, supporting themselves on scant fields from which they had driven back the forest with the axe and fire.

Their efforts are being repeated in Upper Wisconsin. The last two years more than 3,000 families located there to build farms. The men and women who are hewing out homes for themselves in Marinette and other counties may well be said to be doing their duty to posterity.—From address by B. G. PACKER, Director of Immigration for Wisconsin, before meeting celebrating the clearing of 1,800 acres of stump land in Marinette County, Wisconsin.

MARKETS

CHICAGO, Dec. 2—Butter—Creamery, extras, 56c; standards, 43c; dairy, firsts, 42@47c; seconds, 38c.

Eggs—Ordinary, 62@66c; firsts, 73@74c.

Cheese—Twins, 24c; Young Americas, 25¼c.

MILWAUKEE, Wis., Dec. 2—Butter—Creamery, tubs, 55c; prints, 56c; extra firsts, 52@53c; firsts, 48@50c.

Eggs—Fresh, firsts, recandled for city trade, 69@70c; current receipts, country candled, 62@64c; checks, 40@42c; dirties, 45@47c.

Cheese—Twins, 24c; Daisies, 25½c; Longhorns, 26c; fancy Brick, 24c; Limburger, 1 lb., 22c; 2 lbs., 21c.

NEW YORK, Dec. 2—Cheese—Easy; state milk, common to specials, 20@29c; skims, common to specials, 10@20c.

Butter—Steady; receipts, 3,684 lbs.; creamery, extras, 57c; state dairy, tubs, 33@34c; imitation creamery prints, nominal.

Eggs—Steady; receipts, 6,790 cases; nearby white fancy, $1.08; nearby mixed fancy, 67@93c; fresh firsts, 76@88c.

There Was Room at the Top

Mr. Farmer, has it ever occurred to you that a Silo is an investment that brings bigger returns than any other stationary building on your farm, considering the cost of same, the space it occupies, the amount of feed you can store, the extra profit it earns, the ease of feeding in cold weather, and there are many more reasons why you should consider the

"Acme Brick Silo"

It's the last word in silo construction, as it will improve in strength and looks. It will stand wind, fire, heat and cold and any requirement it is put to. Investigate before buying.

Wisconsin Brick Silo Co.
Not Inc.
Racine - Wisconsin

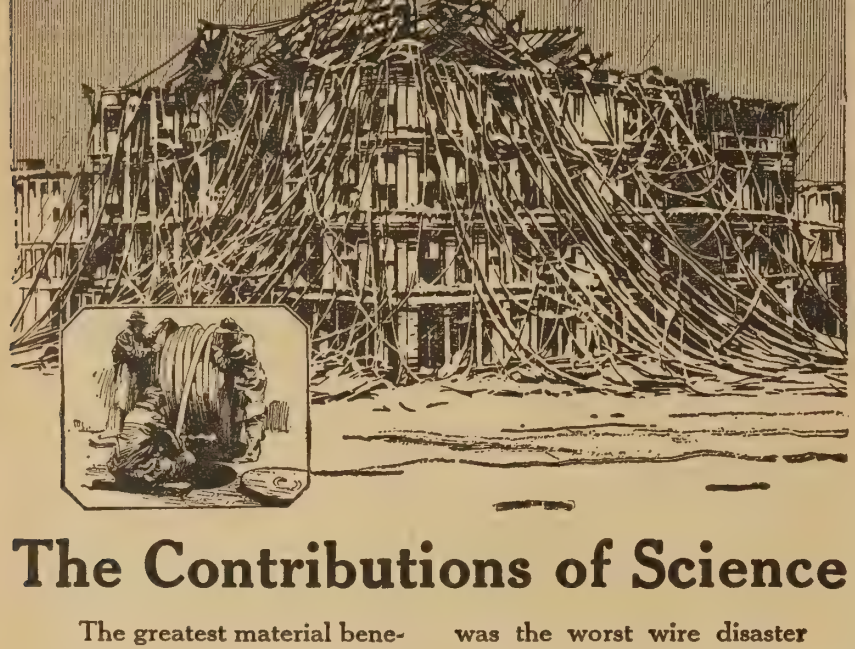
"Acme"
The Height of Perfection
Want agents in different localities.

Phosphoric Acid

Finely Ground Raw Rock Phosphate is the cheapest source. Your inquiries solicited.

M. H. Gray, Mt. Pleasant, Tennessee





The Contributions of Science

The greatest material benefits the world has received have come from the laboratories of the scientists. They create the means for accomplishing the seemingly impossible.

Science, after years of labor, produced the telephone. From a feeble instrument capable of carrying speech but a few feet, science continued its work until now the telephone-voice may be heard across the continent.

In February of 1881 a blizzard swept the city of Boston, tearing from the roof of the Bell telephone building a vast net-work of 2,400 wires. It was the worst wire disaster the Company had sustained.

Now through the advance of science that number of wires would be carried in a single underground cable no larger than a man's wrist.

As the fruit of the effort of science greater safety and greater savings in time, money and materials are constantly resulting.

And never before as now, the scientist is helping us solve our great problems of providing Telephone service that meets the increased demands with greater speed and greater certainty.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy One System Universal Service
And all directed toward Better Service

One Man Saws 40 Cords a Day

At a Cost of 1½c a Cord!
Send today for Big Special Offer and Low Direct Price on the OTTAWA, the One-Man Saw, the first made and sold direct from factory to user. Greatest labor saver and money-maker ever invented. Saws any size log at the rate of a foot a minute. Does the work of ten men. As easily moved from log to log or cut to cut as any wheelbarrow. 4-Cycle Frost Proof Engine has balanced crank shaft—pulls over 4 H-P. Magneto equipped; no batteries needed. **Special Clutch** lever controlled enables you to start and stop saw with engine running. Automatic Speed Governor. Easy to move, costs less to operate. When not sawing, engine runs pumps, feed mills and other machinery. Pulley furnished.

OTTAWA LOG SAW
Cuts Down Trees—Saws Logs By Power
Patent Applied For

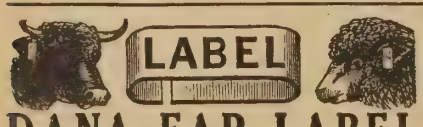
Cuts Down Trees Level with Ground Leaving No Stump.

Strictly a One-Man Outfit

Cash or Easy Payments Shipped direct from factory.
30 Days Trial No waiting—no delay. Let the OTTAWA saw your logs and pay for itself as you use it. **10-YEAR GUARANTEE.**
See the OTTAWA at work on your farm once and you will never give it up. Thousands in use, every owner a booster. Out-saws any other on the market. Send today for FREE BOOK and Special Offer

FREE Write at once for Free Book and Low Price.

OTTAWA MFG. CO., 1385 Wood St., Ottawa, Kans.



DANA EAR LABEL
Stamped with owner's name or address and serial numbers. Send for free samples.
C. H. Dana Co., 55 Main St., W. Lebanon, N. H.



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is the time to purchase a silo, have it shipped early and haul in the winter on good roads. CORN BELT hollow tile silos thoroughly and beautifully glazed are permanent, fireproof, paint proof, repair proof. Include tile chute, tile feed room, steel back ladder and hip roof rafters. Special discounts for early shipments.
The Corn Belt Silo Company
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The "STAY THERE"
Aluminum Ear Markers
are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalog and prices mailed free. Ask for them.
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KING SEGIS PATENT LOCK
Ear Tags, Bull Staff and Rings.
Description and prices sent on application. 300,000 of these ear tags have been sold without adverse criticism. 500 of these BullStaffs are used by the best breeders in the business.



H. A. Meyer, Syracuse, N. Y.

Middlesex Meadows' Quartette

Middlesex Meadows Farms, Massachusetts have lately completed four very meritorious Ayrshire Advanced Registry records. The members of this worthy quartette are Lucy Webb, junior two-year-old, Maple Leaf Jean, six-year-old, Freda of Elmwood, eight-year-old, and Nancy Whitehall, five-year-old. Lucy Webb produced 13,524 lbs. milk, 568.47 lbs. fat; Maple Leaf Jean, 16,271 lbs. milk, 614.69 lbs. fat; Freda of Elmwood, 18,502 lbs. milk, 753.45 lbs. fat; while Nancy Whitehall topped the list with 22,075 lbs. milk, 858.77 lbs. fat. The average production of this quartette is 17,593 lbs. of milk, 698.84 lbs. fat.

Lucy Webb was bred by Middlesex Meadows and is out of Rosella Webb a great producing dam. Maple Leaf Jean is not only a big producer but a great show cow as well, being champion at Toronto in 1919 and winner at many of the state fairs. Freda of Elmwood has also been a prize winner. Nancy Whitehall holds the junior four-year-old world's record in milk production.

Captain Higginson is developing a great herd of producing Ayrshires at his Middlesex Meadows Farms, Massachusetts and at Sheldon Farms, New York. He is ably assisted in this work by his capable superintendent, W. R. Coutts.

Vermont. J. G. WATSON.

National Board Calls Meeting for St. Louis

The National Board of Farm Organizations has issued a call for a national convention of agricultural co-operative organizations throughout the United States to meet at the Statler Hotel in St. Louis, Missouri, December 16, 17, and 18. The purpose is to gear up existing farmers selling and buying machinery and set in motion a national movement to meet the acute and distressing needs of agriculture. The invitation is being extended at the request of the National Farmers' Union.

"The purpose of the convention is for action," wires Charles S. Barrett, who is now starting on his seventeenth year as President of the National Farmers' Union. This sentiment will meet with the approval from farmers everywhere who are facing disaster as a result of the recent declines in farm prices.

The total turnover of the agricultural co-operatives is enormous—several billions annually—and co-ordinated effort on the part of the various organizations now engaged in the marketing of wheat, live stock, cotton, and milk is one of the greatest importance. Farmers' unions, equities, milk producers' associations, granges, gleaners, farm bureaus, and other groups are all invited to participate in the coming meeting. Various committees now working on the grain question will have opportunity to meet and harmonize their programs in case it may appear that there now exists some conflict of opinion as to procedure.—CHAS. A. LYMAN, Secretary.

Jefferson County (Wis.) Holsteins Average $309

Members of the Jefferson County, Wisconsin, Holstein Breeders' Association offered 74 very good individuals in their first annual sale held November 19 at Lake Mills, Wis. The entire lot sold for $22,540, an average of $305, with $2,125 the top figure. C. L. Mulks & Son of Wisconsin paid this for King Segis Pontiac 28th, a yearling son of King Segis Pontiac from Queen Juliana Dirkje, the first cow to produce over 1,000 lbs. butter as a 3-year-old. The bull was consigned by John L. Fisher.

Carnation Stock Farms consigned the highest priced female, Beauty Pietertje Prince Segis, a 2-year-old daughter of Beauty Pietertje Prince from a 27-lb. dam and in calf to Avon Pontiac Echo.

Mack & Haeger did the selling with F. H. Everson in the box.

Following is a list of all animals bringing $300 or more and buyers:

Earl Pierce, Wisconsin	
Colson Ormsby Hengerveld De Kol	$320
Longfield Canary De Kol	325
Mack & Clout, Wisconsin	
Canary Hengerveld Homestead Girl	$325
Daisy De Kol Ringwood 3d	400
L. G. Hall, Wisconsin	
Aaltje Hengerveld Tritomia 3d	$300
Adam Kiesling, Wisconsin	
Ureeka Johanna Ormsby Bess	$620
Linden Lawn Violet Ormsby	675
Walter Heitz, Wisconsin	
Linden Lawn Spofford Ormsby	
G. T. O. Becker, Illinois	
Lady Beets Mechthilde 2d	$300
Longfield Butter King Mechthilde 2d	300
Milford Meadows Stock Farm, Wisconsin	
Helen Ormsby Bess Pietertje	$400
C. S. Mulks & Son, Wisconsin	
King Segis Pontiac 28th	$2,125
Jno. H. Pester, Wisconsin	
Inka Pet Repeater Pontiac	$325
Theo. Thompson, Wisconsin	
King Segis Korndyke De Kol	$330
Phil Gannen, Wisconsin	
Beauty Pietertje Prince Segis	$925
F. B. Dunham, Iowa	
Ione Mechthilde Burke	$300
S. E. Jones, Wisconsin	
Canary Hengerveld Hiawatha	$335
Wm. Lehmann, Wisconsin	
Canary Mamsell Hiawatha	$375
W. C. Von Papplendam, Illinois	
Pauline Denver Creamelle	$300
A. A. McGinnity, Wisconsin	
Admiral Walker Hengerveld	$660
Roy Hetts, Wisconsin	
Grace Butter Maid	$550
H. N. Witte, Wisconsin	
King Calamity Alcartra	$380
Erwin Hartman, Wisconsin	
Marjory De Kol Jewel 5th	$390
Ryanbe Bess Eobes	375
Lee Burlingham, Wisconsin	
Mercedes De Kol Lyon Ryaneta	$300
Ernest Nass, Wisconsin	
Pearl Queen Ormsby	$300
Lawrence Gunnelson, Wisconsin	
Abbie Palmer Homestead Ormsby	$350
Anton Molz, Wisconsin	
Beauty Netherland Beets 3d	$300
W. R. Gates, Wisconsin	
Segis Lyons Mercedes	$500
Fred Gurr, Wisconsin	
Lady Corona Spofford Clarabel	$330
E. E. Canniff, Wisconsin	
Jule Johanna Korndyke	$320

A prominent Guernsey breeder says: "I bought a heifer for $125 and have sold $20,000 of products from her. It could not have been done without Advanced Registry testing." If you have pure-bred cows, write the Dairy Husbandry Department of your State College of Agriculture about testing them.

Sale Announcements

Dec. 14—Holsteins. Will County Holstein Breeders, New Lenox, Ill. Wilbur A. Francis, Sale Manager.
Dec. 16—Holsteins Phelps & McClure Herd, at Aurora, Mo. W. H. Mott, Sale Manager. Herington, Kansas.
Dec. 18—Guernseys. E. J. & Carrie Kantsky, Marsfield, Wis.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Development of the Fetus

After conception has occurred the ovum descends into the uterus and the embryo then gradually develops. Toward the twelfth day in the cow the ovum measures from one-third to one-fourth of an inch in diameter and is composed of four structures or layers contained one within the other, three of which are complete. They are: The yolk membrane and the originating tissue or mass, called the blastoderm, divided into an external, middle, and internal layer. By gradual modification of these embryonic layers form the various organs and enveloping membranes or sack of the fetus. The internal or mucous layer forms the epithelium of the intestines and glands, the respiratory apparatus, the kidneys, and the bladder. The middle layer develops the principle vessels of the fetus and the locomotory organs and from the external or serous layer originates the epidermis and organs of sense. Each layer furnishes in the course of development both the inner and outer parts of the fetus. The inner layer forms the umbilical vessicle filled with granular fluid for the nutrition of the fetus.

The allantois next forms. It has two sacs, the inner composes the true allantois, or inner sac urachus which is small and represents the fetal bladder and the outer which is larger and composes the true allantois, or inner sac of the embryo. The outer envelope is called the chorion and exactly fits the inner surface of the uterus and attaches to its cotyledons or "buttons" through which nourishment is derived from the coa. The amnion is the second envelope, included within the later and contains the fetus; then comes the allantois which has two layers which are spread over the outer face of the amnion and the inner surface of the chorion. The placenta are tufted tissues which graft the fetus to the mother and the umbilical cord, or navel cord, is composed of vessels that attach the fetus to the envelopes which contain it. The amnion or second complete enveloping sac secretes the liquor amnii, a fluid which bathes the fetus. This fluid favors movements of the fetus and serves as a buffer between it and the dam and influences from without. It also preserves an even temperature and has other important functions. The allantois also contains a fluid which at first doubtless helps to nourish the fetus but toward the end of pregnancy is largely composed of urine from the fetus and is brown in color.

When the fetus of the cow is about 12 weeks old it measures 5½ inches; at 13 to 20 weeks, 12 inches; at 21 to 32 weeks, about 2 feet; at 33 to 40 weeks, 2 feet or more according to breed and uterine nourishment. Hairs are seen on the fetus of the cow at the third month. In the cow the maternal cotyledons number 60 to 80. In to their crypts the villi of the chorion graft and between them and the maternal cotyledons is always to be found a small quantity of thick, white milky-looking fluid, called cotyledonous or uterine milk. The fetus does not directly take nourishment from its dam.

Acute Indigestion

Would you please state the best remedy for cows that got an overfeed of apples? They seemed to be very weak, some could not hold their feet, their noses would sweat, and they had no fever up to the time of their death.

Howard City, Mich. F. S.

Gorging upon apples might cause fatal bloating or acute indigestion, but we cannot decide from your description just what was wrong. In such a case treatment would consist in giving stimulants, such as aromatic spirits of ammonia, nitrous ether, and nux vomica in water and if necessary followed by small doses of barium chloride and tartar emetic. A trained veterinarian should, of course, be employed in so serious a case.

Impotent Bull

I bought a Holstein bull a short time ago and he seems to be sterile. He is rising two years old. His sterility is no doubt due to being put in service too young. He is keen and in good flesh. He is very well bred and am anxious to know if there is any chance of his ever being of any value.

Canada. W. M.

As cows often are to blame in such cases the bull should not be considered impotent unless it has been found that conception follows the service of other bulls. If the bull is a confirmed masturbator you might as well castrate him or send him to the butcher. If he has not that vice he may become potent, in time, if you retire him from service and put him to steady work in harness or a tread power, provided there is no organic disease of the testicles.

Why was the maiden all forlorn?
Because her cow had a crumpled horn.
If she had raised that bossie right,
And fed the heifer morn and night
With bran and hay and silage corn,
She wouldn't have had that crumpled horn.

Jack and Jill went up the hill,
With light and lively step,
A balanced breakfast gave them speed,
And health and strength and pep.

Hood Farm Abortion Remedy
and
Hood Farm Breeding Powder
Will Check and Prevent
ABORTION

If you are having trouble from abortion, order these two Remedies at once, give them a thorough trial and we are sure that you will be pleased with the result.

Chemung, N. Y.

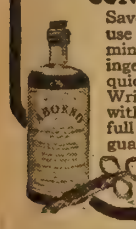
Gentlemen:—For the enclosed five dollars please send me the Abortion Remedy and Breeding Powder. Have had splendid success with your Remedies. No more abortion.

PHIL WYNKOOP.

PRICES: Abortion Remedy, prepaid, $1.25, $2.75 and $9. Breeding Powder, prepaid, $1.15, $2.75 and $5. Injection Tube, by mail, 90 cents. One medium Breeding Powder, one medium Abortion Remedy, one Tube, prepaid, $5.75. Please mention this paper.

C. I. HOOD CO., Lowell, Mass.

A GUARANTEED REMEDY FOR CONTAGIOUS ABORTION



Save calf, cow and herd by the use of *Aborno*. Easily administered by hypodermic syringe. Kills abortion germs quickly without injuring cow. Write today for free booklet with letters from users and full details of our moneyback guarantee.

ABORNO LABORATORY
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Bog Spavin Fleming's Spavin Liquid overcomes lameness or money back. Leaves no scar. $2.08 a bottle postpaid. Send for FREE Vest Pocket Veterinary Adviser. Describes Spavins and 200 other Horse and Cattle Ailments.
FLEMING BROTHERS, 256 Union Stock Yards, Chicago

It Pays To Dehorn



Dehorn your cattle in the modern humane way No crushing—a single stroke does the work quickly when you use a
KEYSTONE DEHORNER
We also make Keystone Bull Staffs and other appliances for cattlemen and dairymen—all sold on *money-back guarantee.* Write for circular. It pays to dehorn.
JAS. SCULLY, Box 109, Pomeroy, Pa.



"Carbola-Clean" Buildings

means that walls and other surfaces offer no harboring places to contagious disease, lice, and mites. It means sunny-sweet interiors—light and wholesomeness. It means healthier and more vigorous cows, hogs and hens. It means fewer losses through death, fewer non-producers, fewer low-producers. It means a better profit on your investment—more money in your pocket.

CARBOLA
The Disinfecting White Paint

a snow-white paint combined with a germicide many times stronger than pure carbolic acid, is the standard of sanitation on thousands of the best kept farms, large and small, and at leading agricultural colleges and experiment stations.

Carbola helps prevent the start and spread of contagious diseases that affect herd or flock—glanders, contagious abortion, roup, white diarrhoea, canker, etc.—and kills lice, mites, fly eggs, etc., besides greatly increasing the light and general evidence of cleanliness. Carbola—which is mixed with water and ready for use in less than five minutes—gives you quickly a paint and disinfectant to apply in one operation instead of two, saving time, labor, and money. There is no straining or waiting, and no clogging of sprayer as there is with whitewash. No peeling or flaking. The smooth-flowing paint-and-disinfectant gives an even surface and puts wholesomeness into every crack and crevice to stay there. Carbola does not spoil if left standing—may be mixed today and used any time—another advantage.

Use Carbola Instead of Whitewash and Disinfectants

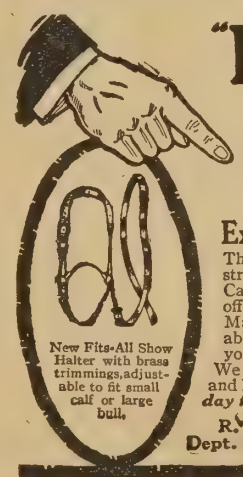
to paint sunshine and health into stables, poultry houses, hog pens, cellars, kennels, rabbit hutches, creameries, outbuildings, garages, etc. Apply with brush or sprayer to wood, stone, brick, cement or other surfaces or over whitewash. A gallon (a pound of the powder) covers 200 square feet. Use it also as a lice powder, for which it also is unexcelled.

Your hardware, paint, drug, or seed dealer has Carbola or can get it. If not, order direct—prompt shipment by parcel post or express. Satisfaction, or money back.

10 lbs. (10 gals.) $1.25 and postage. 20 lbs. (20 gals.) $2.50 delivered. 50 lbs. (50 gals.) $5.00 delivered.

Add 25% for Texas and Rocky Mountain States
Trial package and interesting booklet 30c postpaid

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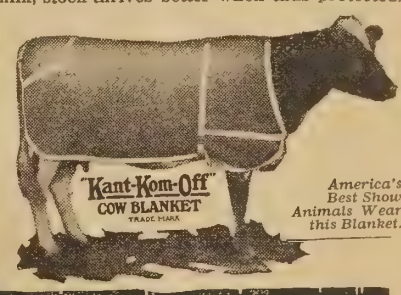
"Kant-Kom-Off" COW BLANKET

This is the original and only Kant-Kom-Off blanket endorsed and used by the most successful live stock breeders. It brings your animals into the show or sales ring in glossy condition. That means more prize ribbons and higher bids. Has no equal as a protection against flies. Milch cows give more milk, stock thrives better when thus protected. An investment that will pay dividends to you.

Exclusive Features

The only blanket with hip strap support of leg stay. Cannot lose off or be kicked off. Stays on day and night. Made of best and most durable material and will give you excellent satisfaction. We also manufacture stack and hay cock covers. ***Write today for circular and prices.***

R. LAACKE MFG. CO.
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America's Best Show Animals Wear this Blanket.

"In Every Respect"
says the Good Judge



You get more genuine chewing satisfaction from the Real Tobacco Chew than you ever got from the ordinary kind.

The good tobacco taste lasts so long—a small chew of this class of tobacco lasts much longer than a big chew of the old kind. That's why it costs less to use.

Any man who has used both kinds will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

World's Champion Ayrshires



GARCLAUGH MAY MISCHIEF, (27944)
World's Champion Ayrshire Cow
25,328 lbs. milk, 1,053 lbs. butter in 1 year
112,205 lbs. milk in exactly 9 years
9 calves in 9 years
6 daughters in the Advanced Registry



NETHERTON ELLA, (41125)
4th highest Junior 4-year-old
17,062 lbs. milk, 4.23% as Junior 4-year-old
12,257 lbs. milk, 4.15% as Senior 2-year-old
14,172 lbs. milk, 4.51% as Junior 5-year-old

Fully Accredited Tuberculosis Free

200 Head in Herd



BLOOMER'S QUEEN, (39119)
World's Champion Ayrshire 4-year-old
21,820 lbs. milk, 1003 lbs. butter as a 4-year-old
13,459 lbs. milk, 588 lbs. butter as a 3-year-old
12,426 lbs. milk, 544 lbs. butter as Junior 2-year-old



AUCHENBRAIN BROWN KATE IV, (27943)
Ex-champion Ayrshire Cow
23,022 lbs. milk, 1,080 lbs. butter in 1 year
Dam of 2 A. R. sires.

Four of our present Herd Sires are sons of the above cows.
20 cows in the herd average 17,074 lbs. milk, 803 lbs. butter.
100 Advanced Registry records average 13,246 lbs. milk, over 4% fat.
110 animals in the herd are descended from the peerless Ayrshire cow, Auchenbrain White Beauty

2nd, now 18 years old and due to calve soon.
30 head, possessing desirable combinations of breeding, rich in the blood of the world's champion cows, are offered at private sale.
Personal inspection invited. Write for full particulars.

PENSHURST FARM (Seven Miles from Philadelphia) **NARBERTH, PA.**

Hitch Your Wagon to a Star

Tie Your Herd to the Proven Success of

Ravinia Ayrshires

with a Ravinia Bull and Get the Uplift of this World's Greatest Production Ayrshire Herd.

You want more milk, bigger records, better profit. It's hard to get these things.

Even with the best feed and care you can only do it by putting at the head of your herd a sire in whom great production has been bred and fixed for generations.

This is just what has been done at Willowmoor and Ravinia.

This herd has made more Advanced Registry records and more world's records than any other. You can depend upon a bull from this herd to bring you more milk, bigger records, and better profit.

In order to give one herd a definite chance to get this production uplift, we are listing in this issue

Ravinia Thrush Successor

This is a good, straight, growthy calf; more white than red; an exceptionally good individual. In this son of the second highest record living Junior two-year-old, you have tremendous milk record inheritance backed by the show quality of Beuchan Peter Pan and Old Graitney Queen 4th, grand champion cow, Panama-Pacific Exposition.

Get your order in first by wire and send check with shipping instructions by first mail.

Martinsville, Ind. Preston, Kan. Axial, Colo.

GOSSARD BREEDING ESTATES

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.

ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont Del. Co., Penn. - Thomas W. Clark, Supt.

DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.



We Have For Sal

the well bred Ayrshire bull, Bargenoch "Drexe (18474) Imported. Bred by John Logan, Bargenoc Scotland. Born Feb. 2nd, 1919. Color white and r Sire, Bargenoch Magnificent (9579). Sire of Bar noch "Royal Champion" sold at Bargenoch sale, 191 for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch recor 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 l milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANI

Middlesex Meadows Ayrshires

NANCY WHITEHALL, World's Jr. 4-yr.-old Champion Ayrshire, has just completed another record of 22,075 lbs. milk, 858 lbs. butterfat. Her bull calf, *NANCY'S CHANCELLOR OF MIDDLESEX*, born September, 1919, by a show ring champion with great milk production behind him, is a winner in the show ring this year, and is now being used on all the Middlesex Meadows Farm heifers. He is offered for sale for immediate delivery. Guaranteed a breeder and right in every way. Price $2,000.

A. Henry Higginson

South Lincoln, Mass.

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

South Farm

250 Registered Ayrshires

Stock of all ages for sale.
Write for prices.

George A. Cross, Mgr., Willoughby, Ohio.

FOUR BULLS 15 to 18 Months Ol

They are in pink of condition and ready for imm diate service. They are from choice stock. Pric reasonable.

FRED TSCHUDY & SONS, Monroe, W

Pure-bred Ayrshire Cattle For Sal

Best of breeding. Calves sired by a Grandso of Brown Kate, record 1,080 lbs. butter in yea

Wm. Nisbet & Sons, Richland Center, W

Missouri Junior Contest

Missouri's first annual Junior Live Stock Judging Contest was held in Columbia, Missouri, on November the 12th and was a success in every way. Each Smith-Hughes School in the state was allowed one team in the contest and twenty-one of these schools



JOSEPH SMITH

were represented. About $800 was offered in prizes and a great deal of interest was manifested in the entire contest. The dairy judging contest was won by the team from Springfield. Joseph Smith of Springfield was the high individual on all dairy breeds winning the gold medal offered by the Missouri State Dairy Association.

The proficiency which these boys showed in judging live stock speaks well for the training given them by their instructors in vocational agriculture. The training in these contests is also excellent preparation for teams in future contests at the National Dairy Show. But it goes further than that. It brings these vocational schools of the state into closer touch with the agricultural college and sends them home with a bigger and a broader grasp of the real value of pure-bred live stock breeding.

Missouri. E. M. HARMON.

"Out of twenty-four hours of daily time you have to spin health, pleasure, money, content, respect, and the evolution of your immortal soul. Its right use, its most effective use, is a matter of the highest urgency and the most thrilling actuality. All depends on that."—ARNOLD BENNETT.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

AYRSHIRES



The THREE WISE MEN FOLLOWED A STAR

BE A WISE MAN

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

Addington's Champion
No. 19561
Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk
FOR SALE—Sons and Daughters from high milking dams.
Tuberculin Free Herd
BLACKBURN FARM Sewickly, Pa.

ELKHORN FARM
"THE AYRSHIRE HERD of the WEST"
Exceptional Offering of
BULL CALVES
Out of A. R. Daughters of Imp. Finlayston, Baron's Best of Bargenoch, Beuchan Peter Pan and Substantial of Highland.
Write for list.
J. Henry Meyer, Owner L. W. Wing, Mgr.
Watsonville, California

Lippitt Farm Ayrshires
For the first time we offer females for sale. They are producers with type.
Write for prices to Hope, R. I.

Ayrshire Stock
of all ages for sale. Satisfaction guaranteed
L. W. McCONNELL, Wellington, Ohio

JERSEYS

Raleigh Bulls For Sale
2 are ready for heavy service, others younger, all from Register of Merit cows with one exception. Also a 2-year-old heifer just fresh and some Register of Merit cows with records from 400 to 500 lbs. butterfat.
P. G. Warmington, Honey Creek, Wis.

Dunn and St. Croix Counties Jersey Breeders' Ass'n
have a few choice bulls and several pure-bred and grade cows and heifers for sale.
S. A. B. AUSMAN, Secy. Elk Mound, Wis.

Serviceable Bulls From R. M. Dams
We have a few very good individuals 6 to 13 months of Majesty and Raleigh breeding. A tuberculosis free herd. Every animal guaranteed right.
Your inquiry promptly answered.
E. E. HILL & SONS, Tomah, Wis.

JERSEYS—DUROCS
TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys
Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd
At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

JERSEY BULLS
Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avondale 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY. BLACK EARTH, WIS.

I Am Offering
my undefeated show bull, Rose's Elmhurst Jolly, No. 142213, and one of his sons of serviceable age for sale to the highest bidder.
Address all inquiries to
Hazeltine Lake Jersey Farm
H. C. Wagner, Excelsior, Minn.

JERSEYS

The Profit Points of the Profit Breed

Economy: Jerseys produce more butterfat from the same amount of feed.
Early Maturity: Jerseys milk sooner.
Longevity: Jerseys milk longer.
Persistency: Jerseys have shortest "dry" period.
Quality of product: Highest in butterfat. People are glad to pay more for Jersey milk, butter and cheese.
Health and Vigor: Jerseys are easily adapted to all climates and conditions.
Prepotency: Jerseys breed true to type.
Dairy Temperament: Jerseys are willing workers.

JERSEYS—the perfect dairy cows! Write today for "Jersey facts" and "The Key to Dairy Profits"—invaluable whether you are interested in one cow or a hundred. Sent free.

"The Profit Breed"

The American Jersey Cattle Club
324-E W. 23rd St. New York
An Institution for the Benefit of Every Jersey Owner



For Better Jerseys
We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.
We have a few young bulls for sale.
THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Cedar Crest Farms Offer Jersey Bull
A fine individual, Nation's Raleigh, (185639), dropped August 14th, 1919. His grandsire Imp. Hauteville Fairy Boy (90952) had twenty daughters in Register of Merit, his dam, Nation (256031) entered Register of Merit at seven years, producing 8,850.7 lbs. milk, 503.64 lbs. butterfat. Also a few first class Jersey cows.
J. K. Dering, Owner, Lake Villa, Ill.

Jersey Bull Calves and Heifers
Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

GOLDEN MAID'S PRINCE BLOOD
Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.
Address: J. Q. Emery & Son, Edgerton, Wis.

31,763.9 lbs. milk
1,786.8 lbs. fat
Made in one year by the two grandams of
Jersey Bull
No. 281 dropped March 7, 1920
Solid Color—Price $250.00
We offer bulls and bull calves ranging in price from $150 and up.
Write us for extended pedigree, description, etc.
HOOD FARMS, Inc.
Lowell - - Mass.

158 R. O. M. records made by
AYREDALE JERSEY COWS
Average 10,503.6 lbs. milk, 582.5 lbs. fat.
We offer bulls and bull calves from these cows, sired by
CARRY-ON of AYREDALE (164012). His dam and two grandams average 17,151.2 lbs. milk, 928.4 lbs. fat.
SOPHIE GILSLAND TORMENTOR (123584). Dam made as a 4-year-old 15,952 lbs. milk, 888 lbs. fat.
SOPHIE 19TH GRANDSON (165221). Dam made 15,578.7 lbs. milk, 809.5 lbs. fat.
The bulls we offer are close up to the World's Champion producer Sophie 19th of Hood Farm. Correspondence solicited. We would appreciate information about your herd, so as to price you bulls calculated to add size, type and increased production.
Write F. W. AYER
AYREDALE STOCK FARM, Bangor, Maine

Montpelier Jerseys
Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

POLLED JERSEYS
Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Third Guernsey Field Man Appointed

Professor W. W. Fitzpatrick, for the last three years Professor of Dairying at Clemson College, South Carolina, and head of the Dairy Division in charge of teaching, experimental work, and extension work, has now become a representative on the extension service of the American Guernsey Cattle Club. Professor Fitzpatrick will work in the states south of the Ohio and Potomac rivers and east of the Mississippi. This is the



W. W. FITZPATRICK

third appointment for field service by the American Guernsey Cattle Club. Professor E. L. Westover is the western representative with headquarters in Portland, Oregon, and Professor Karl B. Musser is the eastern representative with headquarters in Rochester, New York.

Professor Fitzpatrick was born and reared on a farm. He graduated from the University of Kentucky in 1913. In 1912 he was a member of the students' dairy cattle judging team at the National Dairy Show. For eighteen months after graduation he was assistant dairy agent for the Southern Railway Company, in charge of a dairy instruction car operated over eleven southern states. From November, 1914, until July, 1917, he was in charge of dairy extension work in South Carolina, for Clemson College and the United States Department of Agriculture. During this time the first Guernseys were purchased for breeders in South Carolina. The first Guernsey bull association was formed in 1916 and in the next year the State Guernsey Breeders' Association was established. He was made Professor of Dairying in July 1917, and continued this position until his resignation on November 1, 1920.—American Guernsey Cattle Club.

Fond du Lac County (Wis.) Third Guernsey Sale

Sixty-seven registered Guernseys brought a total of $17,500 at the Fond du Lac County Guernsey breeders' third semi-annual sale on November 18 at Fond du Lac, Wis.

D. C. Shephard of Minnesota paid the top price, $725, for a 4-year-old granddaughter of George Washington of Fairfield Farm, consigned by E. V. Maltby, Illinois.

Henry Hefter, Wisconsin, purchased the highest priced bull for $385. It was a 10-month-old grandson of Imp. Kenilworth Gold, consigned by B. F. Sheridan.

Love, Benjamin, and Pohlman did the selling with Sale Manager C. L. Hill in the box.

Following is a list of all animals selling for $300 or more and buyers:

F. J. Reuping, Wisconsin	
Clara Bell of Stratford	$340
Molly of Stratford	410
Henry Hefter, Wisconsin	
Betty Cream Pot	$305
Priscilla of the Maple Farm	300
Fancy of Maple Broeck	310
Excel of Fond du Lac	385
D. C. Shephard, Minnesota	
Marie of Maple Broeck	$325
Ingleside May Rose	725
H. Holterman, Wisconsin	
Duchess of Wilco Farms	$300
V. Leppla, Wisconsin	
Darling Rose of Wilco Farms	$310
W. A. Lawson, Wisconsin	
Katherine Delphia of Maple Farm	$310
A. C. Diedrich, Wisconsin	
Mar's Dolly of Maplebroeck	$540
Chas. Boyd, Wisconsin	
Dolly of Maplebroeck	$300
Lady of Homestead	300
Ed. Bartel, Wisconsin	
Holly of Stratford	$300
Esther Queen of Broad Ripple	305
E. M. Fitzmaurice, Wisconsin	
Victorine of Westlawn	$350
Harry Lewis, Wisconsin	
Dolly's Pretoria King of Ingleside	$325
A. L. King, Wisconsin	
Dolly Bloom's Little Alice of Ingleside	$335
Mathew Nelson, Wisconsin	
Ingleside Moyra May Rose	$405
Pretoria Golden Jessie of Ingleside	320
Dolly Bloom's May Rose of Midlothian	300
B. F. Sheridan, Wisconsin	
Pearl's Pauline of Sunnyside	$318
Robert Jamison, Wisconsin	
Dairymaid of Homestead	$400
Ed. Bornhoeft, Wisconsin	
Lette of Anna Dean Farm	$400

SWINE

DUROCS

Sired by Peerless Sensation
Great Orion Sensation
Brookdale Orion Sensation
—OUT OF—
King of Orions—Pathfinder
and Brookdale High Orion Dams
Ready for Service Boars
Spring Gilts—Bred Sows
Secretary Duroc Record Association will, at no expense to you, make selection if desired.
We Guarantee Satisfaction
Robin's Nest Farms
PEORIA, ILLINOIS

DUROC BOARS

of Pathfinder, Colonel, Orion Cherry King breeding. They are the big long kind that will grow out and make good. They are priced to sell.

Let us tell you about one on our guarantee to satisfy.

BERTLEY FARMS
Glenwood, Illinois Post Office Box 1

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

BROWN SWISS

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Brown Swiss Cattle
Stock For Sale
Correspondence Solicited
HULL BROS., Painesville, Ohio

Jesse C. Moore's Closing Out Sale

of

Registered Brown Swiss Cattle
Percheron Horses
and Poland China Hogs

to be held at his farm near

Morton, Illinois

Friday, Dec. 17, '20

All cattle are tuberculin tested and have qualified as a State and Federal Accredited Herd. Having sold my farms I have no choice but to sell them. Send for catalogue at once as this ad will not appear again. This is the largest herd of Brown Swiss in Tazewell Co., the Banner Swiss county of the state. Come to Peoria, where hourly service will take you near farm. Remember the date and plan to attend.



Buy a Brown Swiss Bull

His offspring are large, hardy, and long lived. They produce heavily and sell readily at good prices.
RA INMA N, Secretary Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg. Rochester, N. Y.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

GUERNSEYS

TIMONIUM
Pure-bred Live Stock Exchange

We offer for the account of Mr. T. G. Tinsley of Baltimore, Maryland, about forty (40) females of the best breeding and individuality. These animals were formerly the property of the Herdlea Farms Co., and represent the best of that famous collection.

Louis McL. Merryman - Cockeysville, Md.

We Offer For Sale
Simplicity's Winner of
Iowanola (54404)

Born August 25, 1918. A show bull. First prize in class and member 2nd prize get of sire, Waterloo Dairy Congress, 1920.
Sire, Cherub's Winner (34180). The sire of all the animals that won all of the cups and trophies awarded at the N. D. S., 1920.
Dam, Simplicity of Haddon (47876), A. R. 7607. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. A big, strong, typy cow, a very easy milker and a good breeder.
Write for further information. We have a few younger bulls.
Mountain Bros., Carrier 403, Des Moines, Ia.

Island Farm

Type and Proven Producing Ability
are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.
Write us your wants.
A Federal Accredited Herd.
Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.
For Sale by
RADISSON FARM, ANOKA, MINN.

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.
SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

Shorewood Farm Offers

Sons of Ladysmith's Cherub, three times National grand champion. One of his first daughters to finish made 591 lbs. fat in Class G. Others equally as promising now on test.
These bull calves are from 3 months to serviceable age out of dams with records up to 777 lbs. fat. They combine size, and type with persistent production.
SHOREWOOD FARM, Crystal Bay, Minn.

Guernsey Bulls

May Rose on both sides. Dams in A.R. or on test. Quality higher than the Price. Send for list.
E. S. Person, - Minot, N. D.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Our last 9 official records average over 510 lbs. fat, including all ages. Our herd sire has 8 A. R. daughters, including one with 572 lbs. fat in Class GG. His three nearest dams average 822 lbs. fat. Send for pedigrees and prices on young bulls with this backing.
Folly Farm, Box 587, Libertyville, Ill.

GERAR GUERNSEYS

We are offering an exceptionally fine lot of young bulls, some old enough for service.

SEND for our sale list.

Headed by a son of Langwater Royal 4th; he and his two full brothers are the only bulls with three sisters that are class leaders, out of a 525-lb. two-year-old Langwater Royal 2d daughter.

Louis McL. and E. Gittings Merryman
Cockeysville - - Maryland

Hillswold Farm
Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr



Economy in Production ← GUERNSEYS → Quality of Products



This is the time to buy Guernseys. The market price on all dairy cattle is lower than it has been for a number of years, and the higher prices will inevitably return as soon as conditions become normal. One can enter a business at the lowest cost during a period of depression and there is no better time to buy Guernseys than now. Write today for our free information.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H 9, Peterboro, N. H.

Daughters of Anton's King Confidence (43517)



These heifers are not for sale but one glance at them tells you that ANTON'S KING CONFIDENCE sires the kind you want in your herd. Since we value his famales too highly to set a price on them your only opportunity is to get one of his sons for your next herd sire. We have several growthy, vigorous and well put up young fellows ranging from 9 to 15 months of age for sale at the present time. We appreciate your inquiry. Send for our circulars.

Hoard's Dairyman Farm

Fort Atkinson - - Wisconsin

May Rose Bull For Sale

Exceptionally fine individual, 10 months old.

Sire: Superb of Edgemoor (49590)—Dam: Imp. Cypress of Sarnia (53729). Sire out of Imp. Donnington Goldie 5th (3rd place Class E) with 796 lbs. of fat. Also the 1st prize junior A. R. cow N. D. S. 1920. His grandsire is Imp. Itchen May King, Grand Champion N. D. S. 1920.

His dam has 423 lbs. of fat Class C and is due to freshen January 13th. She is a fine individual, will be re-entered on test and capable of 700 lbs. of fat.

Corium Farm, F. J. Ruebing, Owner. Fond du Lac, Wis.

Let Waukesha County Supply You With Guernseys

Our members can supply you with any number of Guernseys you desire, either pure-breds or grades, males or females. Prices reasonable for excellent quality offered.

Come to Waukesha and secure your Herd Sire. We have a fine lot of animals well bred and of good individuality. Prices right. For prices and further information write

WAUKESHA COUNTY GUERNSEY BREEDERS ASSOCIATION,
F. E. FOX, Secretary, - - WAUKESHA, WISCONSIN

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Dispersal Sale

Entire Herd
Registered Guernseys

13 head of stock: 9 females, 2 sires and 2 young bulls

The stock has the combined Glenwood, Yeksa and May King breeding. 3 A. R. cows.

Sale at Marshfield, Wis.
December 18th, 1920

Send for catalogue

E. J. & Carrie Kautsky, Owners, Colby, Wis.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Butterfield Farm

Guernseys a Specialty

Write or come and see for your own benefit what we have to offer for sale: Two bulls, 8 and 13 months old, comprising productive breeding, type, and good development.

Priced to sell.

H. R. Andrew and E. Nelson, Livingston, Grant Co., Wis.

Appletree Point Farms



DEANIE'S MAROSE

Pencoyd's Secret Marose, sire of above calf, won first prize, senior and grand championships, at the New England Fair, Connecticut and New York State Fairs. His "get" (4-month-old calves) was first at The Eastern States Exposition and fourth at the National Dairy Show with thirteen "gets" shown. His heifer calf, Appletree Point's Dolly Dimple, was Junior Champion female at New England Fair, first prize calf at the Eastern States Exposition and was Junior and Grand Champion female at Connecticut State Fair. His bull calf was unbeaten in all eastern shows and won at Waterloo and National Dairy Show. Write for prices on May Rose calves that combine type and production.

U. A. Woodbury, II, Burlington, Vt.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

Guernsey Pedigrees Tabulated

Typewritten, $1.00 each, satisfaction guaranteed.

Private herd books written up, and entire management taken of Guernsey sales. Write for information.

F. E. FOX

Waukesha, Wisconsin

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS

James H. Murphy, Mgr. Delavan, Wisconsin

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

BIRCHWOOD GUERNSEYS

Young bulls for sale sired by Sunkistson No. 45371 who has thirteen dams in the first four generations that have A. R. records that average 582 lbs. fat, and out of officiallly tested dams.

M. L. Welles, Rosendale, Wis.

Falcon's Grenadier (65834)

Dropped Feb. 12, 1920

Sire: *Falcon's Proud Warrior* (*47559*). Pronounced by many experts as "the greatest son of Langwater Warrior".

Dam: *Stockbridge Olive* (*30883*), from a noted family of high producers. Olive has an A. R. record of 11,503.2 lbs. milk, 617.36 lbs. fat and dropped two calves during the year.

Grenadier is a high class, well grown bull; priced very conservatively at $600 f. o. b. Litchfield.

Write about him today.

Falcon's Flight Farms, Litchfield, Conn.

Meadowland Guernseys

Sixty-five females, priced conservatively, are offered from which to make selections.

MEADOWLAND FARM, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Broad Acres Guernseys

Bulls and bull calves. By same sire as Rose of Broad Acres No. 67124 A. R. 11,377.2 milk, 643.67 fat. Class E. Write for prices and pedigree.

SPRINGFIELD CENTER, NEW YORK.

Harbor Hill Guernseys

Masher's Galore 8572 A. R.

Increased the Average Production Credit of 12 A. R. daughters out of A. R. dams by 181 lbs. We offer his double grandson out of another daughter also making a better record than her dam.

C. H. Hechler, Superintendent
Box 30, Roslyn New York

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection

OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Stop! Look! Listen!

And you'll not be missin'
Your choice of 25 females
(We're telling no tales),
Of popular May Rose lines.
Fine type, and great dairy signs.
Also 2 males, one 18 months,—
The other still bunts.
$250 takes the older,
For the rest, send for folder.

Forestdale Farm, Richard D. De Forest, Amsterdam, N. Y.

Here's Your Opportunity!

Good Grade Cows in car lots. Pure-bred Males, Females with type and good producing ability. Investigate.

Fox River Valley Guernsey Breeders' Asssociation
Harry Leppla, Sec'y, Appleton, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

New York Butter Market

NEW YORK CITY, November 30:—The butter market has been decidedly sick for several days but appears to be convalescing as there was a firm feeling for fancy butter today. There is a marked nervousness prevailing, however, and it is difficult to predict whether or not the firmness will continue for any length of time. The principal reason for the nervous condition that prevails is the arrival of large shipments of Danish butter. It is feared that shipments from that country will continue to grow larger, now that its contract with England is filled, and that a demoralized condition of this market may result. On last week Friday, 5,084 casks, 1,292 boxes, and 6 tubs of Danish butter were unloaded. On Saturday, a further shipment of 999 casks was received, while today a boat has docked carrying about 8,000 casks of that butter. Unless some condition arises that will prevent further arrivals of Danish butter, there will be a decided slump in the market in the immediate future.

Some New Zealand butter has arrived in this market and it is of excellent quality. However, it remains unsold because of the conditions that prevail. There is a strong possibility that large shipments of that butter may be forthcoming soon, in which event this market will be over-crowded with foreign butter. There have been rumors that New Zealand butter contains preservatives other than salt. As the butter that has been received in this country passed inspection at San Francisco, it is very probable that the rumor is idle. Reports from England state that the Co-operative Wholesale Society of that country is promoting a company composed of the dairy farmers of New Zealand, the object of which is to market New Zealand butter and cheese in England through the agency of the Society, thereby saving vast sums of money in handling charges. In the event of the perfection of such an organization, very little New Zealand butter would be shipped to this country. However, the Food Control still purchases the butter used in England and until it relinquishes its control the marketing organization would be of no avail.

The butter market received a serious set-back on Friday of last week. For several days it had been weakening because of slack demand, but on Friday when over 600,000 pounds of Danish butter were unloaded it became very weak and the quotation on top grades declined 5c. On Saturday, there was a further decline of 3c. Since that day, there has been no change in quotations and the market is fairly firm on top grades but it is very weak on all other grades. Danish butter apparently has succeeded in making friends as the prejudice which formerly existed against it seems to have disappeared and it is selling readily. However, its selling price is largely responsible for that as it is of high quality and is being offered at prices of 54@56c. Argentine butter is in poor favor in the market and is not moving readily. The same is true of Canadian butter. Domestic undergrades are a drug and are accumulating in such quantities. that the matter is becoming serious. Established quotations at the close today were: Extras (92 score), 57c; higher scoring than extras (93 score or higher), 57½@58c; firsts (90-91 score), 50@56c; firsts (88-89 score), 46@49c; and seconds (83-87 score), 37@44c. W. B. LIVERANCE.

Mary had a little lamb
Its fleece was white as snow;
Mary's sheep club taught her how
To make the critter grow.

Public Sale

of 35 Head of Registered and High Grade Holstein Cows, Heifers and Bull

at Spruce Lawn Farm, 2 miles north of

Springfield, Ohio

on O. E. Traction

Tuesday, December 14

Two granddaughters of Rag Apple Korndyke 8th. Some have given 70 pounds milk per day. Clark County is the cheapest place in Ohio to buy Holstein cattle.

J. T. Kirkpatrick, R. 3, Springfield, O.



King Segis + King Colantha Clothilde

Show bull, 10 months, backed by large yearly records. Dam, South Dakota Champion 3-year-old. Sire's dam has milk record of 743 lbs. for 7 days. Chart pedigree upon request. Price $500. Write

Gage & Kurtz, Groton, South Dakota.

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ollie, sire of world's youngest 1,000-lb. 2-year-old, good individuals from tested dams, some with yearly records. These calves grow into profitable sires. Write

WALCOWIS FARMS

Lake Geneva, Wisconsin

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

Bulls for Sale

Ages one to fourteen months, sired by Sir College Colantha No. 136107, sire of 15 A. R. O. daughters, son of College Belle Wayne (35.38 lbs. butter, 824.3 lbs. milk in 7 days; 145.68 lbs. butter, 3,338.1 lbs. milk in 30 days). Dams A. R. O. daughters of Sir Korndyke Hengerveld De Kol 26, No. 71082, sire of 32 A. R. O. daughters, guaranteed in every way. Write

State School & Home, Redfield, S. D.

Wayside Lawn Farms

offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

King Segis Johanna Ormsby

heads our herd of

Registered Holstein-Friesians

Write for description of young stock for Sale.

EZRA BLUMER, MONROE, WISCONSIN

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke.

Wm. N. Osborn, Wanatah, Ind.

We Offer Choice Sons of



SIR ECHO SYLVIA JOHANNA
A ⅞ brother to the $106,000 bull. His six nearest dams average over 35 lbs. butter and 700 lbs. milk.

Extra fine individuals from A. R. O. dams who are daughters of a grandson of Pietertje Maid Ormsby, the dam of Sir Pietertje Ormsby Mercedes. All are good herd prospects.

Priced very low for quick sale.

Chestnut Hill Farms

Herd Under Federal Supervision

G. A. Burdick, Manager Gibsonia, Pennsylvania

Remember—

When You Buy A Bull From Hollyhock Farms

You Have Our Entire Organization Back of You. You have the benefit of our advertising and of our test force. The chances are far better than even that the dam of the bull you buy will later increase her record and the bull increase in value. Consider those things when you want a bull and write us about a son of S. P. O. M. 41st or of King Pontiac Artis Sadie Vale, the 34-lb. son of K. K. S. V. that formerly headed our herd.

We have a few good ones for sale—1 or 2 of serviceable age.

Gustave Pabst's Hollyhock Farms

Fred J. Southcott, Manager Dousman, Wisconsin

I Will Take Your Note

For Better Than a 30-lb. Bull

I will ship anywhere, express paid, for $550, 6 months time allowed or a discount for cash.

HIS SIRE is King Gerben Maid Lyons, a 33-lb. son of Rag Apple Korndyke Boon, herd sire at Friesland Farm, whose tested daughters include a number of 20-lb. 2-year-olds. "King's" dam, a 33-lb. 3-year-old with a 31-lb. daughter, is now going at a 1000-lb. clip on year test.

HIS DAM, Jessie Fobes Maud Burke, a 28.86-lb. 4-year-old granddaughter of Colantha Johanna Lad, is one of the very best producers in our herd. Her dam is by Canary Paul Fobes Homestead and is from a 27-lb. daughter of that great sire, Homestead Jr. De Kol.

Write or Wire

Otto T. Schauble Pilger, Nebraska

Millar Farm offers:—

Five Months Old Bull Calf

Light in color, straight and right. Will weigh about five hundred or better.

Sire — Finderne Netherland Korndyke, the 31-lb. son of the former World's Champion Junior two-year-old. Dam — Colantha Hengerveld De Kol 5th. Record: 2 years, 5 months, 17.3 lbs.; 4 years, 7 months, 20.24 lbs.; 6 years, 2,172 lbs.

Priced at $300.00 and guaranteed to please.

WM. MILLAR, JR., Menomonie, Wis.

$100 to $200

buys a good bull. Sired by very typy, 26-lb. bull and from tested dams up to 25.46 lbs. butter in seven days.

Tuberculin Tested

H. W. Crawford, R. 5, Campbellsport, Wis.

We Have For Sale

A dandy 2-year-old Holstein SHOW Bull. Nice black and white marked. Very good size for his age. Very active and very easy to handle. This bull is of the famous Pabst breeding. We guarantee him free from disease. Price $150, F. O. B. Weyauwega, with papers.

Peterson & Miller, Weyauwega, Wis.

G'D Son of 37th

— 10 Months Old

Sire, one of 37th's best sons whose dam's 2 year's and sire's dam's yearly records average 1,013 lbs. butter, 21,117 lbs. milk. Dam, 19.89-lb. Jr. 2 daughter of a 31-lb. bull. Ideal individual, ⅞ white. Pictures and pedigrees.

ADAMS FARM,

E. B. Adams & Sons, Racine, Wis.

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

t any and all times. Come if you want a erd sire or foundation females. Come if you on't want to buy. We believe you will be in-rested in Sir Ormsby Beauty Pontiac Segis nd his get and in our herd of producing fe-ales, many of them now doing very well on -day and year test.

ou will be welcome and remember if you ould buy from us, we stand back of every nimal sold.

inehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

oth grandams of this young bull made above .235 lbs. butter in 1 yr. 6 dams made above 0 lbs. butter in 7 days. 5 dams above 33 lbs. utter in 7 days. 7 nearest dams average 0.19 lbs. butter in 7 days. 15 nearest dams verage 27.44 lbs. butter in 7 days. He is a di-ect descendant of Miss Korndyke Maid Orms-y, Bess Pietertje Ormsby Mercedes, Spring rook Bess Burke, Colantha 4th's Johanna nd Pietertje Maid Ormsby. Sons of this bull at of A. R. O. dams up to 30 lbs. for sale.

. A. Schroeder & Son, West Bend, Wis.

Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 s. as a heifer; second dam 24.79 lbs.; third am 28.88 lbs. Bull mostly white, very good dividual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record .75 lbs.; second dam 18.75 lbs.; third dam .45 lbs. Half white. A show bull. Price 00.

For complete information and pedigree write

. M. Anderson, Whitewater, Wis.

Fairhurst Herd

On the Accredited List

'e offer young bulls, fine individuals and well own. Sired by 33-lb. bull and from dams ith records up to 30 lbs. Write for pedigree id price.

ITTLE BROS., Holland, Ohio.

Whitehurst Farm

Offers for sale Holstein bull one year old. Sire has four A. R. O. daughters and is a son of Canary Homestead Oak De Kol. Dam has 18,000 lbs. of milk in 365 days at four years of age. Grandam has 19,600 at five years and great grandam has 19,800 at five years old. Grandam has two A. R. O. daughters, one with 16,000 at 2 years and the other with 18,000 at four years. Dam has one daughter with 12,000 at two years. These records were all made under ordinary dairy conditions.

A. F. Randolph, Proprietor

Canton Illinois

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

Wooddell Farm

Offers a Few Serviceable Bulls

Sons of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.

Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

WILSONDALE FARMS

Young Holstein Bulls Backed by Yearly and Seven-Day Records

Herd under Federal Supervision

We have several young bulls up to 17 months of age, sired by Maplecrest Sir De Kol, whose dam made 31.07 lbs. of butter and is a daughter of Daisy Grace De Kol, former World record Junior 4-year-old in the yearly production division.

These bulls are all well grown, and are of show type individuality. They are from dams with records up to 31.70 lbs. of butter in seven days, and 640 lbs. of milk.

Included in the above are a few young calves from 2 to 4 months of age from untested dams, which I will price very reasonable for immediate acceptance.

Prices and full description, with photographs will be furnished upon application.

These calves should be seen to be appreciated.

C. A. WILSON, Prop., Decatur, Illinois

FOR SALE

20 to 25 head of Registered Holstein cows from 4 to 8 years old, mostly close up springers, in calf to Sir Rag Apple Korndyke Hengerveld, a 39.283-lb. grandson of Pontiac Korndyke (whose two-year-old heifers are making mighty good records). Several of these cows have good A. R. O. records. We are selling to make room for our heifers that we expect to test this winter.

Patterson & Dickinson, R. R. 6, Bellefontaine, Ohio



A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

25 Holstein Cows For Sale

exchange. 23 are high grades, 2 are registered. Also my herd bull, a grandson of K. S. P. A., the $50,000 l. This bull is from a 27-lb. cow. Most of the cows are bred to him. All are young cows, well marked, vy producers. Price, $200 per head if entire herd is purchased.

'll take 2 good teams of draft mares or mules as part payment or might consider a good used auto-bile as partial payment.

G. A. HIGGINBOTHAM, Rossville, Kas.

Will County Holstein Breeders' Sale

New Lenox, Ill., December 14

Commencing at 11 a. m.

70 HEAD *of A. R. O. Cows and Sons and Daughters of A. R. O. Cows*

A few of the offerings are:

A heifer, whose dam, Lady Beets De Kol Twist (164967), made 31.31 lbs. in 7 days and 122.446 lbs. in 30 days and whose sire, Pabst Champion Abner, heads the herd of Fred Knudson, also a daughter of Sir Tehee Cornucopia (sire of 31 A. R. O. daughters and 7 sons).

Two sons of Sir Johanna Delia (192528), who heads the herd of Frank Sprague & Son.

The Phelps consignment is headed by Wakefield King Hendrikjen (193464), a 24-lb. grandson of King Segis Pontiac (150 A. R. O. daughters, 79 proven sons).

Wilbur A. Francis is consigning a daughter of a 28-lb. cow, also a daughter whose 7 nearest dams average 26.11 lbs. Herd sire on Francis Farm, Sir Susie Dale Segis (157609), a son of the noted Johanna McKinley Segis, out of Johanna De Kol Van Beers.

Sale will be held at the Wilbur A. Francis farm, near Joliet and New Lenox. Free transportation to the farm.

The Rock Island and Santa Fe and Alton Railroads pass through Joliet.

Wilbur A. Francis, Sale Mgr., New Lenox, Ill.

Haeger and Mack, Auctioneers S. T. Wood in the Box

Of Interest to You—

The Wayne County Holstein Sale

Dec. 13, Orrville, Ohio

To be held at the farm of Reece & Tschantz, 4 miles north of the city

22 A. R. O. Cows 21 Daughters of A. R. O. Cows
8 Good Bulls from A. R. O. Dams

Two Complete Dispersions Included

1. Reece & Tschantz, Marshallville, will sell entire herd of 35 head, practically all of which have A. R. O. records or out of A. R. O. cows.

2. N. D. Bixler, Orrville, will sell herd of 11 head, all with A. R. O. records or out of A. R. O. dams.

The rest of the number is made up of hand picked cattle from nine other good Wayne County herds.

Among the cows are:

	Butter	Milk
Snowdrop of Gerster—and her daughter	28.29	596.8
Daisy Mink Korndyke, 4-yr.-old	25.23	682.3
Aron Clothilde Model Fayne	23.00	571.8
De Kol Sprig Champion, 2-yr.-old	17.70	413.9
Hester Pietertje Champion Ormsby 3d, 2-year-old	17.26	380.2
Lady Pauline of Sunny Side, 2-yr.-old	19.74	381.0
Gerster Segis Korndyke	21.79	562.4
Anita Nikola Hengerveld, out of a 24.41-lb. cow, 472.7 milk	21.91	437.0
Paha Waste Patty	21.19	484.09
Netherland Orphan Queen	21.00	532.2
Biddie Queen Pontiac	20.35	519.0
Pietertje Hengerveld Nudine	21.88	524.1
Andra Barondale Beauty and her three daughters	19.55	507.5
Queen Hartog De Kol Lyons, 1 yr. 11 mo.	15.53	320.0

This is probably one of the very best lot of cattle that has ever been offered at public auction. They are deserving of all that can be said about them.

They come from one of the best Holstein centers in Ohio. For eight or ten years the breeders around Orrville have been using three company bulls and sons of these bulls until today that section is chuck full of good cattle.

All of them have been T. B. tested and will be sold on the regular 60—90-day retest guarantee.

Your catalog is ready

Ohio Holstein Breeders' Association

H. C. Barker, Field Secretary Tiffin, Ohio

Just What You've Wanted—

A Son of

Sir Bess Ormsby Fobes



SIR BESS ORMSBY FOBES—$30,000 SON OF S. P. O. M. 37TH AND WISCONSIN FOBES—NOW HEADING THE GUSTAVE PABST HERD

We Have Several of His Good Sons For Sale

They range in age from calves up to yearlings. Every one of them is from an A. R. O. dam that either has a year record or is now on semi-official test.

These are show type bulls too: — No sloping rumps or shallow bodies. They're the kind you want to head your herd.

We guarantee every animal sold to be exactly as represented. Their health is guaranteed, too.

Write for complete information today

Linden Lawn Stock Farm, R. 1, Jefferson, Wisconsin

B. W. Rabenhorst, Proprietor

Waukesha County Holsteins

Send for information relative to:—

10 carloads of pure-bred bulls of serviceable age and younger at prices ranging from $100 up. Will ship satisfaction.

18 carloads of grade Holstein cows fresh and springing at prices ranging from $140 to $250.

Several herds of choice pure-breds at farmers' prices. If you want foundation stock of any kind, write for information or come and see Waukesha County. (32,000 head of tuberculin tested cattle.)

Waukesha County Holstein-Friesian Breeders' Association

Office 254 Broadway - Waukesha, Wis.

A Son of King Bess

from an A. R. O. granddaughter of Colantha Johanna Champion will suit you for a herd sire

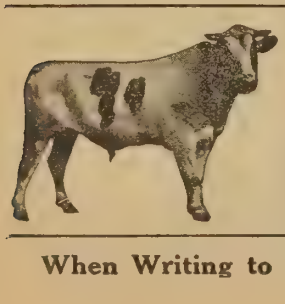
Here's one from Johanna Rutena 3d, a 23-lb. junior 3-year-old that is one of the best long time prospects we have. Her dam, a daughter of Champion, has 30.37 lbs. as a 4-year-old and is now going at better than a 1,000-lb. rate on year test.

King Bess is from a 33-lb., 1,235-lb. daughter of S. P. O. M., so that in the 5 generation pedigree of this calf, every dam has over 22 lbs., 10 have over 30 lbs. in 7 days, 7 have year records, 4 above 1,200 lbs. and 5 over 1,000 lbs.

The calf is a dandy, straight, four-fifths white and well grown. He was born March 8.

Write or wire today about him.

W. J. GILLETT & SONS - - - Rosendale, Wis.



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

When Writing to Advertisers, Mention Hoard's Dairyman

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average age over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Bull for Sale

Having been authorized to sell this bull at a very nominal price, I will give you a brief outline of his breeding.

SIRE—Sir Ormsby Banostine Champion. "The only son of Duchess Skylark Ormsby, the only 1,500-lb. cow." This is enough regarding the sire's breeding.

DAM—A 34-lb. cow with two A. R. O. daughters, and she out of a 29-lb. dam and she out of an A. R. O. cow.

This cow and her dam are individuals, and the dam of the bull is a sister to one of the present day sensational sires in regard to individuality and production of his offspring. Every cow in pedigree is an A. R. O. animal.

This wonderful son of this large producer is offered only for the fact that the herd is small and he is a bull that needs an opportunity.

Guaranteed for 60 days and right in every way. No abortion or T. B. in herd. He is dark, three years old, and weighs 2,400 pounds. Will sell outright or trade for stock of equal breeding.

Address Box 485

Care HOARD'S DAIRYMAN

Cows and Heifers

A Few Good Bulls

Because I am overstocked, I am offering some very good registered females for sale. They either have A. R. O. records or are from A. R. O. dams.

Can also offer some excellent young bulls by a 33-lb. sire and from A. R. O. dams with records up to 28 lbs.

Every animal sold is guaranteed to be as represented.

Write or come and see for yourself.

J. D. McDonald West Salem, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Old Deerfield Herd

Headed by King Piebe Korndyke Johanna. Bulls from one to six months of age for sale. Prices $50 to $75.

CARL FOLL, Deerfield, Wisconsin

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

A Son of the 37th that is "CARRYING ON"



SIR BESS ORMSBY MERCEDES (184275)

He has:

A 14.7 senior yearling daughter,
An 18.4 junior two-year-old daughter,
First Prize two-year-old daughter at Northern Wisconsin State Fair. More coming.

Choice bulls for sale

SILVER SPRING FARM

W. S. Comings, Prop., Eau Claire, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,

A. F. Gafke, Secretary, Jefferson, Wis.



Mr. Dairyman—

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
D. W. Norris, Owner, E. Loehndorf, Herdsman

HOLSTEIN CATTLE

Mr. Datus Clark, Member Farm & Market Council, Albany, N. Y., writes:

"Twelve years ago my Holstein start cost $1,100. The thinking farmer can decide as to the financial end. I now have eighty head and have sold as many dollars, worth of cattle as I have bought and have made much more in milk than I would have with scrub or grade cattle."

Send for free booklets

The Holstein-Friesian Association of America
101 American Building **Brattleboro, Vermont**

Your Choice of 50 Young Bulls

They Are Out of Yearly Record Dams And Sired By—

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his granddams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow—the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms
Winterthur - - - Delaware

We Have For Sale —

A Son of King Pietertje Ormsby Piebe That Will Suit You

This youngster is a splendid individual, fit to show anywhere.

His dam has a very good 7-day and yearly record with every chance of increasing both records later.

His sire, K. P. O. P., as you know, is one of the greatest long distance bred sires in the country.

Better get in touch with us now because this fellow will sell readily.

Herd under federal supervision.

Hargrove & Arnold **Norwalk, Iowa**

Ormsby Bulls—

The 30-lb.—1000-lb. Kind



If you want one of that kind—a real individual—write for our sale catalog.

We have left just a few sons of Sir Ormsby Skylark, the sire of Duchess Skylark Ormsby, from cows with 7-day records up to 40 lbs. and that have made or are making year records.

Have also a few splendid grandsons of S. P. O. M. from the same kind of dams.

MAXWELL FARMS - - - - - HOLLYWOOD, CALIFORNIA
Address all correspondence to Garden Court Apts.

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

HOME FARM HOLSTEIN FRIESIANS

Home Farm Korndyke Sir Clyde

a light colored son of Woodcrest Sir Clyde we offer, just a year old. His dam is a 16-lb. 2-year-old daughter of K. K. S. V. 24th. She will have over 525 lbs. butter for the year; second dam, an 18-lb. 2-year-old daughter of Sir Sadie Cornucopia. He is given a federal certificate of health. Write today.

W. B. Barney & Sons - - - Chapin, Iowa

VERY HIGHLY BRED YOUNG
Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Rhoda Echo Prince

Eleven months old. A choice son of Radium, the wonder bull, son of May Echo Verbella dam of May Echo Sylvia. His dam, a wonderful producing daughter of Pietje Korndyke Lad, the sire of more 25-lb. three-year-olds than any bulls living. Federally tested and crated ready to ship. Price $250.

J. C. Eyre, Chantry, Ontario, Canada.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month,** Dec. 7-8, 1920; Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

365-Day Milk Production

Still Another One

The May bull has been sold, but we offer another grandson of Sir Pietertje Ormsby Mercedes out of a granddaughter of Colantha Johanna Lad, born July 30, 1920. A handsome calf and well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within the reach of the farmer or small breeder.

Cerro Gordo Farms, Mason City Iowa

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.

BLUEBELL FARM, RICEVILLE, IOWA.

EVENTUALLY, WHY NOT NOW—

Buy A Son of a 30-lb. Cow

Born October 2, 1919

A fine individual, straight and well built, about ⅞ white. Sire, son of Colantha Johanna Champion, 57 A. R. O. daughters, and Duchess De Kol Korndyke, 21.65 lbs. at 9½ yrs., having a world champion daughter. Dam, a 30.48-lb. daughter of Johan Hengerveld Lad, 65 A. R. O. daughters, full sister to a twice 30-lb. cow. Have two more of similar breeding. Pedigrees and prices on request.

Ontonagon Co. Farm - Ontonagon, Mich.

T. G. Roberts, Herdsman. J. S. Netteraurer, Sec.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

M. & P.

Healthy Holsteins

A year ago we sold a bull calf to a Virginia breeder. The dam of that calf has just finished a year's record of 17,600 lbs. of milk, 800 lbs. of butter. Was he pleased? His letter states "The bull is growing nicely, and I am glad his dam made so good a year's record."

We supply this kind at moderate prices. Write

Markham & Puffer

Avon - New York

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,

Box 253. Cortland, N. Y.

Yearling Bull

Ready For Service

Here is a show bull whose dam has a 3-year-old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.

The first check of $150.00 takes him.

G. G. Burlingame, Cazenovia, N. Y.

A Rare Opportunity

to buy a Federal Accredited Herd.

15 — A. R. O. cows in calf to a double 30-lb. son of King Segis Pontiac Alcartra, freshen fall and early winter. 4 heifers soon ready to breed.

1 — 20-month-old son of King Lyons, out of Julia Lyons Pontiac, ¾ white, seven nearest dams average 30.10, alone worth $1,000. Not related to any of the females.

These 20 head for $5,000, delivered free east of the Mississippi.

HENRY J. KARPINSKI, R. 7, Oswego, N. Y.

A Grandson of

King of the Pontiacs

For $100 — Eight Weeks Old

Bellwood Pontiac Ormsby Veeman

Sire—King Pontiac Pondyke No. 180976, a son of, and from a 32-lb. granddaughter of King of the Pontiacs.

Dam—Bellwood Ormsby Crissie No. 399607. A. R. O. 16.32 butter in seven days at 3 years. She is a daughter of a 25-lb. cow and Ormsby Pontiac Hengerveld 141144, a son of King Korndyke Hengerveld Ormsby and K. P. Kate, a 25-lb. daughter of King of the Pontiacs.

Good individual guaranteed to please. About ¾ white.

Herd under Federal Supervision

Bellwood Farm

C. W. Bray, R. D. 1, Bridgeport, Pennsylvania

Photo and pedigree on request.

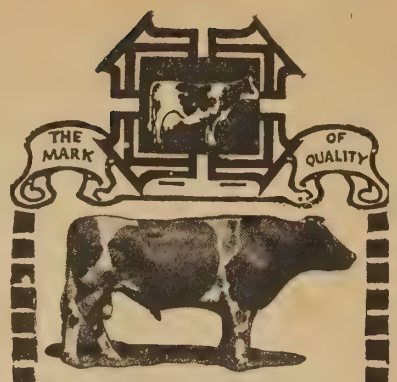
Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions — 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.



King Oak Segis Pontiac

Our Herd Sire

A Herd Cannot be Better Than Its Sire

You can put green goggles on a cow and feed her sawdust. It's cheaper, of course, but will the cow give milk?

It's the same way with a herd sire. A poor one will probably sire just as many cattle, but what will they amount too?

If you intend to get anywhere raising Holsteins, you must use the best sire that money can buy.

We had this in mind when we bought King Oak Segis Pontiac and his full brother, Oak Dale Segis Pontiac. But there was one other reason why we bought these two great bulls. They carried the blood lines we wanted.

There are five strains of Holsteins that look pretty good to us and quite a number of our fellow breeders. They are so good in fact that we have decided to affect a combination of all of them.

Our foundation dams were selected with this in mind and now with the help of our wonderful Herd Sire, King Oak Segis Pontiac, assisted by his full brother, Oak Dale Segis Pontiac, we are well under way with our great work.

We have a few foundation cows and young sires for sale which might interest you. Write us or, better still, come and see our herd and let us tell you more about the great work we are doing.

OAK DALE FARMS

INCORPORATED

BREEDERS of HOLSTEIN FRIESIANS

Austin Minnesota

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

Valley View Offers a Real Bargain

An eleven-month-old son of Colonel Abbekerk Pontiac Segis, the highest record son of Count. His dam has a seven-day record of 35 lbs. of butter and a yearly record, 1,228 lbs. of butter from over 28,000 lbs. of milk.

His dam is an A. R. O. daughter of that great 36-lb. bull, Dutchland Sir Rag Apple Abbekerk.

This calf is a fine individual, light in color and the first check for $150.00 gets him.

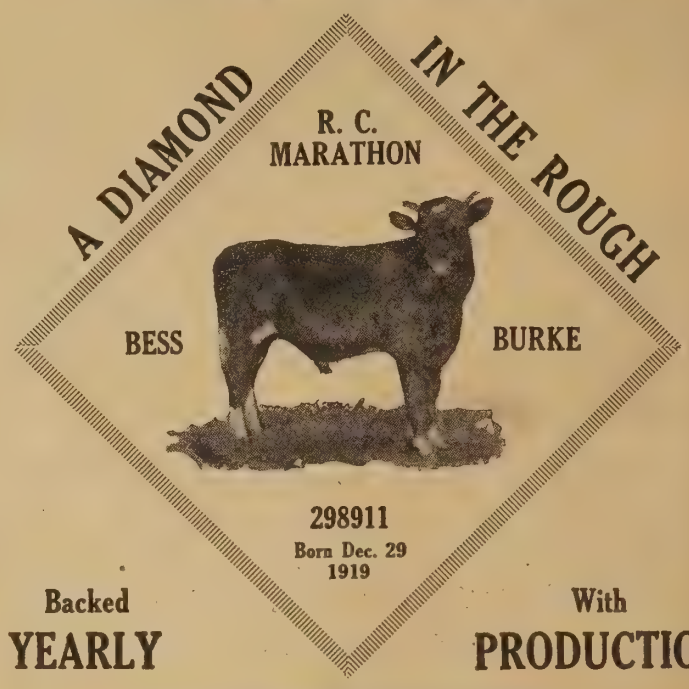
C. E. Overstrud, Northfield, Minn.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

GEO. E. STEVENSON, Scranton, Penna.

FOR SALE



Backed With

YEARLY PRODUCTION

His Sire MARATHON BESS BURKE

His four nearest dams average the highest in the WORLD MILK and BUTTER COMBINED. By a son of QUEEN PIEBE MERCEDES, *WORLD'S RECORD 4-YR.-OLD*, and out of a 42—1,164-lb. daughter of SPRING BROOK BESS BURKE, "The Greatest Mother of the Breed."

His Dam BURKE PIEBE ORMSBY

At 3 yrs., 20.55 butter from 442.4 milk. SOON TO FINISH A YEAR RECORD. Sired by a son of a 35—1,136-lb. daughter and out of a 24—797-lb. daughter of SIR P. O. M.

A Double Cross—Sir P. O. M. and Springbrook Bess Burke—Blood

Five of the dams appearing on his chart have semi-official records which average: Butter, 365 days, 1,116.29; milk, 24,611.14.

Priced to Sell ***Write for a Pedigree***

RAMSEY COUNTY HOME

J. E. McMahon, Superintendent North St. Paul, Minnesota

King Segis Pontiac Count

"The Marvel of All Sires"

Is not affected in the least by this period of business adjustment, he is going right along breaking world's records, and building up the future of the greatest industry on earth. He has done so many marvelous things that sometimes we overlook the magnitude of his achievements.

We Find Now That

Twenty-Five Per Cent of His Daughters are Over the 1,000-Lb. Mark

There never was a time more advantageous to the buyer, than the present.

The future of our business is assured.

Would it not be a good stroke of business to get some of this record-breaking blood into your herd?

We have a splendid line of bulls, heifers and young cows, and will be glad to give you full information on request.

ARDEN FARMS

J. M. Hackney, Owner

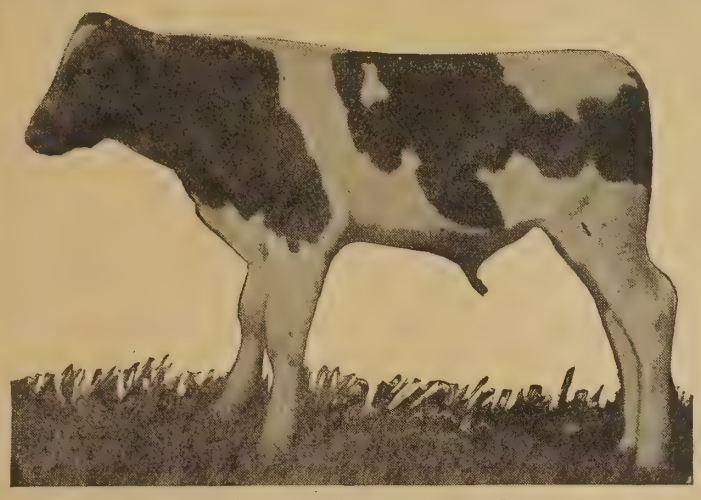
602 Merchants Bank Building, St. Paul, Minnesota

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

This Son of a 31-lb. Junior Three-Year-Old For Sale



KING ORMSBY ACMEANNA (313160), Born June 17, 1920

His two nearest dams average: Butter, 33.26 lbs. and milk, 663.30 lbs. in 7 days. He is a splendid individual, well grown and of a rugged type. He carries a splendid combination of breeding and will make some small breeder a real herd sire.

HIS DAM

LADY ACMEANNA ORMSBY DE KOL, is an outstanding individual. As a junior three-year-old she made 31.14 lbs. butter from 502.3 lbs. milk. Her sire is SIR MUTUAL ORMSBY DE KOL, a son of Duchess Ormsby Butter King and the 31-lb. cow, Maid Mutual De Kol. This cow is the dam of KING PONTIAC CHAMPION, the famous PABST FARM herd sire.

HIS SIRE

SIR COLLEGE CORNUCOPIA 2D, has a splendid list of A. R. O. daughters. His dam is College Belle Wayne, the famous South Dakota College producer. In 7 days she made 35.38 lbs. butter and 824.3 lbs. milk. She has a daughter with 989 lbs. butter for the year.

Price $1500.00

Guaranteed sound in every way. Will hold until six months of age and ship subject to 60- to 90-day retest

E. C. Schroeder Farms - Moorhead, Minnesota

Federal Accredited Herd

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Lake Shore Holsteins

10 pure-bred heifer calves, 6 months to one ar, $150 to $200 this month. Good type, good eking.

J. Oppliger, Forest Lake, Minn.

Have you talked with your neighbors about bscribing for Hoard's Dairyman? Why not it now? Make up as large a club of subscribers as you can and send them in.

Female Holsteins for Sale

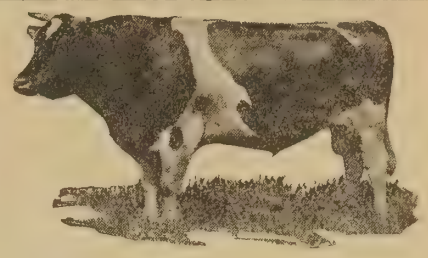
Pure-bred cows and heifers of choice breeding. Bred to our herd bull, "Sir Ormsby Segis Korndyke". Also fifty high grade cows and heifers, fresh and springers.

ISLAND PARK STOCK FARM,
Hanscom and Anderson, Props.,
R. F. D. 1. St. Cloud, Minnesota.

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

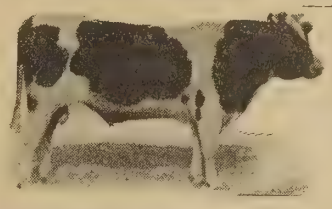
Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Just About Ready for Service — $500



is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.

(Federal Accredited Herd)

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Pine Row Holsteins

Bull calves from A. R. O. dams, sire a 31.42-lb. grandson of Sir Pietertje Ormsby Mercedes.

E. A. HEIFORT, - STILLWATER, MINN.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.

(*A Federal Accredited Herd*)

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records.

Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones.

GRAHAMHOLM FARMS,
H. R. Searles, Mgr. Rochester, Minn.

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

A Son of

King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired," will put quality into your herd. If you want one of his good sons from a high record cow or heifer it will pay you to send for our bull circular today.

Flecks Farms, Faribault, Minn.

RICHLY BRED

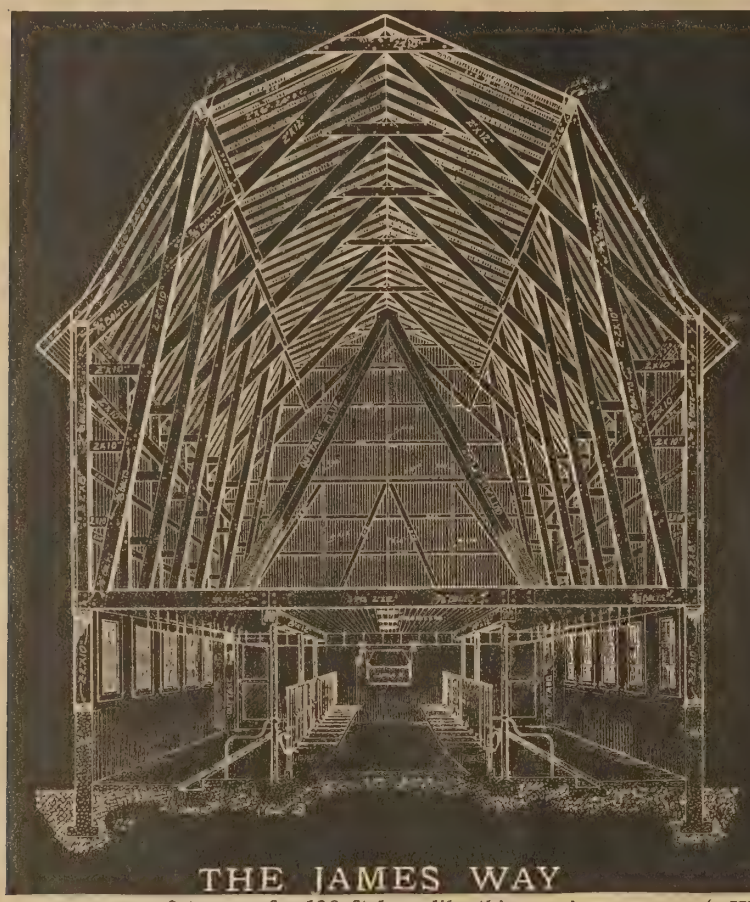
HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes,** a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby,** a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.

Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

You Build But Once—Be Sure You Plan It Right



THE JAMES WAY

9 trusses for 100-ft. barn like this requires 706 board feet. At $60 per M—$381.24.

Which is the better way?



TYPICAL TIMBER FRAME CONSTRUCTION

9 trusses like this requires 1266 board feet at $80 per M—$911.52. A difference of $530.29.

Mistakes on paper are easily rectified and buildings on paper are readily moved. Once built, changes can be made only at great expense.

It pays to plan a remodeling job or a new dairy barn, *on paper, before* the foundation is dug, *before* the carpenters come, *before* actual work is begun.

The dairy barn is your factory, your workshop, in use almost daily throughout the year.

If it is not built right, if it is not correctly planned, it may lose you money every day.

Wrong location of posts; inconvenient arrangement of feed bins and feed rooms, incorrect arrangement of carrier tracking or stalls or pens, or the wrong designing of the hay loft, may compel you to take more steps, do more work and pay out more money for help each day during the life of the barn.

Save Work Daily — Save Building Costs



A chain is no stronger than its weakest link. A timber is no stronger than its tenon.

A silo or a door in the wrong place, poor arrangement of equipment, ventilating intakes or outtakes improperly installed, mistakes in size in stall floors, gutters, passages and alleys—even these smaller errors may be a source of daily expense and annoyance.

A barn correctly designed and built right in every detail is a constant money maker because it is a constant money saver.

If rightly planned, cow comfort and cow cleanliness may be assured; plenty of light, abundant ventilation and easy disposal of litter will be provided; floor space will be used to best advantage; and all the chores made easy. In many a case, careful planning has cut barn work squarely in half.

What a barn will cost depends in no small degree on the care with which it is planned in advance.

It is no uncommon thing to see a man with the "Know how" build a barn at 20% to 30% less cost than another, although the barn accommodates the same number of cows.

And the man with the "Know how" gets a handsomer building, more convenient and better.

How to Get the Low Bid

Regardless of who designs the barn it is well to submit the final plans to several contractors, getting bids from each.

By having as many sets of blue prints and specifications as there are contractors figuring on the barn, you can safely let the contract to the lowest bidder.

You get the low price, and the successful bidder binds himself to give you the same workmanship, construction and materials as those who bid higher. You hold him to the blue prints and specifications.

National Clearing House of the Best Barn Ideas

To help our customers and others get the best barns possible, we, years ago, established the Jamesway Barn Plan Service under direct supervision of Mr. W. D. James, known as the leading dairy barn authority in the U. S.

Associated with him in this department is an architect and engineer of unusual experience in ventilation, reinforced concrete, steel work and structural design.

Another architect with many years of experience in planning, building and remodelling of dairy barns, a large force of skilled barn designers and draftsmen, and barn experts in charge of divisions of the field force, complete the office staff.

In the field, are more than sixty men who practically every day are consulted by farmers on remodeling and other barn problems, drawing preliminary plans and reporting new ideas and unusual conditions.

For years, Mr. James and these associates, have studied dairy barns—how to best remodel; construction, lighting, ventilation, drainage; how barns should be arranged for labor-saving. Every year they plan or help to plan thousands of dairy barns.

The experience and help of these men is yours for the asking. No charge is made excepting when complete plans and specifications are ordered.

Barn Book Free

Much of their experience and the best of their ideas are contained in a 320-page book which will be sent postpaid on request.

In addition to 28 pages of blue prints, 62 pages of pictures of barns in all sections of the country and many pages on barn planning, ventilation, remodeling, etc., this book tells all about James inventions that save so much of labor, prevent spread of disease, promote better cow health, make simpler the care of calves and sick cows, protect against dangerous bulls, and increase milk yields.

Write us now. Tell us what barn problems are bothering you; perhaps we can help solve them.

If you want the book, ask for Jamesway Book No. 23.

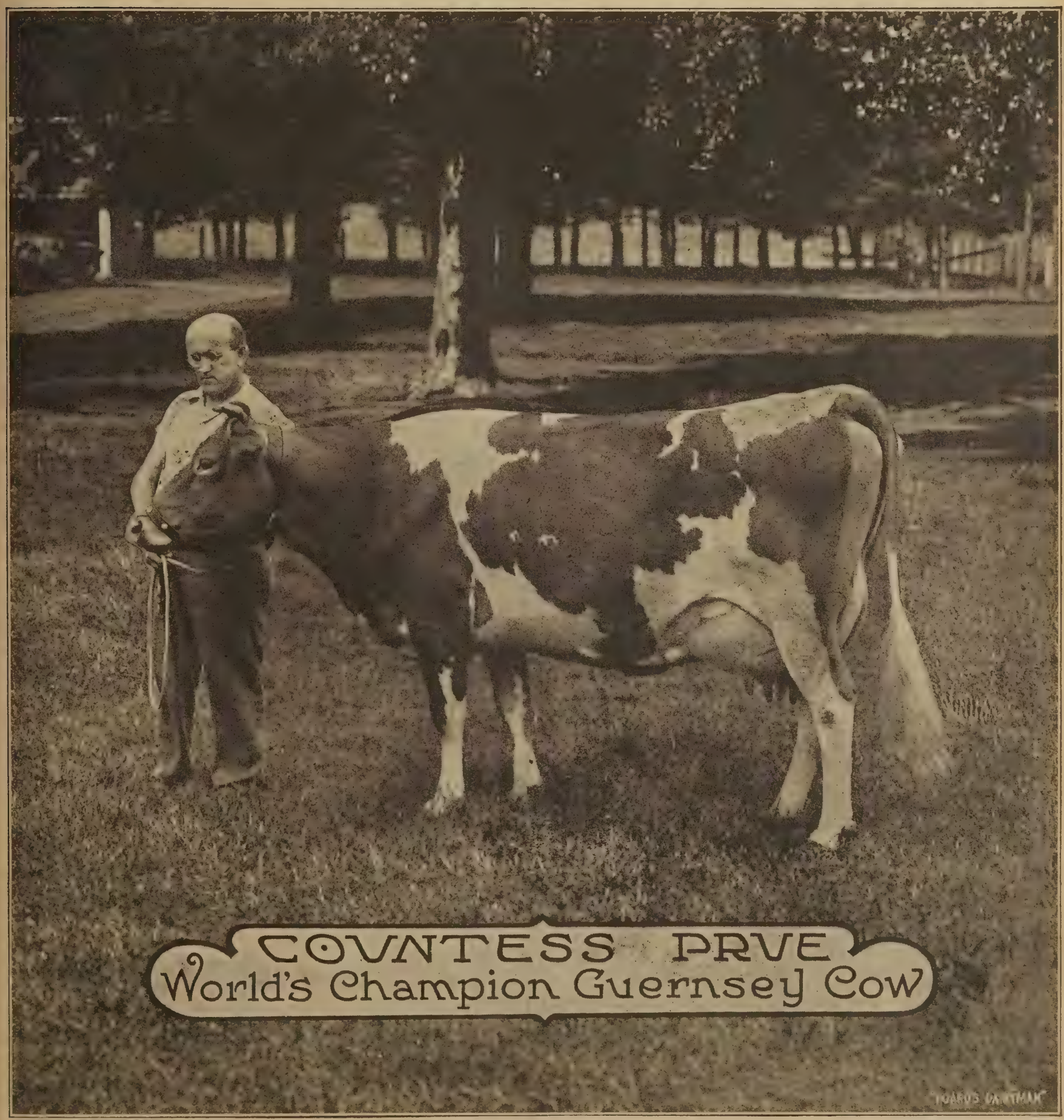
James Mfg. Co., Ft. Atkinson, Wisconsin. Elmira, New York

James way

Labor Saving Equipment for the Dairy Barn

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Photograph by Strohmeyer

Fort Atkinson, Wisconsin Volume LX, No. 22 December 17, 1920

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
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Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

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Entered at Fort Atkinson, Wis., as second class matter.

November Condensery Prices

Prices paid producers for 3.5% milk delivered at factories during November are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms operating approximately 46% of the total factories in the United States. This is a smaller percentage than usual as 54 firms reported no price determined, 21 were temporarily closed, 16 were handling milk for patrons' account, and 2 were out of business. For the firms reporting the prices paid for 100 lbs. of 3.5% milk were as follows for the past three months:

Geographic section	Sept.	Oct.	November Case and bulk goods	November Bulk goods only
New England	$3.89	$3.96	$2.92	$3.91
Middle Atlnatic	3.64	3.49	3.70	3.41
South Atlantic	3.20	3.06	3.30	2.74
E. North Central	3.14	2.70	2.43	2.97
W. North Central	2.69	2.70	2.47	2.87
Western (North)	2.84	2.55	2.03	2.99
Western (South)	2.83	2.56	2.43	3.27
United States	3.31	2.88	2.61	3.17

Wholesale Prices of Condensed and Evaporated Milk

Geographic sections	Sweetened condensed, case of 14-oz. cans		Unsweetened evaporated, case of 16-oz. cans	
	Sept.	Oct.	Sept.	Oct.
New England	$10.29	$9.64	$6.26	$5.76
Middle Atlantic	9.46	9.04	6.28	5.82
South Atlantic	10.54	9.87	6.39	5.85
E. North Central	10.30	9.79	6.22	5.53
W. North Central	10.13	9.67	6.24	5.78
South Central	10.17	9.69	6.37	5.89
Western (North)	10.33	9.67	6.14	5.76
Western (South)	10.38	9.60	6.21	5.65
United States	10.10	9.58	6.26	5.89

This little pig went to market,
A nice, fat project pig;
His seven brothers stayed at home,
Same age, not half as big.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

Two Cows

Bess was a lovable sort of a cow,
Nice to be with and nice to know.
Raised—well, I cannot tell when or how,
That is the way that some cows go.
But when it comes to the ledger's toll,
Records were brief and her output small,
Never ran true to a handsome goal,
Just gave her milk and that was all.

Queen was a sleek and a well-bred girl,
Bright was her eye and her manners pert.
Went to her feed with a swish and swirl,
Just a bit proud and her conduct curt.
But, as to milk and the grade of cream!
Ah! Now I'm telling a different tale.
Pedigree told, it's no idle dream!
Those who have blood, well, they never fail!

That's how it is all the way through life,
Whether with cows or with human kind,
Pedigree tells in the storm and strife,
Class in the breed and the health—and the mind.
Rather one cow with a clean blood strain,
Rather one child that is great of birth,
Than all of the stock that the thoughtless train,
Here on this troublesome, workaday earth.

Some folks are too tarnal good to remain on earth, but I would not go so far as to say that this applies to dairy farmers who love and are kind to the herd and who believe in putting machinery under a shed when it rains.

The New Version

Sing a song of bottles,
On the back step, there,
Of the city dwelling,
That's his honest heir.
Mr. City Feller,
And his jug of cream,
And his quart of glory
From some dairy stream.

Far from cows and pastures,
Far from clover sweet,
Far from barns and silos,
And a pot-cheese treat.
It's his way of knowing,
What a herd can do.
It's his way of tasting
All the relish, too.

Ah, at five, each morning,
Hear the milkman come.
With his rattle, clatter,
And it's going some.
But for mine, the jingle
Of the cow-bells, sweet,
And the smell of clover
Growing at my feet.

Human Nature Always

The dairyman asks: "Have the cows pedigree?"

The farm manager asks: "Have we competent help?"

The helper asks: "How much do I get a month?"

The wife asks: "Can I have a new piano?"

The daughter asks: "Can we have a new car to take us to the movies pa?"

The son asks: "Do I get a herd of my own, dad?"

And the herd asks: "Do I get the right rations and the right care in the right barn?"

All of these questions are easily answered.

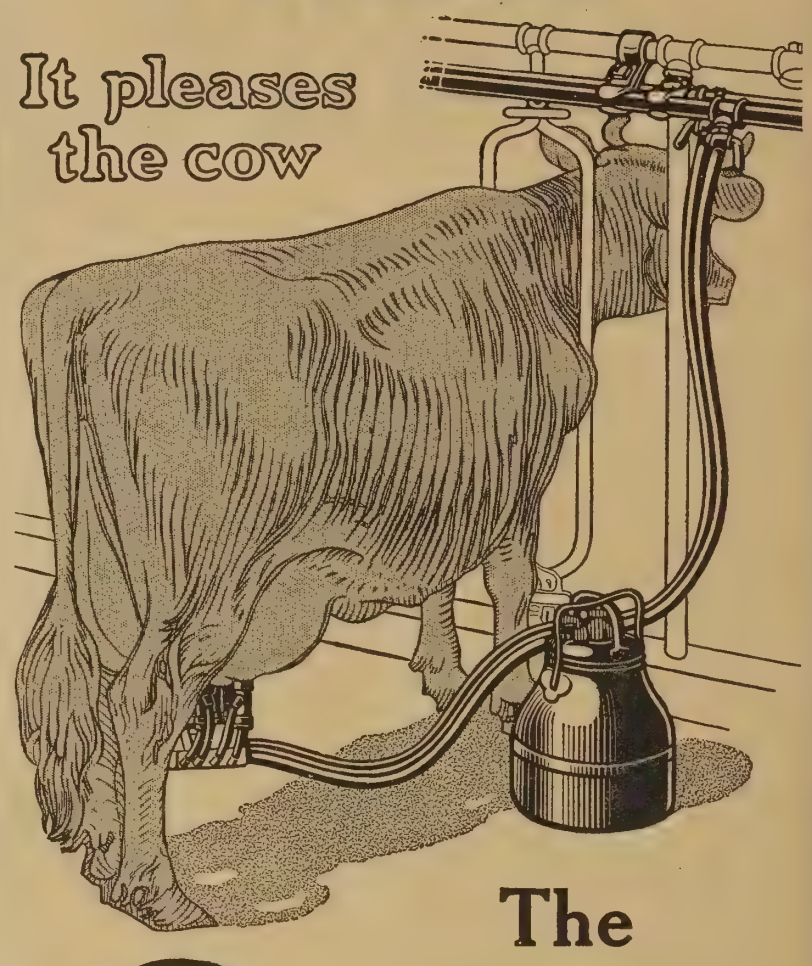
Dairy Jim's Philosophy

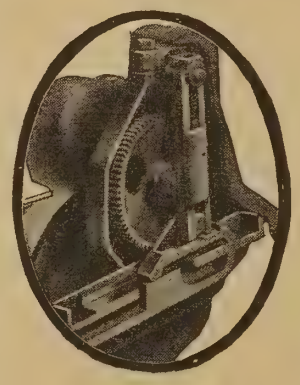
Once farmers thought more about lightning rods than anything else. Now they would rather have a cream separator and pedigreed stock. Superstition is a dead issue and the lightning rod agent has joined the great majority.

And still, and yet, lightning has its way of striking. While building that new silo, it's just as well to remember that standing under a tree in an electric storm is mighty bad business.

Some dairy farmers think so much about county fair prizes and blue ribbons, that they forget there's a market waiting for milk.

The De Laval Milker





The Master Control

(The Master Control is not shown in the part of the Milker installation pictured above. It is built into the Pulso-Pump, which is placed in any convenient part of the barn)

The Master control part of the De Laval Pulso-Pump is a fixed, gear-driven slide valve, furnishing the impulse to every Udder Pulsator in the barn in a positive mechanical way, so that all milking units in the barn work in unison all the time. The pulsations produced by the Master Control are transmitted through the small, independent pipe to all Udder Pulsators.

These pulsations are scientifically correct in duration and frequency, and the pulsation speed cannot be changed by the operator. Improper and unnecessary adjustments are therefore impossible.

The De Laval Milker is a distinctly different type of machine, both as to design and operation, positive and uniform in action from day to day; and faster, more economical and more reliable than any other method of milking. The sanitary features are of special importance and will be much appreciated by dairymen in their efforts to produce milk having the highest market value. An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway, New York
29 East Madison Street, Chicago
61 Beale Street, San Francisco

MUST PIGS ROOT? EVVARD SAYS NO

WM. E. DRIPS, IOWA COLLEGE OF AGRICULTURE

"LOVE of money is the root of all evil", even in the case of the hog. He must root because his master won't spend the money to get him some protein for his ration, and in his anxiety to get the protein he fails to get that essential quality of all hogs, weight.

Here's the solution, according to John M. Evvard, swine feeding expert with the Iowa Experiment Station, given out at the annual Swine Feeders' Day on Armistice Day at Ames: "Give the hog some tankage or buttermilk or some other high protein feed along with the corn and he will not care what is under the sod but will rest quietly in the lot while the feed is being converted into fat on his body."

But this wasn't all Mr. Evvard told at his meeting. He had numerous pens of pigs, getting various kinds of commercial feeds, several pens of pure-bred pigs which were being tested as to their type, some pigs sired by a wild boar, the original sire of the swinedom. These and many other features kept together the crowd of three hundred farmers, breeders, county agents, and farm journal correspondents, following the jovial Mr. Evvard around the station despite the wintry weather that prevailed.

In the matter of rooting it is simple and here is the test he put the pigs to. One lot of pigs was given a free choice ration of corn, salt, and blue grass pasture while another lot resembling the first in weight and general characteristics at the start of the test were given corn, salt, and blue grass pasture plus tankage fed the free choice method.

At the end of 90 days the lot which received only the corn and pasture weighed 109 lbs. They made a daily gain of .67 lbs., ate a daily ration of 2.8 lbs., and required 419 lbs. of feed to produce 100 lbs. of weight. They were wild and restless and turned up the lot from one end to the other and were still at it the day I saw them.

The lot receiving the tankage along with the rest of the ration weighed 171 lbs. They had made a daily gain of 1.38 lbs., consumed 4.8 lbs. of feed daily, and required only 347 lbs. to produce 100 lbs. of weight. They were tame, contented, and had not turned up any of their lot. They were twice as good gainers as their fellow workers in the adjoining lot.

"When a hog or pig roots, look to Evvard as a great believer in tankage; it is expensive but the difference in the gain during the period of the test made it worth our while."

There are many kinds of tankage. The kind Mr. Evvard likes is the better grade, that which tests 60 per cent protein, and his tests show that it certainly pays to give the pigs the best. The cheaper grades contain too much fiber and material which is to be had at a cheaper price from other sources. Perhaps many farmers are wondering over the question of where to get the tankage, as did several in attendance who raised the question. They wanted to know if it was safe to buy tankage from any rendering plant, especially the ones close to home. Mr. Evvard was quick in warning them of the disease which could be put in a herd by feeding tankage that had not been properly sterilized. A little more care and perhaps a little more cost will repay the average feeder in the long run.

Another feature of the day was when the wild boar was trotted out before the spectators. This animal, from which all modern breeds have sprung, raced into the pen. He is a shaggy individual, carrying most of his weight on his fore quarters, has a long nose, large tusks, poor legs, a peaked back, and slanting hind quarters. Although he is several years of age he weighs about 150 lbs. As a curiosity he is a first class attraction but as a type of a hog he is a failure.

Next door in another pen the visitors were asked to look at the result of crossing this animal with a pure-bred Poland-China sow. Here were five pigs, small and shy. They had all their father's features and none of their mother's. The slightest trace of the Poland-China breeding was absent, all in one cross.

These pigs, although six months old, weighed less than a hundred pounds, had been poor gainers although they had been fed a good ration. They received, by the self-feeding method, corn, tankage, corn germ meal, alfalfa meal, and salt, a ration which with our modern hogs would have made a gain of 175 to 200 lbs. in the same time. The best record these pigs ever made was one-half pound a day and that was only for a short time. The lesson here was how quickly the modern hog which had been brought to his present standard through many generations of breeding can be turned back to the original state by a few mistakes. Farmers must keep their breeding stock up if they intend to have good hogs to feed. One poor boar which carries the traits of his wild ancestor will impart sloping backs and long noses to his offspring in a very short time. It takes a long time to breed them up but they go back rapidly.

Another interesting test carried on at the station was with the different types of hogs within a pure-bred line. Pigs representing all three types, large, medium, and small, were shown. All pigs were farrowed in April, all had the same rations and same surroundings and the results were interesting.

Lot one, which contained the pigs from the small type, were not extra good in general appearance. They had snuffles and were light in weight. Mr. Evvard said they had been causing a lot of trouble, due to their susceptibility in getting all the ailments going. They looked despondent.

Lot two, containing the pigs from the medium type, were in good shape, weighing around 200 lbs., were thrifty and fine looking market pigs. They had done well and made a good showing up to date but again Mr. Evvard said they had reached their limit when it came to speed in growth.

Lot three were good healthy pigs not so heavy as lot two, but they had made the best daily gain during the latter period of the test. They had been putting in their time getting legs, bones, and frame to support what was to come. They also were in good spirit and showed up well. It was between these two lots that the ideal pig came. All had a good growing ration used by the station for pigs on dry lot feed. While only a beginning, this test will be continued for other years and the results noted.

It certainly is an interesting sight to see the rows of yellow hog houses stretched out on the flat. Each house has five roomers and each group has its own pasture. Water is provided by a pipe line and all hogs are watered twice daily. In the winter they get cold water for Mr. Evvard says warm water for hogs is not necessary and if the feeder wants to get a good record he wants to get the feed inside where the pigs do not have to go out in the cold wind to eat. Being an advocate of self-feeders, all pigs were

(Continued on page 956)



ROOT HOGS! OR DIE?

"There is an old, old saying that the love of money is the root of all evil. Here is a rooting scene that would not have been presented if a little money had been invested in proper supplemental feeds, feeds such as alfalfa, clover, skimmilk, meat meal tankage, mineral mixtures, and such like. Do you see the "rooters" above? There are no "rooters" below. Why? The unhappy pigs of rooting fame weighed a little over 100 pounds when about 5½ months wise, whereas the pigs of the lower pastoral scene weighed around 175 pounds—all the same kind and quality of pigs, litter mates, pen mates, that grew up together until that fateful day three months before this picture was snapped when the "would be rooters" had the meat meal tankage left out of their ration of self-fed corn and salt on bluegrass pasture. The "bouncers", fat and saucy, below, got their nips of tankage daily, free-choice style, and gained twice as much per day as their ill-conditioned, ill-disposed brothers and sisters. When pigs root, look to their feed, as more and better feed may stop them. Tankage stopped the rooting in this experiment; and say, the tractor that pulls three bottoms hasn't anything on these Ames "Bluegrass Rooters" when it comes to depth. All you could see of some of these rooting pigs this summer was their rumps."—JOHN M. EVVARD.



THE MUTT AND JEFF OF SWINEDOM

Mutt's lot fell to bluegrass, corn grain self-fed, and salt self-fed. Mutt is a spotted pig and is thankful for his feed, but wishes he was given more. Jeff's lot fell to the same bluegrass, same corn grain, same salt, but part of a bag of tankage was thrown in for good luck. If you'll compare Mutt and Jeff you'll see that tankage is better than horseshoe luck. They are of about the same age, 5½ months, and had they been fed the same they'd have now looked about equally well, excepting, of course, the difference in spots. Mutt and his fellows average 109 pounds, Jeff and his fellows 171 pounds, or 62 pounds more. Mutt is discontented—Jeff is happy. Mutt is a rooter—Jeff is not. Mutt is a racer and built for speed—Jeff is not, and doesn't care to. Jeff is looking for something and always lands in trouble—Mutt has what he wants and appreciates his meat meal tankage because its balancing proteins, minerals, and vitamines have put pep into his domestic frame. Lest we forget to point the moral: There are countless extremes, Mutts and Jeffs, on our American farms, some recognized, most unrecognized, as such."—JOHN M. EVVARD.



THE KIND OF TANKAGE FED

"The pig on the left received in addition to his self-fed shelled corn and salt ration, a good grade of 60% protein tankage, but his mate on the right received a lower grade of tankage that happened to carry about two-thirds as much protein. This does not mean that 40 or 50% tankages are not good; they are if made right. But it does mean that one had best buy well-made tankage, the sort that does not carry too much fibrous or other undesirable material."—JOHN M. EVVARD.



DID YOU SAY SQUIRRELS?

"Shall we breed them up or down? No! These are not squirrels, but real pigs. They are the result of the cross of the Wild Boar on a Poland-China sow. These three pigs might have been pretty good Poland-Chinas had we used a Poland boar, but we didn't. We wanted to see how fast and how far back, speaking in parables, we could fly in one generation, this by making a wild boar top cross. They, like their daddy, are built for speed and endurance, and need a "rat proof fence". They are light weights, not a one of them, after six months of Iowa farm life, can boast of a hundred pounds avoirdupois. And yet they have been self-fed, free-choice style, on corn, tankage, corn germ meal, alfalfa meal, and salt from farrow. They should be twice as heavy as they now are. But they won't gain; they are too busy thinking about the fine time they'd have if they were roaming the wild woods. How easy it is to turn down our blood lines, to injure our foundation stock. In the spermatozoa (the male generative units) of scrub boars their lies much of retrogression and objectionable reversion. Grading up a swine herd is likely to be slow and somewhat difficult business, but certainly worth the effort. One can move backward much more rapidly and easily than forward, hence when we reach a high plane of effectiveness we must be careful to diligently and persistently 'watch our step lest we slip and harbor regrets."—JOHN M. EVVARD.

AYRSHIRES ON THEIR NATIVE HEATH

THOMAS FORSYTHE HUNT, Dean of Agriculture, University of California

ASIDE from grass, the prominent crops of Southwestern Scotland are oats, potatoes, and turnips (Swedes). Comparatively little wheat and barley is grown. Less than one acre in five is counted arable. One acre in three of the arable land is in oats. The next largest crop is turnips which comprises an area about one-third that of oats.

Ayrshire is noteworthy because it is one of the few places where timothy is raised as a pure crop—to use a British expression. Timothy hay is well liked. Mr. Cochran, manager of the West of Scotland Agricultural College Farm, said that while a mixture of clover and rye grass, which is the common rotation grass, when well cured might make a better food, in their climate it was likely to be damaged and hence was generally less desirable. The perennial habit of timothy is highly prized. My informant said that he had known timothy meadows to last for twenty years. It is perhaps not altogether without significance as to soil conditions that one of the arguments made for attempting to breed the horns off Blackface sheep is, that the horns exhaust the soil of phosphoric acid.

While there is a considerable trade in seed potatoes about Dumfries for shipping south into England, the potatoes are generally the early varieties planted in February and lifted in June and July at a time which gives them a favorable market. This special potato area lies in a narrow strip near the seashore north and south of Ayr. The potatoes are auctioned off in the field. The successful bidder must dig them and turn the cleared land over to the farmer by a given date. The land is then plowed and immediately put into a second crop. This may be a grain crop, as barley, but I am told it is more frequently rape which is fed off with sheep. The rape crop is highly prized by the sheep raiser, but I was informed in Eastern Scotland that farmers were finding, in some cases, the rape crop more valuable to plow down as a cover crop than as feed for sheep. I found no difficulty in getting that statement disputed, but the fact that it was put forward by responsible parties is a matter of interest. Years ago, Patterson of the Maryland Station reported that there was reason to believe the rape plant, being a gross feeder, would make phosphorus available for other crops.

The country south of Glasgow, until one comes within five miles of Kilmarnock, is rather unprepossessing, as is apt to be the case in coal regions. For a distance of ten or fifteen miles immediately adjacent to the second largest city in Great Britain, there is practically not a plowed field in sight. Many Ayrshires were seen. The large preponderance of young stock in this area attracted my attention. As we proceeded southward we came into a "bonnie" country. Pastures and meadows interspersed with ripening fields of oats (September 16), tasteful farm steadings and milking herds of Ayrshires, as well as evidences of "Bobbie" Burns were to be seen on every hand. Nowhere during our travels of a thousand miles did we see so many cattle to the square mile. They may have been in other regions but they were not in view.

The farms are fairly good size. Three hundred acres are deemed to make a tidy farm. A larger farm may contain 600 acres of arable and in addition some hill or mountain land, perhaps 2,000 acres in all. I saw eight farms lying side by side each containing 500 acres and renting for from $2,400 to $2,800.

It is somewhat difficult to determine how much lands rent for per acre, since the farmers are not in the habit of thinking in acres but in the amount of live stock the farm will carry. This is as it should be. The sizes of a farm should not be determined by its acreage but by its income. In Scotland, the farmer's income tax is computed on twice the rent he pays for his farm. If he is not satisfied, he may declare his income. Thus far he has been content to allow his income to be computed on twice his rental, but he is looking forward to the time when it will be expedient to show his books. Hence there is a brisk demand among farmers for instruction in bookkeeping.

The farm at Kilmarnock, on which the Dairy School for Scotland is located, contains 200 acres while another 80 acres has just been taken over. There was some interesting work being done at the Dairy School in the manufacture of Cheddar, Cheshire, and Stilton cheese. The processes of manufacturing these different kinds of cheese were going on side by side, which increased the value of the instruction. The students were, also, taught to make butter from whole milk. I was told that this practice is quite in vogue in Scotland. It is especially profitable where there is a good demand for buttermilk. It is evidently good buttermilk, since it contains 0.6 to 0.7 per cent of fat. However, there is comparatively little butter produced in Southwestern Scotland. Thus in Dumfriesshire, Mr. John Gillies, in charge of the county (extension) department for the West of Scotland Agricultural College, has 130 farms on which cheese is made. There are rather more which produce milk for consumption. There is comparatively little butter produced except when the demand for milk is slack and even then it is more likely to be made into cheese under existing control conditions.

I visited a number of dairy farms with Mr. Gillies, coming upon them unexpectedly since telephones are uncommon. Everywhere I was struck with the cleanliness of the "byres" (cow barns) and surroundings. Of the number of herds of Ayrshire cattle that I had the privilege of seeing somewhat intimately, the herd of Mr. James Howie and Mr. David Hodge stand out as worthy of special comment. Mr. Howie is one of the leading exporters and is well known to American breeders of Ayrshire cattle. His herd of thirty odd milking cows I think is the best herd of Ayrshires I have ever seen. Most if not all of the cows had records of 10,000 up to 17,000 lbs. Mr. Howie has colors to suit the American trade and other colors to suit the South African taste, but he himself says quite frankly that this insistence upon color is a silly fad. However, he admitted that you could not do anything to a brown cow, but that by washing her, you could greatly improve a white cow for the show ring.

The most striking thing about these cows was their udders (always called vessels by Scotchmen). They had uniformly good udders, but very few of them had the real typical, flat, tight udder that we have been taught to associate with the Ayrshire.

The stock bull belonging to the dairy school is from a cow in this herd with a record of 17,000 lbs. of milk in one year. A sister of the cow, also in the herd, has made 10,000 lbs. with her first calf. This picture was not taken because of the bull's beauty or fine points. It seemed to me that his great vigor and sturdiness, which some may call coarseness, coming as it does from one of Mr. Howie's best cows, is rather significant of the breed. Mr. Hodge has what is called a commercial herd of 70 milking Ayrshires worthy of his own breeding and turns the milk into Cheddar cheese at the farm. While the emphasis is placed upon cheese production, nevertheless Mr. Hodge won the sweepstakes for the best female Ayrshire of any age at the Highland Show.

An interesting breeding experiment is going on at the Dumfries Asylum where a herd of 90 milking cows with an Ayrshire foundation is maintained. These cows are being bred to a Red Polled bull in the hope of getting as good a dairy cow as the Ayrshire, minus the horns. The offspring is generally red and polled. It is said that occasionally a useful animal is obtained but too frequently the offspring is indifferent. Ayrshire men, however, say that a polled Ayrshire cow is greatly to be desired. I wonder if it is really so.

This institution introduced the milking machine fifteen years ago. I saw the first pulsator installed here chugging along on a cow as contentedly and apparently as efficiently as if it had been invented yesterday. I am convinced that the Britisher is far better than the American at keeping machinery in repair.

There is, perhaps, more activity in the buying and selling of land in this vicinity than elsewhere, although the upheavel is more or less general throughout Great Britain. Many of the estates are being offered for sale and the tenant farmers are rather reluctantly buying their places to keep some tenant's son from buying and thus ousting them. The statement was made that the farmers generally would prefer to rent but had to buy in self defense. Upon inquiry as to whether it was not desirable for the farmers to own their farms, the answer was in the affirmative provided the farms were not purchased at inflated prices. The tenant farmer generally feels that while prices may not go back to the pre-war level, present prosperity cannot be expected to continue. Hence, rental is a safer policy, and he buys only when compelled to do so.



A GROUP FROM A HERD OF 90 GALLOWAY COWS KEPT FOR COMMERCIAL PURPOSES AT DUMFRIES, SCOTLAND



HERD BULL USED AT THE DAIRY SCHOOL FARM OF THE WEST OF SCOTLAND AGRICULTURAL COLLEGE, KILMARNOCK. DAM HAS A RECORD OF 17,000 LBS. MILK IN A YEAR



FIRST PRIZE GALLOWAY COW AND CHAMPION FEMALE OF THE BREED AT THE HIGHLAND SHOW, SCOTLAND, BELONGING TO DAVID HODGER, A TENANT FARMER NEAR LOCHERBIE

Pig Weighs 308 Pounds at 208 Days of Age

An unusual incident of rapid growth and fattening of a pig is reported by the Ohio Experiment Station.

One pig used in experimental work weighed 3.7 pounds at birth; at the time the test was completed the pig was 6 months and 24 days of age and weighed 308 pounds, making an average daily gain of 1.46 pounds.

At the weight of 87 pounds the pig was started on a 105-day feeding test in which it gained 2.1 pounds daily.

Besides rape pasture, the feed consisted of corn 14 parts and tankage 1 part, by weight, when the test was begun; when the pig reached a weight of 125 pounds a ration of corn 19 parts, tankage 1 part, was fed.—Weekly Press Bulletin, Ohio Experiment Station.

A Tennessee Creamery

F. C. McCUSKEY, TENNESSEE

ABOUT fifteen years ago it became evident to some of the people of Franklin County, Tennessee, that they needed something to bring in more money for the farmers of this county. They tried to raise melons and other truck crops and sell through the commission men in the cities. After trying this they came to the conclusion they were dealing with a slippery bunch as all their crops did not bring back the money they had hoped to get for it. Perhaps part of the trouble was in the way the crop was prepared for market, we do not know. Anyway they had to find something that would do better than they were doing with truck farming.

About this time there came into this country a Catholic priest, Father Duffey. He was from Wisconsin where the dairy business has been developed to a great extent and in looking around for something to help his people he suggested starting a creamery. About this time a young man of this county came back from the Agricultural College at Knoxville. This man, Mr. Arthur Ring, joined forces with Father Duffey and they worked out a plan to get the money for the creamery.

After figuring out the cost they found it would take about $1,600.00 to put up a creamery in Winchester. The banks offered to loan the money if about thirty farmers would give their individual notes for $60.00 apiece to cover this loan. So thirty progressive farmers put up their notes and Mr. Ring was sent up into Ohio to buy a second hand plant from an old creamery that had gone broke. In the meantime Mr. H. M. Templeton donated a lot for the use of the creamery as long as they continued to use it for that purpose.

On April 1, 1910, the new creamery opened for business. They only had about 250 cows to start with. Mr. Arthur Ring was the buttermaker. He churned every other day, and on the day he was not churning he took a spring wagon and a pair of ponies and went around gathering up the cream for the next day's churning.

From the very beginning 1% of the receipts were set aside to pay off the note the farmers had put in the bank to make possible the starting of the creamery. While the production of butter the first year was only about 12,000 pounds, the growth of the creamery has been slow and sure.



THE ORIGINAL CREAMERY BUILT BY FATHER DUFFEY



THE NEW PLANT BUILT FROM PROFITS MADE

At the regular meeting of the stock holders of the creamery in January, 1913, Mr. Frank Pittenger was elected secretary of the creamery. Under his management the creamery has grown until in 1919 they built a new creamery at a cost of $4,500.00. Some of the money for this new creamery was on hand when the new building was started as a few years ago they increased the sinking fund each month from about $25.00 to $100.00 a month. Part of the money for the new creamery was made by Mr. Pittenger by holding a carload of his summer butter until in the fall when the price of butter went up. He made $1,200.00 on this carload. As the patrons of the creamery had been paid the current price for the butter in the month it was produced this money all went to the creamery and was enough to put them out of debt.

The creamery buys feed and fertilizer for the farmers. And as they have been in need of some place to store these things when they bought they have just completed a warehouse at a cost of $1,500.00. Acid phosphate (16%) is being sold this year to the farmers at $32.00 a ton. This is as cheap as it is being bought anywhere in Tennessee this year. The new warehouse will be paid for before this year is out. During the summer months the creamery is handling about $2,000 worth of feed a month. This is at a great saving to the farmers. While the feed is handled for the benefit of the 665 patrons of the creamery anyone can buy feed there.

This summer some sugar has been sold to the farmers for canning purposes. This has meant more saving on the high price of sugar.

Since the creamery began to sell Golden Rod butter in 1910 there has been a great increase in the price paid for a pound of butterfat. While the year 1911 only averaged 27 cents, the year 1919 averaged 65½ cents a pound for fat. Since the creamery has been in operation it has produced 1,583,360 pounds of butter valued at $854,142.25.

Below is a statement showing the amount of butter produced and its value for every year since 1911. This shows the growth and the money the creamery is bringing into Franklin County every year.

	Lbs. of butter made	Ave. price paid cents	Total business
1911	41,387	27	$ 12,416.27
1912	68,447	27½	20,534.14
1913	92,426	29	28,652.02
1914	154,036	31½	53,912.81
1915	202,758	30	75,199.37
1916	275,115	35½	100,537.89
1917	296,659	47	144,553.27
1918	323,469	59	184,471.98
1919	383,099	65½	233,864.44
Total	1,583,360		$854,142.25

Dairying at Arizona State Fair

H. A. HOPPER, NEW YORK

WHILE Arizona is a great mining state, its wealth and activities are by no means limited to this field. Like every western state, she hungers and thirsts for increased population. So great has been her success in attracting citizens to this land of promise, that the recent census report gives a gain of 63.1 per cent, the largest increase shown by any state.

A statement indicating the source of state taxes also indicates the relative importance of the industries of the state. In 1920 mining paid 52.7 per cent of the taxes, land improvements 11.6 per cent, railroads 11.35 per cent, city or town property 10.44 per cent, and live stock 4.7 per cent. Bearing in mind that live stock is largely a range proposition in the state, the dairy cattle interests become a small part indeed of that 4.7 per cent.

In a human sense, however, dairy development is very important. Milk and butter substitutes are painfully evident but the real article is in growing demand. The increase in population must be fed. Many come to rest, others are sick, but all need, in addition to the climate, the vitalizing effect of good milk. The state has apparently set its hand to the task of supplying this need from its own resources. They are beginning to say, in the presence of irrigation, that cotton is king and alfalfa is queen in Arizona. Judging from the experience of other states, the dairy cow will inevitably become the guiding inspiration of those who plan to develop a well balanced agriculture to meet the growing needs of a progressive new state. What is the matter with cotton, alfalfa, corn, and dairy cows as a diversified scheme for the irrigated regions of the Southwest?

The Arizona State Fair was held the week of November 8th. In facilities for housing exhibits and the general lay-out, the grounds and equipment meet the situation well. The visitor from a distance is struck by the number of games of chance and fakir outfits. It still seems necessary, also, for the amusement of onlookers, to rope and maul a poor, defenseless, emaciated steer.

Two things are imperatively needed: there are sanitary facilities for the grounds and an open air pavilion for the judging of live stock in the shade. With the strides the state is making these improvements ought not and probably will not be long delayed.

The Dairy Herds

In the dairy building appropriate attention was given to farm dairying and market milk production through comprehensive exhibits arranged by the University of Arizona.

(Continued on page 957)



JUDGING HOLSTEINS AT THE ARIZONA STATE FAIR

New York Dairymen's Annual Meeting

H. H. LYON, NEW YORK

THE New York State Dairymen's Association recently held its 44th annual meeting in Watertown. President Troy spoke of the splendid dairy conditions across the northern portions of the state. He suggested the high degree of development of the people in the dairying sections that not only does this industry develop soils but men as well. There is much being learned about the value of dairy products and this knowledge is likely to assist greatly in the work of combatting the use of oleo. He called attention to the experiments at Rochester showing the greatly superior development of children when butter was used instead of oleo. These figures have been published in Hoard's Dairyman. Then he mentioned our low annual consumption of cheese of 3.8 lbs. per capita, while Switzerland makes use of 26.4 lbs. Butter is used in the United States to the extent of 17.4 lbs., while Australia makes use of 25.8 lbs. If we increased our cheese consumption, even to ten pounds per capita, it would require six billion more pounds of milk to provide it and would relieve any congestion of supply.

⚜

The look of the city man upon the Agriculture of the state was given by John B. Harris. He deplored the "scraps" between dairymen and distributors of milk. He called attention to the strange attitude of the public when prices of dairy products went up as did all else except that dairy products went up in a lesser degree. He advocated advertising dairy products.

⚜

State Commissioner of Agriculture Hogue deplored the attitude of the Federal Reserve Banks in restricting credit during harvesting season. It only lowers the farmer's prices and does the consumer no good. Restricting credits has caused the loss of vast quantities of produce which has not been harvested because of such restrictions. Mr. Hogue stated the numbers of cows in the state in 1918 was 1,023,034 and in 1919, 1,146,727. The increased milk production was from 4,436,923,413 lbs. in 1913 to a production of 5,212,769,749 lbs. in 1919. Then he showed that June has double the quantity of milk that December has. We need to pay enough for December milk so that it will pay to produce it, for milk is needed at that time.

⚜

In his address, Geo. L. Flanders, veteran counsel of the New York Department of Agriculture, stated that the American people are rather too tolerant, and that, when wakened up, they sometimes go too far as in the case of the oleo laws. They waited until adulteration of dairy products went so far as to create rebellion and laws were made too drastic. After much work and opposition a law was had that overdid.

Federal courts, he said, do not uphold state laws, but they do presume to say whether a state law conflicts with the powers given to the federal government. There is now a bill prepared which if enacted into law would permit the shipment of goods in package form by interstate shipments and would forbid the state to interfere. The state under this act could look after its own residents and forbid their selling oleo or other products under certain conditions, but citizens of other states might ship it in and be protected. This would apply to all foods, drugs, and medicines, which might mean many things in addition to oleo.

⚜

Mr. Richardson, a cheese dealer of Lowville, spoke of the difficulties of the cheese man. He did not claim that the middleman is perfect but thinks he performs a service. He must advertise largely and get in position to serve. He is not superfluous and is entitled to what he makes. The cost in the cheese business is not much over two per cent exclusive of freight. This he thinks is not excessive and would not be up to five per cent. He is not desirous of rapping co-operative marketing, but it too may be superfluous. Prices are low, partly due to the heavy losses on cheese last year. We must look for lower prices in all lines and the outlook for cheese is as bright as any. There was a large output of poor cheese last year owing to weather conditions. It hurt the market. This year has seen the best cheese that has been made in ten years. New York must do everything to keep up the quality of cheese. We have yet to put much milk in cheese in this state. Wash curd cheese is demanded by certain sections and is to be in demand in the future as well as the hard cheese. It is quality that counts in either case. Professor Troy thinks that we should have distinctive names. Now we are unable to designate any particular kind. Buyers at the retail stores do not know what they get when they order cheese.

⚜

Mr. Horace Reese, the veteran cheese maker of Lowville, said that it isn't necessary to make any poor cheese. It is up to the maker. Have the milk in fine condition. The maker needs to exercise the neatness he would expect in the making of his bread. The milk will be good if the maker is up to his job. Speak to the farmer with a good big smile on your face, and do it at the first instance where there is a lack of quality in the milk. Coach the farmer, not abuse him. Don't hurry the make too rapidly. It takes five hours to do a good job. Mr. Reese went into details as to manufacture. In finishing up, take pains. Have cheese uniform in size and appearance. The man who takes pains in this will take pains all through the process. He will have good cheese. Wisconsin does not make any part of skim cheese and we should not. Skims will affect our reputation unfavorably.

⚜

Mr. Nathans, the secretary of the milk dealers' conference board, presented a paper somewhat along the lines of the circular matter that the dealers have been sending out. He tried to show that the League has been forcing prices too high all summer, that the Nestles Company have been driven to the last ditch and can stand no more. They must rebel against such drastic and unreasoning tyranny. The dairying conditions were pictured as the worst that have ever been known. There is sale in this country for only twenty million cases of condensed milk and the export markets for condensed are rapidly disappearing. I am not trying to quote the words of the speaker, but I believe I have the tone of his argument. It is not for me to take up the cudgel, but unless the dealers have been abused far in excess of anything we know of the attitude of the speaker was unjustifiable. If it is a sample of the sort of argument our League officials have had to contend with, I wonder how they can refrain from extreme combativeness.

⚜

The last day of the convention was opened by an address by Dean Mann of the college of agriculture. He spoke of the general difficulty in disposing of agricultural productions. There has been a readjustment over many years. After the Civil War, we opened up land much faster than the population increased. At the same time, the people continued to drift more from the country to towns. He went on to note the tendency toward deflation and the increase in the difficulty to secure money, due to the rather rapid movements on the part of the government. High interest rates mean that money is bid for by those who can best pay the interest. An additional point is psychological.

The dean called attention to the advantage had by manufacturers during the war over that of agriculture. The farmer had not had an equal advantage and it is a problem of fairness. Our exports are not large in percentages, particularly in manufacing lines. It may be one to three per cent in manufacturing and practically fourteen per cent in agricultural production. In both cases it is something concerning the disposition of surplus.

The chief of tuberculosis eradication of the federal government spoke at length regarding his work, leading up to the accredited herd plan. There is not a large amount of animal tuberculosis except in a few localities. The work started in 1918 and has developed rapidly. The method of detecting tuberculosis was determined in 1890. It came to be a diagnostic agency and is fairly accurate though not 100 per cent efficient. There may be a reaction at the point of application or at the point of the disease and still not react as a temperature change. However, the tuberculin test is by far the fairest. The intradermal method sets up local reaction and can be worked more rapidly. It is considered as certain as the subcutaneous. It is possible for all the herds of a county to be tested and the whole county cleared up without waiting for the accredited herd plan to be worked out. It will go as fast as the people want it. It will never be made compulsory. It is up to owners.

The accredited herd plan in New York was discussed by D. W. McLaury, director of the State Bureau of Animal Industry. It is noted that the status has changed since first commenced two years ago. Then it was a case of getting somebody interested; Now it is a question of doing the work. Mr. McLaury finds that tuberculosis has increased in the state in fifteen years. It needs to be checked at once. It is being done. We are, in New York, testing as many animals as any state in the country. We have 1,300 herds, but these average at least thirty animals. The law was changed last winter so that animals generalized will be paid for the same as those with localized lesions.

⚜

The nominating committee reported for president, H. B. Richardson, with H. E. Cook as vice-president. Mr. Tignin was continued as secretary and Mr. Kirkland as treasurer. This report was adopted. Mr. Richardson, being called upon, asserted that his desire is to increase the attendance of real farm people at the next annual session. These men are from northern New York mainly and it is fair to guess that Watertown will get consideration when the place of meaning is to be determined.

⚜

The paper of P. H. Kieffer of New York City on the question of improving the quality of butter was read by Professor Ross, Mr. Kieffer being unable to be present. The paper stated that two things are necessary—good material and good workmanship. The maker should be experienced and educated in his line. It takes a specially good man to make good butter in all cases. He needs three years' experience as a helper and a short course at the dairy school.

Good material, careful pasteurization, and prompt cooling are very important. The speaker also said a bit about the Danish butter now coming to this country in quantities of 500,000 lbs. a week. It is quite a commentary, remarked Professor Troy, that this butter comes from so far and proves of such uniform and superior quality. We complain because the public does not use more dairy products but a reason is found in the uncertain quality. We must get uniformity. Any good butter that continues uniform will make a market for itself. Milk for butter should be as good as that for marketing purposes, but it may be possible to have a higher acidity. The reason for pasteurization is to destroy disease germs in the case of market milk. The resolutions of this convention were unusually brief. One urged the defeat of the Calder Senate bill relating to provisions for interstate transportation and sale of package goods which would prevent states from controlling the sale of oleo and other products brought from other states, and a house bill that if enacted would also aid certain interests not desired by farmers.



MILKERS AND ONE OF THE HOLSTEINS IN THE IOWA SOLDIERS' ORPHANS' HOME

These boys milk 32 cows, using machines. From left to right they are: Harry Wadenton, Merl Hammond, Forrest Mitchell, James Green, and Bert Wilson.

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ind.	Orleans Co-op.	A. C. Walker	Nov.	396		51.7	B. J.Purlee
Ia.	Dallas Co.	Don L. Chase	"	177	22	78.2	Leaverton & Son
Ill.	Knox Co.	J. B. Countiss	"	253	37	55.9	J. E. Simmons, Jr.
"	Adams Co.	Paul Ronk	Oct.	166	9	55.1	O. W. Alexander
"	DeKalb Co.	Earl R. Jackson	"	384	34	68.0	Roberts Hol. Co.
"	DeKalb Co.	Earl R. Jackson	Nov.	390	44	82.5	Fox & Arison
"	Effingham Co.	F. W. Schwarzlose	"	175	10	57.2	E. O. Ramsey
"	Tri-County	Edgar Booker	"	373	28	68.6	Mrs. L. A. Ralston
Wis.	Wausau—Marathon	N. M. Nelson	"	441	5	64.3	C. J. Baumann & Sons
"	Fort Atkinson	Wm. Seales	"	434	52	83.3	H. J. Becker
Ohio	First Portage	Lowell W. Lee	"	239	7	78.5	E. E. Gemberling
Wis.	Monticello	H. T. Albrecht	Oct.	520	20	88.2	F. C. Marty

Association Notes

Dallas County, Iowa:—Feed prices for early November, by the ton, are: corn and cob meal, $20; oats, $25; bran, $37; oil meal, $60; cottonseed meal, $55; alfalfa, $30; clover, $25; silage, $8. Milk sold for $3.75 per cwt., a test of 3.5% being required and 5c paid per point above.

Knox County, Illinois:—Seven unprofitable cows were disposed of during November. Two pure-breds and four exceptionally high producing grades were purchased by members of the association. At present six herds have been tested for tuberculosis and 12 more members have agreed to have their herds tested. Seven of the members are using milking machines which are giving perfect satisfaction. More are planning on installing mechanical milkers in the near future. Most of the farmers are feeding balanced rations. November market milk testing 3.5% sold for $4.08 per cwt. and 9c per point above. The creamery paid 60c per lb. for fat. Milk retails for 17c per quart and butter for 75c per lb. Feed prices are as follows: corn and cob meal, $1 per cwt.; ground oats, $2; cottonseed meal, $3.25; oil meal, $3.65; wheat bran, $2.15; Cow Chow, $2.50; alfalfa hay, $29 per ton; clover hay, $20.

Adams County, Illinois:—There are some unprofitable cows in the association, but the members are waiting for a better market. Two pure-bred bulls were purchased during the month of October and the association bought a carload of pure-bred and grade Holstein cows and heifers in Lake County through the I. A. A. One carload of cottonseed meal was purchased. October milk testing 3% sold for $3.96 to $5.85 per cwt. Milk retails for 16c per quart and butter for 70c per lb. Feeds are rated as follows: alfalfa, $25 per ton; clover, $20; silage, $8; corn, 85c per bushel; oats 62c; cottonseed meal, $3.15 per cwt.; bran, $1.95.

De Kalb County, Illinois:—Seven "boarders" were sold during November. Three pure-bred bulls were purchased, one a 37-lb. grandson of King Korndyke Sadie Vale. In November $3.05 was paid for 3.5% market milk, and 4c per point above this test. Bran sold for $1.80 per cwt.; barley, $1.70; corn, $1.14; oats, $1.50; oil meal, $3.25; cottonseed meal, $2.75; gluten, $2.50; Unicorn, $3.50; clover hay, $30 per ton; alfalfa hay, $35.

Effingham County, Illinois:—Eighteen pure-bred females and one pure-bred bull were purchased during November. Seven of these animals were purchased at the National Dairy Show and have very good backing and individuality. Market milk sold for $2.90 per cwt. and 4c per point above 3.5%. The creamery paid 52c per lb. for fat. Milk retails at 15c per quart and butter at 65c per lb. Feed prices are: corn, $20 per ton; oats, $43.60; bran, $42; cottonseed meal, $68; oil meal, $70; Purina Cow Chow, $70; silage, $7; alfalfa, $30.

Tri-County, Illinois:—One pure-bred Holstein bull calf, one pure-bred Jersey bull calf, two pure-bred Jersey heifer calves, and three grade Holstein cows were purchased during November. One member has a new carrier in his dairy barn, thus lessening the labor of caring for his cows. One unprofitable cow has been disposed of during the month. In November 3% market milk sold for $3.90 and 3.5% milk for $4. A test of 3% was required, 2c being paid for each point above, up to 3.5% and 5c per point above 3.5%. The creamery paid 59c per lb. for fat. Milk retails for 16⅔c per quart and butter for 70c per lb. Feed prices are: brown middlings, $42 per ton; gray middlings, $45; bran, $38; hominy hearts, $42; Purina Cow Chow, $70; cottonseed meal, $50; oil meal, $75; alfalfa, $32; clover, $30; oats, 65c per bushel; corn, 85c; barley, $1.15 per bushel.

Wausau—Marathon, Wisconsin:—Two more herds were tested for tuberculosis during November, making a total of twelve tuberculin tested herds in the association. Farmers are giving their fresh cows better care than we did a year ago, which shows they are interested in better records. Four unprofitable cows were sold to the butcher during the month. November market milk sold for $2.40 per cwt., a test of 4% being required and 6c paid for each point above. The creamery paid 60c per lb. for fat and the cheese factory paid 59c per lb. Milk retails for 15c per quart, butter for 62c per lb., and cheese for 38c per lb. Hay sold for $20 per ton; silage, $6; Wisconsin Balanced Ration, $53; International Dairy Feed, $48; hominy, $46; corn meal, $46; bran, $36; oil meal, $63; oats, 55c per bushel; barley, $1.10 per bushel.

Fort Atkinson, Wisconsin:—November market milk testing 3.5% sold for $2.30 per cwt. The creamery paid 62—65c per lb. for fat and the condensery paid 67c per lb. Local feed prices are: alfalfa hay, $28 per ton; clover hay, $24; wild hay, $12; corn, $28; barley, $90; bran, $35—$40; oil meal, $69; gluten, $68; oats, 60c per bushel.

First Portage, Ohio:—Of the twenty herds in this association, thirteen are headed by pure-bred sires. Seven of the herds are tuberculin tested. Several dairymen are making their herds more profitable by weeding out the unprofitable cows. Much young stock is being raised for dairy purposes. Market milk in November, testing 3.5%, sold for $3.55 per cwt. and 5c per point above this test. Milk retails for 14c per quart, butter for 72c per lb., and cheese for 44c per lb. Feed prices are: gluten, $2.80 per cwt.; oil meal, $3.10; cottonseed meal, $3.10; corn, $1.35; middlings, $3.10; bran, $2.60; hay, $25 per ton; fodder, $7; silage, $8; ground oats, 70c per bushel.

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The Stewart No. 1 Clipping Machine is an essential part of the modern farm equipment. Any owner of cows, horses or mules needs it the year round.

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Whether a producer of high grade certified milk, or a distributor of ordinary commercial milk, the clipping machine should be used regularly on your herd. Compulsory now in many communities, the requirement will soon be general.

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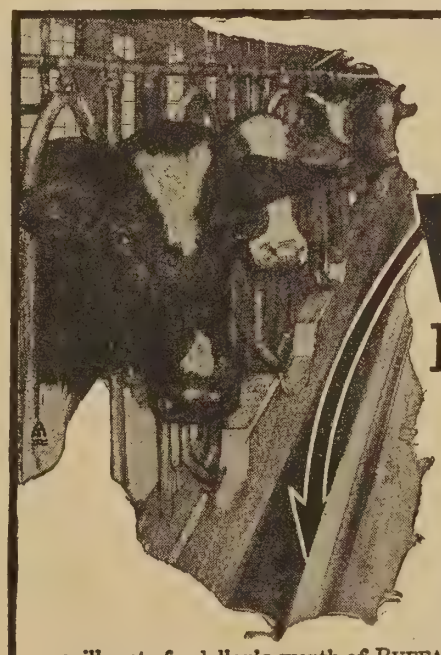
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FEED, yes. But—WHAT KIND is it?

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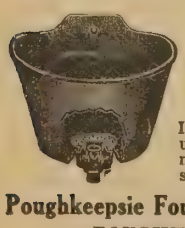


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No ice to chop. No chilled stomachs. Stock drink more—gain faster. Heater soon pays for itself in greater gains and bigger milk yield. Write for free catalog today.

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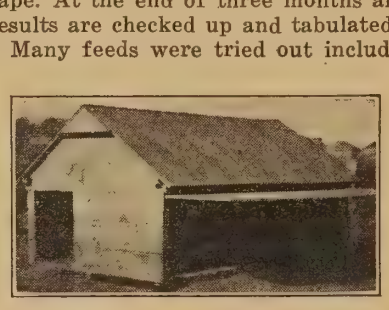
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Must Pigs Root? Evvard Says No

(Continued from page 951)

fed this way and all had the same start. Pigs of the various breeds are selected as near an age and weight as possible and all started on their various trials on the same day. This year it was July 22 at the afternoon feeding. There were thirty-one pens in all, two of them being pastured on blue grass, as was mentioned above in the rooting work, and the rest given rape. At the end of three months all results are checked up and tabulated.

Many feeds were tried out including hominy feeds, containing 10% protein; specially prepared feeds containing corn feed meal, alfalfa meal, peanut and cocoanut meal, ground blood meal, oats, molasses, and barley; corn germ meal with oil extracted; ground barley, corn gluten feed, oil meal, wheat shorts, tankage, salt, and molasses; corn feed meal, ground barley, wheat middlings, oil meal, alfalfa meal, and salt. All feeds contained from 10 to 20% protein by analysis and between 4 and 6% fat.



THE IOWA MOVABLE HOG HOUSE AFIELD

"This is a good hog house because it gives good results. Its good points are many: Provides shade in summer through the swinging upward of the wall door; gives air to the pigs through the ventilating devices, which note in the peak ends, especially valuable in winter or any time when shade doors are down; furnishes high side walls which give upright and capacity room for men, hogs, and self-feeders, and naturally makes possible more utilizable floor space than in the A type of house; promotes convenience in that the far roof has doors in it, 'side hung' doors, that swing upward, thus permitting attendant to work to better advantage, encouraging airing and sunning, and aiding in better inspection of the housed herd; and makes possible, because of its substantial, stalwart construction, a long period of service. We have had some of these houses at Ames for practically fifteen years, and they are still going strong. To date, we have never scrapped a single one."—JOHN M. EVVARD.

The best results with these feeds were made by the hominy feeds. They were figured from the check results which were 236 lbs. gain for the period, a daily gain of 1.52 lbs., a daily amount of feed consumed amounting to 5.7 lbs. and requiring 347 lbs. of corn and 28 lbs. of tankage for every 100 lbs. of flesh produced.

The best hominy result showed a final weight of 237 lbs., average daily gain of 1.57 lbs., daily consumption of 5.5 lbs. and requiring 319 lbs. of hominy feed and 31 pounds of tankage for 100 pounds of gain. This was yellow corn hominy and the problem of whether or not yellow corn is better seemed to have a point when we examined the group fed white hominy. This lot had a final weight of 228 lbs., average daily gain of 1.46 lbs., consumption per day of 5.2 lbs., and required 325 lbs. of hominy and 33 lbs. of tankage. In the matter of cost the check ration cost $9.10 per 100 lbs. gain while the yellow hominy test cost $11.17 and the white cost $10.80.

The poorest results came with a feed containing considerable molasses which showed a final weight of 190 lbs., a daily gain of 1.08 lbs. with a daily consumption of 5.0 lbs. and a requirement of 389 lbs. of corn and 74 lbs. of the molasses feed for every hundred pounds gain. This feed cost only $11.37 per 100 lbs. gain but would have been fed at a loss as compared with the check ration. This difference is attributed to the pig's natural aversion to sweet feeds of any kind and whenever there was molasses in the ration the pigs did not do very well.

Another experiment in the line of forage crops was announced by Mr. Evvard when he told of comparing alfalfa pasture and the new sudan grass for sows. Several lots were put out on the pastures with no grain given them. They all had salt. Others were given the pastures and two pounds of shelled corn daily.

Sows on the lots with no grain in both cases lost weight but the sows on the sudan grass lost .014 more than those on the alfalfa. The ones on the pastures plus the shelled corn acted differently. Those on the alfalfa plus corn gained daily while those on the sudan plus corn lost.

Alfalfa had the best record as a long season crop. It is good to use in the middle of May and runs until the middle of November. Sudan grass is not good for pasture until June 15 and goes with the first frost, which this year came the 5th of October. Also two crops of hay were cut off the alfalfa lot while only one was removed from the sudan grass. This of course is an item worthy of the farmer's attention.



SOLID COMFORT

"Make things comfortable for the pigs so that they can rest, yes, snooze more. You ask why? Because the fattening pig may burn up too much feed when standing unnecessarily on his feet, thus wasting the precious energy resources that we need to conserve."—JOHN M. EVVARD.



MAKING THE MOST OF RAPE

"Rape, pig feed meritorious, a crop that is worth the while, one that comes early in June and stays until old Jack Frost gives it a terrific wallop. Pasture it so that it just keeps ahead of the hogs' appetite—and then in late October, when the rape growing season has waned, turn the extra stock afield to gather up the high protein, high mineral, high vitamine carrying leaves."—JOHN M. EVVARD.

Corn gluten feed was tried out to see if its possibilities as a feed for fattening fall pigs were worth while. It worked the best when fed in a ratio of one part gluten to three parts of tankage in a corn, tankage, salt ration. Where the gluten was fed alone in a free choice method in addition to corn, tankage, and salt it gave fair results but it increased the feed requirements and decreased the gains, as compared to the corn, salt, tankage ration.

The saving by feeding gluten was not very favorable and it was decided that as far as the Iowa tests are concerned the gluten makes a far better feed for cattle and sheep than it does as a hog feed. A little better statement can be made where the gluten was fed in a dry lot ration. It must be remembered that gluten does not contain the germ as does the corn oil cake meal. The latter is a very valuable hog feed.

These were the outstanding feat-

ures of the year's work and next year Mr. Evvard will have some interesting type tests, more feed experiments and some work with vitamine qualities. He is working on color tests in corn feeding on hogs and promises to have some good information.

Dairying at Arizona State Fair

(Continued from page 953)

The writer's attention was early attracted to the dairy cattle exhibit. It was the largest and best balanced feature of the live stock show. In all 175 head of dairy cattle of the four breeds were shown by fifteen different exhibitors. These were distributed according to breeds as follows: Ayrshire, 2 exhibitors, 63 animals; Holstein-Friesian, 8 exhibitors, 50 animals; Guernsey, 2 exhibitors, 33 animals; Jersey, 3 exhibitors, 29 animals. Every herd came from Arizona except one, the Guernsey herd from Hollow Hill Farm of California. Most of the animals were reasonably well fitted. But few were off type sufficiently to mar the show as a whole.

The State Champion

The Tempe State Normal School made a creditable display of Holstein-Friesians. With records covering several years, they were able to put punch into their statement. They showed the champion production cow of Arizona. She is Minnie Shadeland De Kol with a ten-month record of 16,498 lbs. of milk and 529.7 lbs. of butterfat. Her 2-year record is 30,132 lbs. of milk and 1,293.5 lbs. of butter. She is a cow of good size and great capacity, with plenty of quality.

As a class the Ayrshires made a good show but no effort was made to feature any herd or the work of individuals. The Jerseys, likewise, were satisfactory, though in numbers and quality hardly equal to some other breeds.

While only two Guernsey herds were shown, the Guernsey display far outclassed others in the dairy divisions. The exhibit from Hollow Hill Farm was remarkable for its uniformity and quality. While coming from another state it set a high standard and Arizona breeders may well profit from the demonstration.

As indicating the character of the herd the record of a few individuals will be of interest. The 8-year-old cow, Imp. Cherry 3rd of the Effaids, is a fine individual and has 735 lbs. fat in the single letter class. She was first prize aged cow, senior champion, and grand champion at the Riverside Fair. In that show, she went above Imp. Cheminante 11th who was senior champion at the 1919 Dairy Show.

One particularly attractive heifer in the herd is Rosie E. King of Hollow Hill Farm. She has quality, type, and attractiveness all of her own. She was first junior yearling and junior champion at the 1920 California State Fair. Also, she won first junior champion, junior yearling, and reserve grand champion at the Riverside Fair. Here she stood ahead of the senior yearling that won over 44 heifers at the National Dairy Show, 1919.

The dairy exhibit speaks well for the type of pioneers who are building the future dairy business of Arizona. A new country, it naturally has unusual problems which are being met by original though effective methods. Reflecting, as the state fair exhibits did, the relatively large number of pure-bred herds of good quality, there should be the incentive and the means to keep economical production well abreast of demand.

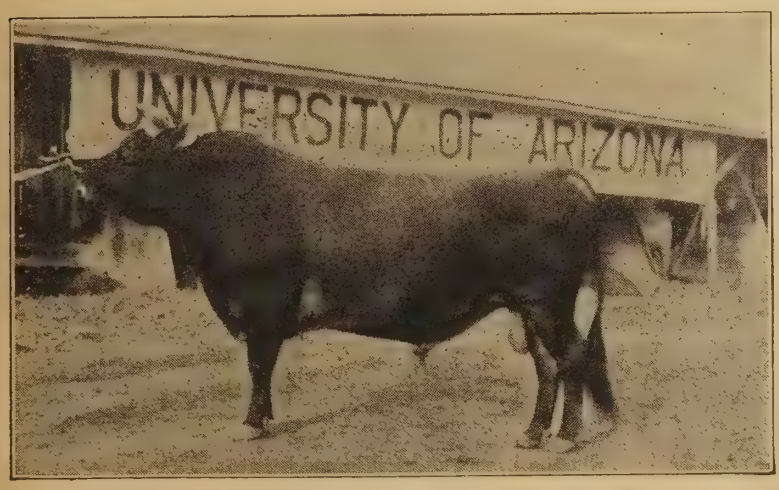
Scub Bull Funeral

Some few weeks ago there were still two scrub bulls in use by two of the members of the Wilton Cow Testing Association. At a picnic held at Wilton, considerable attention was given to the funeral of the last scrub bull. A pure-bred Guernsey bull was hitched to an old top covered milk wagon which contained large frame crate representing the coffin. The bull which was hitched to this wagon is the animal which was purchased to replace the last scrub in the Wilton Association. The wagon was elaborately decorated with American flags.

The coffin was decorated with stick-tights and bull thistles. Mr. Gleis of Tomah, an attorney, served as undertaker and pastor. The fifteen-piece Tomah band was in the procession together with fifty automobiles which followed the coffin to a nearby bridge crossing the Kickapoo river. Upon arrival at the bridge, the coffin was thrown into the river.

There were 500 people in attendance at this picnic and funeral. It was reported that this funeral caused more excitement in the city of Wilton than any other funeral ever known of in Monroe County. Extreme gaiety was shown instead of sorrow and grief as is usually shown at a funeral. It is hoped that more of the associations throughout the state will follow in the footsteps of the members and tester in the Wilton Association.

At the present time we have fifty associations reporting 100 per cent free from scrub bulls. It is hoped that we can report at least ninety per cent on this list before another year goes by. The present forty-five per cent can easily be increased with the hearty co-operation of the members and testers in the associations where scrub bulls are still kept.—A. J. CRAMER, Supervisor.



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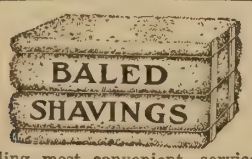
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Countess Prue—World Champion Guernsey

SINCE February, 1915, Murne Cowan of the Anna Dean Farms, with a record of 1,098 lbs. of fat, has held the honor of being the world's champion Guernsey. It is an unusual honor, therefore, that now comes to Countess Prue, for not only has she established a new high record of production for the breed, but she is the only Guernsey cow in the world to exceed 1,100 pounds of butterfat in a year's production. On November 29 she completed her year's work, finishing with 18,626.9 pounds milk containing 1,103.28 pounds butterfat. This accomplishment will bring much fame to Riverdale Farm of Massachusetts, to the owner of the cow, F. L. Howes, and to her caretakers, Harry R. Robblee, manager, and Fred Burdick, herdsman.

Countess Prue merits the distinction which is hers, for she is a cow of splendid dairy conformation, of good breeding, and of refinement and beauty. It is not often that we have such a combination in one individual, although one should see her to really appreciate these facts. She is large, weighing about 1,300 pounds, has splendid spring of rib, depth through body and heart, and breedy head, with generous muzzle and nostrils that go with large digestive and lung capacity. She has good lines and an udder of excellent shape and texture. One of her outstanding characteristics is her quality throughout.

She is a cow of fine temperament, nothing unduly excites her. She seems rather to enjoy the presence of visitors, although it is easy to see that she much prefers Fred Burdick to anyone else. Mr. Burdick has personally fed and cared for her throughout her test, and while he has had a wonderful cow to work with, nevertheless he deserves much credit for his skill and good judgment in handling her. Not once while on test has she missed a feed through indisposition, and at the end is as full of vigor and as keen in appetite as at the beginning.

A careful study of the pedigree of this wonderful cow reveals the fact that she has an inherited right to her dairy conformation, beauty of form, and tremendous producing powers. She belongs to a family of capable and well formed animals. Her sire, Bell-founder, has come to the attention of Guernsey breeders during the past year through the records made by his daughters at Falcon's Flight and Riverdale Farms. He has at present sixteen in the list, whose twenty records average 12,627.72 pounds of milk containing 642.26 pounds butterfat. It is interesting to note that of these twenty records, completed by the sixteen daughters of Bell-founder, one has made over 1,100 lbs. fat, one over 900 lbs., one over 800 lbs., three over 700 lbs., four over 600 lbs., seven over 500 lbs., and only three under 500 lbs.—the least being 418.78 lbs. of butterfat. Bell-founder, through his sire, is a grandson of Imp. Island Champion. His dam, Imp. Island Blossom, was a daughter of Imp. France's Masher 2d and is a sister of the great Guernsey matrons, France's Milk Maid and Anton's Frances. Imp France's Masher 2d, being a son of Imp. Island Champion, Bell-founder gets Masher blood through his dam as well as his sire.

Countess Prue has a previous record made in class B of 13,172.9 lbs. milk containing 709.21 lbs. butterfat. Her full sister, Polly of Falcon's Flight, made 14,133.3 lbs. milk containing 728.79 lbs. butterfat. Another sister, My Fancy of Falcon's Flight, now owned by George W. St. Amant, has just completed an official record of 18,214.7 lbs. milk containing 979.11 pounds butterfat, which entitles her to eighth place in class A. It is surely an unusual happening that two daughters of one bull take a place among the leaders of class A within a month of each other.

Guernsey breeders are familiar with the records of Monobelle, another daughter of Bell-founder, with 546.61 lbs. of butterfat in class B and 16,724.5 lbs. milk containing 847.64 lbs. butterfat in class A. In the next box stall to Countess Prue at Riverdale is another sister, Blanco, that finished early in December with a record of over 800 lbs. butterfat.

Countess Prue was born December 20, 1912, and was bred by Joseph A. Blake of Connecticut. In April, 1914, she was sold to B. Austin Cheney and remained in his Falcon's Flight herd until September, 1917, when she was sold to her present owner. She has two daughters, Prudence of Falcon's Flight, sired by a grandson of Imp. May Rose King, and Duchess Prue of Riverdale, sired by Cottina's Goldseeker of A. D. F. Duchess Prue of Riverdale was born on Nov. 26, 1919, just previous to the beginning of this epoch making record, and has been recently sold by Mr. Howes for a high figure to H. H. Buckley of New York.

The Massachusetts Experiment Station supervised this record of Countess Prue. Her record was confirmed by testers from Vermont, Connecticut, New Jersey, Pennsylvania, Delaware, and Maryland. Besides the regular tests she had ten automatic retests, and two special retests by Massachusetts testers, and eight special tests made by testers from other states. During the year she was under official supervision on an average of one day in every five.

Her highest month in the production of milk was January, the second month on test, while her highest month in the production of butterfat was March, the fourth month. In both March and May she produced more than 100 pounds of butterfat—107.16 pounds in March and 103.38 pounds in May. Her lowest month in both milk and butterfat was September, the tenth month, when she produced 1,247.9 pounds of milk and 79.87 pounds of butterfat. Her lowest day's production of milk was 36.8 pounds on August 23, during a period of excessive heat. Her highest production was 63.7 pounds on January 4.

She was an unusually high tester throughout. Her lowest test for any month being 5.03 per cent for December, the first month of her test, and the highest 6.76 per cent in October, the eleventh month. The owner's statement of feed is as follows:

December—578.2 lbs. grain: 82.6 lbs. bran, 41.3 lbs. each hominy, ground oats, gluten feed, cottonseed meal, oil meal, and alfalfa meal, 123.9 lbs. each Unicorn Dairy Ration and Schumacher Feed; 465 lbs. beet pulp, 620 lbs. each silage and mixed hay.

January—660.8 lbs. grain: 82.6 lbs. each bran, cottonseed meal, and alfalfa meal, 41.3 lbs. each hominy, ground oats, gluten feed, and oil meal, 123.9 lbs. each Unicorn Dairy Ration and Schumacher Feed; 600 lbs. beet pulp, 930 lbs. silage, 630 lbs. mixed hay.

February—580.5 lbs. grain: 77.4 lbs. each bran and cottonseed meal, 38.7 lbs. each hominy, ground oats, gluten feed, oil meal, and alfalfa

meal, 116.1 lbs. each Unicorn Dairy Ration and Schumacher Feed; 435 lbs. beet pulp, 870 lbs. silage, 435 lbs. mixed hay.

March—619.5 lbs. grain: 82.6 lbs. each bran and cottonseed meal, 41.3 lbs. each hominy, ground oats, gluten feed, oil meal, and alfalfa meal, 123.9 lbs. each Unicorn Dairy Ration and Schumacher Feed; 620 lbs. each beet pulp, silage, and hay.

April—600 lbs. grain: 80 lbs. each bran and cottonseed meal, 40 lbs. each hominy, ground oats, gluten feed, oil meal, and alfalfa meal, 120 lbs. each Unicorn Dairy Ration and Schumacher Feed; 450 lbs. each beet pulp and mixed hay, 900 lbs. silage.

May—Same grain ration as April; 450 lbs. each beet pulp and mixed hay, 620 lbs. silage.

June—20 lbs. daily of the following mixture: 300 lbs. bran, 200 lbs. each hominy, gluten feed, cottonseed meal, oil meal, and alfalfa meal, 100 lbs. each corn meal and ground oats, 600 lbs. Schumacher Feed; 20 lbs. beet pulp, green oats, peas, and clover.

July—20 lbs. daily of the following mixture: 400 lbs. bran, 200 lbs. each hominy, gluten feed, cottonseed meal, and alfalfa meal, 100 lbs. each corn meal and oil meal, 250 lbs. ground oats, 300 lbs. each Unicorn Dairy Ration and Schumacher Feed; 15 lbs. beet pulp, green oats, and mixed hay.

August—20 lbs. daily of the following mixture: 300 lbs. each bran, Unicorn Dairy Ration, and Schumacher Feed, 100 lbs. each hominy, corn meal, gluten feed, cottonseed meal, oil meal, 250 lbs. ground oats, 200 lbs. alfalfa meal; 15 lbs. beet pulp, green clover.

September—Same grain ration as August; 10 lbs. each beet pulp and mixed hay, green clover.

October—20 lbs. daily of the following mixture: 300 lbs. each bran, Unicorn Dairy Ration, and Schumacher Feed, 100 lbs. each hominy, gluten feed, cottonseed meal, and oil meal, 50 lbs. corn meal, 200 lbs. ground oats, 150 lbs. alfalfa meal; 15 lbs. beet pulp, 10 lbs. each silage and mixed hay, 30 lbs. carrots and turnips.

November—22 lbs. daily of the following mixture: 300 lbs. each bran, Unicorn Dairy Ration, and Schumacher Feed, 100 lbs. each hominy, corn meal, and gluten feed, 200 lbs. ground oats, 150 lbs. each cottonseed meal, oil meal, and alfalfa meal; 15 lbs. each beet pulp and mixed hay, 20 lbs. silage, 30 lbs. carrots and turnips.

Official Year's Record, Class A

1919	Milk Lbs.	Butterfat %	Butterfat Lbs.
December 1	1,746.2	5.03	87.83
January, 1920	1,881.3	5.08	95.57
February	1,759.1	5.57	97.98
March	1,771.3	6.05	107.16
April	1,685.3	5.83	98.25
May	1,708.8	6.05	103.38
June	1,550.8	6.19	95.99
July	1,443.0	6.17	89.03
August	1,304.5	6.26	81.66
September	1,247.9	6.40	79.87
October	1,313.5	6.76	88.79
November 29	1,215.2	6.40	77.77
Total	18,626.9	5.92	1,103.28

Previous record begun as a 4½-year-old: 13,172.9 pounds of milk, 709.21 pounds of butterfat.

World's Champion Guernsey Cows

Name of animal	Milk Lbs.	Fat Lbs.	Date admitted to A. R.	Owner
Yeksa Sunbeam	14,920.8	857.15	October 21, 1905	Helendale Farms, Milwaukee, Wis.
Dolly Dimple	18,458.8	906.89	October 16, 1909	Langwater Farms, No. Easton, Mass.
Dairymaid of Pinehurst	17,285.3	910.67	January 31, 1912	W. W. Marsh, Waterloo, Iowa.
Spotswood Daisy Pearl	18,602.8	957.38	March 11, 1912	Anna Dean Farms, Barberton, Ohio
May Rilma	19,673.0	1,073.41	May 8, 1914	E. B. Cassett, Berwyn, Pa.
Murne Cowan	24,008.0	1,098.18	March 1, 1915	Anna Dean Farms, Barberton, Ohio
Countess Prue	18,626.9	1,103.28	December 14, 1920	F. L. Howes, Groton, Mass.

Illinois Holstein-Friesian Association Reorganized

The state-wide campaign for membership in the Illinois Holstein-Friesian Breeders' Association was conducted according to schedule Nov. 15-25. Two series of meetings were held simultaneously in the northern and southern sections of the state. Through this campaign Illinois breeders are assured of a working program for the next three years. The preliminary subscriptions amounted to over $15,000 for the three years with at least another $10,000 available on the follow-up campaign which will be conducted by the breeders themselves.

The ten days of the Illinois campaign fitted in with the week that the New England campaign was not going on, owing to the National Grange meeting in Boston. This made it possible for the National Association to lend its help. R. C. Pollock, in charge of the organization work for the National Association, attended all the meetings of the northern series, and F. A. Koenig, also of the National Association, accompanied the southern crew.

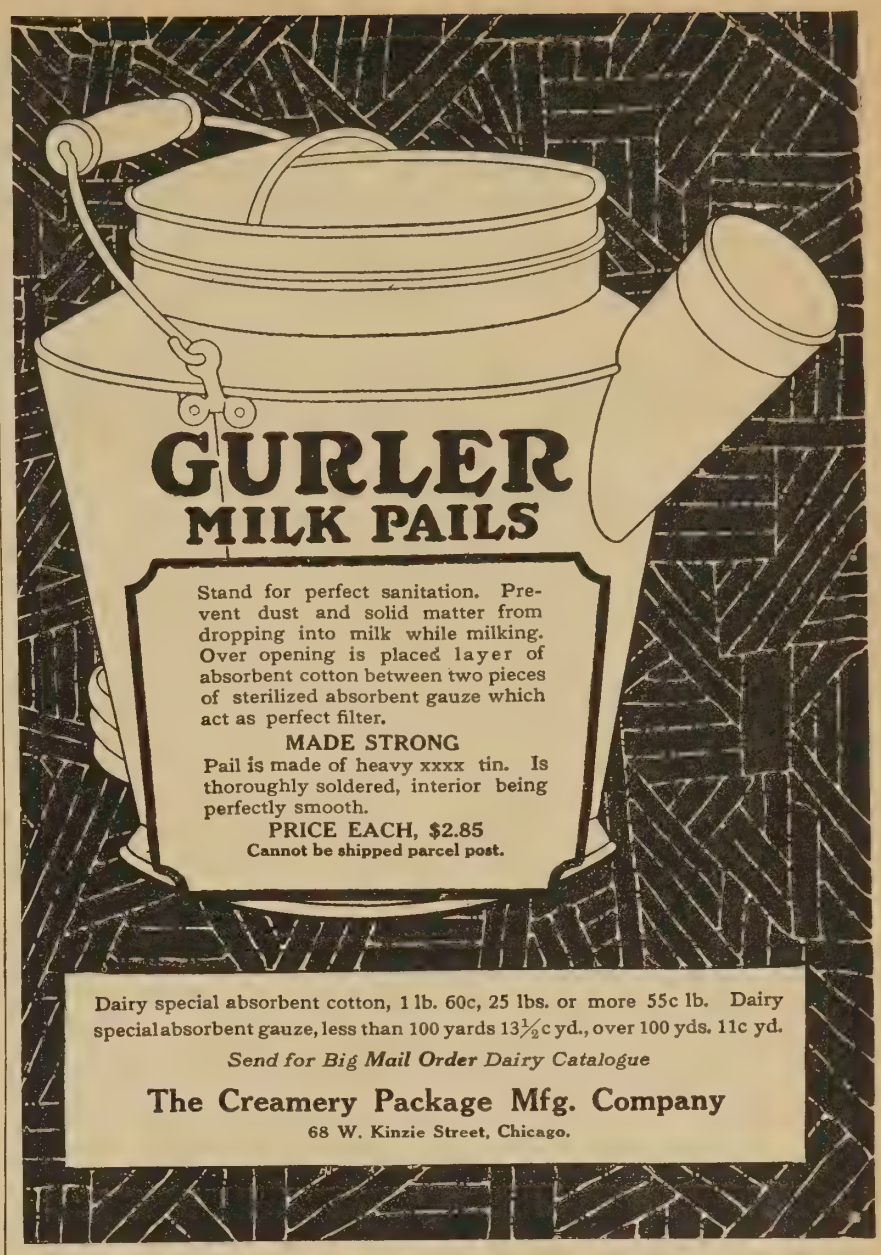
Illinois breeders some time ago divided the state into five districts according to Holstein population. Each district is in charge of a vice-president and is again divided into three sections, each section in charge of a director. The directors are responsible to the vice-president for their sections, and the vice-presidents to the state association for their district. This plan makes it possible to carry on a follow-up campaign until every Holstein breeder in the state has joined the state association on an equal footing with the other members.

Illinois, as the organizations in other states, welcomes the grade Holstein owners into the association, realizing that the owner of grades today is the pure-bred breeder of tomorrow. A great number of pure-bred bulls are heading the grade herds all over the country and demonstrating the value of pure blood lines in increasing milk production and improving type and quality of the milking herd.

Illinois is the seventh state organized by its breeders with the co-operation of National Association, the others being Ohio, Wisconsin, New York, Michigan, New Jersey, and the New England States which was completed by December 9th. The total number of organized Holstein centers in the United States is now ten, eacn having one or more men putting in their entire time in the interests of Holstein breeders who employ them. These sections are Minnesota, the first to put the plan of a paid secretary in operation, Ohio, Wisconsin, New York, Michigan, New Jersey, the New England States, Illinois, Iowa, and, most recently, Missouri. The breeders in these states have realized that combined effort and a single policy of promotion of Holstein interests within their own borders and intelligent advertising to attract outside buyers is the only solution towards making business more profitable each year.

Each of these organizations conducts its business through a board of directors elected by the breeders within the state. They hire their field men to direct the nature of the work they want done, and in general decide on the best means of furthering Holstein interests.

The New England breeders will by the first of the new year have a secretary on the job working out their problems.—National Holstein-Friesian Extension.





Two Ways to Spell a Good Thing

Teacher: "Spell Dessert."
Bobbie: "Is it where the camels live?"
Teacher (severely): "Certainly not. It is the best part of dinner."
Bobbie: "Oh, I can spell that—

"J-E-L-L-O"

Nobody knows better than the children what the best part of dinner is, and Bobbie expresses the prevailing conviction regarding it.

Delicious pure fruit flavors, freshness, wholesomeness and sparkle—these are famous Jell-O qualities.

And nothing to do but add boiling water, cool and serve.

Put up in six pure fruit flavors: Strawberry, Raspberry, Lemon, Orange, Cherry, Chocolate.

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EDITORIAL COMMENT



SELL FEED THROUGH COWS

Corn sold for $24 per ton in Chicago the last week in November, with other grains at comparable values. The net to the producer is considerably less. The Chicago price of whole milk was $3.55 per 100 lbs. for November, while in the main markets cheese brought 25 cents per pound and 92 score butter was worth 57 cents. These prices represent declines in the returns from dairy products and in themselves are not cheering, but, comparatively, they are very satisfactory. The dairy farmer has the best market for his feeds. He need not rush his grains onto a glutted market; he can sell through his cows to much better profit.

Many months have passed since feed prices have been as favorable to profitable milk production as today. Milk, butter, and cheese have gone down in price, but not at the rate of the decline in feeds. A concentrate mixture can be made for about fifty per cent of its cost a year ago. The owner of dairy cattle now finds himself in a better position than at any time for months past, and better than that of those who do not own cows. It is bad judgment not to feed good rations now in liberal quantity. If the extreme high prices of past months and the difficulty in obtaining feeds suited to a first class ration made excuse for scant rations, they no longer do so. The man who now fails to take full advantage of the market his cows offer him makes a mistake. Until their maximum season requirements are provided for, it is folly for an owner of cows to put his grains on a market already flooded. Market conditions find the dairy farmer in a position of vantage, he should sell his feed through cows.

BUTTER PRICES FOR NOVEMBER

From the daily quotations of the United States Bureau of Markets, we have compiled the following table giving the monthly averages of the daily wholesale prices for November, 1919 and 1920, on 92-score butter (extras) in the four principal markets, together with the total receipts of butter at these markets for November:

	Av. price		Receipts	
	Nov. 1920	Nov. 1919	Nov. 1920	Nov. 1919
	cents	cents	tubs	tubs
Chicago	59.47	68.98	127,045	102,958
New York	63.26	71.24	139,145	203,799
Boston	59.75	68.59	31,710	55,802
Philadelphia	63.46	70.54	40,129	29,469
			338,029	392,028

These four markets show a decreased receipt of 54,000 tubs less than in November last year, which would seem to indicate a lowered milk production, as it is generally reported that many condenseries and some cheese factories have been turning their milk into butter. The total receipts at these four markets are also over a million tubs less for the first eleven months of this year as compared with last year, and it is reasonable to expect that these large markets are representative of all the markets in the United States. Cold storage holdings at these markets are now only a million and a half pounds (approximately 25,000 tubs) less than a year ago, which, to the novice at least, indicates a lowered consumption. The imports of butter can not account for much of this for the increase over last year in total imports and the decrease in exports to the present time can not be more than one-half to two-thirds the decreased receipts at the four principal markets alone.

These statistics seem somewhat confusing, but they do offer some opportunity for optimism as to the future butter market. The principal disturbing factor is a possibly lessened buying power on the part of the consumer and the general tendency of decreased prices for all commodities.

Ninety score butter averaged 53.88 cents for November on the Chicago market, with centralized butter at this market selling for 54.95 cents. Jobber's prices on extras sold to retailers during November averaged 60.98 cents in Chicago and 66.26 cents in New York.

PAYING FOR MILK BY TEST

Milk varies in comparison; therefore, it varies in food value. The richer the milk, the more valuable it is for making butter, cheese, and condensed milk. Butterfat alone may not be the best way to determine the relative values of milk, for there are other food constituents of milk besides butterfat and these should not be ignored.

If milk were to be paid for upon the exact basis of its food value, it would be necessary to take into consideration its fat and solid not fat contents. Paying for milk at a flat rate without regard to test leaves no inducement or incentive to produce the higher testing and more valuable milk. The richer the milk, the more cheese or condensed milk can be made and the more valuable it is as a food and it is not fair to pay the same price for 3% milk as is paid for richer milk.

Professor Hunziker says, in his third edition of Condensed Milk and Milk Powder: "As far as the condensery is concerned, it is entirely advisable to pay for all milk strictly on the butterfat basis. Milk rich in fat and, therefore, rich in solids, yields more condensed milk than milk poor in fat. To pay by the hundredweight regardless of quality is a practice which discriminates in favor of breeds of low testing milk against breeds of high testing milk." He could have said that this system discriminates against herds of the same breed, for the test of milk in the breeds varies materially. It is not wholly a breed question; it is a question of justice and of right. We do not believe in paying for milk at a flat rate, and the sooner it is paid for according to its test and food value, the better it will be for the dairy industry.

ELIMINATE POOR DAIRYMEN

There is no one factor that can account for all the ills of the milk situation. There are many influencing factors which could be enumerated. Not the least of the troubles are poor dairymen; men who will not read that they may act wisely in the conduct of their business and intelligently associate themselves with their fellow dairymen that they may market their products upon the proper basis. There is opportunity through educational forces to help most men engaged in dairying, but some are hopeless and should, like the poor cow, be eliminated.

It is a comparatively simple matter to weigh and test a cow's milk to determine how much she produces in a year, her feed costs, and profit above cost of feed. If she does not pay she can be sent to the butcher and there the story ends. But with the poor dairyman it is a different problem. His mind is so closed that there is no opportunity to get at him; he will not read or learn of his business; he will not treat his cows properly; he is out in the cold and refuses to come in by the fire and to be warmed. All he does is produce a surplus of milk which helps depress the market price of dairy products and buys so-called dairy substitutes, oleomargarine, because he thinks dairy products too expensive for him to use.

Such men as these should not keep cows, for it takes intelligence, a thirst for knowledge, to be successful in handling cows. Men who do not feel the desire for information had better let cows alone, for, while there is no quick or easy way of eliminating them from the dairy industry, there is a slow grinding and grueling force that will in time replace them with men who thirst for knowledge; who read and think. The poor cow keeper will then be eliminated, but by a most painful process.

BUY DAIRY CATTLE NOW

Temporarily unstable conditions have brought severe declines in the market values of dairy cattle. Recent auctions indicate a panicky feeling among buyers in most sections. A quality of pure-bred which sold for $500 a year ago, fails to net above $275 to $300 now and prices on grades have tumbled about fifty per cent. At some sales animals have gone at a sacrifice.

A decline in values of breeding stock and of grade milkers is in keeping with general financial conditions, but the severe depreciations registered at some auctions are not in keeping with sound dairy thought which looks ahead. This is the time to lay in foundation stock. The beginner can start in pure-breds now at prices lower than those seen in many months and which must surely make his purchases safe investments. It is a time when he can do the choosing; he is no longer forced to take what is offered. He must use discretion even now, it is true, but he overlooks such opportunities as have not been his in years when he lets high class breeding stock sell below their value. He must remember that a poor animal is always a bad buy, but his present advantage lies in the fact that good animals are now selling at prices within his reach.

There is no surplus of breeding dairy cattle; the need for superior animals was never greater or more generally appreciated. The future promises prices which will give profitable returns for money invested now in well bred animals of good conformation.

The coming months may bring further recessions in prices; the chance is just as great that improvements will come within a few weeks. Present values permit very advantageous selections; this seems to be a time to buy breeding stock for the future.

Corn and Cottonseed Meal for Concentrate Mixture—Obstructed Teat

I am feeding the following ration to my herd of Holstein cows: 27 lbs. good corn silage, 10 to 15 lbs. fine third cutting alfalfa at $25 per ton; free access to good sorghum hay ($12 per ton) during the day. I feed one pound of following mixture for every 3 lbs. of milk: 500 lbs. ground corn at $1.25 per hundred pounds and 200 lbs. of 43 per cent seed meal at $2.80 per hundred. Bran is selling here for $2.25 per hundred, ground oats $2.30, and ground barley, $1.65. Could you suggest any improvement on above ration?

One of my best cows seems to have a growth just inside lower part of teat which closes some so no milk can be drawn with the milking tube. My veterinarian suggested the use of elm plugs which we use a day or two, then the teat will milk good for a week but closes again. Milks good out of the quarter but very painful.

Colorado Springs, Colo. E. H. R.

There is a good basis for profitable returns from cows in the feeds listed. Alfalfa at $25 supplies nutrients cheaper than they can be purchased in most concentrates. We would feed alfalfa, therefore, as liberally as it will be consumed. Sorghum hay, while lower in nutrient content, is a very good feed and, at the price, is very cheap. It should be supplied in addition to alfalfa in as large amounts as the cows will clean up. By feedng 27 lbs. of silage per day in addition a basis for profits from milk is had.

The quotation on corn is unusually low. Ground corn at $25 per ton is so cheap a feed that a feeder is justified in making it supply a great portion of the concentrate mixture. Bran at $45 is higher priced than alfalfa and we would not use it. Oats is only a little better than bran and not enough better than alfalfa to afford it at $46. Barley is somewhat less valuable than corn and should, therefore, not replace it. If it is on hand, it will give good results with the corn, but is more costly.

The mixture of 500 lbs. of ground corn and 200 lbs. of cottonseed meal seems to us to be as good a one as can be made, provided it is not too heavy and sticky. Our inquirer might grind this corn,

cob and all, so that the corn and cob meal will lighten up the mixture somewhat. If he has only the corn meal and cottonseed meal together, he can mix these feeds with the silage so that they may not be sticky and be poorly masticated. If he can grind some alfalfa very fine, it will mix nicely with these two feeds. An allowance of one pound of the concentrate mixture for each 3½ to 4 lbs. of milk should be sufficient.

In such cases such as described, the tip of the teat becomes hard, horny, or wart-like in structure, and the orifice becomes so small that milking is made difficult. It would be best to disinfect the teat by immersing it in hot water, containing all the boric acid it will dissolve. Then apply etherized iodine by means of a sterilized teat bistoury. Cut down through the obstruction in four different directions. Milk then will come easily, but may spray. Strip away a little of the milk frequently during the healing process and use the boric acid solution twice daily. If a raw spot remains, apply twice daily a mixture of one part of balsam of Peru and three parts of alcohol. We do not think that teat plugs will suffice in this case. Such instruments may be bought from any veterinary supply house.

Starters, Pasteurizers, Neutralizers

Why should ripener milk be used and how is it used?

Does pasteurizing improve the quality of butter other than to kill possible germs? Does it have any effect on obtaining a proper overrun?

Why is pasteurized butter worth no more per pound than butter that has not been pasteurized, the score being the same in both cases?

What should be considered a good overrun, quality being first consideration? Is there any law governing overrrun in buttermaking?

If a pound of good butter has 80% fat, what per cent of moisture, salt, and casein should it have?

Is it possible to neutralize sour cream with pure lime (Allerwoods) and bring it down to a degree of acidity, where it can be mixed with sweet cream churned together and make a 92 score butter?

Is there any law that will prevent farmers or creameries from selling or receiving cream that is moldy or in advanced stages of decay?

Why does butter shrink in tubs in weight packed 63½ lbs. net delivered in Chicago 6 days old and then weigh out 58 to 60 lbs. per tub? The tubs are said to have been soaked in hot water and paraffined and liners and cloth circles soaked in brine 24 hours before butter is packed?

What per cent of protein is there in good buttermilk?

Is it a proper or healthy practice to neutralize sour cream with Wyandotte? Is Wyandotte anything but common soda potash?

Lone Park, Iowa. W. J. C.

Professor E. H. Farrington of the Wisconsin Dairy School has given the following replies to these inquiries:

"By ripener milk is meant what is ordinarily called starter or sour milk, which is added to cream for the purpose of controlling the souring of the cream, and by so doing developing satisfactory flavors in the butter made from such ripened cream.

"Whole sweet cream may be used for making a starter if desired, but the cream should be skimmed off before the sour milk is added to your sweet cream, as the sour cream on the milk may produce white specks in the butter because it contains lumps of cream that do not soften but separate with the buttermilk when this is drawn off at the time the churning is completed.

"Ripener milk or starter is commonly added to sweet cream. It will not have much effect on sour cream unless the sour cream is pasteurized for the purpose of destroying the ferments already developed by the souring process. In the case of pasteurized, sour cream, a starter may be added and good results obtained by so doing, but the best results are naturally obtained by adding the starter to sweet cream.

"The amount of ripener milk or starter ordinarily used in cream varies from 1% to 10%, and in 500 lbs. of cream testing 30% fat, I suggest that 20 lbs. of starter be added, provided the cream is to stand only about 20 hours before churning. In case a longer time before churning is taken, a smaller quantity of starter, say, about 2 lbs. ripener milk for each 100 lbs. of cream may be added.

"Pasteurizing the cream should improve the quality of the butter by giving it a more uniform flavor, which is obtained because the pasteurizing process is assumed to destroy all the fermentations present in the cream each day and if to such cream a carefully prepared starter containing a definite ferment is added each day, this should develop the same kind of flavor in the butter made daily.

"Pasteurization should not necessarily have any influence on the overrun obtained when butter is made, as the overrun is influenced by the carefulness of the buttermaker in saving all losses from waste cream and butter during the churning process and also on the percentage of fat in the butter made. This latter point is largely controlled by the temperature of the wash water and the amount of working the butter receives during this part of the process.

"While it may be true that butter made from pasteurized cream does not always bring a higher price than butter made from cream which is not pasteurized in the general market, I think there is on doubt but any creamery adopting the consistent practice of pasteurizing cream and using a carefully prepared starter will be able to produce a butter of uniformly high quality that will command a higher price than would be obtained at the same factory when the cream is churned each day without giving any attention whatever to pasteurizing it or using a starter. Some buyer will eventually notice the uniformly good quality of butter coming from a factory where the cream is pasteurized and on this account offer a higher price per pound for such butter, provided the buyer finds that he can depend on this uniform quality in the butter for any length of time.

"If the overrun from butter is calculated from the cream received, this overrun ought not to exceed 23 per cent. I think in the every-day work of a creamery it will probably vary from 21 to 23 per cent, depending on the carefulness of the buttermaker.

"The only law which has anything to do with the overrun in buttermaking is the one which requires a certain percentage of butterfat in the butter. If the standard of the law is 80 per cent fat in butter, then the overrun cannot possibly be over 25 per cent and if the law requires butter containing 82.5 per cent, then the overrun cannot be over 21 per cent.

"If a pound of butter contains 80 per cent fat, it may in addition to this fat contain 2 per cent casein, 3 per cent salt, and 15 per cent moisture. The per cent casein here given may be a trifle high, as it occasionally drops to 1 per cent and sometimes even less, while the per cent of moisture may be somewhat above 15 per cent, although it should never equal or exceed 16 per cent.

"It is possible to neutralize sour cream with lime and make a butter having a score of 92.

"The laws of different states vary somewhat in regard to the kind of cream a factory may receive and make the same into butter. I have no doubt the dairy commissioner of your state will be glad to give you definite information concerning the laws on this point.

"The shrinkage in weight of butter shipped to market or held in cold storage in 63-lb tubs, amounts to about one-half pound per tub. This is the shrinkage we have obtained by repeated trials at our Dairy School Creamery when the tubs are carefully soaked and lined with parchment paper before filling them. If there is a greater shrinkage than this, it is probably due to the tub standing in a very dry refrigerator after it is filled and the water evaporating from the wood of the tub, or the butter has a 'leaky' texture and a certain amount of brine leaks from the tub through the staves, or may be poured out from the tub when the butter is removed.

"The protein in buttermilk varies from 3 to 4 per cent. Buttermilk contains about the same amount of protein as skimmilk.

"I have never known of an instance where the washing powder mentioned has been used for neutralizing sour cream.

"You may doubtless obtain from the manufacturer of the washing powder mentioned, a statement concerning its chemical composition."

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Calves in Market Milk District

What is the best system of feeding high grade Holstein calves from time of birth until one year of age, where whole milk is sold and there is no skimmilk available?

Mt. Dora, Fla. R. C. S.

The question raised is one of very great importance in market milk districts. The common practice is to sell all the milk and fail to give calves the kind of a start which is necessary if they are to mature to the best producing animals. We have never seen a farm where calves raised without milk have made cows which were the equal of those which were given enough milk when youngsters to make them vigorous and healthy and growthy.

It pays to feed calves well; therefore, under any market condition, we would provide a milk supply. The best plan is to feed whole milk in any case for ten days or two weeks. After that, if the milk can be skimmed to save the fat, which is more valuable on the market than in the calf pail, that much is saved. If milk cannot be skimmed, we are very certain it pays to continue the whole milk supply to calves until they are at least four or five weeks of age. This is particularly true at this time, when milk prices are very much lower than they have been for many months.

Feeding may begin by giving calves six or eight pounds of fresh whole milk, from their own dams for the first few days if possible. Increase this amount very gradually until ten or twelve pounds are fed each day. By the time calves are three weeks old they will begin to eat a little hay.

A grain mixture should be placed before them so that they will very early begin to make some use of it. A very good mixture may be made from 200 lbs. of ground corn, 200 lbs. of ground oats, and 100 lbs. of oil meal. Some feeders prefer not to grind the oats. We would give as much of this mixture as the calves will eat until the time they are at least four or five months old, when it may be profitable to limit the amount of grain somewhat and force increased consumption of roughage.

Mixed hay gives a little better returns than alfalfa, or even the best grade of clover, since these hays tend to be a little too laxative when consumed greedily by calves.

Marsh Hay to Cows

Would you help me by formulating a ration from the following feeds? We have 11 Jersey cows. We have silage enough to feed 30 to 35 lbs. each daily, marsh hay for roughage. Should the cows giving 8 lbs. milk have as much silage as cows giving 20? We can get the following feeds: Gluten, $52 per ton; bran, $35; oil meal, $70; and oats, 60 cents per bushel. If the price of corn and barley are about the same, would it pay to buy some barley and mix in? At present we are selling our cream for 57½ cents per pound net for butterfat. We have to buy marsh hay from $5 to $8 per ton. Would it pay to buy alfalfa hay?

Redgranite, Wis. J. C.

While marsh hay is much less desirable in the dairy ration than a legume, such as alfalfa or clover, the price listed is so low that economical results may be obtained from feeding it in as large amounts as will be consumed. Ordinarily we would advise the purchase of alfalfa or clover, but it may cost so much that the use of this marsh hay in large amounts will be advisable. Supplemented with 30 to 35 lbs. of silage per day, it gives a fair basis for a dairy ration. Give this allowance to both dry and milking cows. To those cows which are producing milk, a concentrate mixture should be fed in addition. Corn is worth somewhat more in feeding cows than barley and, unless barley can be purchased much cheaper, we would use the former feed heavily. A mixture of 400 lbs. of ground corn, 200 lbs. of bran, 100 lbs. of gluten, and 100 lbs. of oil meal, fed at the rate of one pound for each three or three and one-half pounds of milk, should give very good results. The price quoted for oil meal is too high. It can be purchased cheaper. With butterfat at 57½ cents, a profit should be made.

CONTENTS

November Condensery Prices - - - 950
The Dairy Optimist - - - - 950
Must Pigs Root? Evvard Says No - - 951
Ayrshires on Their Native Heath - - 952
Pig Weighs 308 Pounds at 208 Days of Age 952
A Tennessee Creamery - - - - 953
New York Dairymen's Annual Meeting - 954
Cow Testing Associations - - - 955
Scrub Bull Funeral - - - - - 957
Countess Prue—World Champion Guernsey - - - - - - - - 958
Illinois Holstein-Friesian Association Reorganized - - - - - - 959
Sell Feed Through Cows - - - - 960
Butter Prices for November - - - 960
Paying for Milk by Test - - - - 960
Eliminate Poor Dairymen - - - - 960
Buy Dairy Cattle Now - - - - 960
Corn and Cottonseed Meal for Concentrates—Obstructed Teat - - - - 960
Starters, Pasteurizers, Neutralizers - - 961
Calves in Market Milk District - - 961
Marsh Hay to Cows - - - - - 961
Expect Lighter Cheese Demand Through Holidays - - - - - - - 962
Severe Declines Recorded for High Protein Feeds - - - - - - - 962
Heavy Declines in Butter Markets - - 962
Farm Bureau Federation Meets - - - 963
Danish Butter Competes with Medium Grades - - - - - - - - 964
Cheese Producers of Wisconsin to Federate 966
London Dairy Show - - - - - 966
Of Vital Interest to All Dairy Women - 968
Washington, D. C. Weekly News - - 970
Common Poultry Diseases - - - - 972
Trapping Notes - - - - - - 972
Junior Letters - - - - - - - 973
Iowa Corn Show - - - - - - 975
Bulletins of the Week - - - - 976
Bull Associations Produce Results - - 977
Veterinary—Help at Calving Time—Mammary Tumor - - - - - - - 978
Improving the Milk Market - - - 979
Helps and Handicaps to Dairying - - 980
New York Butter Market - - - 982
Oregon County Farmers' Week - - - 982
Cheese Prices for November - - - 994

Coming Events

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

Jan. 11—Wisconsin State Horticultural Society, Madison.

Jan. 11-13—Wisconsin Dairymen's Association, Madison, Paul C. Burchard, Secretary, Fort Atkinson.

Feb. 1-10—Mid-Winter Farmers' Course, Madison.

Feb. 1-10—Wisconsin Live Stock Breeders' Association, Madison. Geo. W. Davis, Secretary, Madison.

Feb. 4 & 5—State Live Stock Judging Tournament (roundup), Madison.

Heavy Declines in Butter Markets

[Report by U. S. Bureau of Markets.]

Failure of the butter markets to recover during the week ending December 4 from the sharp declines of the previous week was somewhat of a surprise to those who had expected an early reaction. Instead of a recovery the steadiness which marked the first few days of the week gave way on Friday to further weakness, and at the close on Saturday the tone was weak and unsettled in all markets with prices 5½c lower than the previous Saturday at New York and 3c lower at Chicago.

The only new factor contributing to the market weakness was the pressure of farther arrivals and offerings of Danish butter at New York. As long as buyers were willing to take top grades of domestic butter markets have held, but recently an increasing use of Danish make which could be had regularly at 6 to 8c cheaper than the top grade domestic has caused an accumulation of the latter on the markets. The policy of dealers toward the close of the week was to sell at any price which would interest buyers.

Moderate Storage Reduction

The rapid fall in values coupled with the continued money stringency has tended to make a bad situation worse on storage butter. The movement out of storage in distributing markets was very good during November considering the practical lack of exports, and the poor condition of the market. Reduction on the four large eastern markets amounted to 12,454,000 lbs., compared with a reduction of 18,839,000 lbs. last year. There is still a very large unsold surplus. At Boston the situation was reported as almost panicky. Most of the holdings, however, are in strong hands. Prices on storage butter have declined rapidly. It is reported on good authority that storage extras (92 score) were offered at New York as low as 48c. Prices around 46c on the Chicago market were rumored although some of this butter brought 50 to 51c early in the week. Canadian creamery butter in boxes sold on the Chicago market as low as 37½ to 38c. A low price of 30c was reported as having been accepted for some undergrade butter.

Week's Receipts Lighter

Receipts on the four markets were lighter than a week ago by some 5,000 tubs, but were heavier than a year ago. These light receipts on a declining market prevented losses to some extent, although conditions were such that some losses had to be taken by both shippers and receivers.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending December 4, 1920, and the corresponding week last year were as follows:

	Week ending Dec. 4 1920	1919
	Cts.	Cts.
New York	55.58	73.50
Chicago	51.53	71.70
Philadelphia	56.00	73.30
Boston	55.67	71.50
San Francisco	50.29	64.60

The receipts of butter at these markets for the week were 5,827,104 lbs. as compared with 5,430,083 lbs. a year ago and 6,065,074 lbs. a week ago.

Expect Lighter Cheese Demand Through Holidays

(Report by U. S. Bureau of Markets)

Reports from most quarters indicate a tendency toward dullness in cheese markets during the week ending Dec. 4. Business was not marketed by the same lack of confidence that attended trading in the butter markets, which suffered severe declines during the week, but the good substantial feeling of the past several weeks was noticeably missing. No doubt the heavy declines in butter were of influence in this connection, especially since a good many dealers who follow the markets had anticipated that the continued drop in butter prices would be checked before the low figures recorded the latter part of the week were reached.

Some dealers in Wisconsin attempted to stimulate trading by shading prices but little additional business resulted.

With quality of fresh cheese becoming less dependable held goods has met a better demand. There also seems to be more call now for cheese having a sharper flavor. Fancy held cheese is very firm and is moving out well to small trade. Fine early make is reported scarce. Export business is exceptionally quiet for present prices in Canadian markets are such as to attract whatever buying interest exists.

The average wholesale prices on American cheese (style Twins) for the week ending Dec. 4, 1920, and for the corresponding week last year, were as follows:

	Week ending Dec. 4 1920	1919
	cents	cents
New York	28.00	31.60
Chicago	25.50	31.38
Boston	25.83	32.70
San Francisco	29.41	30.20
Wisconsin Board	25.00	31.04

The receipts of American cheese at the four markets first given and at Philadelphia totaled 3,376,193 lbs., as compared with 2,881,732 lbs. a year ago and 3,026,240 lbs. last week.

Severe Declines Reported for High Protein Feeds

Market During Week Remains Inactive—Production Improves—Middlings Exceedingly Weak

[Report by U. S. Bureau of Markets.]

The demand for feedstuffs remained light during the week ending Dec. 4. Prices of linseed meal and cottonseed meal broke sharply. Heavy stocks and unsatisfactory export and domestic demand are given as the cause for the decline. Exports of these commodities to European countries decreased about 7,000 cars during the first ten months of 1920 compared with the same period in 1919.

Wheat feeds, especially middlings, were exceedingly weak. Increased flour production and the inability of a number of mills to obtain shipping instructions for December delivery contracts caused heavy offerings at lower prices. Buyers' bids were usually several dollars below prices quoted by mills and western jobbers. Minneapolis reports that a number of track cars of bran and middlings were sacrificed at prices considerably lower than prevailing quotations in order to avoid demurrage from accruing. Stocks of wheat feeds are reported to be heavy in principal markets.

Bran quotations were as follows: $26.50 at Minneapolis, $31 at Chicago, $32 at St. Louis, $50 at San Francisco, $39 at Atlanta, $37 at Boston, and $36 at New York and Philadelphia. Standard middlings ranged from $23.50 in Minneapolis to $28 at Chicago and $35 in Boston.

Offerings of cottonseed meal were heavy. In the Chicago markets, 43% meal was offered as low as $37 per ton. Several transactions, however, were consummated at a higher figure. Southern markets, due to the lack of improvement in financial conditions and mildness of the season, are reported dull. Quotation on 41% meal were $31 at Memphis, $33 at Kansas City, $35 at St. Louis, $38 at Chicago, $40 at Buffalo, $42 at Minneapolis and Boston. The 36% meal averaged $3 lower.

Linseed Meal Off in Northwest

While the price f. o. b. Buffalo remained unchanged at $40.50 to $41 per ton, northwestern mills reduced their prices to approximately the same basis. The demand has shown very little improvement due, it is maintained, to offerings of cottonseed meal at lower figures and heavy stocks of other feeds. All mills report heavy stocks. Other quotations are $44 at Chicago and New York, $45 at Boston, Philadelphia and St. Louis, $44.50 at Kansas City.

Offerings of gluten feed were light and demand good. Kansas City quoted $32, but majority were at $48 to $51. Hominy feed ranged from $30 in Omaha to $37 in Chicago and $43 in Boston. Alfalfa meal sold as low as $28 in Chicago and St. Louis. In Jacksonville velvet bean meal was quoted at $35 and 36% peanut meal at $50. Beet pulp was $45 in Minneapolis, $46 in New York, and $48 in Boston.

The hay market shows little change. No. 1 timothy ranged from $23 in Minneapolis to $38.50 in New York. Mixed hay sold in the same markets for $20 and $33, with clover at $20 in the former market. No. 1 alfalfa was quoted at $24 in Omaha, $27 in Minneapolis, $28 in Kansas City, $30 in Chicago, $23.50 in San Francisco, $35 in St. Louis, $32 in Memphis, and $38 in Jacksonville.



EMINENT'S DISTINCTION, JERSEY COW WHICH HOLDS THE SECOND HIGHEST RECORD IN VIRGINIA, 15 686.7 LBS. MILK, 802.03 LBS. FAT, MADE AT 11 YEARS, 7 MONTHS

OWNED BY BOWMONT FARMS

County Rivalry at the Cheesemakers' Convention

The growth of intense rivalry among the leading cheese counties in Wisconsin during the recent years in competing for prizes, and in making the largest and finest exhibits at state fairs, cheesemakers' conventions, etc., is one of the hopeful signs of the times in the industry.

At the coming conventon of the Wisconsin Cheesemakers' Association January 4, 5, 6, 1921, at Milwaukee, this intense county competition is likely to bring new leaders to the front. Altogether 175 prizes, valued at over $1,200, are listed in the new convention program, which is now being printed and will soon be mailed to every factory, by Secretary J. L. Sammis, College of Agriculture, Madison, Wisconsin. In addition, $800 in premiums will be distributed, and diplomas awarded for every cheese scoring 93 or above. One or more prizes are offered in every county in the state. These, with the special prizes for the leading county and the splendid state prizes and premiums, open to all, will undoubtedly bring out the largest cheese exhibit ever seen at a convention, and a special drive in all of the larger counties to carry off the leading honors.

We Learn From Work

1. That work is good for us.
2. That we should find our greatest happiness in it, and not in escape from it.
3. That the most salutory form of rest consists in change from one kind of useful work to another kind.—F. A. FALL.

FARM BUREAU FEDERATION MEETS

The permanent organization of the American Farm Bureau Federation was made in Chicago March 3, 1920. Its present paid membership is well over 1,000,000 with at least 500,000 affiliated members. Close to 1,000 farmers attended the Indianapolis convention December 6—8. Thirty-two states were represented.

The Federation is conservative in policy and national in scope and influence. It goes after big things and is accomplishing much toward bettering American agriculture.

FOREMOST of the considerations of members of the American Farm Bureau Federation, convened in annual session at Indianapolis last week, was the recent severe declines in market prices of farm products and the incident financial hardships to producers. The initial action of the convention was to telegraph Congress on the opening day of its present session asking that immediate provision be made for extensions and renewals of farmers' obligations, that an embargo be placed on importations of agricultural products in "destructive competition with American farm commodities", and that arrangements be made to open foreign markets for the exportation of agricultural products.

J. R. Howard, in reviewing the present market situation, estimated the loss to farmers in the recent price slump at more than $7,000,000,000 in the value of corn, wheat, and oats, and placed proportionate loss appraisals on other products. Mr. Howard said: "The wheat farmer is in the best shape today of any farmer in the Union . . . . and yet from the wheat growing districts every day reports to our office show that farmers are compelled, because of pressure brought upon them, to sell not only their crops but their machinery and everything they have to pay their debts. They are borrowing money to get into the cities where they can get work to support their families. Financial conditions will not be righted and American business will not be upon a sound basis ever again until the purchasing power of the farmers of America is brought back to normal."

Transportation, Marketing, Legislation Discussed

The three-day program was outlined to cover the transportation, marketing, and legislation work of the Bureau. The Wednesday discussions dealt with various methods in organization work.

TRANSPORTATION:—Clifford Thorne, representative of the Bureau on railroad rates, told of the work done seeking lower rates on farm freight, chiefly in reducing the railroad valuations which form the basis of present rates. Even though it appears that less was accomplished than was hoped, this work is credited by President Howard with securing sufficient reduction to net a saving of $100,000,000 to farmers annually. Henry Sherley of the Federal Highway Council called for assistance in working out a plan which secure permanent roads. Governor W. L. Harding of Iowa spoke of the benefits to middle western agriculture from a deep waterway from the Great Lakes to the sea through the St. Lawrence River, which he estimates will permit a saving in transportation costs of 5 to 7 cents per bushel between lake ports and Boston. Such a waterway would cost about $300,000,000, he says, and could be made a profitable investment by the government through developing hydro-electric power.

MARKETING:—In the marketing discussions main emphasis was given the need of credit provisions allowing the producer to store his crops and market them throughout the year rather than selling three-fourths of the total production in four months as now occurs. A. F. Lever, author of the Smith-Lever Agricultural Extension Act, submitted a credit scheme in which warehouse receipts of insured storages of non-perishable farm staples can be used for credit. "What we seek to do," said the speaker, "is to pool warehouse receipts, representing tens of millions of bushels of wheat or corn or oats or barley or pounds of wool or cotton into the hands of trustees to issue against them short-term certificates to be offered for sale to the investing public." He charged the Federal Farm Loan system with failing to furnish the credit support to farmers it should, but held that the system can be changed to be of much benefit.

Willis H. Booth of the Guarantee Trust Company explained the plans for organizing a banking corporation to aid exportation, which would improve the market situation by relieving it of the present surplus. The Bureau accepted his invitation to send representatives to meet with bankers in Chicago December 10 and 11 to consider such an organization.

Contrary to the general feeling throughout the convention that the Federal Reserve Bank has been too severe in its application of deflation measures to agriculture, Gov. W. P. G. Harding of the Federal Reserve Board declared that liquidation has been much more marked in New York City banks than in sections serving agriculture directly. He predicted the early completion of arrangements for foreign sales which will take care of staple products at better prices.

Dean Eugene Davenport gave a general survey of marketing conditions, emphasizing the losses the farmer incurs through marked fluctuations in price. He called for, "Steady prices, not necessarily high prices", and pointed out the Bureau's opportunity as a stabilizing factor. Milo D. Campbell characterized the American farmer as a 1920 John Alden and said the hope of the future of agriculture is that farmers are now ready to "speak for themselves", that through such organizations as the Bureau "we are now ready to have a word with Priscilla for ourselves".

LEGISLATION:—The work of H. C. McKenzie, New York, as chairman of the Bureau's committee on taxation, has brought such results as led President Howard to say: "I consider that he has done a greater piece of work for American agriculture during the past year than has been performed by any other one individual". Mr. McKenzie in his address called for a strong stand against the effort to substitute a tax on sales for the present excess profits tax. Such a change, he holds, would saddle the chief burden of taxes on the consumer instead of levying it upon the organizations making large profits as at present. The sales tax when paid by institutions not making a profit is a tax on capital, which the speaker asserts has been proved unsound. He declared for a reduction of surtaxes and a constitutional amendment doing away with tax-free securities.

The Bureau seeks temporary relief for farmers in an embargo on agricultural importations, as stated in its resolution to Congress, and for tariff reform, so that the farmer has "the same consideration in tariff matters as industry gets", which is "the least we ought to be satisfied with".



DIRECTORS OF THE AMERICAN FARM BUREAU FEDERATION

Left to right, top row: John T. Burton, Utah; J. W. Morton, Georgia; J. W. Coverdale, Iowa, secretary; H. E. Taylor, New Jersey; middle row: Dr. A. C. True, Washington, District of Columbia; C. H. Gray, Missouri; D. B. Cornwall, Vermont; E. F. Richardson, Massachusetts; bottom row: O. E. Bradfute, Ohio, newly elected vice-president; S. L. Strivings, New York, retiring vice-president; J. R. Howard, Iowa, president; Gray Silver, West Virginia; at the extreme right, W. H. Walker, California.

A Full Measure of "Resolves"

The convention put over a full measure of resolutions—to a total of thirty, these being adopted with less time for close consideration than many delegates desired. Among these "resolves" it is recommended that the Bureau give attention to the need for rural personal credits and taxation questions, the Department of Justice was requested to delay plans for the disposition of the stock yards until the Bureau's committee can make its examination, our incoming president was requested to appoint as Secretary of Agriculture a man of "thorough and practical understanding of farming", an amendment was demanded increasing the Federal Farm Loan Act limit to $25,000, sympathy with the laboring man was expressed and unalterable opposition to strikes and lockouts, preferential rates were asked on limestone and fertilizers, the preservation of state power to regulate carriers in intra-state shipments was demanded, the basis for fixing return of railroads on cost-plus basis was denounced, and a truth in fabrics law and a simplification of the income tax law were demanded from congress. The resolutions declared the farmer is entitled to compensation for his services equal to actual cost of efficient production, that a law permitting collective bargaining should be at once enacted, that legislation should be passed to prevent short selling in agricultural products, that the Bureau favors a Great Lakes-to-the-sea deep waterway, and that a tariff law should protect American farm products against those from countries where land is cheap and living conditions low.

Thirty-two States Represented

Thirty-two states were represented by delegates at this second annual convention of the American Farm Bureau Federation meeting. In these states the organization now has well toward one and a half million members. The Federation is now "both in financial support and in number of members the strongest organization of farmers which has even been built up in this country". About one thousand attended this convention and came to fuller appreciation not alone of the great work the Federation is already doing but also of its potential influence in bringing about the improvements which shall measure the future of American agriculture.

President Howard outlined the present activities of the organization and laid before the meeting the plans now under way for enlarged undertakings. If an undercurrent of pessimism regarding present agricultural conditions was noticeable among the members, there was no such feeling relative to Bureau affairs. The general sentiment was for conservative progress which will bind the organization closely together and enable it to serve agriculture in a large way.

Officers Elected

J. R. Howard was re-elected president by a unanimous vote and given a hearty ovation. In his acceptance remarks he said: "I cannot promise you more than I have given. I have done my level best and will continue to do my level best. The results we have obtained have come through the co-operation you have given me. I ask—I expect a continuance of that co-operation."

A lively contest for the vice-presidency began early in the session. John G. Brown, president of the Indiana Bureau; Howard Leonard, president of the Illinois Agricultural Association; and S. L. Strivings of New York, who held the position during the past year, were contestants. A compromise turned the supporters of the first two to O. E. Bradfute of Ohio. Only Mr. Strivings and Mr. Bradfute were nominated, the latter being elected.

Directors chosen were: for the far western section: W. H. Walker, California; W. G. Jamison, Colorado; and John T. Burton, Utah; for the eastern section, E. B. Cornwall, Vermont; E. F. Richardson, Massachusetts; and H. E. Taylor, N. J.; for the central section, Howard Leonard, Illinois; John G. Brown, Indiana; and C. H. Gray, Missouri; and for the southern section, Gray Silver, West Virginia; Jas. W. Morton, Georgia; and J. T. Orr, Texas.

In session December 9, the executive board re-appointed J. W. Coverdale secretary and gave him charge of organization work. C. E. Gunnels was re-appointed as assistant secretary and given duties as treasurer. Departments of co-operation and publicity were created. A dairy marketing conference was authorized for a date late in January, 1921.



For Mother From Daddy and the Children

Everywhere the tubs and the washboards are being discarded. Women are thinking more about their own health and comfort. Menfolks are showing more interest in labor-saving devices for the home.

Especially at Christmas time is this interest strongly manifested. For example, hundreds of Maytag Washing Machines will be given to mothers this year for Christmas. Why not you?

If your home is without electricity, the Maytag Multi-Motor Washer is a godsend. Gives all the advantages of the electric washer and many of which no electric can boast.

A wonderful little air-cooled gas engine—a part of the washer—operates it. Will do your biggest wash anywhere—because it is a complete outfit. Use it in the cellar or kitchen—in the shed. A long, flexible metal exhaust pipe carries all the smoke and noise outdoors.

For Homes with Electricity

The Maytag Wood Tub Electric Washer is identical with the Multi-Motor except that it is operated by an electric motor. You merely hitch it up to an electric light socket—turn the switch and it's on the job. Can be used with any kind of current including farm lighting plant.

Has an electric wringer adjustable to three positions. Wrings from washer into rinse tub—from rinse tub into blue tub and from blue tub into basket without moving the machine. Wrings forward and reverse.

The Maytag Multi-Motor handles heaviest pieces in quick time. Saves you the hard work. All you do is feed the clothes through the power wringer and hang them out. Costs only a little to buy and practically nothing to operate.

Maytag

Electric and Gas Power Washers

The Maytag Company, Dept. 105, Newton, Iowa

Branches at Philadelphia, Pa.; Indianapolis, Ind.; Minneapolis, Minn.; Kansas City, Mo.; Portland, Ore.; Winnipeg, Man., Can., and The Maytag Company of England, 323 Caledonian Road, King's Cross, London.

Makers of Maytag Multi-Motor, Electric, Belt and Hand Power Washer

Cow Waters Herself



with this wonderful new Libbey Automatic Water Bowl. Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

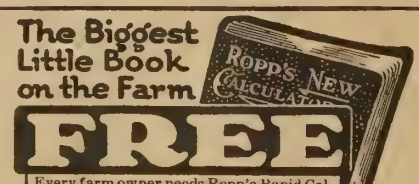
Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

The Biggest Little Book on the Farm



FREE

Every farm owner needs Ropp's Rapid Calculator—the book that gives you answer in an instant to all everyday Farm problems. We will also send our latest catalog on

Square Deal Fence

The fence that stands tight and trim whole year 'round, without bagging and sagging. The fence that takes fewer fence posts and costs less because it lasts longer. Both books free and postpaid to landowners.

KEYSTONE STEEL & WIRE CO.
7077 Industrial Street Peoria, Ill.

Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build—such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field

Send for catalog No. 6

W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

Danish Butter Competes With Medium Grades

Total Imports of Foreign Butter for First Nine Months of 1920 More Than 28 Million Pounds

Imports of butter into the United States during the first nine months of this year, from January to September, inclusive, totaled 28,186,993 lbs. Of this quantity Denmark led in supplying 14,367,127 lbs., Canada and Argentine following with 7,393,702 lbs. and 3,078,437 lbs., respectively. The remainder came principally from Holland and New Zealand.

Because of the generally high quality of the Danish butter much interest has followed it in domestic markets. It was at first believed that this product would come into direct competition with the finer grades of American butter. However, while its quality has compared favorably with the better domestic make such competition has not resulted, but rather the Danish butter has competed with medium domestic grades, scoring 89—91 points.

Danish Package Not Always Popular

Of the several factors which have been responsible the package is outstanding. Most of this butter has found its way into the New York market which is highly specialized, and where the Danish style of package is not entirely satisfactory when the butter must be resold. Retailers who sell from the package and who have refrigerators equipped for the standard tub or cube object to the cask. The cask is not such a disadvantage to the distributors who cut up and print butter for their own trade, although it involves more work in handling and is not a package which can be disposed of to advantage after being emptied.

The principal outlet for most of the Danish butter has been to a class of trade accustomed to taking butter at prices considerably under the price of fancy goods. The result has been that many consumers who heretofore have been using medium and undergrade butter have become accustomed to the finer qualities of Danish butter and this at prices which would correspond to those paid for 89 to 91 score domestic. Whether or not these consumers will continue to demand equally fine quality will depend on current prices, also upon the ability of American creamerymen to improve the quality of American butter so that there will be enough fine butter to supply the demand without causing such wide spreads between fancy and medium grades as have typified markets this fall. It is hoped that a better demand for quality will result and that American creameries will be able to supply markets with ample quantities of fine butter. A review of butter prices the past few months will indicate how much more profitable it has been to market fancy butter than undergrades.—U. S. Bureau of Markets.

Cheese Prices for November

Cheese prices during November held fairly well to their October rate. For the eleven months ending November 30, 1920, the total receipts of American cheese at Chicago, New York, Boston, and Philadelphia totaled 148,067,183 lbs. as compared with 176,475,747 lbs. during the corresponding eleven months of 1919. This is a decrease of 28 million pounds, the month of November accounting for two million of this decrease. The cold storage holdings at these markets are also eight and a half million pounds less than a year ago, with exports for the year somewhat in excess of what they were up to December 1 a year ago.

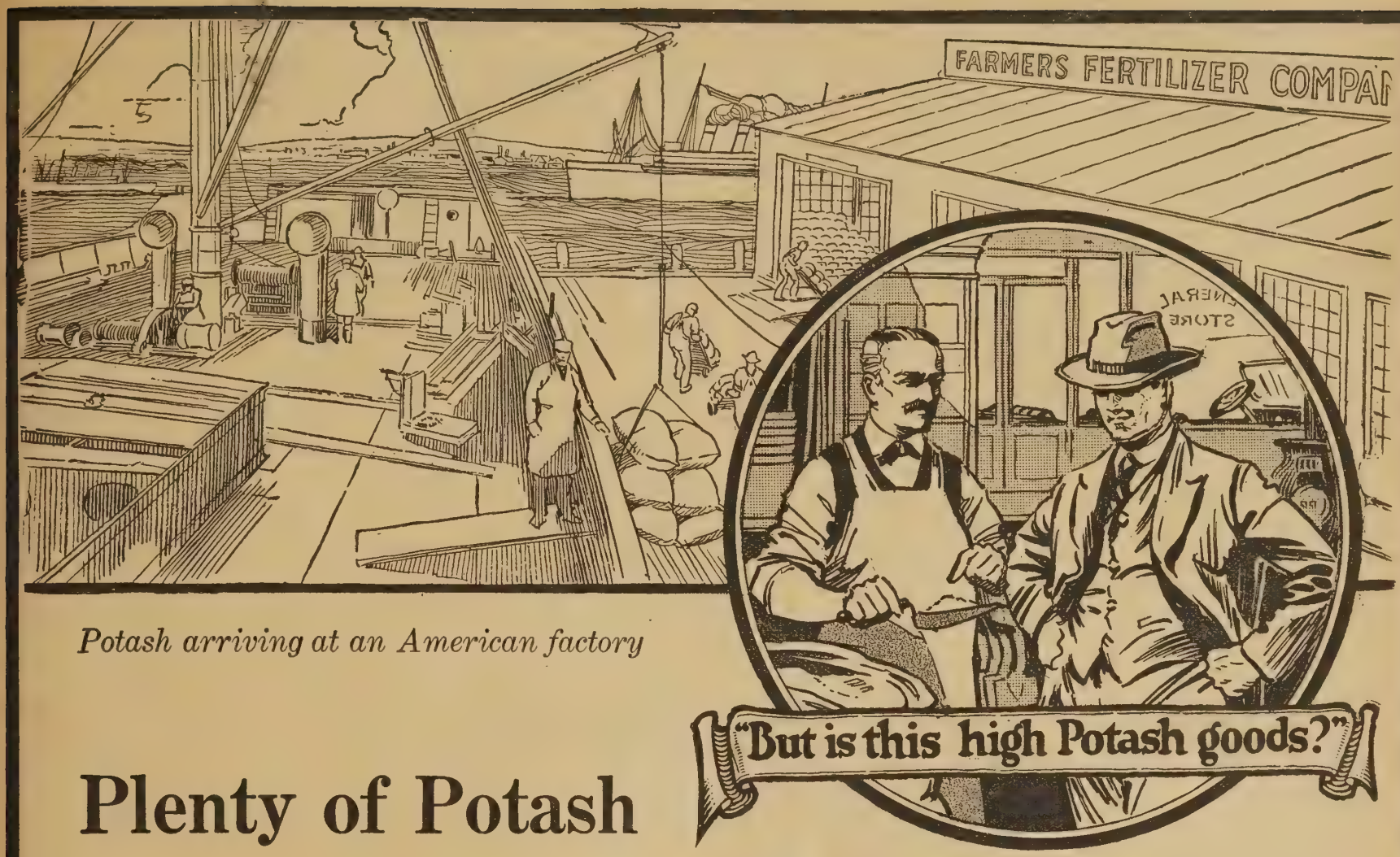
The daily quotations of the U. S. Bureau of Markets show the following average quotations on cheese (style Twins) for three large markets in November, 1920 and 1919:

	Average price	
	November 1920	November 1919
	cents	cents
Wisconsin Boards	24.47	30.89
Chicago	24.52	30.74
New York	26.88	31.49

Longhorns averaged 26.10 cents on the Wisconsin Boards for November as compared with 25.39 cents for October.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.



Potash arriving at an American factory

Plenty of Potash

AFTER five years of Potash famine there is now plenty of Potash to be had at prices that will permit it to be used at a good profit.

When Potash in mixed fertilizers was sold at five dollars per unit, everybody exclaimed that the price was "prohibitive". This was a state of mind. As a matter of fact, when the records of long continued experiments east, south, and west, were carefully gone over it was found that there were plenty of cases where the crop increase from the use of Potash on corn, wheat, oats, cotton, tobacco, potatoes, vegetables and fruit returned over five dollars per unit, even valuing the crops at prices current before 1914.

Now prices of Potash are less than one-half of these "prohibitive prices" and prices of farm products are still high enough to make the purchase of the five to ten per cent. Potash fertilizers a very profitable investment when yields alone are considered.

But this is not all. The shipping and keeping quality of many of our truck, fruit and special crops has suffered from lack of Potash.

Plant diseases have increased for the same reason.

Our best lands have been overworked to the limit and need restoration.

The fertilizer manufacturer who really has the foresight to understand that he serves his own and his customers' interest best by furnishing what his community really needs will return to the formulas that were found most profitable for his community before the Potash famine upset things. Indeed this is putting the case mildly, for provision should be made not only to restore the old high Potash formulas, but to use additional Potash to restore the drain on the soil during the past five years.

We never advised the use of Potash on soils where we had reason to believe it would not prove profitable, and never shall do so.

There is not a single crop on which Potash has not been found profitable on many types of soil.

In the readjustment period when farmers must use every means to assure success it is of the utmost importance that they should not be turned aside in their efforts to buy fertilizers with a reasonable (five to ten) per cent. of Potash.

Potash Pays

and after five years of Potash famine it will pay better than ever.

It takes time to produce and ship Potash and large stocks are not carried at Potash works.

Therefore it is imperative that you notify your dealer at once what brand of fertilizer you will require and that you should not be induced to change your order on any claim that the right kind of goods cannot be secured. Stick to it and you can get what you know you want.

SOIL AND CROP SERVICE, POTASH SYNDICATE

H. A. HUSTON, Manager

42 Broadway **New York**

Cheese Producers of Wisconsin to Federate

A PLAN for the cheese producers to get control of the marketing of their product, and to organize the Wisconsin Dairymen's Storage Co., has been adopted by a nearly unanimous vote of the stockholders of the Wisconsin Cheese Producers' Federation at a special meeting on Nov. 23rd, 1920. This plan has been endorsed by the Division of Markets of Wisconsin; the Economics Department of the University of Wisconsin; the Farm Bureau Federation and others.

It is contemplated to get the majority of cheese factories as soon as possible to join the Wisconsin Cheese Producers' Federation, which for nearly seven years has been marketing the cheese of its members successfully and at a very low cost. This fact was determined by the Division of Markets of Wisconsin and by the Economics Department of the University of Wisconsin who made an investigation of how the business of the Federation has been conducted. That the Wisconsin Cheese Producers' Federation has been successful is shown by its steady growth, as the following figures will show:

Year	Pounds cheese	Value of cheese sold
1914	6,125,480	$ 887,501.00
1915	7,558,796	1,132,867.00
1916	7,490,020	1,304,640.00
1917	8,981,308	2,171,526.00
1918	8,522,509	2,322,536.00
1919	14,098,021	4,319,956.91

During this time the farmer members of the Federation have been paid the Plymouth board price, which is all that the farmers outside of the Federation get, and in addition to that they have built and paid for a warehouse and storage which with ground and equipment could not now be replaced for less than $70,000. Over and above that more than $42,000 has been paid out in dividends or deferred payments and more than $38,000 remained in the treasury January 1st, 1920, making in all $150,000 Federation members were to the good at that time.

However, the protection against price manipulation, especially during the summer months when the most cheese is produced, has amounted to many times the surplus. There is no longer the great difference between the summer and winter prices that there formerly was.

The Federation is no longer an experiment. It is recognized as being one of the most successful examples of farmers' co-operation in this country.

A great deal of money, time, and effort has been spent to increase the production of dairy products, but little or nothing has been done to improve marketing conditions of the same. It is absolutely necessary that dairy producers combine in the marketing of their product in order that they realize fair returns on the product of their cows.

In their report the Division of Markets and the Economics Department of the University of Wisconsin say:

"The Wisconsin Cheese Producers' Federation is one of the most successful and commendable examples of farmers' co-operation in the United States. * * * The experience of the Federation indicates that Wisconsin farmers have a great opportunity before them in the building up of a strong, unified co-operative cheese producers' selling organization. The Federation has shown that it knows how to sell cheese, and to keep the costs down. * * * All it lacks is the size of business. What it should have is more cheese. If Wisconsin farmers provide the volume of business this Federation, because of what it now does and will do for its patrons, is destined to rank in the class with the California and Canadian farmers' co-operative concerns."

The only way in which the producers can have anything to say about prices is through an organization of this kind, large enough so that it controls the marketing of the cheese produced in Wisconsin. These prices are now fixed on the Plymouth board by the agents of the five big packers who have nothing to do with the production of cheese, and who many times fix the board prices regardless of supply and demand, and regardless of the cost of production.

The easy money in the cheese industry in the past has not been in the production of milk to be made into cheese, but it has been in the marketing of cheese, and it is time that the farmers who produce the cheese get some of this easy money.

In order that the Federation as it grows larger may be in position to properly handle and market its cheese, it was decided to organize the Wisconsin Dairymen's Storage Co. with a capital stock to begin with of $250,000, the common stock of which need only be a nominal sum, say $2,000. This common stock is to be the voting stock, owned by the Federation, and held in trust for the Federation by its board of directors; the balance to be preferred stock; this stock to have no vote, and to draw 6 per cent interest guaranteed by the Federation; the preferred stock to be divided up into shares of $50 each, and to be sold to anyone, preferably farmers.

While this preferred stock has no vote nearly all of it will be held by farmers who are Federation members, and they will control the Storage Co. through the Federation. As soon as enough stock has been sold this storage company plans to take over the warehouse which the Federation owns at Plymouth; also to take over the Spring Green warehouse, and to build or buy warehouses where needed. Practically all the money that farmers will invest in this warehouse stock will be invested in buildings, grounds, and equipment. The organization expenses will be kept at a minimum, as this is not a stock promoter's scheme. The storage company will take over the Plymouth and Spring Green warehouses at book value, which is much below the actual present value.

If the farmers want to go into the business of marketing their cheese they must finance their organization and provide warehouse room. Very few farmers would hesitate to invest several hundred dollars in a granary to house what little grain they are now growing, and there can be no reason given why they should hesitate to invest that amount of money in a cheese warehouse association when the value of their cheese amounts to much more than the value of their grain, and when they are guaranteed 6 per cent interest on every dollar they invest in warehouse stock.

Dairymen must directly or indirectly pay for cheese storage houses and their upkeep, and they might as well own and operate them.

Subscription blanks for Storage Co. stock will be sent to the officers of every local association, and they will be requested to circulate them among the patrons of their factory and others and get all the subscriptions for stock they are able to get. In this way the organization expenses will be kept at a minimum.—Wisconsin Cheese Producers' Federation.

London Dairy Show

THOMAS REECE, ENGLAND

THE London Dairy Show of the British Dairy Farmers' Association, held this year at the Royal Agricultural Hall, was most successful. It was the 42nd show and on the popular days was quite inconveniently crowded. Cattle entries numbered 384, a figure substantially above anything in recent years.

The results in the inter-breed competitions at the last two shows have quickened rivalry in the milking breeds of cattle. Last year the honors went to the Red Polls; at the recent show the British Friesians made a clean sweep of the cups and other championship trophies.

Enterprising supporters of the British Friesian are naturally jubilant at the successes gained by their breed. Their efforts in pushing it will be helped greatly by the addition of these important honors to records in private performance already arresting attention. The value of Dairy Show successes, especially to a breed more or less local or new to the great body of farmers, was exemplified in the case of the Red Poll last year. The hornless reds of East Anglia were beginning to make fresh ground outside their native district before their victories, but the impetus which their milking performances in the fall of 1919 gave to their progress was instantly marked, and in a few months raised the breed to a prominent position in dairying districts in many counties. The results of the recent achievements of the black and white cattle of Friesian origin will not be less effective in gaining new supporters for them.

The milking and the butter tests were exceedingly high. Greater importance than ever was attached to the performance of the cows at the milk pail. The association adopted a different plan of management. In past years the result of the milking trials and butter tests has not been available until late on the last day of the show, while cattle were judged by inspection on the previous Tuesday. This year the trials and tests were taken earlier, with the result that the yield of each cow was available for the judges when the inspection classes were paraded. In these days, when increasing importance is attached to the quantity of milk given, the innovation is an advantage and, furthermore, as the amount of milk given by the exhibits was shown over their stalls it enabled the general public to form some idea as to the quantity of milk produced by the best cows in this country.

As is customary, a large number of special prizes and cups were offered in this section. The Spencer Challenge Cup is offered for the best dairy cow in the show, that is, a cow gaining the greatest number of points by inspection, milking trials, and butter tests. This cup went to A. and J. Brown's Hedges Sweet Buttercup, British Friesian, which in the butter test gave 57 pounds, 4 ounces milk in 24 hours, with a yield of 2 pounds, 8 ounces butter. Reserve to her came the Shorthorn cow, Ruby, belonging to J. T. Nelson and Co. who, with a rather less milk yield amounting to 49 pounds, 13 ounces in 24 hours, yielded 2 pounds, 11¼ ounces butter.

The Bledisloe Cup for the cow gaining the highest points above the standard of her breed was awarded to W. and R. Wallace's British Friesian cow, Inwood, the reserve in this instance going to the Duchess of Albany's Jersey cow, Hartsfield Venus, while the Desborough cup for the cow gaining the highest points in the milking trials was awarded to Mr. Palmer's Rosebud 14th, with Sir C. C. Allom's Hadnock Mignon Daisy 5th reserve, both of these being of the Shorthorn breed.

The Barham Cup for the cow gaining the greatest number of points in the milking trials resulted in another win for Messrs. Wallace's Inwood, the reserve in this instance, as well as the winner of the Shirley Cup, being G. Holt Thomas's Cymric Cheeky. The Stagenhoe Challenge Cup for the Guernsey cow or heifer gaining the greatest number of points at the show was awarded to the Duchess of Albany's Hartsfield Venus. The Kerry and Dexter Challenge Cup confined to cattle of these breeds was won by J. W. Towler's Gort Drop 6th, reserve Captain Nelson Zambria's Minley Mistress.

At the inaugural luncheon of the show, Lord Bledisloe, president of the association, said that this year's show had never been equalled, not merely in the quantity of the exhibits, but in quality. The cattle exhibits, he thought, would be regarded by experts as the finest collection in one building of dairy cattle that had ever been seen in this country. "There was no branch of the agricultural industry," continued Lord Bledisloe, "in which there had been more progress made during the last 45 years than dairying. In spite of the melancholy wails of certain gentlemen who occasionally contributed to the public press that there was poison in the milk pail, it is more important to the health of the community, and particularly the poorer section of the community and their children, that there should be a plentiful supply of milk than that there should be milk which from a bacteriological point of view was absolutely above criticism." Some of the leading medical men at the recent conference on tuberculosis drew attention to the fact that a certain section of the public were being deterred from consuming sufficient milk for themselves and their children by these alarming reports about disease carried by the milk supply. He agreed that they must all try to improve their methods. There was scope for considerable improvement in the matter of cleanliness in the production, carriage, and distribution of milk, but the milk being consumed by the British public today was infinitely better and more free from disease, both bovine and human, than the milk consumed in this country a generation ago.

As a result of the milk recording tests which, fortunately, were coming more and more into use, they found at

(Continued on page 971)

True Value
DAIRY FEED-STOCK FEED

True Value PRODUCTS
DAIRY FEED
STOCK FEED
HORSE FEED
HOG FEED
CHICK FEED
DEVELOPER FEED
SCRATCH FEED
POULTRY MASH
AND
LADISH QUALITY WHEAT FLOUR

Winter Profits from Dairy Cows

Winter Profits from dairy cows depend upon the economy of winter feeding. Economical feeding in this case does not mean feeding a small amount of feed, nor does it mean feeding the cheapest feed obtainable. It means that combination of feeds that will produce the most profitable results at the least cost.

True Value

True Value Dairy Feed is a combination of those nutrients which the dairy cow can most **profitably** transform into bodily maintenance and milk. The cow uses the energy received from the feed **first** for bodily needs and **then** produces milk from the balance. Some nutrients can be used most profitably for body maintenance and others for milk production. Hence, it is absolutely necessary to have the **exact balance** of nutrients to make the most profit.

In True Value Dairy Feed we have combined **only** those nutrients which the Dairy Cow can convert into vital energy and milk **at a profit.** The profitable cow will not fatten on True Value Dairy feed but she will maintain her **highest** standard of bodily vigor — produce her maximum amount of milk — and return the **greatest** profit on the **money** invested.

True Value Stock Feed like True Value Dairy Feed is a profit making feed. It is designed first of all for young stock. That is, it will furnish energy for plenty of rapid growth and development and still not fatten. Because the nutrients in True Value Stock Feed are directly available for use, the development of young stock is made at a wonderful profit.

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If you are interested in real bread of the finest kind, try our Ladish Quality Flour.



This Hog House Saves Feed and Lessens Work

Hogs are kept warm, clean and healthy. The air-cells in the tile protect from unfavorable weather and permit hogs to fatten rapidly on less food. No feed is wasted on the smooth floor.

HOLLOW TILE

The Most Economical Form of Permanent Construction

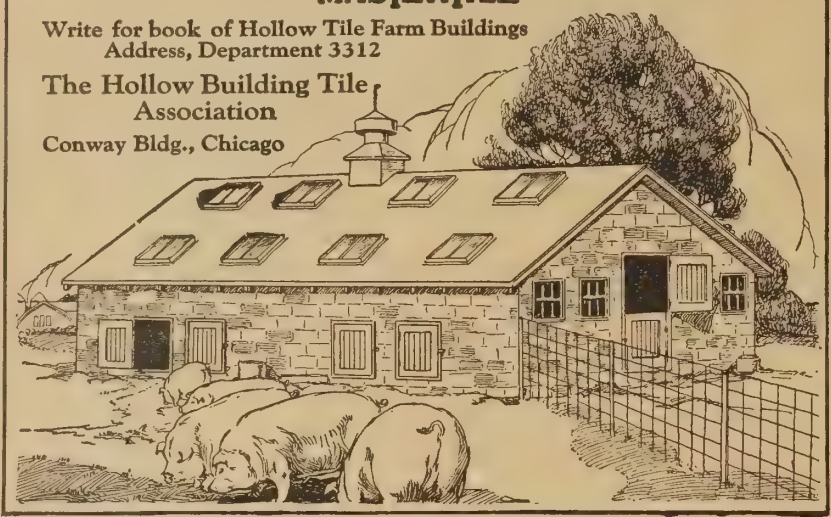
Little painting or repairs are ever necessary, and the house is easily kept clean. Secure a set of plans for this hog house from your building material dealer for $3.00; or order direct, giving your dealer's name. Ask for Design No. 1182.

MASTERTILE

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The Hollow Building Tile Association

Conway Bldg., Chicago



Westclox



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BABY BEN does his work with a smile—and gets you up the same way. Not so easy sometimes, either, on those cold, dark mornings when you'd a lot rather stay in bed for another little roll-over nap.

Maybe it's his littleness that gets him so many friends: folks chum up with Baby Ben on sight. But he's a lot more than just cute! Otherwise his friendships wouldn't last.

He's a good timekeeper and a dependable alarm—true to the Westclox reputation.

Baby Ben will call you once with a long ring or he'll coax you gently out of bed with intermittent calls—any way you say.

He's just about as big as a minute but he takes every minute seriously—as a good timekeeper should.

That Westclox construction inside his case is what helps him make good. The name, Westclox, on the dial and tag *always* means Westclox patented construction; and honest, faithful timekeeping.

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Makers of *Westclox:* Big Ben, Baby Ben, Pocket Ben, Glo-Ben, America, Sleep-Meter, Jack o'Lantern

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Of Vital Interest to All Dairy Women

H. S. K. WILLCOX, NEW YORK

THE millions of new American voters are some day going to vote for and have enacted laws which the regular voters in this country have overlooked and passed by until shamed out of their indifference by their own wives, mothers, and sisters. One of the greatest of these vitally needed pieces of legislation is about to wage a grim battle for its passage, and its future existence and power seems to depend at this writing on the earnest help of American women. That bill to come up for the consideration of Congress in December is called the Sheppard-Towner bill and it provides for the very material lessening of the casualties of American motherhood. Surely every farm woman in our United States should manifest interest and concern at this announcement, especially those of us in isolated districts or far from the advice and medical attendance which might save a life at the most critical time in any woman's span.

Good Housekeeping Magazine is making its mighty influence felt for the immediate passage of this bill and from its columns I would gather the facts which every woman everywhere should know if she is to throw her influence in time for a law which will make her life and that of her baby nearly as well worth the saving in the opinion of Congress as the lives of her husband's hogs, sheep, cows, and horses.

It will come as a shock to the average decent American man and his faithful partner to learn that the casualties of war and the casualties of motherhood nearly balance. Our own casualties in the world war were 34,625 killed in action, while during the same period, 30,000 American mothers died in childbirth.

Every year in the United States more than two million women submit themselves to a contest with death in bringing children into the world. These figures are repeated year in and year out—in war or peace—and women accept the burden and many of them call it their happiness. Casualities of war are accurately recorded and scientifically treated under government responsibility, but the casualties of motherhood are casual, indeed, says Good Housekeeping, and it is considered as a mere matter of course for which there is none but individual responsibility, and no care and treatment beyond that afforded by the family purse. To the meagre purse may be traced many of the fatalities and injuries that help swell the shameful total of deaths from this cause.

For the casualties of war the government provides free surgical care of the most expert, experienced, and scientific kind. It assumes no responsibility for the bringing into the world of its future citizens. Mothers must pay their own surgical care, and we know too well that only a very small proportion who need such care can afford it, and those living on isolated ranches and farms fight the battle of childbirth with little or no help from trained sources—and accept the life or death verdict with a courage glorious and sublimely pathetic in its unselfishness.

It is safer to become a mother in many other countries than in the rich and progressive United States. Of fifteen important countries, fourteen have a more favorable maternal death rate than ours, and seven a more favorable infant mortality rate.

The Children's Bureau, from the point of view of human welfare perhaps the most important bureau of the national government, and yet receiving the most meagre of aid, found that the menace to childhood begins at the darkest hour of the mother's life—when she brings her child into the world. It found that the person most strangely neglected by medicine is the helpless mother at that hour, and that by neglect alone the child and mother cruelly suffer. It found that 80 per cent of the mothers in rural districts had received no advice or trained care during pregnancy and that many mothers had no trained care whatever at confinement.

This bureau found that not only 23,000 American mothers die each year at confinement, but that within the first year of life and from causes going back to pregnancy, childbirth, or poor care or lack of any immediately following, 250,000 babies die each year, 40 per cent of them in the first month of life. This is a total of deaths alone, leaving out of account all injuries not fatal, which is larger for twelve months than the total of American men, both killed and wounded, during the nineteen months of the war.

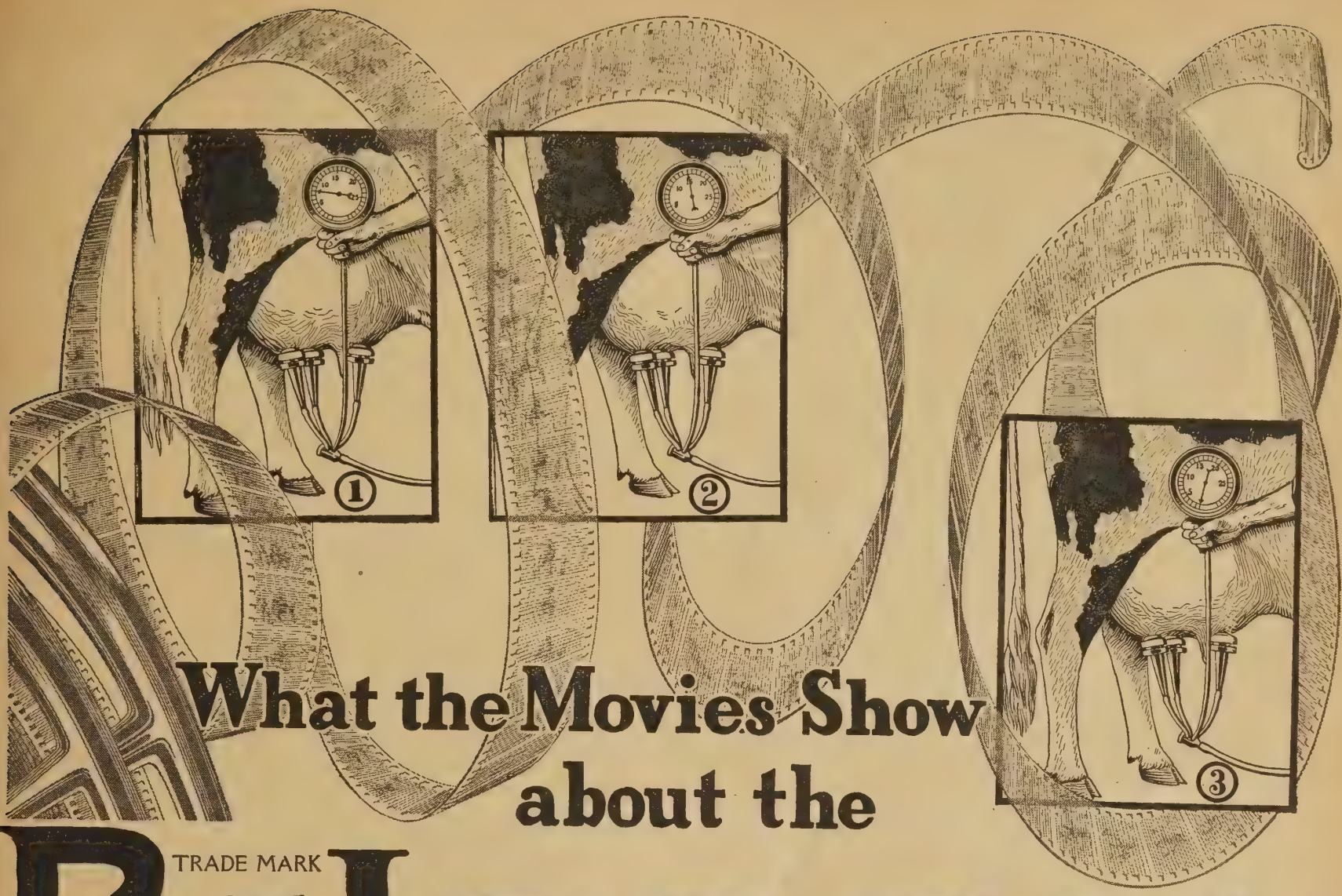
Investigation also proved that in the past fifty years there has been no diminution in the number of deaths of mothers in childbirth and that more women die at this time, leaving the new born babe motherless, than from any other cause, even tuberculosis. This is a pretty serious charge to bring against medical science. That it is possible to make such a statement is due to the fact that the medical profession, disregarding its casualties, has always persisted in considering childbirth not as a pathological but as a perfectly normal physiological process.

Three years ago the Children's Bureau framed a bill for the purpose of bringing to it the aid of the federal government. It provided that the government should give financial aid to the states in taking up this new aspect of public health—the care of women and children at childbirth. By its terms, federal and state governments would co-operate in providing instruction for mothers in the hygiene of infancy and maternity through public health nurses, consultation centers, and other methods, and would also provide medical attention and nursing care in home or hospital where necessary. Special mention was made of those in isolated places. The bill was introduced in Congress by Representative Jeanette Rankin.

Of vital interest to all women, but of little seeming importance to men and with no men interested outside of Congress to bring the pressure of their vote to bear, this measure for the benefit of present and future generations never even came to a vote. In 1920 a change has come to pass. Women now hold government power fairly equal to men. The Maternity Bill has been introduced in both Houses by Senator Morris Sheppard of Texas and Representative Horace Towner of Iowa.

The Sheppard-Towner Bill considers babies as the Smith-Lever law considers farm animals. Under the latter law the federal government is today wonderfully aiding the agricultural development of this country. In the same way the Sheppard-Towner bill seeks to develop human welfare. It will provide that the United States appropriate to the states for infant and maternity hygiene a certain sum, with the requirement that an equal amount be appropriated by the public

(Continued on page 976)



What the Movies Show about the

TRADE MARK BURRELL B-L-K MILKER

THE MOVIE camera has caught the story of the Burrell Automatic Controller and shows why the Burrell Milker *"Milks the Cows Clean."* The illustrations shown above are taken from the film of a moving picture of the Burrell Milker in actual operation. They are selected to show the suction on the teats at three distinct periods in the process of milking.

In picture No. 1, taken during the main part of the milking, when the milk was flowing freely, the gauge registered eight inches—only about one-half the maximum suction.

In picture No. 2, taken toward the end of the milking, when the milk was flowing less freely, the gauge registered fifteen inches—the maximum suction.

These moving pictures demonstrate the efficiency with which the Burrell Automatic Controller regulates the suction to the requirements of the cow at different stages of the milking, and to the requirements of different cows.

During the main part of the milking or at the end of the milking—on easy milkers or on hard milkers—the Burrell always gives the right suction. There is a constant *balance* between the amount of milk flowing and the amount of suction on the teat.

In picture No. 3, taken between sucks, the gauge registers zero, showing how the Burrell Pulsator creates sharp, definite, positive, intermittent periods of relief during which the teat hangs in free air, and normal circulation is resumed.

Write for booklets and complete information about the Burrell Milker. Tell us how many cows you have and why you are not already milking by machine. Use the coupon below.

D. H. BURRELL & CO. INC.

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"It Milks the Cows Clean"
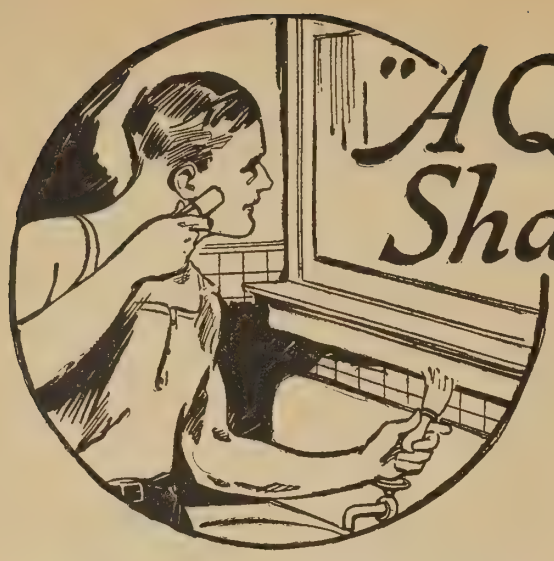
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D. H. BURRELL & CO. INC., LITTLE FALLS, N. Y.

Gentlemen: I have.....(number) milking cows. I am not now milking by machine because.....

I want you to send me your booklet and complete information about the Burrell Milker and tell me why *"It Milks the Cows Clean."* 10

Name..... P. O..... State.....



"A Quick Shave—"

... and great economy in

COLGATE'S "HANDY GRIP"

The Refill Shaving Stick

Your face will have to last you all your life. Be friendly with it by using Colgate's. The generous, softening lather needs no mussy rubbing in with your fingers.

Ask for Colgate's Thrift Shaving Package. It contains, one complete Handy Grip Shaving Stick, and two full sized "Refill" sticks of Colgate's. You refill the Handy Grip just as you screw a new electric bulb into its socket.

Sold everywhere—or send 4c for trial size, Stick, Powder or Cream

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We make Shaving Sticks, Powder and Cream, and can give you this impartial advice: the most economical form of shaving soap is the Stick.



20 to 25% Bigger Winter Milk Yields

WITH pure, rich milk analyzing 87% water—and with your winter herd *getting only ¾ to ⅔ of their natural water requirement from* ice outdoor tanks, you can see where cold weather cow-thirst is one of the biggest causes of your year-after-year winter milk shortages. With

Simplex Improved Water Bowls

your cows drink "to their hearts' content" day and night. Result—*20 to 25% more milk from every cow all through the housed-in season.* And no more frozen tanks—no tank-heater make-shifts—no more twice-a-day "herding out" periods. *Write for Full Information on the Modern Miracle.*

F. RASSMANN MFG. CO.
29 Rowell Street, Beaver Dam, Wis.
Manufacturers of Complete Barn Equipment

ONLY DROP CLEAN WATER BOWL MADE

ALFALFA HAY
FOR DAIRY COWS
The H. M. Goldwood Co.
St. Joseph, Mo.

Alfalfa Hay
The Choice Dairy Kind

We are now moving this Choice variety direct from the fields to the consumer—weights and quality guaranteed. We handle Alfalfa Meal and other Dairy Feeds. Write or wire us for prices.

W. A. Ferson Hay Company, Kansas City, Mo.

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Self aligning TENSION FENCING SYSTEM

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Half the Cost — No Concrete
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Washington, D. C., Weekly News

[Special to Hoard's Dairyman]

WASHINGTON, DEC. 8—The final session of the 66th Congress opened this week, with the novel circumstance of the president-elect holding his seat in the U. S. Senate.

There is another circumstance which marks the opening of this Congress which is more significant than the presence even of the president-elect of the United States, and that is that important as are the supply bills and the taxation revision program which this Congress is to take up, agricultural legislation holds the center of the stage in both houses. Whether this means constructive and safe legislation depends on a number of other factors, but one factor is sure, between the power and the insistance of agricultural organizations represented in Washington, and the attention which has been directed to agricultural problems by the crisis in prices and in credits, agricultural matters press here for attention to the exclusion of most other matters except supply bills.

⚜

Senate agricultural committee hearings have been in progress for several days, Senator Norris presiding, in an effort to formulate plans for remedial legislation to relieve what is said to be a credit stringency which has forced the products of the farm on the markets. Senator Hitchcock of Nebraska announced the preparation of a bill to furnish federal funds to the land banks to be loaned to farmers through the land bank machinery. Senator Capper has proposed a bill to tax wheat gambling out of existence, especially excepting dealings in hedges and legitimate future trades by licensed dealers, millers, growers, and dealers on recognized boards of trade. A bill to revive the War Finance Corporation to finance foreign trade is proposed. Another measure will compel the Federal Reserve Board to advance money to member banks to finance agricultural loans. A wool embargo bill has been introduced by Senator Smoot. In the House, relief for cotton and wheat growers is proposed in various forms in not less than a score of bills dropped into the box on opening day. Back in the Senate the packer control legislation is "unfinished business" and will be taken up almost as soon as President Wilson finishes reading his final message. But with all this start toward legislation to help the farmers there is nothing certain about what will be done—or that anything will be done. A recess over the holidays is in prospect at an early day, and when the sitting is resumed, supply bills will be ready for consideration, and March 4 is but eight weeks away.

⚜

The problem of foreign trade is up in several forms and interests the dairy industry because of its reaction on the condensed milk situation and because of its secondary reaction on Danish butter imports. There are three foreign trade proposals under discussion, two involving government aid, one purely private. One is the revival of the War Finance Corporation to finance foreign trade shipments by a direct advance of federal funds. One is a direct government loan of a billion dollars to Germany, to be used to buy American foods and raw materials. The third is the organization of Foreign Trade Finance banks, under the Edge law, one having been perfected to handle cotton exports, and one ready for an organization meeting in Chicago, about the time this is printed. Any of the plans, if put into operation, would undoubtedly furnish an outlet for some of the condensed milk now blocking the storehouses and acting as the drag on domestic milk and dairy markets. The loan to Germany if actually granted, would probably, no matter what else it does, supply that nation with raw materials which would start a business revival there which would make Germany a potential consumer of Danish and Holland dairy products, taking them out of American domestic competition.

These and other arguments are being vigorously urged in support of the German loan, which is incorporated in the Smith bill, which was before this Congress just before the end of the last session, and which is to be vigorously revived at this time. The bill is being forced to the front by the campaign in its interest carried on by William Wallace Brauer of New York, the largest live cattle exporter in the United States. Mr. Brauer has wide trade acquaintance throughout the dairy sections of the country. At this time he is the accredited agent of the German Ministry of Finance pressing this bill, and he is in position to guarantee the expenditure of every dollar of the loan in this country, should Congress make the advance. He proposes that this loan shall be a first lien on the resources of the German government, as provided in one article of the Treaty, taking precedence over reparation claims, and also that the entire fund in the hands of the Alien Property custodian, some seven hundred million dollars, shall also be pledged as security for the prompt repayment of the bonds.

Whether or not this form of rehabilitation will be offered our recent enemy, and whether or not such a plan which puts Germany into our markets as a buyer, the result of which might be to establish new price levels, remains to be settled by this Congress as one of the proposed measures of agricultural relief.

⚜

An unofficial list of the 67th Congress membership has been issued by William Tyler Page, Clerk of the House. It shows that 118 new members of the House were chosen on election day. The net result of this survey is to indicate that the friends of agriculture and dairying were for the main part returned. The loss to agricultural interests is greatest in Missouri where two of the men defeated, Congressman Nelson and Congressman Rubey, were outstanding friends of dairying, while Congressman Igoe of St. Louis was a strong supporter of many items of agricultural legislation. In Illinois the defeat of Henry T. Rainey—not the Rainey of Chicago who was also reported to be defeated but whose name appears on the unofficial list—deprives agriculture of a real friend; although it is to be assumed that in this district, as in the 8th and 16th Missouri districts, where farming is the chief industry, the new members will prove to be alert to farmer interests.

⚜

Some time ago the Washington office of the National Dairy Union called attention to a study of text books being carried on, with a view to disclosing whether or not the books in general use in schools and colleges gave proper statement to the essential facts as to vitamines in milk and milk products. It can be stated frankly that this study is very disappointing. It is only the newer books that give any consideration at all to this topic. That the dairy industry should take concerted action to bring this to the attention of text book publishers is the view expressed by the National Dairy Union Secretary, A. M. Loomis, in a statement which he is preparing for the press, to be issued soon. In this statement Secretary Loomis quotes with approval, the statement which he finds in a new text book, "Agriculture for Beginners", issued by Ginn & Co. of New York, in which appears the following statement:

"Along with its dry matter, its protein, its carbohydrates, and its fats, milk and its products possess another most important property. This property is hard to describe for its elements and its powers are not as yet fully understood. However, we do know certainly this much—milk and the foods made from it have power to promote health and favor growth in a more marked degree than any other foods. These health promoting and preserving substances are called "vitamines". Men of science are working with much care to try to add to ou knowledge of these "vitamines", which have so marvelous an influence on the health of all animals. Unless food, no matter how good otherwise, contains these "vitamines"

it does not nourish the body nor preserve bodily health as it should. A complete lack of "vitamines" in our food would cause death. Since, then, milk and its products butter, cheese, curds, are rich in "vitamines", these health giving and health preserving foods should form a regular part of a person's diet."

J. S. Abbott, secretary of the Institute of Independent Margarine Manufacturers, closes what would otherwise be a very valuable and helpful bulletin recently issued on the butter,



T. W. Gullickson, who has resigned his position in the Dairy Division of the United States Department of Agriculture to become instructor in dairying in the University of Minnesota.

margarine, and other edible fat production of the United States, with this statement submitted to the dairy industry as a specimen of the type of mind with which the dairy industry is fighting for its existence: *"The slogan 'down with margaraine' which has been the cry of a few hopelessly envious souls, is insane and without sound economic or scientific basis. It will get them nowhere. It will be a boomerang to those who have used it as soon as the facts of maragarine as a food are known. And they are now being made known."* Unconsciously, perhaps, Mr. Abbott told the truth in the last sentence. The facts of margarine, that it is just as valuable as tallow, or beef fat, and not quite as valuable as lard, and without the vital elements which make butter the incomparable food of all the human family, are just being made known. If to protect the consumer against being sold something of this value as butter, for butter prices, is "insane" than the few "hopelessly envious souls" will be happy to plead guilty to the indictment.

London Dairy Show

(Continued from page 980)

shows an increasing number of cattle of a heavy milking type. There was an imposing display of Friesian cattle at this year's show. Enormous pains were being taken to improve this breed of cattle. We had still within this country British breeds which were comparable almost with any breed on the continent. The Friesians were still on their trial. If they could justify themselves in butter content and in food value to the same extent as they had succeeded in filling the milk pail, they had come to stay and would receive in the future very high recognition from judges of dairy cattle. Dairy Shorthorns, which he thought the majority of farmers in this country considered as still holding the premier position, would have their work cut out to hold their own. He regretted the absence of Ayrshires and South Devons, owing possibly to the cost of railway transit and the coal strike. Ayrshires had made a reputation at any rate for cheesemaking, and were particularly interesting because they led the way in the matter of milk recording.

The differences which existed between milk producers and milk distributors, continued Lord Bledisloe, on the question of winter prices were most unfortunate, and every effort ought to be made to prevent their occurence in future. It was in the best interests of the public that the milk producer and the milk distributor should co-operate without any disputes as to what proportion of profit should be allocated to each. It had been suggested in one district lately that the supply of milk should be curtailed in order to maintain a sufficiently high price during the winter. He could not conceive anything more calculated to stand in the way of the full confidence of the public being extended to the milk producers of the country, and he hoped every dairy farmer would do his best to check any such suggestions among his fellows.

Experiments carried out by Dr. Stenhouse Williams, said Lord Bledisloe, had shown that the great loss entailed every year by the souring of milk could be prevented by proper treatment, whereas 26 per cent of the samples of average milk turned sour within 24 hours from the time of milking, when kept at room temperature.

Small kindnesses, small courtesies, small considerations habitually practised in our social intercourse give a greater charm to the character than the display of great talents and accomplishments.—KELTY.

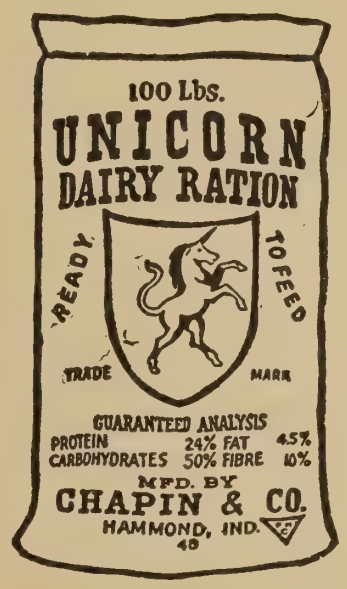
MARKETS

CHICAGO, Dec. 10—Butter—Creamery, extras, 48c; standards, 42½c; dairy, firsts, 38@44c; seconds, 36@37c.
Eggs—Ordinary, 63@67c; firsts, 73@75c.
Cheese—Twins, 19c.

MILWAUKEE, Dec. 10—Butter—Creamery, tubs, 50c; prints, 51c; extra firsts, 48@49c; firsts, 46@47c; No. 1 packing stock, 30@33c; off goods, 20@25c.
Eggs—Fresh, current receipts, country candled, cases returned, 75@77c; checks, 40@42c; dirties, 45@47c.
Cheese—Twins, 20@21c; Daisies, 22@23c; Longhorns, 23@24c; fancy Brick, 23@24c; Limburger, 1 lb., 24c; 2 lbs., 23c.

NEW YORK, Dec. 10—Cheese—Weak; state milk, common to specials, 20@28c; skims, common to specials, 10@20c.
Butter—Easy; receipts, 3,503 pkgs.; creamery extras, 52c; state dairy, tubs, 33@50c; imitation creamery, prints, nominal.
Eggs—Firm; receipts, 6,875 cases; nearby white fancy, $1.04@1.05; nearby mixed fancy, 76@96c; fresh firsts, 84@92c.

One Way to Save Feed



A McHenry County (Ill.) herd of 23 grade cows produced $743 worth of milk from $164 worth of Unicorn, fed straight.

Your own grain ration may be getting every pound of milk out of your cows that they can give.

But have you figured feed against milk?

You may be astonished to find that for each dollar you spend for feed you are getting a return of only $2 or $3 in milk.

Where Unicorn is fed, $1 paid for feed brings you a return of $4 or $5 in milk.

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HOARDS DAIRYMAN JUNIORS

Common Poultry Diseases

Disease is one of the handicaps to successful poultry keeping and should be guarded against at all times. Unless kept in a healthy condition, chicks will not grow properly, and mature fowls will lose their vigor and vitality and become unproductive and unprofitable.

It is far better to prevent disease by proper care and attention than to attempt to cure a bird after it is sick. Therefore it is important to watch the flock closely at all times for any signs of disease, so in case an outbreak occurs it may be checked at once. Prevention is always better than cure, and all boys and girls who wish to succeed in poultry club work should try to give their birds such good care and keep their houses so well cleaned and disinfected that both fowls and chicks will keep hardy and vigorous and allow no opportunity for sickness to creep in.

Some diseases may be treated successfully, while others of a more serious nature usually are fatal. However, if only one or two birds of a flock become sick it is usually advisable to kill them immediately (unless they are choice specimens) and burn or bury the carcasses. If the birds are kept and an attempt is made to doctor or cure them the disease may prove contagious and spread throughout the entire flock.

The more common poultry diseases and those which poultry club members are likely to find most troublesome are gapes (in young chicks), roup, chicken pox, and scaly leg.

Gapes

The disease known as gapes, which is quickly noticed because of the sneezing and gaping of the chick, affects only young chicks and young turkeys, and usually develops during the first few weeks of their lives. It is caused by a little worm which attaches itself to the inside of the windpipe, where after a few days it will increase in numbers to such an extent as to obstruct or stop up the windpipe, making it difficult for the chick to breath, and unless the worms are removed at once it will soon strangle, choke, and die. The female worm produces large quantities of eggs while in the windpipe, and these are thrown out by the chick in sneezing, or are swallowed, pass through the intestines, and are scattered with the droppings. After a few days young worms hatch from these eggs and live in the earth for a long time. If picked up and swallowed by young chicks they quickly find their way to the windpipe, develop, and cause the disease to appear. This explains how infection is carried over from one year to another, and why ground used year after year becomes so infested or filled with these little worms that chicks can not be raised upon it.

TREATMENT—Take a long hair from a horse's tail and twist the two ends together so as to form a loop. Hold the chick's head firmly with one hand, with the neck out straight, forcing the beak open with the fingers. When the glottis, which is the little opening at the root of the tongue, is open for breathing, insert the loop end of the hair, pressing it down the chic's windpipe about 1 inch. Give it two or three turns and then withdraw it. This will usually bring out several of the worms. Make sure that the hair is run down the windpipe and not down the chick's gullet. Each time the hair may be inserted a little deeper until it reaches nearly the full length of the neck, extreme care being taken not to choke or injure the chick. All worms taken out should be shaken off the hair and scalded or burned.

PREVENTION—The best preventive for gapes is to keep the chicks on fresh, clean soil at all times. If they become affected with the disease, remove them at once to fresh ground where there is plenty of green grass. Ground occupied by chicks affected with gapes should be covered with a thick coating of lime and then spaded up thoroughly or plowed to destroy any worms that may possibly exist. Chicks should not be raised on the same ground again for at least two seasons.



A BEGINNER IN THE HOLSTEIN BUSINESS

John Paul Barker, son of Ohio's state Holstein secretary, seems to know one of the first essentials in dairying.

Roup

Roup is a disease which affects the eyes, nose, and throat. The first signs are watery eyes, swollen eyelids, loss of appetite, and a thin, watery discharge from the nostrils; after a few days the discharge becomes thick and interferes with the bird's breathing. In severe cases the side of the bird's head is hot and badly swollen and the eyelids stuck together with a yellowish, cheesy substance.

Roup frequently develops from a hard cold, but more often is brought into the flock by other birds that have had the disease or have been exposed to it. It is very contagious. The saliva or discharge from the mouth and nostrils carries the germs, and if the sick birds are allowed to remain or eat or drink with the others the disease will spread very quickly throughout the flock. Birds that are out of condition or lacking in vitality are usually the first ones to become affected and the last ones to recover, and sometimes carry and spread the disease for several months after they appear to be cured.

TREATMENT—The sick birds should be removed at once from the flock and put into warm, dry quarters where there is plenty of fresh air but no drafts. Take some warm water, add a little salt (about one teaspoonful to a quart of water), and carefully wash the eyes and mouth, using a soft cloth or a piece of absorbent cotton. It is also well to rub or massage about the nostrils and under the eyes to loosen any of the watery discharge or secretion that may have accumulated there. After cleansing take two heaping teaspoonfuls (one-half ounce) of boric acid, or a small half-teaspoonful (1 dram) of permanganate of potash, which can be purchased at almost any drug store, dissolve in 1 pint of water, and wash the eyes and mouth thoroughly; or dip the bird's head into a bowl of the solution, repeating the treatment two or three times daily. A tablespoonful of peroxide of hydrogen mixed with 2 tablespoonfuls of water and injected into the bird's nostrils with a small oil can or medicine dropper is very beneficial. After the bird has been treated in this manner grease the head with camphorated oil or carbolated vaseline. It is also advisable to put a small quantity of permanganate of potash into the drinking water, as it helps to prevent the disease from spreading. In very severe cases it is best to kill the bird at once, as seldom, if ever, can it be fully and permanently cured.

PREVENTION—Keep the house clean, well ventilated, and disinfected. Be sure that the birds are not exposed to drafts so as to catch cold. Fowls or chicks purchased from other breeders should be put into a separate house. If this is not possible, watch each specimen closely for two or three weeks for any sign of the disease, so that if it appears the bird may be removed before the others are affected.

Chicken Pox

Chicken pox (sometimes called sorehead) is another very contagious disease. It makes its appearance in the form of irregular whitish patches or festers which later develop into brown spots or crusts (resembling a scab of a sore) on the comb, wattles, eyelids, and around the beak and nostrils. In severe cases these patches or sores increase in numbers to such extent that the birds have difficulty in opening their eyes and beaks, and if neglected many will die.

TREATMENT—Apply a liberal quantity of carbolated vaseline to all the affected parts. This treatment after a short time will cause the patches or crusts to soften and drop off, when the tissue or sore underneath should be painted with tincture of iodin or 5 per cent solution of carbolic acid. Five pounds of fine-powdered sulphur mixed with each 100 pounds of dry mash is also beneficial in effecting a cure. As soon as the disease makes its appearance spray the houses and coops thoroughly with some good disinfectant (preferably some wood preservative or coal-tar preparation), and scald the drinking fountains and feed dishes thoroughly with boiling water. Repeat every two or three days until after all the birds have fully recovered.

PREVENTION—Keep all roosting quarters clean, dry, and well disinfected. During the summer, when the disease is most common, mix 3 pounds of powdered sulphur with each 100 pounds of dry mash, allowing the birds to eat all they want. Chicken pox usually attacks late-hatched chicks more often and more severely than early hatched ones, which makes it advisable to hatch as early in the season as possible.

Scaly Leg

Scaly leg is easily recognized by the enlarged, roughened appearance of the feet and legs. It is caused by a little mite which burrows beneath the scales and causes the formation of a yellowish, powdery substance which keeps raising up the scales until they present an unsightly appearance. In severe cases, if the birds are not cared for, the joints of the toes become inflamed and make the birds lame and sometimes unable to walk. The disease is contagious, although it spreads rather slowly.

TREATMENT—Wash the bird's legs well with soap and warm water and remove all loose scales. Rub well with a half-and-half mixture of kerosene and linseed oil (melted lard or vaseline may be used in place of linseed oil), or fill a can with the mixture, and at night, after the birds have gone to roost, dip each bird's legs into it and allow them to soak for a minute; then return the bird to the roost. Repeat the treatment every three or four days until the scales are removed. Oil of caraway used in the same manner is also very effective.

PREVENTION—Spray the roosts, dropping boards, and all nearby cracks and crevices thoroughly and often so as to keep them free from mites. Examine the bird's shanks occasionally, and if any signs of scaly leg appear rub them well with oil, as directed above, to prevent the disease from developing.

Prevention Better Than Cure

Remember that it is much easier to keep birds healthy and well than to cure them after they are sick. Club members are therefore urged to guard against disease by giving their fowls and chicks proper care at all times. Keep in mind the following: Lice, mites, filth, poor feed, dirty water, damp houses, drafts, and lack of care and attention breed disease. Sunlight, fresh air, clean houses and runs, good feed, fresh water, and good care and attention mean health, vigor, and profits.

For information regarding other poultry diseases write to United States Department of Agriculture, Washington, D. C., for Farmers' Bulletin 957, "Poultry Diseases", or ask your poultry club leader to obtain a copy for you.—D. M. GREEN in Farmers' Bulletin 1114.

Trapping Notes

A Water Set for Mink

HOARD'S DAIRYMAN JUNIORS:—Minks travel a great deal in early spring, and it is then that the following set can be used to the best advantage.

First secure a hollow log, about four feet long and five or six inches



A YOUNG MICHIGAN DAIRY FARMER AND HIS FIVE-MONTH-OLD JERSEY HEIFER CALF

This Michigan calf has been fed as much as she will eat and drink from the time of her birth and has never been sick. But the milk has always been diluted with about a fourth as much water, so that the resulting mixture contained twenty per cent water. This dilution of Jersey milk seems to make its digestibility very satisfactory for this calf. The feeder considered this a better practice than that of skimming the fat from the milk. The pail in which the calf was fed was always kept clean, and after the milk was given shelled corn was placed where the calf could get it. This was thought better than to feed corn meal in the milk, as that practice might cause scours.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

HOARD'S DAIRYMAN Juniors,
Fort Atkinson, Wisconsin.

I want to join your Juniors Club. My father's name is _____.

I am _____ years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. _____ State _____ R.—

in diameter, or larger if you can find one. Next locate a small spring run that is free from snow during the spring. Place the log in the water, so the spring runs through it, and cover it with dead branches, giving it the appearance of being a hollow log in a brush heap.

The outer end of the log is the place to set the trap, concealing it under mud covered leaves, and hiding the chain and drag under a similar covering. The mink, on seeing the log, is pretty certain to try entering it, as such places are rich in mice; and the mink is fond of mice. The trap should be a No. 1½ or No. 2. And be certain that it is concealed so you yourself cannot detect its presence. A mink cannot be caught in sets that are plainly man-made. It takes longer to construct this set carefully, but that is the only way it will give results.

A Snow Set for Foxes

There are many kinds of sets for catching foxes in winter, but the only one I ever had any great success with is a rather simple one.

There was an old weed covered manure pile back in the fields near which a neighbor had drawn a dead horse. Foxes, great and small, visited the horse, but they always avoided stepping in the traps I concealed about it. Then I noticed how they had formed a little path about the base of the manure pile, evidently a sort of playground for them.

I carefully hollowed out a place in the path and set one No. 215 trap, using waxed paper under it to prevent it from freezing down. The drag I carefully covered with snow, using leather gloves to prevent scent. Then I re-set the other traps about the horse. The second morning I caught a fine fox in the lone trap in the path, and I have since used this type set successfully. Foxes, especially on moonlight nights, are fond of playing about a dead carcass where they are feeding, and in the hurry of their sport they are less apt to note a trap; at the bait they are alert, and that is one reason why it is harder to catch them there.

Winter Weasel Sets

The weasel is seldom prime before January first, except in very cold regions. This fact, coupled with his habit of traveling a great deal, makes it more profitable to catch him in winter. Snow is, of course, an obstacle that spoils many sets. So it does not pay to use sets other than those the snow cannot render useless.

The "cubby" set is perhaps the most successful one under average conditions. It consists of a "cubby" or shelter, made either of boughs or stones, and located where weasels travel frequently such as along a fence or near a stream. Inside the cubby a bait, such as a piece of bloody meat, is suspended so that the weasel must step on the trap beneath it before he can secure the bait. Traps well concealed sometimes catch mink in this type of set. For weasel, the No. 1 steel trap is good, care being taken to fasten it strongly.

Small weasels are often caught in the spring type rat traps, but they are not much good for the large ones. And a weasel, while curious, is no fool; build the cubby so it looks like the natural hiding place for mice, as that is what brings the weasel to investigate, if the bait should be frozen.

Where the snow is not too deep, weasels can be caught in traps concealed on the top of a log that is used by them, such as one crossing a stream. A depression should be cut in the log, deep enough to keep the trap level with the surface, and grooved so that water will run out. If the water isn't taken care of, the first thaw renders the set useless.

A larger trap, such as a 1½ or a 2, is better for the log runway set, because raccoon and mink can be caught at such places. For weasels, of course, the traps must be adjusted to spring from a light pressure.

New York. SMITH C. MCGREGOR.

Junior Letters

Hoard's Dairyman Juniors:—I am going to Lennon High School this year and I can't find much time to write to anybody.

Last year we had a pig club in our school and I joined it. There are seven members in this club. We took our pigs to Owosso Fair and I got first prize. My pig is a boar. Everybody thinks that he is a dandy. I keep track of what he gains. He made a gain of 40 lbs. in 27 days and another time he gained 50 lbs. in 32 days. I thought that was good. Our pigs are Hampshires. Our neighbors are nearly crazy about our pigs. They are going to start to raise them.

Michigan. Myles Martin.



BESSIE BERNICE LINDSAY AND SHEEP SHE IS INTERESTED IN

Hoard's Dairyman Juniors:—We have a fine lot of silo corn. It is white cap dent. The ear corn is smut nose. We got 241 bushels of oats. We have about 32 hens and 50 pullets. We get about 22 eggs a day. We have a litter of five young pups.

We have a new teacher at school. Her name is Mrs. Clara German. I am in the 6th grade at school.

I have my creed framed.

We have about all of our buckwheat cut. One field headed out fine and the other was very poor. The millet is all cut and in the barn. This morning we had to unload a load of millet though it was Sunday. Pa pitches it off the wagon to the mow. I take it from him and the rest of the family mows it away. We have a hayfork in our barn but our barn is longer than most barns and we cannot get from the one end down and around to the floor and the fork has to go to the load, so it takes quite a long rope.

New York. Alfred E. Eisenhardt.

Hoard's Dairyman Juniors:—We have three cows; one is a registered heifer, one is eligible to registry, and the other one a grade cow. They are all Jerseys.

We have a sow with ten pigs about a week old.

Kansas. Warren Thurston.

Hoard's Dairyman Juniors:—I live on a 160-acre farm. I am 12 years old and in the 8th grade.

We have 17 head of Holstein cows and 2 bulls. One cow is mine. She is 3 years old and three-fourths full blood. We have six head of horses.

I have 3 pet pigeons and some Leghorn chickens.

Minnesota. Orice Franke.

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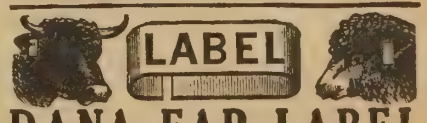
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STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows, fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Holsteins. Yearling bulls, sire from a 30-pound daughter, Pontiac Korndyke, $150.00 up. DEWEY PIERSEN, Metamora, Michigan. 17*

Registered Holstein bulls from two to fourteen months old. Ready for service. Prices right. M. H. PETERSEN, Libertyville, Illinois. 19-4

Serviceable Holstein bulls—30-lb. son of 37th heads the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

3 bull calves. Grandsons of Dutchland Creamelle Korndyke Lad. Dams have good A. R. O. records. Priced at $40.00, $60.00, $75.00 each, also 8 young A. R. O. cows. H. W. SCHULTZ, Middleton, Mich. 20-3

Holstein bull, ready for service, 4 dams averaged 105 lbs. milk in 1 day, 38 lbs. butter 7 days, $150. ROY HARRIMAN, Appleton, Wisconsin. 21-3

Do you want the very best? I offer beautifully marked high grade Holstein heifer calves at only $25. Registered bull calves $40. Will ship C. O. D. and if calves don't satisfy don't take them. J. M. McFARLAND, Watertown, Wisconsin. 21-2

If you want the very best, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves, $25.00 each, I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 21-4

Registered Holstein bulls, old enough for service. Fine individuals. Best of breeding, $100. Yearling heifers, $100. Older heifers bred to 36-lb. bull at low prices. My 36-lb. herd sire at a bargain. DR. BLACKBURN, Cuba, Ohio. 21-5

For Sale—Two-year-old Holstein bull. Dam 24.93, Sire, 35.07. $220. IRVING COLWELL, Helenville, Wisconsin.

Pure-bred Holstein bull calf, good breeding, well marked. BLACKBURN COLLEGE, Carlinville, Ill.

Registered Holsteins—$125.00 buys $250.00 bull calf born in July. Dam won first premium in competition with fifteen of the best selected cows in Steuben and Allegany Counties. Dam also granddaughter of the $50,000 bull King Segis Pontiac Alcartra. Calf mostly white and wonderful individual. NU-BORN FARMS, Jasper, New York.

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Females for sale. A few pure-bred Guernsey cows and heifers. Every animal guaranteed. FRISSDALE FARM, Hopkins, Minn. 20-3

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vranque of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Son of 1st prize 4-year-old at Waterloo 1920 Dairy show. Dam made close to 550 lbs. fat at 3½ years of age, raised 2 calves in 10½ months and was 1 month on show circuit and record made on ordinary cow's feed. A fine son of a wonderful cow. Price for immediate sale, $500. We have several other well bred bulls from high producing dams. FRISSDALE FARM, Hopkins, Minn. 20-3

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

STOCK FOR SALE

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS, Mankato, Minnesota. 19*

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. HOMER RUNDELL, Livingston, Wisconsin. 19*

Choice Guernsey yearling bulls, Glenwood breeding. A. R. sires and dams. Prices reasonable. A. W. HARGROVE, Ripon, Wisconsin. 19-4

Guernseys for Sale—From Federally Accredited herd. Bull calves, two bulls ready for service, sired by Clara's Sequel and out of high testing dams. Also ten pure-bred females. LLOYD RUNDELL, Roberts, St. Croix County, Wisconsin. 22-3

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

A son of Ne Plus Ultra, good show bull. Also a son one year old by bull offered out of cow that made 40 lbs. milk a day and 50 lbs. fat in 30 days. H. C. HURLEY, Rockville, Md. 20-5

High grade Guernsey cows. Can furnish carload lots. Address WM. LONSDORF, Sec'y, Athens Guernsey Club, Athens, Wisconsin. 20-3

For bargains on May Rose bulls with type and production, write KUHTZ BROS., Waukesha, Wis. 21*

Registered Guernsey bulls. Good breeding. Bargains. FRED RAY, Lake Mills, Wisconsin. 21-3

For Sale—Guernsey bulls, ten and twelve months old. Good individuals, sired by Leader of Prospect and dams by Tom Rilma. J. D. WELBORN, Owensville, Indiana. 21-2

Choice, registered Guernsey calf, two months old, a beauty, finely marked, excellent breeding. First $40 check takes calf. DAVID GREESON, Kokomo, Indiana.

High Grade Guernsey heifers. Beauties. SUMMIT FARM, Blue Ridge Summit, Pa.

For Sale—Registered Guernsey bulls of serviceable age, May Rose and Sequel breeding. Dams have good A. R. records. ORE HILL FARM, Dale E. Rundell, Livingston, Wisconsin. 22-spl

Three months Guernsey bull. 534-pound A. R. dam, A. R. foundation cow. Three-year-old bull, two A. R. sisters. Herd fully accredited. W. J. HAINES, Chestnut Hill, Philadelphia, Pa.

Fine, young Guernsey bull, excellent breeding. Dam on test, $125.00, express prepaid. W. G. UDELL, Cambridge, Ohio. 22-2

Registered Guernsey bull calves from 1 month to 1 year. Some from A. R. dams. OTIS A. MARKEN, Valders, Wisconsin. 22-5

Registered Guernsey heifer calves for $150.00, delivered. Sire's 5 nearest dams average 725 lbs. fat. PINE HILL FARM, Howard City, Mich. 22-3

To make room for registered stock will sell few choice grade Guernsey young cows and bred heifers sired by and bred to registered A. R. bulls, from heavy milking dams. QUINEILO FARMS, 297 East Water, Milwaukee. 21-3

For Sale—Bull calf from cow producing 650 pounds of butterfat in twelve months. Price, $150.00. Calf born March 29, 1919, nearly black in color weighing about 750 pounds. Sire, a grandson of Sophie 19th, who holds the world's record for butterfat of all breeds. Dam, a seven-sixteenths Jersey cow weighing about 1,250 pounds. SHERMAN NURSERY COMPANY, Charles City, Iowa. 18-6

Jersey bull calves for sale, sired by Oxford Gipsy Knight, whose sire is by half brother to twenty-five thousand dollar Golden Fern's Noble and out of National Grand Champion 1917—1918 Oxford Majesty's Gipsy. His dam, half sister to Gold Medal bull Oxford You'll Do. Her dam, half sister to Gold Medal bull Royal Majesty. Calves' dams rich in blood of famous Golden Jolly, good, economical producers. Herd Federal Accredited. Write for description, pedigree and prices. J. J. NURRE, Bancroft, Iowa. 21-2

Sunny Crest farm Jerseys—Federal, State Accredited herd. Bulls 1 to 20 months, $25.00 to $150.00. Sire's dam Gold Medal cow, Edith Marigold; 819 lbs. butter, as 4-year-old. EMERSON & SON, Wheeler, Wis.

Jerseys—Three yearling Majesty bulls. Register of Merit and tested dams. Priced according to breeding and quality. ROMANS STOCK FARM, Cardington, Ohio. 21-2

For Sale—35 head extra high grade Jersey heifers, most all heavy springers, from high butter tested cows and bred to my registered bull, "Butter Lad Noble D", sired by "Fontaine's Butter Lad", the richest of all Allen Dale breeding and of R. of M. records. The entire herd goes at prices that will sell. O. H. DENMAN, Thorp Springs, Texas.

For Sale—Jerseys. Cows, heifers, calves, 1 bull ready for service. LEROY KUNEY, Adrian, Mich. 22-2

Registered Brown Swiss bull calf. Grade heifer calf. WM. REHBERG, Tomah, Wisconsin. 22-2

Ayrshires—Special sale next ten days foundation stock of the best breeding and type. Three heifers six weeks to two months old, $125.00 each. Eight heifers 6 months old, $150.00 each. Offer bulls not related to females, ages six months to serviceable age at $125.00 to $250.00 ADAM SEITZ, Waukesha, Wis. 22-2

Four milking Shorthorns for sale. One cow and three heifers. Will accept equal value in Holsteins. C. L. ROSE, Big Lake Farm, Evart, Michigan. 22-3

STOCK WANTED

What will $100 each buy in registered Holstein heifers, calves and $150 for bull calf? JOE BOSAK, Frederic, Wisconsin.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SWINE

Tamworths for sale. Champion stock, young bred sows and three-month pigs. WALN, Westtown, Pa. 21-4

Registered Berkshires—April boars, open and bred gilts. Harpending breeding, reasonable prices. QUINEILO FARMS, 297 East Water, Milwaukee. 21-3

SHEEP

Shropshire sheep, bronze turkeys, Toulouse geese. McCRADIE BROS., Hendrum, Minn. 22-3

DOGS

Airedales—Puppies from registered parents for sale. FRED SCHROETER, Grafton, Wisconsin. 20-4

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

POULTRY

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 19-5

Bourbon Red turkeys. Toms $10.00. Hens $6.00. MAURICE RECTOR, Rockford, Michigan. 22-2

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale—At a bargain. My entirely new Ann Arbor Fly Wheel Silo Filler complete with Blower and Distributor Pipe (never used). Cost me $485, will sell for $325 to move quick. Address BOX 102, Fond du Lac, Wisconsin. 17-6

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00, 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Empire Milker. Two double units and pumping outfit. New (never used). $340.00. JACK TAYLOR, Elgin, Illinois. 20-3

For Sale—Avery 12-25 Tractor, new. Best reason for selling less than cost. Address BOX 617, Marengo, Illinois. 21-2

For Sale—Three-unit Hinman Milking Machine and one 2-horse power Fairbanks Morse engine. Both in excellent condition. First check $135.00 f. o. b. Baltimore, Maryland, gets them. Address BOX 510, care Hoard's Dairyman.

For Sale—3-unit Hinman Milker, good as new. D. OFFRINGA, Ames, Iowa.

For Sale—Empire double unit milking machine complete, used eight months. A-1 shape. $150.00. Reason, out of business. FRANK DECHANT, Waukesha, Wisconsin. 22-2

Empire Double Unit, piston pulsator, new rubbers, $50.00. New Perfection and Empire Unites, complete milker. Pine Tree and Universal Milkers. Nearly new. Real bargains. Satisfaction guaranteed. FELIX JULIUS, Stockton, Illinois.

For Sale—A three, single-unit, Sharples Milker in perfect condition. German silver pails. S. M. BISHOP, Springfield, Vt.

For Sale—Empire milking machine outfit, consisting of one gas engine, one No. 4 pump and tank, four 70-lb. silver double units or pails. A bargain at $700.00. Address BOX 822, Chicago, Illinois. 22-4

For Sale—Account selling farm, Empire milking machine, three double units, used only two months, perfect condition. Address BOX 511, care Hoard's Dairyman.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

No. 1 Alfalfa hay, $18.00 per ton, immediate shipment. BROOKSIDE FARM, Buffalo Gap, S. D. 21-3

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 20-10

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY AND CHEESE

Honey and cheese of superior quality in family size packages. Price list free. I. B. ROSA, Monroe, Wis. 21*

TOBACCO

Kentucky Natural Leaf Tobacco, 10 lbs., $3.00; 20 lbs., $5.00. FORD VEAL, Sedalia, Kentucky. 21-2

SEEDS

Medium Red Clover, Alsike, Timothy seed. Try us with samples. DADMUN BROS., Whitewater, Wis. 19*

No. 1 Alfalfa Seed—$10.00 bushel, sack lots, F. O. B. Jerome. WILLIAM VEAZIE, Jerome County Farm Bureau, Jerome, Idaho. 22-3

MISCELLANEOUS

Wanted—Ten thousand good dairy cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Orders handled. Leasing or feeding contracts available. Address NEWLANDS PROJECT ALFALFA ASSOCIATION, Fallon, Nevada. 20-4

Edward Louis Gregor—Information as to his whereabouts is greatly desired by his mother. He left his home in Portland, Oregon, one year ago at the age of 15. Has blue eyes, brown hair and was 5 feet, 6 inches in height. Has a large V shaped scar on left arm. Any information regarding him will be greatly appreciated. MRS. F. GREGOR, 179 W. Blandena St., Portland, Oregon. 22-4

Special until Christmas: Large double crested yellowhead parrots at $9.00. Male singing canaries at $12.50, female, $4.00; per pair, $15.00. Birds shipped safely anywhere. Pet stock of all kinds, bought and sold. Address MICHIGAN BIRD CO., Dept. 640, P. O. Box 442, Muskegon, Mich. 22-2

FARMS FOR SALE

Where dairy farming is profitable—There are localities in the South where, on account of the rapid development of industrial cities and towns, supplies of dairy products are short and prices are high. In these same localities long grazing seasons and winter cover crops cut down feeding costs and all conditions are exceptionally favorable for profitable dairy farming. Good improved farms can be bought at prices much lower than are asked for similar lands in other parts of the United States. Buy a Southern dairy farm now while prices are still low, make money and build up a valuable property. Forr full infromation write to J. C. WILLIAMS, Manager, Southern Railway Development Service, 1302 Pennsylvania Avenue, Washington, D. C. 14-spl.

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard. $160 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 992, East Lansing, Michigan. 11*

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin. 13-13

For Sale in Clark County, Wisconsin: 80-acre farm, 75 under plow, 5 acres timber. 1½ miles to town and high school, ¼ mile cheese factory. 2 silos, good buildings. 18 registered Holstein females, herd sire, horses and machinery. Terms easy. LOCK BOX 123, Granton, Wisconsin. 18-5

New York state dairy farms for sale. Catalogue free. HILLIS FARM AGENCY, Hobart, Delaware County, N. Y. 19-6

Stock and dairy farm for sale. Good buildings, good soil. Terms. C. E. PEIRCE, 333 Garfield Ave., Eau Claire, Wisconsin. 19-4

For Sale—Stock farm, 220 acres, splendid condition. JAMES W. GRAVES, Owner, American National Bank, Richmond, Virginia. 21-4

Buy Farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and service. Offices throughout the state. Write the CENTRAL OFFICE at Oneida, N. Y., for a brief list and state your requirements. 8-spl

Great Combinations—Best markets, best roads, highest prices for produce, cheapest farms, biggest profits in farming. NEW YORK FARM AGENCY, Westfield, New York. 18-spl

Free map and list land bargains near Twin Cities. BAKER S-76, St. Croix Falls, Wisconsin. 6-spl

For Sale by Owner—160 acres in fine dairy section, half mile from creamery, mile from store, school, church. Sixteen-room house, silo, basement cow barn, tool and horse barn, field barn, hen house, hog house, tenant house, equipped maple sugar camp, maple orchard, fruit, telephone. Running water in house and cattle yard. Pasture watered by trout stream. Timber for fuel. Twenty-four Guernseys (registered), three horses, fodder to winter stock, tools to operate farm. For quick sale, eleven thousand dollars, one-third cash. E. N. DAVIS, Route 1, McDonough, New York.

Free maps of Mississippi, showing views and describing the famous Black Prairie alfalfa, corn, clover, and dairy belt in Northeastern Mississippi, where Lincoln Harbold of Iowa, largest hog feeder in the world, has located; good water, schools, hard roads, creameries; healthy climate; best general farming and stock section in the South. WISHART REALTY CO., Aberdeen, Miss. 22-2

Must be sold at once. 80 acres level land, 15 acres cleared, 15 acres easily cleared, firewood, log house and barn, 1½ mile to railroad village, school and creamery. Price $3,200. For terms, further information and literature address EV. LUTH. COLONIZATION CO., Dept. 23, Merrill, Wis. 22-2

South Dakota—Your opportunity is waiting for you in South Dakota. For each farm family in 1919 this state produced $5,000.00 in new wealth. South Dakota offers you a special opportunity now to secure a farm. Write for further information today. IMMIGRATION DEPARTMENT, Irwin D. Aldrich, Commissioner, Capitol F15, Pierre, South Dakota.

Widow must sell 224-acre farm equipped. Convenient big city; loamy tillage, 50-cow wire-fenced pasture, abundance wood; 3 acres grapes, variety fruit; 800 sugar maples, complete equipment; fine buildings; to close now includes pair horses, 17 cows, and heifers, flock hens, complete implements, gas engine, saw rig, cream separator, harnessses, wagons, quantity oats, corn, beans, potatoes, etc.; $9,000 easy terms, takes everything. Details page 21 Strout's Free Illustrated Catalog Farm Bargains, 33 States. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

For Sale—Choice Ohio farms. All sizes and prices, some great bargains. Write for list. I. J. MILLER, JR., Conneaut, Ashtabula Co., Ohio. 22*

Modern dairy farm, well located on good road in Waukesha County. 200 acres, comfortable brick house, furnace heat, running water. Horse barn, two large, connected modern dairy barns, two silos, tile milk house. A complete breeding establishment, conveniently near Waukesha and Milwaukee. Price reasonable. R. E. BENSON, Dousman, Wisconsin. 22-6

Montana irrigated quarter section. Improved. Stock, machinery, feed, $17,000. Adjoins open range. Finest hunting, fishing, near town and school. Particulars ERNEST ROSE, Plaines, Montana.

FARMS FOR RENT

Wanted—A good opportunity for a man who knows how to farm and make money out of pure-bred cattle. The farm is stocked with pure-bred cattle and equipped with good buildings and machinery. Applicant must be willing to invest some money as the division of the proceeds will include equal shares of live stock raised and sold. Do not answer unless you can furnish proof of ability to accomplish results. Address BOX 492, care Hoard's Dairyman. 21-3

To Rent—Good dairy farm on shares, for term of years. THOS. B. FOSTER, Foster, Ohio. 22-3

Rent, shares, March first possession, dairy and hog farm, complete modern equipment, plumbing in residence. EMMET SCOTT, LaPorte, Ind.

FARMS WANTED

My plan is proving successful. Number satisfied increasing rapidly. You have not been able to sell your farm. Why not try my plan? Be convinced. WALTER MILLER, 320 Brumder Bldg., Milwaukee Wisconsin.

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—Single herdsman in good Illinois Jersey herd doing testing, showing. Only experienced and willing worker considered. Also second man for teaming and help milking. State experience, reference and wages in first letter. Address BOX 496, care Hoard's Dairyman. 21-2

Wanted at once—Man and wife (no children), man to do general farm work. Must be good hand milker. Woman to do house work. Good wages and steady employment. MORGAN HEIGHTS SANITARIUM, Marquette, Michigan. 21-2

Firemen, brakemen, for railroads nearest their homes, everywhere. Beginners $200, later $300 monthly (which position?). RAILWAY ASSOCIATION, Desk, W5, Brooklyn, New York. 21-4

Wanted—By January 1st, herdsman for a Guernsey breeding establishment in Western Pennsylvania, who has experience in testing and feeding cows for A. R. work and high production. Must be of steady habits, good worker, have unquestionable references and be able to produce results. State all particulars in first letter and if married how large family and how soon can come. A good proposition to the right party and only those qualified and willing to stay long need apply. Address BOX 498, care Hoard's Dairyman. 21-2

Wanted by March first. Single man to work with herd of A. R. O. Holsteins. Must be willing to help take care of cows on test as well as all other work in barn. Prefer young man with clean habits who is a hustler. Give references and salary expected in first letter. KILPATRICK BROS. CO., Beatrice, Nebr. 1y

Railway Mail Clerks Wanted. $135 month. Sample examination questions free. FRANKLIN INSTITUTE, Dept. F 118, Rochester, New York. 20-5

We want, immediately, young married man qualified in official testing and calf raising, for registered Holsteins and Jerseys. Excellent living conditions, and a permanent position for a man who can deliver satisfaction. FLOWERDALE, Drs. Flowers, Props., Dallas, Texas. 22-2

Man wanted on dairy where milking machine is used. Some experience in feeding dairy cattle. Good wages to right party. G. C. LINDSEY, Route 3, Aberdeen, South Dakota. 21-3

Manager for dairy farm at once. Will give large share of business to right man. Address BOX 499, care Hoard's Dairyman.

Wanted—Man and wife for work on dairy farm near Chicago. All modern farm improvements; farm buildings and grounds in first-class condition. Either salary or shares for right party. Address BOX 505, care Hoard's Dairyman. 22-3

Wanted at once—Good, handy man to work on 100-acre farm and dairy. Must be reliable and not afraid of work. CRYSTAL SPRING STOCK FARM, Littlestown, Pennsylvania. 22-3

Wanted—January first. Married man on large, modern Guernsey farm. Wife to board help. Modern house. Splendid opportunity. Address BOX 504, care Hoard's Dairyman.

Wanted—Experienced, reliable, married man for steady work on large stock farm. Salary $100.00 per month with free house rent, garden spot, wood, potatoes. Will be expected to board help at $35.00 per month. Also want good single man for steady work. Salary $60.00 per month with board and room. Prefer man with dairy experience. Address BOX 503, care Hoard's Dairyman. 22-3

Wanted at once.—Single man on large dairy farm. $40.00 per month and board. LOCK BOX 85, Livingston, Wisconsin.

Good, reliable young man with no bad habits to handle a milk route of 60 gallons, wash bottles, help strip, run a truck, care for it. State wages in first letter. BOX 842, Marseilles, Illinois.

Wanted—Correspondence with first-class dairyman desiring Florida location. J. M. WILSON, Kissimmee, Florida.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Experienced manager on Holstein or Guernsey farm. Have successfully tested and fed cows of both breeds and can handle men. Wants position where opportunity will be given to produce results. Best of references. Address BOX 475, care Hoard's Dairyman. 19-5

Wanted—Position on large dairy farm. Life experience. Expert with tractors and farm engines. Address BOX 493, care Hoard's Dairyman. 21-2

Position wanted as Jersey herdsman, creamery man or manager of dairy. Married, 2 children, age 32, 15 years' experience, dairy school course. Understand buttermaking, testing, market-milk and machinery. Also care and breeding of pure-bred Jersey cows and feeding for good R. of M. records. GEORGE R. FOSTER, Glendale, Ohio. 21-2

Wanted—Work on dairy farm by young man, age twenty. Life experience on farm. Please state wages in first letter. WALTER KASSERA, Maiden Rock, Wisconsin.

Herdsman, Scotch, wants position with registered Ayrshire or Holstein herd. Experienced with A. R. O. work and Babcock testing. Guelph college graduate in dairying and feeds and feeding. References given on request. State wages in first letter. DAVID LOUTTIT, Room 206, 226 West Adams Street, Chicago, Illinois.

Associated interests of any sort wanting a super farmer and dairy live stock breeder, who wish to create proper housing conditions, and obtain correct equipment for farm and buildings, or am open for position as field secretary for cattle clubs, or agriculturist to Corporation. Address BOX 500, care Hoard's Dairyman. 22-2

Young man, clean, wishes permanent position on a farm in Iowa or Wisconsin. Knows how to milk, and handle horses, references if required. State wages and particulars. Address C. H. SCHLIEPER, Route 1, Campbell, N. Y. 22-3

Farm superintendent with 18 years practical and scientific experience, open for position on large up-to-date dairy farm. Understand soil conservation, machinery of all kinds, pure-bred cattle, A. R., etc. Address BOX 506, care Hoard's Dairyman.

Wanted—Position on modern stock farm by single man, 27 years' experience, best reference, steady worker. Salary reasonable. Address BOX 502, care Hoard's Dairyman.

Wanted—By experienced college man, 32, position as herdsman. Would consider any good dairy farm proposition. LEIGH KEENAN, Appleton, Wis.

Young man, single, Protestant, age 25, lifetime experience general farm work, wishes position on modern dairy farm with opportunity for advancement. At liberty January first. Write best offer. CLARENCE ALQUIST, Clay Center, Kansas.

Young, experienced dry hand milker wishes position at once on dairy farm. Hollander, single. DAVID GANSMA, 128 6th St., Milwaukee, Wisconsin.

A young, single man with college training, experience and ability will be open for position as herdsman or dairy farm manager about February 1. References. Address BOX 512, care Hoard's Dairyman.

Single man, 30 years old, lifetime experience in feeding and calf raising, wishes position. Can handle any herd. $80.00 to $125.00 per month. A. D. LINNIG, 1858 Sedgwick St., Chicago, Ill.

Position wanted as farm manager. Single, agricultural college training, life time experience with live stock and crop production, up-to-date with farm implement and tractors, 10 years in managerial capacity, best of references. Address BOX 509, care Hoard's Dairyman. 22-3

Wanted—Position. Experienced herdsman. Can produce results. Married. JAY HENRY, Richford, New York.

Position wanted by middle-aged single man in dairy barn (no outside work). Have worked in dairies all my life, and am experienced in Sharples milking machines, also experienced in the manufacture of butter and cheese. State wages and full particulars in first letter. Address BOX 508, care Hoard's Dairyman.

DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.

Iowa Corn Show

The Iowa State Corn and Small Grain Show will be held from January 3 to 8 in the Iowa State College gymnasium at Ames as a part of the farmers' short course. Under the auspices of the Iowa Corn and Small Grain Growers' Association, an organization of Iowa farmers, the state show has been an annual affair since 1904. Since that time there have been 16 shows.

In past seasons the Iowa State Corn Show has been probably the largest of its kind held anywhere in the world. Each year there have been on the tables from 10,000 to 15,000 ears of corn besides hundreds of entries of small grain, clover and grass seeds, soy beans, alfalfa, and other crops. The successful crop season of 1920 means a large amount of show grain in the state. For this reason the show this year should be large and successful.

This year a cash premium list has been arranged and all premiums will be paid by the association's check at the close of the show. In addition to the cash premiums more than 100 trophies valued at thousands of dollars will be awarded.

Many have doubted the ability of corn judges to select high yielding types of corn. In fact, they have doubted very much the value of corn shows. To determine the relation between prize winning ears and high yielding ears Professor H. D. Hughes of the Iowa Agricultural Experiment Station selected kernels from the different show samples entered in the state show in the spring of 1919. These kernels were planted five to the hill and thinned to three stalks so that the stand would not affect the yield.

In most cases the direct relation of prize winning and high yielding samples was apparent. The results were surprisingly good. An average of thirty-three 80-ear samples gives the following results:

First prize corn, 51.2 bushels; second prize corn, 50.6 bushels; third prize corn, 50 bushels; fourth prize corn, 49.4 bushels; fifth prize corn, 48.8 bushels.

All entries for the show should be mailed as soon as possible to E. N. Bressman, Ames, Iowa, who is superintendent of entries. Entries giving name, address, county in which exhibit was produced, class entered, and varieties of exhibits should be mailed to the superintendent of entries before December 20. Exhibits must be at the show by Thursday, December 30, 1920.

Exhibitors must be members of the Iowa Corn and Small Grain Growers' Association. The membership fee is $1. If you are not a member send your dollar and ask for a catalog and entry blank. All exhibitors will be ranked as professionals or amateurs according to their winnings in previous shows.—E. N. BRESSMAN, Supt.

The United States Department of Agriculture finds hairy vetch the best winter legume for all localities in the eastern half of the United States where red clover fails or where crimson clover is not a success. Vetches make excellent feed, either green or as hay, and are also exceedingly useful as cover and green manure crops.



$5 Gift

Salt and Pepper Set

A beautiful example of modern silversmithing in the always-attractive Colonial design. Made of finest grade of silverplate. Bright finish. Salt shaker has gold plated top. Packed in neat, lined box. Every woman would be delighted with this beautiful set. Illustration, one-third full size. Money back if it does not give complete satisfaction. Sent by mail postpaid upon receipt of price.

Silver Art Crafts
MERIDEN, CONN.
Home of Silver Art

Eggs Wanted

We require about 40 cases per week of high grade Western eggs. Terms to suit convenience of shipper. Address Box 501, care Hoard's Dairyman.

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Why Land Needs Limestone

Natural lime in the soil becomes practically exhausted in 15 years. Thus, with the very foundation of plant life and soil fertility removed, land cannot produce. — Limestone must be added.

SUPERIOR LIMESTONE restores soil and increases production from 50 to 100 per cent.

Mail Soil Sample for Free Trueg Test

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Waukesha, Wisconsin
W. S. Halladay, Mgr. of Soils Bureau

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Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

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Valuable Information on

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We Guarantee Our Treatment
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Two Applications Ten Days Apart Completes the Treatment. Apply it Yourself.



Write us today and we will send you absolutely free full particulars how to rid your herd of this disease at small expense.

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Look for the Red Ball

You get longer wear from your Rubber Boots or Arctics when they bear the Red Ball Trade Mark.

You get satisfying fit and real comfort — feet dry and ankles warm, after you have worked all day in snow, slush, or oozy mire.

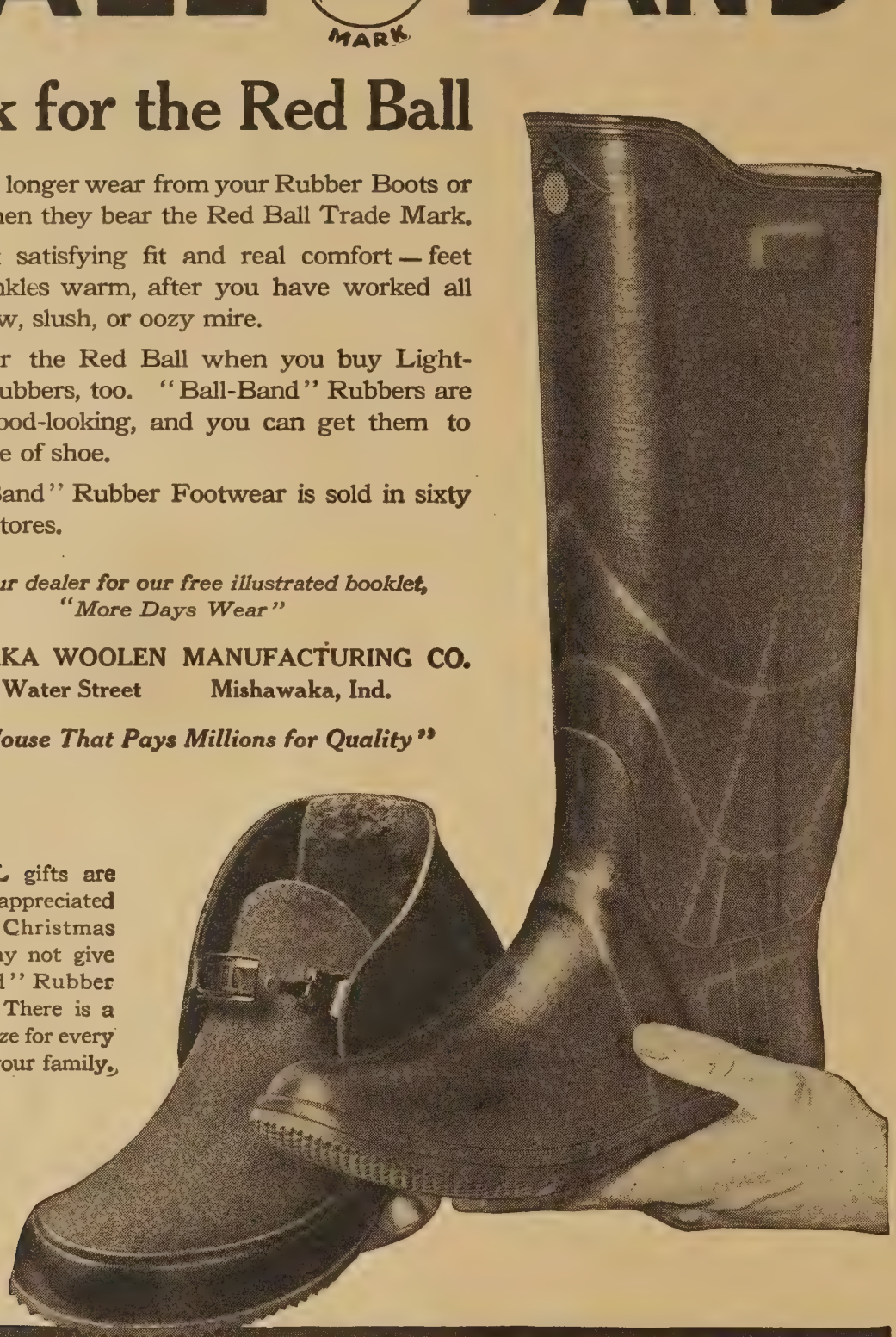
Look for the Red Ball when you buy Light-Weight Rubbers, too. "Ball-Band" Rubbers are shapely, good-looking, and you can get them to fit any style of shoe.

"Ball-Band" Rubber Footwear is sold in sixty thousand stores.

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"The House That Pays Millions for Quality"



USEFUL gifts are always appreciated most. For Christmas this year why not give "Ball-Band" Rubber Footwear? There is a style and a size for every member of your family.

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Most economical and satisfactory way of handling your corn crop. No delay, no extra help. Do it in your own spare time. Two sizes for individual use, 6 to 15 h. p. Also make three larger sizes for custom work. Over 20 years in the field. Write for catalog and Free Farmers Account Book. State h. p. of your engine.

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Also Makers of Feed Cutters and Silo Fillers

LADD'S ALUMINUM MILK STOOL



Light, Comfortable and Durable. Easy to Clean and Sterilize. Demountable Legs.

Ladd's Aluminum Milk Stool will last a life time if properly used and will relieve the milker of the back-breaking position of milking.

Packed in individual cartons.

Price, postpaid, anywhere in the United States, each, plain, $3.25, polished, $3.75.

John W. Ladd Company
"Complete Outfitters to the Dairy Industry"
Detroit, Mich., Cleveland, O.

Of Vital Interest to All Dairy Women

(Continued from page 968)

health authorities of the states themselves.

In addition the federal government will make an initial contribution of $10,000 to each state, without requirement of an equal state appropriation. The largest total sum to be appropriated by the federal government under this law would be $4,000,000. With this sum as a nest egg, augmented by an equal or greater amount contributed by the states, existing maternity centers in remote centers now neglected may be expanded and others established. Gradually hospital facilities in city and country can be so extended that no mother anywhere need face dangers through lack of proper care which she now accepts as her lot.

The only enemy which this mighty bill is facing today is indifference. Women alone can save it. People of force and authority count for no more than the single vote of the farmer's wife or the city clerk's wife. What Congress needs to know, and what it must know, is that the voters of the country demand the prompt passage of the Sheppard-Towner bill.

Medical experts testify that babies of mothers receiving intelligent care have a death rate of only 18 to 19 per cent, as contrasted with 40 per cent without it. Can we longer be indifferent in the face of such revelations?

Under the Smith-Lever law the United States is this year spending $47,000,000 on the item of hogs alone. Contrasted with this amount, can we not afford the pathetic sum of $4,000,000 for our own wives and our own babies?

Therefore, dairywomen of America and dairymen who love your wives and your unborn children, write now upon laying down this paper, to your Congressman and Senator urging the immediate passage of this bill. The Senate bill is No. 3259 and the House bill No. 100925. If you do this, and your wives do it, and if your friends and neighobrs throughout the nation do it, there is a good chance of passing the bill before the new Congress convenes in March.

Farm women are fully aware of the risks they run at maternity. Just as we entered the war, Good Housekeeping states that the woman's division of one of the largest farm organizations of North America appealed to an association that was interested in better obstetrics for women. They asked for speakers and organizers in aiding a chain of rural hospitals. At the time there were none to be had. The funds the farm women had were diverted to other sources. These women are today fighting again for their just rights.

Will the dairymen and dairywomen of America write at once to their Washington representatives beseeching, yes, and commanding, the passage of this bill? Is not a human baby worth nearly as much as the baby hog out in the pen? We want to save them both, but our future children and their mothers are only asking for the consideration we have formerly demanded for the beasts in our barns. Shame, America, that you lazily permit 23,000 helpless mothers and 200,000 helpless babies to die just from indifference every year. It is time to act! Write your representatives in Congress *today* that the Sheppard-Towner bill shall become a righteous law.

Bulletins of the Week

Breeds of Dairy Cattle, by H. P. Davis. Farmers' Bulletin 893, U. S. Dept. of Agr., Washington, D. C.

Chicory—Control and Eradication, by A. O. Hansen. Circular 108, U. S. Dept. of Agr., Washington, D. C.

Milk Plant Equipment, by Ernest Kelly and C. E. Clement. Bulletin 890, U. S. Dept. of Agr., Washington, D. C.

What Name for the Farm, by F. A. Aust and Gladys Baker. Circular 130, Extension Service, College of Agriculture, Madison, Wis.

Waterproofing and Mildewproofing of Cotton Duck, by H. P. Holman, B. S. Levine, and T. D. Jarrell. Farmers' Bulletin 1157, U. S. Dept. of Agr., Washington, D. C.

The Hot Lunch in Rural Schools, by Gladys Stillman. Circular 127, Extension Service of College of Agriculture, Madison, Wis.

The Beef Calf—Its Growth and Development, by E. W. Sheets. Farmers' Bulletin 1135, U. S. Dept. of Agr., Washington, D. C.

Condensed Milk and Milk Powder, revised and rewritten by the author, Professor O. F. Hunziker. Will be supplied by Hoard's Dairyman on receipt of its regular price, $5.75.

Sale Announcements

Dec. 18—Guernseys. E. J. & Carrie Kantsky, Marsfield, Wis.
Jan. 4-5-6. Holsteins. The Moyer Sale, Syracuse, N. Y. H. A. Moyer, Director.
Jan. 12-13—Holsteins. New York State Breeders' Sale, Syracuse, N. Y. New York Holstein-Friesian Association, E. R. Zimmer, Sec'y.
Feb. 1, 1921—Holsteins. Watertown Holstein Bull Sale at Watertown, Wis. Francis Darcey, Sale Manager.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.

Bull Associations Produce Results

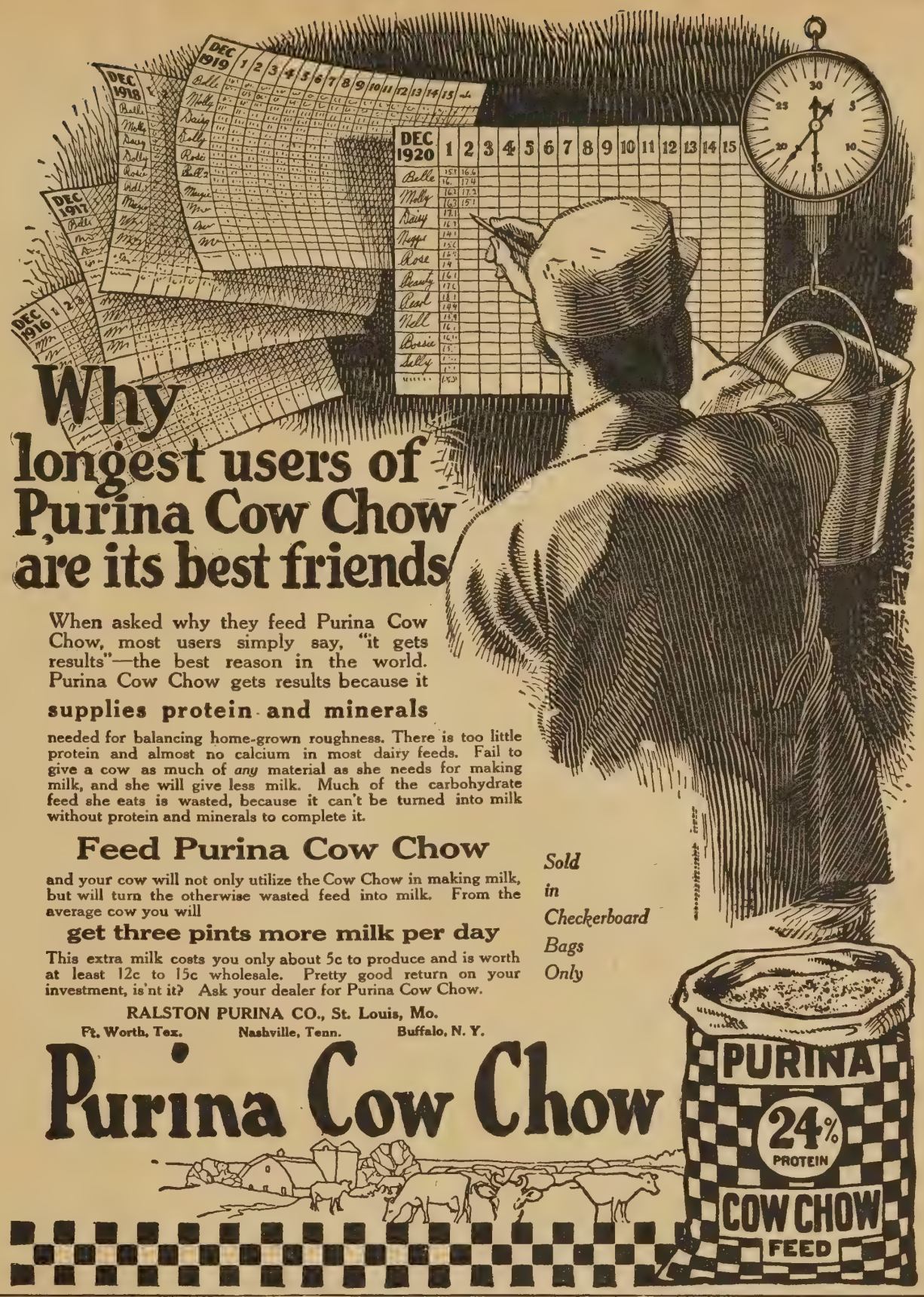
HOARD'S DAIRYMAN:—The limitations under which cow testing associations operate as agencies in increasing milk production throughout the United States as a whole was well illustrated by Mr. Helmer Rabild, of the Dairy Division of the Department of Agriculture, in an address delivered before the American Association of Creamery Butter Manufacturers at its recent meeting in Chicago. Cow testing associations are doing a wonderful work, Mr. Rabild admits, but conditions are such that comparatively few cows, the country over, can be profitably included in association work. There are, he pointed out, some 24,000,000 dairy cows in the country. Of these approximately 19,000,000 are owned in herds of 12 animals or less and the great proportion of these are in groups of three, four, or five cows each. The farmer who has only three, four, or five cows cannot enjoy many of the benefits which one associates ordinarily with dairying. The small size of his herd precludes the periodic testing enjoyed by herds of larger size for the simple reason that the expense per cow would be greater than the returns would justify. The small herd owner is likewise barred from profitable employment of silage as a feeding ration and is in most cases denied the advantage, also, of using a pure-bred sire. For these reasons, it was explained, it must not be expected that cow testing will revolutionize production on the part of some 19,000,000 of the 24,000,000 cows owned on the farms of our 48 states. It cannot be made profitable for the owners of these animals.

Mr. Rabild sees in the bull association, however, an effective agency by means of which any community of small herds can be made to increase its milk production by at least 1,000 lbs. of milk per cow in a five-year period. Where a community is divided into four blocks and a bull is maintained in each block for a two-year period there is no danger of inbreeding, while the cost to each farmer for bull service is reduced to a comparatively low figure per cow. Much better bulls can be purchased for bull association work where sixty to seventy farmers unite for this purpose than is the case where the members of a cow testing association each own their own pure-bred sire. "Nowadays," states Mr. Rabild, "we no longer talk anything less than $1,000 bulls when we go into a community to work up sentiment preliminary to the organization of a bull association. And no matter how "scruby" the cows of that particular region may be, we find that the $1,000 bulls not only win converts to the association but lead more rapidly than would be expected to the introduction of pure-bred herds upon the farms."

In illustration of this fact the speaker told of one community in the South where 60 men who owned 120 scrub cows were encouraged to form an association of this sort with four $1,000 bulls. Those in charge of the work reported that one after another of the members of the new association came to them during the following months and stated that they had reached the conclusion that "their cows were not good enough for those bulls." The outcome of the matter was that by the end of the year the members of this association had purchased 124 pure-bred cows. Results such as this are uncommon, Mr. Rabild asserted. The "coffee cow" of the South, in particular,—an animal which though possessing the female bovine characteristics, produces only enough milk for the daily coffee—gives way before the influence of pure-bred standards represented by the $1,000 bull introduced by the bull association.

The average milk production of cows in the United States is about 4,000 lbs. a year. This is very much lower than in many of the European countries. The average production of cows in Denmark is 5,700 lbs., in England 5,900 lbs., in Switzerland 6,900 lbs., and in Holland close to 7,600 lbs. Denmark doubled its milk production in 24 years and changed a beef breed to a dairy breed during the process. That which has been possible, asserted Mr. Rabild, in the case of a nation is entirely within the reach of any community in the United States by persistence in the use of pure-bred sires. Five years of bull association work will increase by 1,000 lbs. a year the average milk production of the animals included in such an organization.

Illinois. ORIN CROOKER.



Why longest users of Purina Cow Chow are its best friends

When asked why they feed Purina Cow Chow, most users simply say, "it gets results"—the best reason in the world. Purina Cow Chow gets results because it

supplies protein and minerals

needed for balancing home-grown roughness. There is too little protein and almost no calcium in most dairy feeds. Fail to give a cow as much of *any* material as she needs for making milk, and she will give less milk. Much of the carbohydrate feed she eats is wasted, because it can't be turned into milk without protein and minerals to complete it.

Feed Purina Cow Chow

and your cow will not only utilize the Cow Chow in making milk, but will turn the otherwise wasted feed into milk. From the average cow you will

get three pints more milk per day

This extra milk costs you only about 5c to produce and is worth at least 12c to 15c wholesale. Pretty good return on your investment, is'nt it? Ask your dealer for Purina Cow Chow.

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Finely Ground
Raw Rock Phosphate
increases the fertilizing value of manure 60%.

Dairy Farmers
get particularly good returns from money invested in **rock phosphate.**

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NULIFE
Pure Sugar Cane Stock Feeding
MOLASSES
Makes more milk. Puts more fat on steers, horses, sheep, and hogs in less time. Feed **NULIFE** pure sugar cane molasses with all your roughage and grain.

If your dealer can't supply you, send us his name and **Order Direct**, 55 gallon barrels — 24 cents per gallon — $13.20 per barrel. 10 barrels or more, 22½c per gallon, $12.40 per barrel. Carlots, 21c per gallon, $11.55 per barrel. **F. O. B. Chicago.** Pamphlet on **Feeding Facts Free. Prompt shipment. Order Today.**

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Phosphoric Acid
Finely Ground Raw Rock Phosphate is the cheapest source. Your inquiries solicited.

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Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.



Electric Wheel Co.
31 Elm St., Quincy, Ill.



Your Private Cow Doctor

If cows could tell their feelings, many a serious illness would be prevented, and constant milk losses would be saved.

Milking cows, particularly, are subject to many ailments that are first manifested only in a reduced milk yield.

Such cow ills you can treat yourself with the aid of Kow-Kare, the great cow medicine. At the first sign of reduced milk flow try Kow-Kare. Use it according to directions and watch the story the milk pail tells.

Dairymen everywhere know the value of Kow-Kare both in preventing disease, and in treating such ailments as Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches.

No cow barn should be without Kow-Kare, your private cow doctor. Sold in in 70c and $1.40 packages by feed dealers, general stores and druggists.

Write for free book, "The Home Cow Doctor."

DAIRY ASSOCIATION CO.
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DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.



Write for free booklet with guarantee and letters from farmers and dairymen

ABORNO LABORATORY
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ABORTION



Dr. Geo. Hollabush's remedy a general tonic for cows and mares will prevent abortion and make prompt breeders and correct failure to clean. I guarantee and refund money if not satisfactory. Send for circular.

Dr. George Hollabush, Fort Atkinson, Wis

BABY CHICKS 12½c each, postage or express paid by us. Place order now for delivery any date you desire during 1921. Safe delivery guaranteed anywhere in U. S. Highest quality. All varieties. We ship from Chicago, Cincinnati, Philadelphia, Minneapolis, Des Moines, and Kansas City. Full information sent FREE. Write today. Address all mail to main office. NATIONAL CHICK CO., 35 Railway Exchange Bldg., KANSAS CITY, MO.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Help at Calving Time

To make it easy for the cow to calve avoid feeding constipating rations during pregnancy and make the cow take plenty of exercise to keep her muscles in tone. If the rich ration of concentrates is fed right up to calving constipation commonly results, the cow also is too fat and flabby, and when not given adequate exercise her pelvic ligaments and bones will not properly relax to facilitate passage of the calf. Bran and some oil meal will help to regulate the bowels. Some silage should be fed, but only about half the ordinary ration. Roots are suitable feed as an adjunct to bran and oil meal. Clover or alfalfa hay should be preferred to timothy, prairie, or marsh hay. The latter hay is poor stuff for a dairy cow. Prefer it for packing crockery or iron castings.

When it is seen that the cow is about to calve let nature "boss the job". Interference often causes much more harm than good. Make it a rule not to assist the cow unless that is absolutely necessary. If it is seen that calving is abnormally delayed an examination should be made to determine if anything is wrong. If an unnatural presentation is discovered, what is wrong should perfectly be determined and a feasible plan of setting matters right decided upon and then carried into effect. If the three items here suggested are correct in conclusion and consummation the calf will be delivered, otherwise assistance will fail. The calf must be delivered head and front feet, or hind feet and quarters first. It cannot be extracted broadside on, nor will it come away if the operator ties a rope to one fore foot and one hind foot and then applies brute strength. Brains are as necessary as brawn in this work. Brutality, such as hitching a horse to ropes tied to the calves' legs, should be avoided.

Lubrication of the calf and vagina is necessary in all obstinate cases of calving. The natural lubricant present just after breaking of the "water bag" soon dries and the difficulty of delivery then is aggravated. Inject 8 to 10 quarts of raw linseed oil or cotton-seed oil over the calf into the womb when necessary to assist at a difficult calving. If oil is not available use melted lard or slippery elm bark decoction. The latter is well suited for this purpose.

The greatest possible care should be taken to avoid infecting the womb. To that end the hands and arms of the operator and all instruments and ropes should be clean and disinfected. The finger nails also should be pared to prevent laceration. Some operators wear thin, sterilized rubber gloves. After removal of the calf the womb should be cleansed and disinfected by flushing with a bloodwarm antiseptic solution, such as a one-fourth to 1 per cent mixture of Lugol's solution and water, or a solution of a heaped teaspoonful of table salt to the quart of water will do. For a week to ten days after calving the vagina should be flushed out daily with a similar solution. The afterbirth should be buried or burned. Never allow it to be eaten by the cow.

When nature is not given time properly to relax the pelvic ligaments and bones, the hind parts of the calf tend to lodge or jam in the pelvis and forcible delivery then injures the parts. All help should be given as gently as possible. Traction, when necessary, should be downward, as well as outward. It will succeed if the calf's head is gotten into position between its knees and the two fore feet are present in the vagina; or if the hind feet and legs are presented; not otherwise.

Mammary Tumor

I have a registered Holstein cow that when fresh one year ago and the swelling went out of her bag, a good sized lump remained at the base of one hind teat. Just before she was fresh this year it started to swell and scatter over the balance of her bag. She has now been fresh for three weeks and the swelling remains, only it is several times larger than before and is spreading to other teats. It in no way is connected with the milk glands. What can I do for it?

South Range, Wis. A. N. Y.

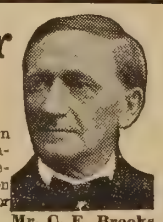
Tuberculosis of the lymphatic glands of the udder is to be suspected as the cause of the lumps mentioned and to determine this you should at once have the cow tested with tuberculin. Any graduate veterinarian can supply the test. The disease is incurable and makes the milk dangerous for use by persons or animals.

Jersey Cattle Notes

For week ending December 3:

Number of animals registered: Bulls, 140; cows, 505; total, 640. Number of transfers recorded: Bulls, 205; cows, 616; total, 821.

Don't Wear a Truss



Mr. C. E. Brooks

Brooks' Appliance, the modern scientific invention, the wonderful new discovery that relieves rupture, will be sent on trial. No obnoxious springs or pads.

Brooks' Rupture Appliance

Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. Sent on trial to prove it. Protected by U. S. patents. Catalog and measure blanks mailed free. Send name and address today.

Brooks Appliance Co., 467 B State St., Marshall, Mich.

ABORTION IN CATTLE



CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT, REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A, 398-408 Columbus Ave., New York City, Reference—Colonial Bank.

Barren Cows

Must Be Made to Breed or Your Dairy Business Will Be a Failure. They

Can Be Made to Breed

By the use of

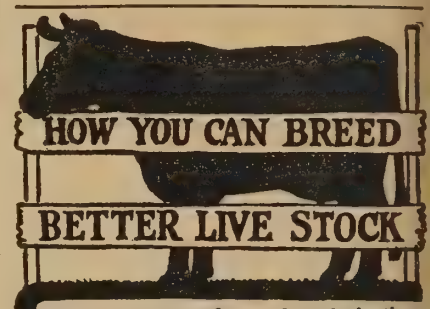
Hood Farm Breeding Powder

We say this confidently because it has been used with such marvelous results by so many breeders. Every cow at Hood Farm is treated with the Breeding Powder, and we know that it does make barren cows and heifers breed; we know that it checks and prevents abortion; we know that it makes cows clean quickly, thereby saving us hundreds of dollars annually.

Order today, mentioning this paper.

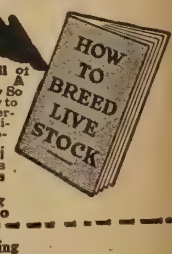
Prices prepaid $1.15, $2.75 and $5.00. Flexible Injection Tube, by mail, 90c. Mammoth size Breeding Powder and Tube, prepaid, $5.75.

C. I. HOOD CO., Lowell, Mass.



Why lose money each year through abortion—through high-priced animals failing to breed—through animals dying at birth—through diseases and countless other causes when a little special knowledge of animal raising would stop all this, and put your live stock on a big-paying basis. The National School of Animal Breeding, through its famous home-study course, has taught hundreds how to breed more and better live stock, and how to increase their profits. Stop the leaks in *your* profits! A few minutes reading of this course each day in your own home is all that is required. Course is the result of long years of experience. Brings the school to the breeder. Written by experts. Our free book tells all about it. Send for it today.

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"How to Breed Live Stock,"---a really remarkable book! Chock-full of valuable pointers on animal breeding. A few of the chapter headings: Why So Many New Born Animals Die--How to Prevent Abortion--How to Control Heredity--How to Care for Breeding Animals--Complete Instruction in Capsule Breeding. Many others as well. Shows pictures of breeding organs! Simply fill out coupon, mail it to us today---and this amazing book is YOURS! Mail Coupon NOW.

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Please send me, without obligation or cost, your book, "How to Breed Live Stock."

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That gives a man more genuine chewing satisfaction than he ever got out of the ordinary kind.

Smaller chew, lasts longer—so it costs less to chew this class of tobacco.

And the good, rich tobacco taste gives a world of satisfaction.

Any man who uses the Real Tobacco Chew will tell you that.



Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Improving the Milk Market

HOARD'S DAIRYMAN:—My work takes me among farmers a great deal and, since the price of all farm products has declined, one hears discussions on all sides as to causes and probable results. What I have in mind just now is to show that sometimes a man in business is working to his own detriment.

A few days ago I called on a farmer and we discussed the low prices now being paid for milk as also the small price of milk that is now being used for condensing purposes and for manufacture into cheese. This farmer said something that surely is the truth and ought to set every other farmer to thinking. "I cannot understand," he said, "how any of us can expect to get a real price for our products when we, ourselves, use oleo and drink black coffee. A man ought to boost his own business by eating his own product. In doing this, more will be consumed and at the same time, he, who produces the milk, will be advertising his own business. When a person has something to sell, he must do a certain amount of advertising and the place to begin is at home and show other people that we believe in our own goods by using them liberally on our own table."

This thought has never before been brought so forcibly to my attention. If farmers themselves will begin to use dairy products as they should, they will create such a demand for better butter, cheese, ice cream, and the one hundred and one other things that can be made from milk, that there will be very little need to look for a foreign market to take all that we can produce. Because the people of America want the money and want to have the best there is for home consumption, a little propaganda should find an outlet among our own people for all the milk products produced in the United States.

Wisconsin. J. JACOB TSCHUDY.

SWINE

Cedar Crest Farms

have never possessed a finer lot of Berkshires than at present. Let us name you prices on fall and spring boars and young gilts.

J. K. DERING, Owner
Lake Villa, Illinois

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

BROWN SWISS

Brown Swiss Cattle For Sale

Male and Female

We solicit correspondence.

Dahlem & Schmidt, Box 85, El Dorado, Kans.



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, which mature to hardy, heavy milking, long-lived dairy cows—profitable in your herd and readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeders' Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

JERSEYS

Bulls—JERSEY—Bulls

A splendid lot of Majesty bulls out of Register of Merit dams for sale at very low prices. We must sell to make room for our winter and spring calves. These bulls are from three months to two years old and sell with full guarantee to be breeders. We have a Federal Accredited Herd. For pedigrees, descriptions and prices, write Thos. T. Bacheller, Jr., Mgr.

ELMS JERSEY FARM
M. D. Munn Forest Lake, Minnesota

One-year-old JERSEY BULL
... For Sale ...

1,410 lbs. fat, 24,613.8 lbs. milk, year's total for two grandams. Two grandsires of two nearest sires, premium winners at National Dairy Shows. Five of six nearest sires R. of M. sires. Price $125.00, others $75 and up.

E. O. ANDERSON, Shelby, Michigan

Sophie Tormentor
— Golden Fern's Lad Bull

Dropped May 1, 1920, solid color.
Sire—Brookside Babe Torono, a wonderful sire, and a grandson of the Gold Medal sire, Hood Farm Torono, 73 tested daughters.
Dam—An imported line bred Golden Fern's Lad cow. In Register of Merit Class AA.
Calf has great length of body, straight back, and is well grown.
Price $125.00 f. o. b.

CHAS. A. TILLEY, Frankfort, Kansas.

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.

F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write

ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. **R. C. Green & Son, Albion, Wis.**

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Avranche 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write

FRED STUBLEY, BLACK EARTH, WIS.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Fedro, Loretta D, King Sappho King and Golden Maid's Prince.

J. Q. EMERY & SON. Edgerton, Wisconsin

TWO BULL CALVES

10 and 11 months old, Imported Jap breeding. Dams have made 455.9 lbs. fat in 11 months and 462.4 lbs. fat in 10 months. For pedigree and price address

Washburn Farm, Oshkosh, Wis.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.

CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

JEREY

How to Select a Cow

LOOK FOR—

The cow that produces plenty of rich milk for which the public is glad to pay the top price. The cow that produces the most butterfat profitably. The cow that milks earliest. The cow that milks longest. The cow that thrives under all conditions. The cow that is always willing to work.

Look for the cow that possesses the greatest number of profit points and you'll find Jerseys—THE PROFIT BREED.

Write to the Jersey Information Bureau for facts on how to make Dairy dollars. Get the free books that tell how others have succeeded and how you may succeed.

An Institution for the Benefit of Every Jersey Owner



THE AMERICAN JERSEY CATTLE CLUB
324-E W. 23d St.
New York



For Sale—Eight New Milk Cows

These cows have type, breeding and are real producers. Guaranteed right in every way. If you are looking for good cows, come and see them or write for particulars.

W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

MERIDALE JERSEYS



Interested
Prince 2d 95708

Sire of 27 Register of Merit cows, including Interested Jap's Santa, 15,569 lbs. milk, 1,007 lbs. 85% butter.

His pedigree blends the blood of those conspicuously prepotent cows, Interest and Sayda.

He has 50% the same blood as five Gold Medal cows in the Meridale Herd. A few of his sons are for sale, out of excellent Register of Merit cows.

AYER & McKINNEY
300 Chestnut Street, Philadelphia, Pa.

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Raleigh Bulls For Sale

2 are ready for heavy service, others younger, all from Register of Merit cows with one exception. Also a 2-year-old heifer just fresh and some Register of Merit cows with records from 400 to 500 lbs. butterfat.

P. G. Warmington, Honey Creek, Wis.

Dunn and St. Croix Counties Jersey Breeders' Ass'n

have a few choice bulls and several pure-bred and grade cows and heifers for sale.

S. A. B. AUSMAN, Secy. Elk Mound, Wis.

Serviceable Bulls From R. M. Dams

We have a few very good individuals 6 to 13 months of Majesty and Raleigh breeding. A tuberculosis free herd. Every animal guaranteed right.

Your inquiry promptly answered.

E. E. HILL & SONS, Tomah, Wis.

31,763.9 lbs. milk
1,786.8 lbs. fat
Made in one year by the two grandams of

Jersey Bull

No. 281 dropped March 7, 1920

Solid Color—Price $250.00

We offer bulls and bull calves ranging in price from $150 and up. Write us for extended pedigree, description, etc.

HOOD FARMS, Inc.
Lowell - - Mass.

158 R. O. M. records made by
AYREDALE JERSEY COWS

Average 10,503.6 lbs. milk, 582.5 lbs. fat.

We offer bulls and bull calves from these cows, sired by

CARRY-ON of AYREDALE (164012). His dam and two grandams average 17,151.2 lbs. milk, 928.4 lbs. fat.

SOPHIE GILSLAND TORMENTOR (123584). Dam made as a 4-year-old 15,952 lbs. milk, 888 lbs. fat.

SOPHIE 19TH GRANDSON (165221). Dam made 15,578.7 lbs. milk, 809.5 lbs. fat.

The bulls we offer are close up to the World's Champion producer Sophie 19th of Hood Farm. Correspondence solicited. We would appreciate information about your herd, so as to price you bulls calculated to add size, type and increased production.

Write F. W. AYER
AYREDALE STOCK FARM, Bangor, Maine

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.

Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors

ULSTERDORP FARMS Highland, N. Y.

I Am Offering

my undefeated show bull, Rose's Elmhurst Jolly, No. 142213, and one of his sons of serviceable age for sale to the highest bidder.

Address all inquiries to

Hazeltine Lake Jersey Farm
H. C. Wagner, Excelsior, Minn.

Helps and Handicaps to Dairying

HOARD'S DAIRYMAN:—"What is the biggest handicap to dairying at present?" was one of the questions recently asked the 68 West Virginia dairymen who hold membership in the Ohio County, Greenbrier County, and Eastern Panhandle Cow Testing Associations of that state. Sixteen of them replied shortage of labor and high wages, 21 were just as positive that the high cost of feed was the stumbling block, 21 more mentioned the lack of high producing cows, bad roads was the pet worry of one man, and low prices of milk discouraged 9 dairymen in the eastern part of the state. One man was found who had no kicks in any particular with his condition.

There were three dairymen who noted that butter substitutes and the need of advertising dairy products have been potent causes of low prices of milk in their vicinity. Five others answered that they must receive a higher price for milk through the use of better selling methods and marketing organizations.

The average size of the farms was 158 acres. There were only 16 renters among the 68 dairymen, indicating that dairymen are strongly in favor of owning their own homes. There were 61 silos, all of which were giving entire satisfaction and which were regarded as the mainstays of the dairy business. Twelve members were using milking machines and with but a single exception they were proving entirely satisfactory. There were 266 pure-bred cows kept in the various herds and 48 pure-bred bulls. The pure-bred cows were found in the herds of 35 of the 68 association members.

All the milk in the Wheeling district is handled co-operatively by an organization representing both producers and consumers, and it has proved entirely satisfactory to both parties.

Where different groups are affected by the selling price of an article, there should be a conference of representatives of these groups. The Pittsburgh plan of arriving at the price of milk per quart, which is the plan that takes in Wheeling and vicinity also, is to negotiate each month's price. Organized consumers, organized producers, and organized dealers get together. Representatives of each group state their needs and all learn that by co-operation each group can get justice in price.

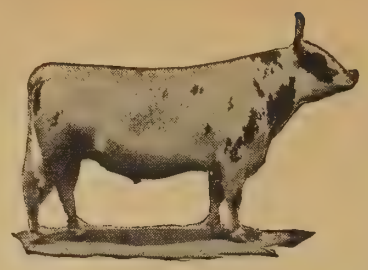
The demand for milk is widened because consumers learn the true food value of the milk they buy, but the consumer pleads that as milk is a necessity the price should not be based on what the traffic will bear, but on a program of efficient production on the farm with the least possible cost of distribution. The farmers reply that their interest is in the annual net return and that they are ready to accept somewhat lower prices in summer and autumn if the consumers will co-operate to increase consumption in the spring when production costs are as high as in the autumn, but when the milk production is higher only on account of fresh cows. Consumers point out that drivers of retail wagons are careless in collecting bottles and that there are too many retail wagons on each street. The dealers reply that they can lower the cost of distribution if consumers will take pains to put their bottles out each morning, and see to it that bottles are not used for preserves or carelessly broken in the home. The dealers also agree to reduce the number of wagons on each street.

Costs are lowered in the country by organized dairymen weeding out their poor cows through testing associations and better methods of feeding. A better, cleaner product is furnished on account of more sanitary methods, the cooling of all milk and the eradication of disease from the herds. This is real enlightened co-operation; a co-operation that is enlightened because it is powerful enough to get a full hearing always helps bring justice.

The milk consumers of Pittsburgh and Wheeling have a right to feel that they are securing a good, clean article at a fair price, because the price is based on actual costs of production and distribution. In this connection, Dr. Clyde King, a noted economist from the Wharton School of Finance, of Philadelphia, has been of invaluable assistance in arriving at an equitable price to be charged per quart to the consumer. The Pittsburgh Sales Company, which is the name of the milk producers' organization, has been of great value to the dairy industry in the Pittsburgh and Wheeling district in capitalizing the quality of product, and in leading stability to the dairy business by inspiring confidence among producers that they will continue to receive cost of production, plus a reasonable profit.

The Ohio County Association receives a price of $4.35 per hundred for 3.5 per cent milk. The Eastern Panhandle receives from 54 to 95 cents a pound for butterfat. Greenbrier County receives an average of 75 cents a pound for butterfat. This variance is attributed to difference of location, cost of labor, cost of feed, shipping facilities, etc., so that as a whole there seems to be a reasonable close check on the different districts.

West Virginia. ROSS B. JOHNSON.



We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANIA

Middlesex Meadows Ayrshires

NANCY WHITEHALL, World's Jr. 4-yr.-old Champion Ayrshire, has just completed another record of 22,075 lbs. milk, 858 lbs. butterfat. Her bull calf, *NANCY'S CHANCELLOR OF MIDDLESEX*, born September, 1919, by a show ring champion with great milk production behind him, is a winner in the show ring this year, and is now being used on all the Middlesex Meadows Farm heifers. He is offered for sale for immediate delivery. Guaranteed a breeder and right in every way. Price $2,000.

A. Henry Higginson

South Lincoln, Mass.

Delchester Farms Ayrshires

Tell us your wants and we can supply them at prices you can afford to pay.

Aged cows, bred to Glenury, an A. R. son of Finlayston.

Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

Heifers, bred to these two great sires.

Young heifers.

Bull calves.

All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS

Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,

Arthur H. Sagendorph William Hunter

SPENCER, MASSACHUSETTS

AYRSHIRES



The THREE WISE MEN FOLLOWED A STAR

BE A WISE MAN

AYRSHIRE BREEDERS ASSOCIATION

BRANDON VERMONT

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed

L. W. McCONNELL, Wellington, Ohio

World's Champion Ayrshires

Fully Accredited Tuberculosis Free — 200 Head in Herd



AUCHENBRAIN WHITE BEAUTY 2ND

A. R. 14,721 lbs. milk, 4.33%

In 13 years, 112,486 lbs. milk and 13 calves

110 animals in herd are descended from this cow. 4 of our cows hold the 1st, 2nd, 6th and 7th highest Ayrshire records. They average 22,823 lbs. milk, 1,046 lbs. butter in one year. 20 cows in herd average 17,074 lbs. milk, 803 lbs. butter. 100 Advanced Registry records made here average 13,246 lbs. milk. 30 head, choice animals for sale at reasonable prices.

Write us your needs.

PENSHURST FARM, Narberth, Pa.

Addington's Champion

No. 19561

Hard to Excel his Breeding
Maternal Grandfather—Nox'emall
Paternal Grandfather—Finlayston
Father—Rena's Champion—17 A. R. Daughters
Mother—Addington Queen 3d—Mature Record 19,315 lbs. Milk

FOR SALE—Sons and Daughters from high milking dams.

Tuberculin Free Herd

BLACKBURN FARM Sewickly, Pa.

ELKHORN FARM

"THE AYRSHIRE HERD of the WEST"

Exceptional Offering of

BULL CALVES

Out of A. R. Daughters of Imp. Finlayston, Baron's Best of Bargenoch; Beuchan Peter Pan and Substantial of Highland.

Write for list.

J. Henry Meyer, Owner L. W. Wing, Mgr.

Watsonville, California

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.

NORTH WEYMOUTH, MASS.

Aldebaran Farms

Racine, Wis.

AYRSHIRES

FOUR BULLS 15 to 18 Months Old

They are in pink of condition and ready for immediate service. They are from choice stock. Priced reasonable.

FRED TSCHUDY & SONS, Monroe, Wis.

Pure-bred Ayrshire Cattle For Sale

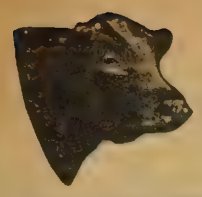
Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.

Wm. Nisbet & Sons, Richland Center, Wis

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

FRIENDS HOSPITAL, Frankford, Phila., Penn.



Economy in Production ← GUERNSEYS → Quality of Products



The more you investigate Guernseys, the more thoroughly you will realize that they are the cows you want to buy. Guernseys have the greatest profit producing capacity, and considering the dividends they return, they can be purchased for the least money. A big claim, perhaps, but you will agree if once you own Guernseys, or become acquainted with a breeder who has Guernseys. Let us help you start investigating.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H10, Peterboro, N. H.

Ready For Service



KING CONFIDENCE OF PROSPECT 61174
Dropped October 19, 1919
SIRE: Anton's King Confidence No. 43517. DAM: Anna of Prospect No. 47674, A. R. 5050

This young fellow is one of the big type. He has filled out remarkably since his picture was taken four months ago. He carries the stamp of Anton's King Confidence which we regard as equal to that of any bull of the Guernsey breed. King Confidence is out of one of the best cows we have on the farm.

This bull will put size into your herd as well as the best blood of the breed.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

Just What You Want!

An 8 months old bull calf. Partly white, light fawn, very fine individual.

SIRE—Cream Cup's King Regent of Allenwood 33889, by Allenwood King Regent 23641 and Allenwood Cream Cup 41291 who has a record of 436.89 lbs. fat Class G.

DAM—King Regent's Fanny of Allenwood 2d 73637, now on test in Class FF and will finish between 500 and 600 lbs. fat and has milked as high as 49 lbs. in one day. She is a daughter of Noble Regent 31691 and King Regent's Fanny of Allenwood 58290 who has a record of 347.64 lbs. fat at 2 years.

CORIUM FARM, F. J. Rueping, Owner, Fond Du Lac, Wisconsin.

Two Yearling Guernsey Bulls For Sale

They are very well grown, well marked, show individuals. Clear noses. Pencoyd and May Rose breeding. Guaranteed satisfactory—$175 each, delivered anywhere with registry and transfer papers.

Write or come and see them.

PETERSON & MILLER, Weyauwega, Wis.

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS
James H. Murphy, Mgr. Delavan, Wisconsin

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

For Sale

Two Advanced Registry Guernsey Bulls of excellent breeding and conformation. Tuberculin tested. One 2-year-old and other a yearling. Dams' records over 515 lbs. per year as 3-year-olds.

Address
Emil Walther, Medford, Wis.

For Sale

Craigamoor Raritan 24912 (A. R.), whose daughter now on test will make over 600 lbs. fat in AA. Also 4 sons 2 to 10 months old out of A. R. dams. Write for full description.

E. F. JONES, Barron, Wis.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Butterfield Farm

Guernseys a Specialty

Write or come and see for your own benefit what we have to offer for sale: Two bulls, 8 and 13 months old, comprising productive breeding, type, and good development.

Priced to sell.

H. R. Andrew and E. Nelson, Livingston, Grant Co., Wis.

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., Nelsonville, Portage Co., Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

Here's Your Opportunity!

Good Grade Cows in car lots. Pure-bred Males, Females with type and good producing ability. Investigate.

Fox River Valley Guernsey Breeders' Association
Harry Leppla, Sec'y, Appleton, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Harbor Hill Guernseys

Masher's Galore 8572 A. R.

Increased the Average Production Credit of 12 A. R. daughters out of A. R. dams by 181 lbs. We offer his double grandson out of another daughter also making a better record than her dam.

C. H. Hechler, Superintendent
Box 30, Roslyn New York

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection
OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Forestdale Farm

3 Bully Baby Bulls 8 Handsome Healthy Heifers — 2 to 18 months

from Superior Standard Sires, also a few A. R. matrons. May Rose Breeding. Tuberculin tested. $250 lowest price.

R. D. DeForest, Amsterdam, N. Y.

Falcon's Grenadier (65834)

Dropped Feb. 12, 1920

Sire: *Falcon's Proud Warrior* (*47559*). Pronounced by many experts as "the greatest son of Langwater Warrior".

Dam: *Stockbridge Olive* (*30883*), from a noted family of high producers. Olive has an A. R. record of 11,503.2 lbs. milk, 617.36 lbs. fat and dropped two calves during the year.

Grenadier is a high class, well grown bull; priced very conservatively at $600 f. o. b., Litchfield.

Write about him today.

Falcon's Flight Farms, Litchfield, Conn.

Meadowland Guernseys

Sixty-five females, priced conservatively, are offered from which to make selections.

MEADOWLAND FARM, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Guernsey Bulls

All ages, sired by a son of Beda's May King, out of dams who are daughters of Governor of the Chene (1297) P. S., Langwater Raritan, Prince Charming and others. Write for prices.

Peter Simon, Elba, Minn.

We Offer For Sale

Simplicity's Winner of Iowanola (54404)

Born August 25, 1918. A show bull. First prize in class and member 2nd prize get of sire, Waterloo Dairy Congress, 1920.

Sire, Cherub's Winner (34180). The sire of all the animals that won all of the cups and trophies awarded at the N. D. S., 1920.

Dam, Simplicity of Haddon (47876), A. R. 7607. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. A big, strong, typy cow, a very easy milker and a good breeder.

Write for further information. We have a few younger bulls.

Mountain Bros., Carrier 403, Des Moines, Ia.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by
RADISSON FARM, ANOKA, MINN

For Sale

Guernsey herd sire Zac of Elm Springs 36192, age 5 years. Very active and an extra good individual. Write for picture and other information.

SARATOGA GUERNSEY FARM
Ray F. Frisby, Prop., - St. Charles, Minn.

Shorewood Farm Offers

Sons of Ladysmith's Cherub, three times National grand champion. One of his first daughters to finish made 591 lbs. fat in Class G. Others equally as promising now on test.

These bull calves are from 3 months to serviceable age out of dams with records up to 777 lbs. fat. They combine size, and type with persistent production.

SHOREWOOD FARM, Crystal Bay, Minn.

Guernsey Bulls

May Rose on both sides. Dams in A. R. or on test. Quality higher than the Price. Send for list.

E. S. Person, - Minot, N. D.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Our last 9 official records average over 510 lbs. fat, including all ages. Our herd sire has 8 A. R. daughters, including one with 572 lbs. fat in Class GG. His three nearest dams average 822 lbs. fat. Send for pedigrees and prices on young bulls with this backing.

Folly Farm, Box 587, Libertyville, Ill.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

New York Butter Market

NEW YORK CITY, DECEMBER 7:—The nerves of the butter receiver are being severely tried these days as there is a constant downward trend to butter prices. The market is decidedly weak and inactive and prospects of an improved condition are very remote. There are several factors which are responsible for conditions that prevail at present. The most important one is Danish butter, which will undoubtedly continue to arrive in great quantities for an indefinite period as the Danes have made definite plans to develop a permanent market for their butter in this market. Then, too, speculators who stored vast quantities of butter during the early spring months are anxious to dispose of their holdings in order to prevent still greater losses than they will realize if the butter is moved at present prices. In addition, there is a general feeling of uncertainty as to the future of the market and receivers are anxious to move their butter at any price. That condition very naturally causes a downward trend to butter prices.

Practically two million pounds of Danish butter arrived a week ago and it is known that a like quantity is on the water at present. A steamer carrying 10,000 casks has been expected for several days and it is probable that it will be docked today. Some held Canadian butter, approximately five car loads, has been received during the past week. Very little foreign butter from other sources has been received. It is probable that very little Canadian butter will be received in the near future as England has contracted with several Canadian creameries for their surplus output at prices more satisfactory to the factories than could be obtained in this country. Foreign butter, other than Danish, will have little influence on the market during the winter months. However, that from Denmark will be the deciding factor as to whether or not a strong active market for domestic butter will prevail for the next few months.

There is a strong sentiment among butter receivers in general that butter prices should be worked down to a comparatively low level so that the Danes can not afford to ship their butter to this country. Whether or not that would cause them to find other markets for their butter is problematical as their market is limited, as European countries are purchasing little butter at present, and the factor of European exchange makes it profitable for the Danes to ship their butter here even though our prices are considerably below those which obtain in European countries. The Danes have as an objective the establishment of a permanent market in this country and would willingly lose some money at present in order that the consumers of this country may be educated to demand the high quality Danish butter. It is already quite evident that the butter is in greater demand than it was a few months ago and it is quite probable that the Danes will have little difficulty in realizing their ambition. There is a possibility that the incoming federal administration may increase the duty on butter thereby shutting out considerable of the present supply of foreign butter. Even then, if foreign exchange does not improve, the extra duty will not necessarily cause a curtailment of shipments to this country.

On Friday, November 26, extras were quoted at 60c, there having been a price decline of 5c on that day. On the following day, there was a further price decline of 3c. The quotation then remained until the following Friday when there was another radical decline of 3c. An additional price of 2½c materialized the following day but yesterday there was a recovery of ½c. There was no change today but the market was without life and there is a probability that there will be additional declines. Demand continues only for butter of fancy quality. Danish butter is moving quite readily at prices from two to three cents under the quotations on domestic butter. There is little demand for other foreign butter. Established quotations today are: Extras (92 score), 51½@52c; higher scoring than extras (93 score), 52½@53c; firsts (90—91 score), 46½@50½c; firsts (88—89 score), 43@46c; and, seconds (83—87 score), 36@41c.

W. B. LIVERANCE.

Oregon County Farmers' Week

The annual Farmers' Week at the Oregon Agricultural College held in past years late in December has been postponed until June of next year and an innovation in agricultural extension is being instituted in a series of county farmers' weeks for the coming winter. The idea of a series of such events developed out of a very successful county farmers' week held n Multnomah County last year. One day was devoted to a single line of agriculture and at the end of a week a total attendance of 1,600 had been recorded.

This year it is planned to hold approximately twelve such events in as many counties at the close of farm bureau membership campaigns. One day will be devoted to each of the main lines of work adopted in the farm bureau program with the final day known as farm bureau organization day which will mark the completion of the county organization drive.

Oregon. F. L. BALLARD.

We Offer Choice Sons of



SIR ECHO SYLVIA JOHANNA
A ⅞ brother to the $106,000 bull. His six nearest dams average over 35 lbs. butter and 700 lbs. milk.

Extra fine individuals from A. R. O. dams who are daughters of a grandson of Pietertje Maid Ormsby, the dam of Sir Pietertje Ormsby Mercedes. All are good herd prospects.

Priced very low for quick sale.

Chestnut Hill Farms

Herd Under Federal Supervision

G. A. Burdick, Manager **Gibsonia, Pennsylvania**

I Will Take Your Note

For Better Than a 30-lb. Bull

I will ship anywhere, express paid, for $550, 6 months time allowed or a discount for cash.

HIS SIRE is King Gerben Maid Lyons, a 33-lb. son of Rag Apple Korndyke Boon, herd sire at Friesland Farm, whose tested daughters include a number of 20-lb. 2-year-olds. "King's" dam, a 33-lb. 3-year-old with a 31-lb. daughter, is now going at a 1000-lb. clip on year test.

HIS DAM, Jessie Fobes Maud Burke, a 28.86-lb. 4-year-old granddaughter of Colantha Johanna Lad, is one of the very best producers in our herd. Her dam is by Canary Paul Fobes Homestead and is from a 27-lb. daughter of that great sire, Homestead Jr. De Kol.

Write or Wire

Otto T. Schauble **Pilger, Nebraska**

HOLSTEINS

CHOICE AT $150.00

For one month only! 10 young bulls Federally tested. Sire, Joh Segis—15 nearest dams over 30 lbs. His dam, 700 lbs. milk. Dams—A. R. O. cows up to 25 lbs. Bulls 8 to 12 months old.

HENRY J. KARPINSKI, Route 7, Oswego, N. Y.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.

COLORADO

For Sale—Sons of Sir Johanna Bess Segis (the Colorado-Minnesota bull) from dams with records up to 30 lbs. One calf of serviceable age. A clean herd. Safe delivery guaranteed.

Loesch Bros., Pahgre Valley Ranch,
Montrose, Colorado.

Bull For Sale

Faultless Individual, born in January from A. R. O. Dam. Well grown and Prize Winner in October show. Herd tuberculin tested. The best calf I ever sold at the price, $200. Photo and pedigree on request.

Arthur C. Daily, Springfield, Mo.

Old Deerfield Herd

Headed by King Plebe Korndyke Johanna. Bulls from one to six months of age for sale. Prices $50 to $75.

CARL FOLL, Deerfield, Wisconsin

Grandsons of "Count" and "Piebe"

I have just purchased from the University of Nebraska, which owns the highest record son of PIEBE from BEAUTY GIRL PONTIAC SEGIS, the World's Record Daughter of COUNT,

Eight Young Bulls

from six to eighteen months old, all from good A. R. O. dams. Individuality faultless. Beautifully marked.

Most Popular Combination of Breeding of the Day

They Won't Last Long **Write Me At Once For Prices**

J. M. HACKNEY

ARDEN FARMS, 602 Merchants Bank Bldg., St. Paul, Minn.

ECHOLAND FARMS

Offer a few bargains in bull calves sired by Chief De Kol Ormsby, a son of the world's record 4-year-old daughter of S. P. O. M. The average for his 2 nearest dams is 1,279.29 lbs. butter and 27,276.9 lbs. milk for the year.

Write or come and see them.

EGIL BOECKMANN, White Bear Lake, Minn.

4 Serviceable Bulls

ALL SONS OF THE 1235-LB. YEARLY SIRE

Sir Korndyke Bess

The Dams' yearly records all over 800 lbs.

R. E. Benson - - Dousman, Wisconsin

$73 plus $9 for each month of age, buys a Serviceable Son of Sir Pietertje Ormsby Mercedes 43rd

"43rd's" sire is "Old Piet". And his dam the long-distance cow, Aaggie Wayne Peep, with 34.59 lbs. butter in seven days and 1,250.35 lbs. in a year. She also holds the world's record for five consecutive years with 4,992.03 lbs. butter. Dam of young bull is a daughter of the 32.52-lb. sire, Beauty Pietertje Prince.

Also have several younger bull calves with 2 and 3 crosses of Sir P. O. M. blood.

M. E. GUNDERSON & SON, Oconomowoc, Wisconsin

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cows and Heifers

A Few Good Bulls

Because I am overstocked, I am offering some very good registered females for sale. They either have A. R. O. records or are from A. R. O. dams.

Can also offer some excellent young bulls by a 33-lb. sire and from A. R. O. dams with records up to 28 lbs.

Every animal sold is guaranteed to be as represented.

Write or come and see for yourself.

J. D. McDonald West Salem, Wis.

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ollie, sire of world's youngest 1,000-lb. 2-year-old, good individuals from tested dams, some with yearly records. These calves grow into profitable sires. Write

WALCOWIS FARMS
Lake Geneva, Wisconsin

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

$100 to $200

buys a good bull. Sired by very typy, 26-lb. bull and from tested dams up to 25.46 lbs. butter in seven days.

Tuberculin Tested

H. W. Crawford, R. 5, Campbellsport, Wis.

Wayside Lawn Farms

offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

F. H. HEMBROOK

Graduate Auctioneer

A record of 44 Sales for November and October, 1919, and that many satisfied customers in that time. A life time experience raising and selling live stock. Write or wire early for dates as they are going fast.

F. H. HEMBROOK Chetek, Wisconsin.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.



Mr. Dairyman—

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
D. W. Norris, Owner, E. Loehndorf, Herdsman

G'D Son of 37th

— 10 Months Old

Sire, one of 37th's best sons whose dam's 2 year's and sire's dam's yearly records average 1,013 lbs. butter, 21,117 lbs. milk. Dam, 19.89-lb. Jr. 2 daughter of a 31-lb. bull. Ideal individual, ⅞ white. Pictures and pedigrees.

ADAMS FARM,
E. B. Adams & Sons, Racine, Wis.

MILLAR FARM

Home of:

King Pietertje Ormsby Piebe 16th. Records of dam and sire's dam average 1,351.52 lbs. butter in one year.

He is the $15,000 calf purchased at the National to breed on the daughters of Finderne Netherland Korndyke, son of former champion junior 2-year-old; Finderne Pontiac Netherlands. A few sons of the latter bull and out of A. R. O. cows still left for sale.

Better write or come and see us.

WM. MILLAR, JR., Menomonie, Wis.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Waukesha County Holsteins

Send for information relative to:—

10 carloads of pure-bred bulls of serviceable age and younger at prices ranging from $100 up. Will ship satisfaction.

18 carloads of grade Holstein cows fresh and springing at prices ranging from $140 to $250.

Several herds of choice pure-breds at farmers' prices. If you want foundation stock of any kind, write for information or come and see Waukesha County. (32,000 head of tuberculin tested cattle.)

Waukesha County Holstein-Friesian Breeders' Association

Office 254 Broadway - Waukesha, Wis.

Remember—

When You Buy A Bull From Hollyhock Farms

You Have Our Entire Organization Back of You. You have the benefit of our advertising and of our test force. The chances are far better than even that the dam of the bull you buy will later increase her record and the bull increase in value. Consider those things when you want a bull and write us about a son of S. P. O. M. 41st or of King Pontiac Artis Sadie Vale, the 34-lb. son of K. K. S. V. that formerly headed our herd.

We have a few good ones for sale—1 or 2 of serviceable age.

Gustave Pabst's Hollyhock Farms

Fred J. Southcott, Manager Dousman, Wisconsin



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

WAUPACA COUNTY HOLSTEINS

The Home of Healthy Holsteins

More Federal Accredited Herds than any other County in Wisconsin

200 Grades and Pure-breds ready for immediate shipment

WAUPACA COUNTY HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, A. B. Rowe, Secretary, Waupaca, Wis.

A Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 lbs. as a heifer; second dam 24.79 lbs.; third dam 28.88 lbs. Bull mostly white, very good individual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record 19.75 lbs.; second dam 18.75 lbs.; third dam 21.45 lbs. Half white. A show bull. Price $200.

For complete information and pedigree write

A. M. Anderson, Whitewater, Wis.

Woodell Farm

Offers a Few Serviceable Bulls

Sired by a son of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.

Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.

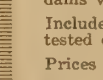
KITTLE BROS., Holland, Ohio.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont,** the **First Tuesday and Wednesday of every other month,** Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

Whitehurst Farm

Offers for sale Holstein bull one year old. Sire has four A. R. O. daughters and is a son of Canary Homestead Oak De Kol. Dam has 18,000 lbs. of milk in 365 days at four years of age. Grandam has 19,600 at five years and great grandam has 19,800 at five years old. Grandam has two A. R. O. daughters, one with 16,000 at 2 years and the other with 18,000 at four years. Dam has one daughter with 12,000 at two years. These records were all made under ordinary dairy conditions.

A. F. Randolph, Proprietor
Canton Illinois

Buffalo Creek Farm

Holsteins

We have for sale a bull calf born Dec. 11, 1919, evenly marked in color, from a 25-lb. cow that also has a good 10-month record. He is sired by a grandson of Sir Pietertje Ormsby Mercedes. Write for price and pedigree.

H. L. Bingham, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

A Few Bulls at Bargain Prices

Old enough for service. Sired by Sir Rag Apple Korndyke Hengerveld and from good A. R. O. dams. These bulls are well grown and right in every way. Photo and extended pedigree upon application.

Patterson & Dickinson, Bellefontaine, Ohio

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.



Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

WILSONDALE FARMS

Young Holstein Bulls Backed by Yearly and Seven-Day Records

Herd under Federal Supervision

We have several young bulls up to 17 months of age, sired by Maplecrest Sir De Kol, whose dam made 31.07 lbs. of butter and is a daughter of Daisy Grace De Kol, former World record Junior 4-year-old in the yearly production division.

These bulls are all well grown, and are of show type individuality. They are from dams with records up to 31.70 lbs. of butter in seven days, and 640 lbs. of milk.

Included in the above are a few young calves from 2 to 4 months of age from untested dams, which I will price very reasonable for immediate acceptance.

Prices and full description, with photographs will be furnished upon application.

These calves should be seen to be appreciated.

C. A. WILSON, Prop., Decatur, Illinois

NEW YORK HOLSTEIN-FRIESIAN ASSOCIATION — THE NURSERY OF THE BREED

First State Breeders' Sale

200 HEAD

From the Herds of

Oneida Community
R. J. Stevens
E. A. Vandervort
R. E. Chapin & Son
F. M. Campbell
Yates Farm
A. H. Shaul
J. L. Zeliff
Cornell University
N. F. Hopper
E. H. Marshall & Son
E. J. Snyder
F. A. Blewer
Jabez Smith & Son
F. L. Ronas
Claude Fletcher
A. C. Howe
Antrim Farms
J. M. Jones
Dygert Bros.
Ward Loomis
John Vaughn
Geo. N. Smith
R. N. Thompson
E. T. Jenkins
C. A. Wilcox
Geo. W. Rogers
Coveney & Evans
F. H. Judd
Markham & Puffer
Ross Bros.
F. S. Sidway
A. A. Button
C. E. Dinsmore
F. M. Davis & Son
J. Sloat Welles
L. Breeze & Son
M. I. Roy
Eli Bodine
J. N. Allen
Harry Petzold
Hawley & Murphy
Frank Potter
J. C. Eddy
Brock & Jenks
Ward W. Stevens
A. W. Brown
G. F. Warren
J. H. Phelps
H. V. Bump
Otto Ives
G. S. Gooderham
W. H. Mace
Grant B. Low
C. B. Marshall & Son

These 55 breeders whose herds are located in all parts of the Empire State have permitted an experienced judge to walk into their herds and choose any animal coming up to his exacting requirements.

They have done this for two reasons. They know it is only animals of this class that discriminating buyers seek, and that it is only animals of this class that will make this first state sale a success.

Ordinarily, one would expect to find in such a collection of over 200 animals some that would not quite measure up to expectations. We do not intend that a single animal will be offered in this sale for which there will be any sort of an apology. Already overworked with indiscriminate use, the word "Best" cannot express what is to be found in this first state sale. It, however, means just what breeders would like it to mean—perfect individuals, healthy animals of good breeding, sold by reputable consignors.

You will buy in this sale individuality such as has never before been approached. You will buy animals that are as free from any contagious disease as is possible to determine, not only from observation of the condition of the herd at the time of selection, but also by means of the three tuberculin tests, that is, intradermal, subcutaneous, and ophthalmic, and ALL ANIMALS OVER SIX MONTHS OF AGE ARE SOLD WITH A 60-DAY RETEST GUARANTEE.

It is not necessary to enlarge upon the good breeding in such a collection. Offhand, we call to mind at least a half dozen 30-lb. cows, at least two above 35 lbs., at least as many sons and daughters of cows with 30-lb. records and of course the usual run of 20- and 25-lb. cows and two-year-olds.

The admission of an animal to this sale under its stringent regulations is in itself their best recommendation.

The catalog, yours for the asking, will be ready for the mails January 1st. Send for it now.

New York Holstein-Friesian Ass'n
E. R. Zimmer, Secretary
Syracuse New York

At

Rochester, N. Y., Jan. 12-13



SOUTH DAKOTA HOLSTEINS.

King Segis + King Colantha Clothilde

Show bull, 10 months, backed by large yearly records. Dam, South Dakota Champion 3-year-old. Sire's dam has milk record of 743 lbs. for 7 days. Chart pedigree upon request. Price $500. Write

Gage & Kurtz, Groton, South Dakota.

EVENTUALLY, WHY NOT NOW—

Buy A Son of a 30-lb. Cow

Born October 2, 1919

A fine individual, straight and well built, about ⅞ white. Sire, son of Colantha Johanna Champion, 57 A. R. O. daughters, and Duchess De Kol Korndyke, 21.65 lbs. at 9½ yrs., having a world champion daughter. Dam, a 30.48-lb. daughter of Johan Hengerveld Lad, 65 A. R. O. daughters, full sister to a twice 30-lb. cow. Have two more of similar breeding. Pedigrees and prices on request.

Ontonagon Co. Farm - Ontonagon, Mich.

T. G. Roberts, Herdsman. J. S. Netterauer, Sec.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,

Box 253. Cortland, N. Y.

Yearling Bull

Ready For Service

Here is a show bull whose dam has a 3-year-old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.

The first check of $150.00 takes him.

G. G. Burlingame, Cazenovia, N. Y.

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

GEO. E. STEVENSON, Scranton, Penna.

Major Oliver S. Johnson

The Dairy Auctioneer

TIPTON, - - - IOWA

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.

BLUEBELL FARM, RICEVILLE, IOWA.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

THE MOYER SALE

Syracuse, New York Jan. 4-5-6 3 Days, 2 Evenings

270 Head

Give Careful Consideration to This —

This is the ninth of a series of sales which I have conducted. In the first eight I sold 1,400 head for a total of over $1,500,000. To my knowledge less than a dozen of those 1,400 animals reacted under the retest.

For this sale I have selected animals from breeders whom I believe to be reliable. Every one of them gentlemen from whom you would be pleased to buy animals, knowing you would find them exactly as represented.

And REMEMBER—All animals over six months of age not in herds that were accredited, were tuberculin tested previous to their acceptance for this sale—will be tested again just previous to the sale and ALL ARE GUARANTEED UNDER A SIXTY-DAY RETEST.

Re-test Guarantee

Consigned by —

Antrim Farms (52)
H. A. Moyer (40)
C. H. Fiske (31)
John Arfmann (19)
Alson D. Weller (16)
W. H. Crowell (15)
R. A. Ross (11)
John R. Jones (10)
A. C. Bickford (9)
E. H. Knapp & Son (9)
Forsgate Farm (7)
R. M. & J. H. Stone (6)
Sherrick Bros. (5)
F. L. Ronas (5)
E. T. Jenkins (4)
John Delles, Jr. (4)
Robert B. Knapp (3)
C. H. Marshall & Son (21)

Thirty-Three Sons and Daughters of 30-lb. Dams —

Twenty Daughters and Granddaughters of 1000-lb. Long-Distance Cows —

13 daughters of Sir Veeman Vale Pontiac
12 daughters of King Segis Pontiac Alcartra
6 daughters of King Lyons
5 daughters of King Joh
5 daughters of Spring Farm King
5 daughters of Sir Aaggie Mead De Kol
5 daughters of King Lunde Pontiac Korndyke
6 daughters of Sir Echo Sylvia Pontiac Paul
5 daughters of King Artis Lyons
9 daughters of Winana De Kol King Segis
5 daughters of Annie De Kol Model Segis
5 daughters of Rag Apple Butter Clyde King
6 daughters of Model Darius Glista
2 daughters of Prince Hengerveld Pietje
2 daughters of Sir Pietertje Ormsby Mercedes 37th
3 daughters of King Echo Sylvia Model
30 bred to Empire Segis
25 bred to Sir Aaggie Mead De Kol

I am pleased to say that practically every consignment is rich in the blood of King Segis. A hundred forty-six animals in the sale trace directly to him.

The new world champion milk producer, the first cow to defeat Tilly Alcartra, is the granddaughter of King Segis and her dam traces directly to Prilly. The new world champion 2-year-old is a granddaughter of King Segis. The world champion 4-year-old is a granddaughter of King Segis. The grand champion male and female at the Pacific International Show were by a grandson of King Segis.

Limited space prohibits mentioning all the great animals, but some of the leaders are: Two 30-lb. daughters of King Lyons, both from 30-lb. dams; ten daughters of the $50,000 bull, all from 30-lb. dams; a show daughter of King of the Ormsbys—second dam a 35-lb. cow; a heifer due in January with thirty 30-lb. dams in her pedigree; a 30-lb. sister to the dam of King Lyons; six daughters of former world champion cows; two granddaughters of May Echo Sylvia; a son and three granddaughters of Champion Echo Sylvia Pontiac; scores of cows with records of 20 to 30 lbs.; three daughters of 1000-lb. cows; four daughters of cows above 35 lbs.

It is not necessary to go into further detail about such a collection of animals. Any student of Holstein pedigrees knows how rarely it is possible to find such a wealth of breeding. We are selling the days of January 4, 5, 6, and the evenings of January 5 and 6, during which time there will be sold 270 head of as good Holsteins as any one has ever had an opportunity to purchase. Close to one-half of the entire offering is due to freshen in January, February and March, all of them in calf to great sires.

Be Sure to Make Your Plans to Attend

H. A. Moyer, Director, Syracuse, New York

3 BIG SALE DAYS

IF YOU ARE A REAL HOLSTEIN MAN
Send for the Catalog

I have made a special effort to get this out on time and it was ready for the mails Dec. 15th. Only this book can tell the story of this great collection. It will only be sent to those making inquiries, but will be gladly sent to those anxious enough to write for it.

The Catalog is Ready

HOLSTEIN CATTLE

Fred H. Lee, Plymouth, Michigan, writes:

"I have 26 head of Purebred Holsteins, all descendants of my two original cows. I have become owner of a large farm near Detroit, which otherwise would have been impossible. I have not been able to back Holsteins but Holsteins have had to back me."

Send for Free Booklets

The Holstein-Friesian Association of America

101 American Building **Brattleboro, Vermont**

Holstein Breeders are the Finest Fellows in the World, But They Should Boost

We Need *Boosters* in this Business—Not Half-Hearted Ones, *But*

REAL BOOSTERS

Do you realize that this great business of ours is only in its infancy? That prices are going to increase, and should exceed those of the past? That the fellow who fills his barn with Holsteins now is the fellow who is going to have the money to build a new barn a year from now?

Did it ever occur to you to be grateful to your Holstein herd for the fact that you have a barn full of a paying investment, instead of shelves laden with merchandise constantly decreasing in value—the situation in most other lines of business?

Do you know any other commodity that would pay you as well as the Holstein cow that fills the pail to overflowing at every milking, and gives you a beautiful calf every year?

You realize these things. Then talk about them, and

BOOST

Just to show you that we are sincere about this thing, we are not going to mention the bulls and heifers we have for sale (and we have a lot of splendid ones), but are going to use this advertising space to spread the gospel of better live stock and to

BOOST HOLSTEINS

J. M. HACKNEY

Your Choice of **50** Young Bulls

They Are Out of Yearly Record Dams And Sired By—

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his granddams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow—the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

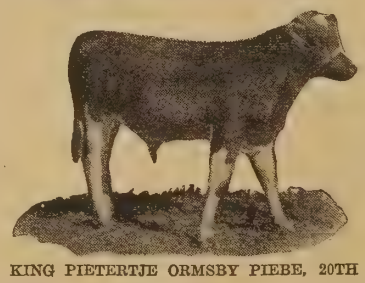
If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms

Winterthur - - - Delaware

Here He Is — A Son of King Pietertje Ormsby Piebe For You



KING PIETERTJE ORMSBY PIEBE, 20TH

His dam, Kirby Martha 2d, made 32.36 lbs. butter in 7 days and 978.58 lbs. in a year, as a 4-year-old.

His sire, K. P. O. P., is as you know, the best long-distance bred bull in the country.

King Pietertje Ormsby Piebe 20th is a showy calf like most of his brothers. His 2 nearest dams average 1,184 lbs. butter and 24,288.8 lbs. milk, both as 4-year-olds.

Write for more information. His price is right and we offer him on easy terms.

Hargrove & Arnold **Norwalk, Iowa**

Herd Under Federal Supervision

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS

DAVENPORT, IOWA

HOME FARM HOLSTEIN FRIESIANS

Home Farm Korndyke Sir Clyde

a light colored son of Woodcrest Sir Clyde we offer, just a year old. His dam is a 16-lb. 2-year-old daughter of K. K. S. V. 24th. She will have over 525 lbs. butter for the year; second dam, an 18-lb. 2-year-old daughter of Sir Sadie Cornucopia. He is given a federal certificate of health. Write today.

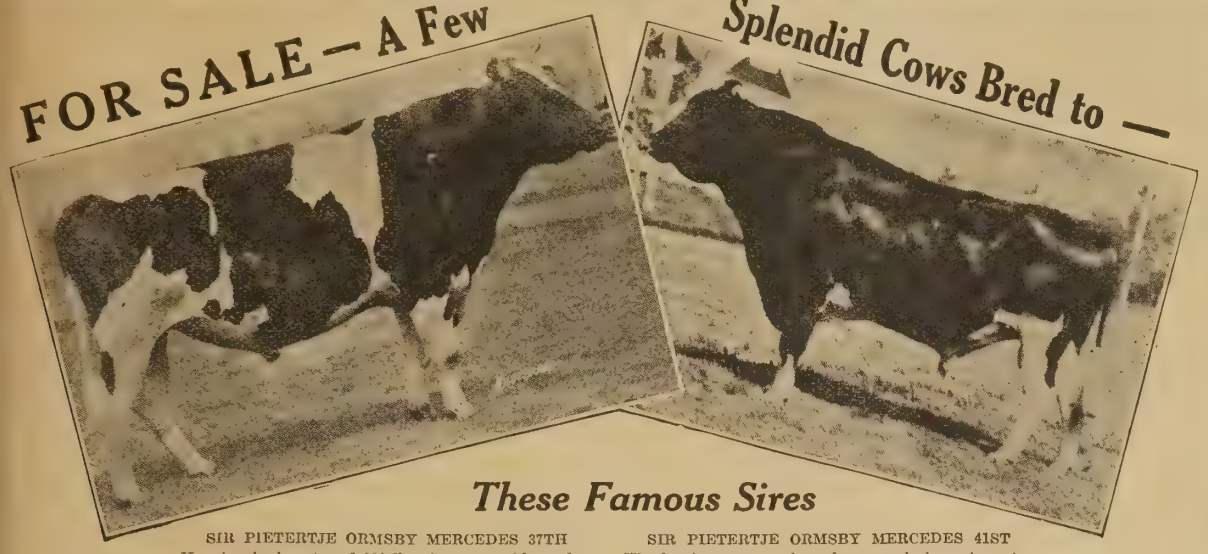
W. B. Barney & Sons - - - Chapin, Iowa

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

FOR SALE — A Few Splendid Cows Bred to —



These Famous Sires

SIR PIETERTJE ORMSBY MERCEDES 37TH

He already has two 1,000-lb. three-year-olds and a 900-lb. junior two.
A full sister has twice made over 1,000 lbs. in 305 days.
Dam:—Spring Brook Bess Burke 2d. 1,290.91. Two other records above 1,000 lbs.

SIR PIETERTJE ORMSBY MERCEDES 41ST

His daughters are real producers and show ring winners. One of his daughters was grand champion at the Dairy Cattle Congress, defeating the National Champion.
Dam:—Spring Brook Bess Burke 1,094.16, "Greatest Mother of the Breed".

And You Know Their Sire —

SIR PIETERTJE ORMSBY MERCEDES, the world's greatest sire of show ring winners and yearly producers. Thirteen of his daughters have made above 1,000 lbs. Twenty have made over 20,000 lbs. milk in a year.

We are offering a few splendid cows—not culls—bred to these bulls at prices that will move them quickly. Come and look them over.

E. C. SCHROEDER FARMS *(Fully Accredited Herd)* **Moorhead, Minnesota**

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.
Address correspondence to Axel Hansen, formerly with John B. Irwin.

Just About Ready for Service — $500



is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

Federal Accredited Herd) **A. J. Lashbrook, Northfield, Minn.**

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.
BISCAY SALES CO., BISCAY, MINN.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.
(A Federal Accredited Herd)

BULLS—Two of Them.

Ready for service. One light and one medium in color. One sired by our DUTCHLAND CREAMELLE COLANTHA LAD, from a good daughter of SIR WINANA BEETS SEGIS. The other sired by SIR WINANA BEETS SEGIS from a daughter of SEGIS JOHANNA GRAHAMHOLM. Both cows are on yearly test now and are making good records. Don't buy a bull until you have seen and studied the pedigrees, pictures and prices on these youngsters. They are good ones. **GRAHAMHOLM FARMS,**
H. R. Searles, Mgr. Rochester, Minn.

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

RICHLY BRED

HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes,** a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby,** a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.

Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell. Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Female Holsteins for Sale

Pure-bred cows and heifers of choice breeding. Bred to our herd bull, "Sir Ormsby Segis Korndyke". Also fifty high grade cows and heifers, fresh and springers.

ISLAND PARK STOCK FARM,
Hanscom and Anderson, Props.,
R. F. D. 1. St. Cloud, Minnesota.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

We Believe

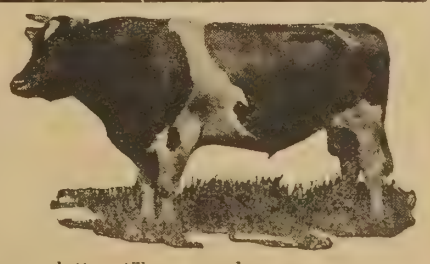
King Segis Pontiac Fayne Star is the best individual King Segis Pontiac Count ever sired. We believe that he is destined to rank as the best son of his famous sire. There will never be a better time to buy one of his sons. A postal brings the bull circular. Write right now.

Flecks Farms, Faribault, Minn.

Serviceable Sons of "Piebe"

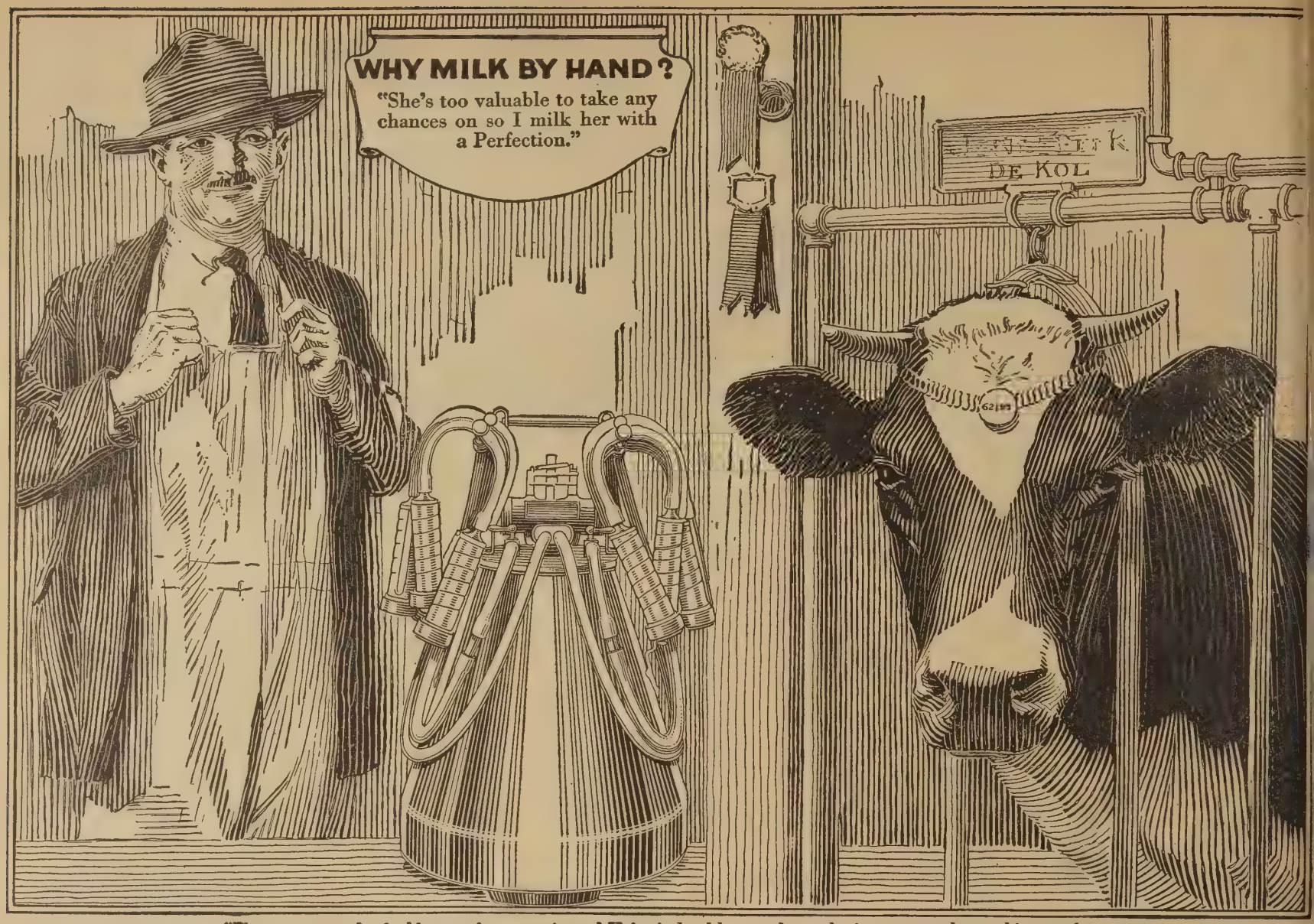
are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.



"There are several valuable cows in our registered Holstein herd but we do not hesitate to put the machine on the best of them since there is no possible danger of hurting them and the cows take to it readily." —JOHN SELF.

A Safe Way To Milk Your Valuable Cows

ARE you willing to take chances on the milking of your valuable cows? Perhaps you milk them yourself to make sure they are milked safely and their production kept up. But why take chances or milk them yourself when there is another way that's safe and in addition will save you time and work? That way is the Perfection Way.

Thousands of dairymen have found the Perfection Milker a safe way to milk their valuable cows. The reason is clear enough—*Perfection milking is nature's way.*

Like the calf, Perfection milks with a gentle suction followed by a downward squeeze, followed by a period of rest. Is it any wonder that many prominent breeders through the country use the Perfection on their valuable herds? They will tell you that their cows prefer the Perfection and give more milk than when milked by hand. Best of all they have found it the safest way to milk.

Investigate This Safe Way of Milking

Write and let us send you a free copy of "What the Dairyman Wants to Know." It tells of the safe way to milk. We'll also send you names and addresses of Perfection owners near you.

Perfection Manufacturing Company

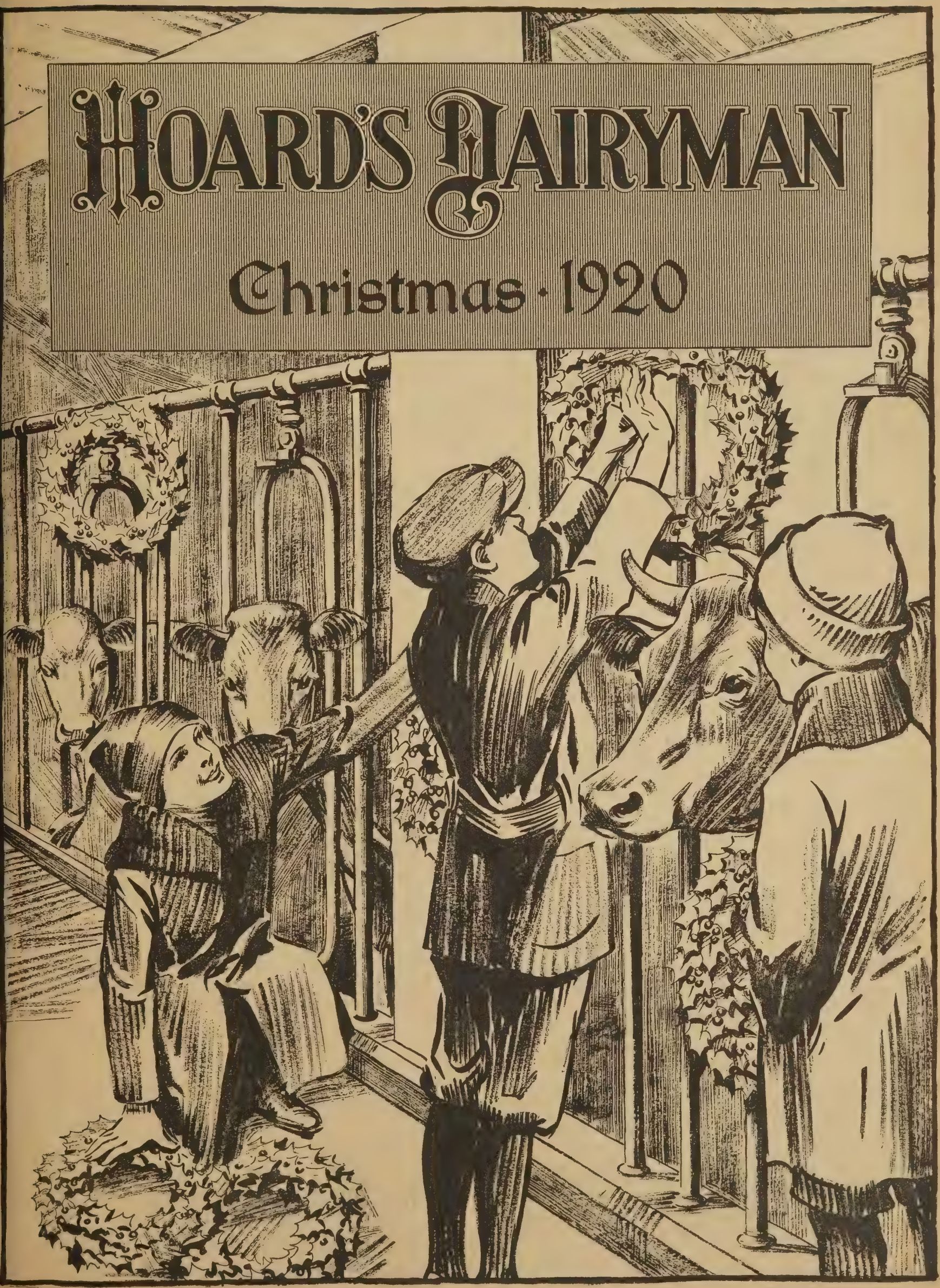
2100 East Hennepin Avenue Minneapolis, Minnesota

PERFECTION MILKER

4 C 7 Jan 21
University Of Ill.
Urbana, Ill.

HOARD'S DAIRYMAN

Christmas · 1920



Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

W. D. HOARD & SONS CO., Publishers
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C. L. BURLINGHAM

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FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

Success Depends Upon the Man

There are two kinds of men in the world; those who sail and those who drift; those who choose the ports to which they will go, and skillfully and boldly shape their course across the seas with the wind or against it, and those who let winds and tides carry them where they will. The men who sail in due time arrive; those who drift often cover greater distance and face far greater perils, but they never make port. The men who sail know where they want to go and what they want to do; they do not wait on luck or fortune or favorable curents; they depend on themselves and expect no help from circumstances. Success of the real kind is always in the man who wins it, not in conditions. No man becomes great by accident. A man gets what he pays for, in character, in work, and in energy.

There are few really fine things which he cannot get if he is willing to pay the price. Men fail, as a rule, because they are not willing to pay the price of the things they want. They are not willing to work hard enough to prepare thoroughly enough to put themselves heartily into what they are doing.

The only road to advancement is to do your work so well that you are always ahead of the demands of your position. Keep ahead of your work and your work will push your fortunes for you.

Our employers do not decide whether we shall stay where we are or go on and up. We decide that matter ourselves.—HAMILTON D. MABLE.

Alsike clover is most at home in northern latitudes or at high altitudes. It thrives best in a cool, moist climate.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

The Joy of Giving

Ah! the joy of giving,
Better than the gift.
Like a flash of sunshine
Comin' through a rift.
Making others happy,
Making others glad.
Spiritual, I'd call it,
Not a Christmas fad.

In your heart a yearning
For to see the smile
In somebody's spirit,
Last a little while.
Not the value, mind you,
Not the money-worth.
But the Christmas spirit
Of sweet Peace on Earth!

Little children happy,
Elders, eyes a-brim.
Someone murmurs, softly—
"That was nice of him."
Ah! the joy of giving,
That must play a part,
When the gift comes, brimming
From an earnest heart.

Dairy Jim's Philosophy

I would rather have ten cents worth of gift at Christmas from somebody who gave because their heart was in the job, than one hundred dollars' worth from the feller that gave because he thought it was his duty.

A lot of things are hung on a Christmas tree but the best of 'em all is what you can't see, even by candle light—and that's love!

The herd is my best Christmas gift—and it's one that lasts the whole year 'round. Santa Claus lives out yonder in that big dairy farm. So you see, I still believe in Yuletide!

Jones—"What are you giving your hired man this Christmas?"

Smith—"An alarm clock, a new suit of overalls, and a conscience. And if there's anything left over, I'll give him a nice book on how to run a tractor."

The Boy at Christmas

Another Christmastide has come,
Another day of Yuletide joy.
But, sweetest of the gifts—all gifts,
Is having you—my precious boy.
So many boys have left the farm,
So many sons have gone away,
The greater gift of all I know
Is you—your loving arms today.

The tree—the lights—the ecstacy
That comes when Santa is around.
The snow white fields, the well stocked barn,
The dormant wonders of the ground.
All these seem small compared with this—
This greater joy of having you.
My boy is here—on Christmas Day,
And love bides with us, surely, too.

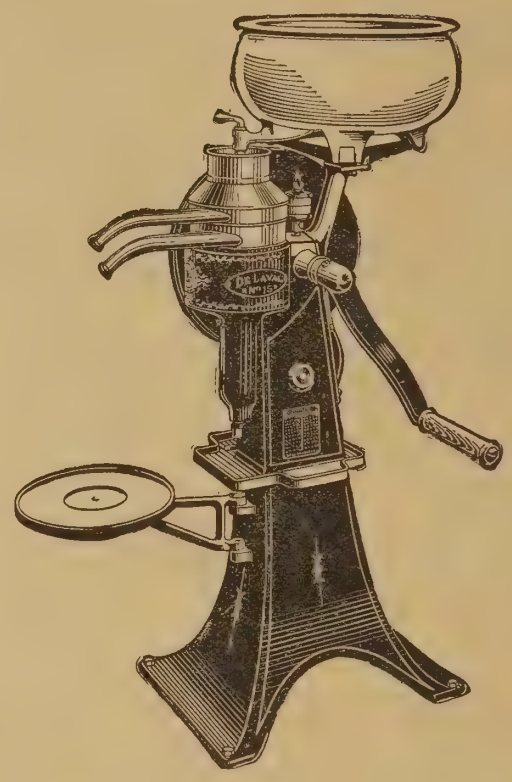
Feeling Happy

What makes people happy? What makes people glad?
What brings lots of sunshine when th' going's bad?
Maybe it's your spirit—what you say and do.
How you scatter blessings all a lifetime through.
This here feeling happy is in sunshine spread,
And the heaps of blessings on some other head.

What makes people happy? Well, I think I know:
It's their way of livin'—and th' deeds they show.
Selfish folks are lonely, selfish folks are sad,
But, do things for others—when they've never had,
And you'll find Peace coming, over hill and dale,
Bringing you the pleasure, when the selfish fail.

What makes people happy—it's a Christian thought.
It's the world-old battle, every man has fought.
Give and love and suffer, as we all must do,
And there comes a blessing on the head of you.
Life is sort o' funny, in that sort o' thing,
When we make folks happy, then our hearts will sing

Wherever there are cows there should be a DE LAVAL SEPARATOR



A DE LAVAL Cream Separator is an essential piece of equipment on every farm where there are two or more cows. Even though you sell whole milk you should have a De Laval to protect you against changing market conditions. It will turn the surplus you sometimes have into a readily marketable product.

Thousands of De Lavals have been installed to meet such emergencies and each one has paid for itself many times over. In all, there are more than 2,500,000 De Laval Separators in use throughout the world — each one giving its owner service and profits that he could get from no other machine.

The De Laval skims cleaner, turns easier and lasts longer. Therefore it is the most economical and most satisfactory separator to buy.

Ask the De Laval agent nearest you for a demonstration, or write nearest De Laval office.

The De Laval Separator Co.

New York	Chicago	San Francisco
165 Broadway	29 East Madison Street	61 Beale Street



Xmas *and the* Herd

IT'S when the snow is flying and there's Christmas on the air,
And "Peace on Earth" is ringing from the towers everywhere
That my thoughts turn, more than ever to the cattle—to the herd,
To the service they have rendered and the promise of the word.
Yes, the service! Loyal, willing—and the records, day by day,
And the gift they give, unending, in their own, unselfish way.

At Yuletide, we pass presents, in the spirit of the time
And we praise the love o' giving in our speech and in our rhyme,
But the herd keeps on a-giving, from the summer to the snows,
From the month of frigid weather to the month of bird and rose.
There's no season to their giving—it's a present every day,
And it's Christmas when its Christmas and it's Christmas when it's May.

That's why, when candles glitter on the green boughs of th' tree,
And there's lots of happy laughter—that the feeling comes to me—
I want to sing their praises—give them a Christmas thought,
Thank them for all th' blessings their years of toil have brought.
It's gratitude, old fashioned, and homely, but sincere,
The herd has made it Christmas for all us fellers here.

Pass out the presents, mother, light up the Christmas tree,
I smell the turkey cooking, with an extra slice for me.
But I've been out to see them—snug in their beds o' hay,
I've talked to them, and patted each fine, fair head today.
They know I'm more than grateful for what they've given, too,
And said their "Merry Christmas" with a quaint Kris Kringle "Moo".

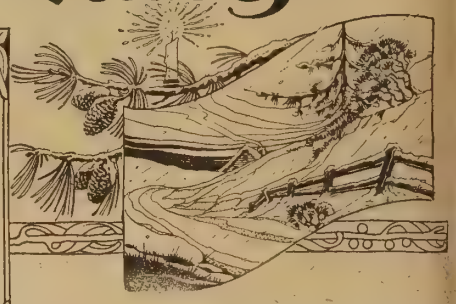
W. LIVINGSTON LARNED



Christmas On The Dairy-Farm

Helen S. K. Willcox







H. S. K. WILLCOX

THE first fluffy snow blanket, arriving early in November, is always the signal at our farm for sundry joyous exclamations like these from the little folks, "Oh, mother! Christmas is 'most here!" and "We must write our letter to Santa Claus now!" and "How many weeks will we have to be real good, mother?" For reasons sufficient to the average American parent, the latter question is eagerly seized upon and answered without delay, and for a space of twelve very long, memorable weeks three much alive kiddies try their hardest to be as good as gum in order to propitiate old Saint Nick and insure a visit from the clever fellow—whose memory is fortunately short, perhaps, where the innocent and sometimes premeditated shortcomings of his young admirers are concerned.

So throughout November it is busy times in the dairy farm house, or in any home for that matter, where there are children and relatives galore to be remembered with little gifts and entertained, but Christmas preparations reach their climax with the advent of jolly old December—and mercy! how busy and excited everyone becomes when a child calls down on a wintry morning, "Only three weeks before Christmas!" So in addition to the daily house chores—meal getting, dish washing, sweeping, dusting, 'redding up', milk pails washed and scalded, sewing, mending, baking—and a dozen others—we manage somehow to crack several hundred butternuts in preparation for the big Christmas cake, to pop corn by the panful for stringing long garlands to decorate indoors, to color and cut out blue and golden stars from crepe paper for further decorations, to hunt up and learn jolly Christmas 'pieces' to be recited after the big Christmas dinner, and, as Christmas draws nearer and nearer, to go out in search of a just-right hemlock tree and great piles of hemlock and pine branches—the latter for wreathes to be hung under the outside of each window.

And, of course, these wonderful preparations mean everything to the children, in fact, Christmas at our house lasts for two months, instead of but one day, for it was a wise person who rather sadly admitted that anticipation is usually better than realization and, while the youngsters undoubtedly think nothing on earth is more blissful than the opening of the stockings on the great morning, yet I am convinced that their after memories will go back to the happy days before Christmas when, in front of the large fireplace, they speculated mysteriously on Santa Claus in his far-off home and upon his probable 1920 method of chimney-descending, while roasting chestnuts and apples and popping corn enthusiastically meanwhile.

And being that we of this farm are dairy farmers first, last, and always, it is not strange that the cows have always been remembered at holiday time by the smaller members of the family. Ever since our little Ann was able to cut out, she has spent several happy days in December fashioning paper stars and streamers for the stanchions, which kindly attentions, let us hope, are properly appreciated by the black and white pure-breds. I remember that the story of the Christ Child's birth made a profound impression on Ann at the first telling, and she couldn't ask enough questions about the lowly stable in which He was born—a stable where cows, perhaps just like ours, made room for His mother to sleep. So because it was cows instead of some less familiar animal that shared in the honors of our first Christmas night, the divine story has a more personal meaning to little dairy farm folk than it can possibly have for less fortunate children. Therefore it should be told often and the cows and stable emphasized—if our children are to properly appreciate that Christ Himself was once a little child just like them, but born in a stable instead of a house.

We sometimes envy our city cousins at this season of the year—envy them their luxurious shops and rich gift displays to tempt the limp pocketbooks of the poorest. And we envy them the Christmas atmosphere and the fine free music and all that goes to keep Christmas in our modern metropolitan cities. But there is no need. We have so much more than they in spite of their expensive, artificial ways. Every farm in America can contain the heart of Christmas if we only wish it so; it isn't the bright lights and the expensive store things which make Christmas. For the farm from time immemorial has been chosen by the city-tired and blase for the observing of this best day of all, and if the most discriminating of them can get out to the farm for the holidays, you always see them doing it.

Somehow Christmas is sweetest of all spent on the farm. It is the treat of the year to take a sleigh ride from town into the country, and then the hours not passed in front of the red-hot heater or watching the fireplace blaze are fun indeed—coasting or skating or straw-riding—sports worthy of kings and not to be had in the congested centers for love—but money.

Then the Christmas dinner never tastes quite so good as it does when some skillful, deft farm wife prepares it with her own hands. Our city cousins hand the palm to us on these eventful eating occasions without a dissenting voice. The Thanksgiving and Christmas dinners, all raised and grown on the farm, are typical American habits which can't be equaled in any other country anywhere. The bursting-fat hens and roosters, the mammoth turkey, the tender goose or ducks, or perhaps a sucking pig or a great savory sparerib, or leg 'o lamb—any of these we can choose for our Christmas dinner and the more ceremony there is about it, the longer the kiddies will remember Christmas as it ought to be kept today. But one can't make a Christmas dinner from meat alone, even if that is the piece de reistance of the feast, and we farmers' wives know it full well. So for a week beforehand, especially if hungry guests are expected, the farm kitchen is a little fuller of business than even that busy place usually is. The pies—tasty things—of pumpkin, mince, cranberry, and apple; vegetables from squash to silvery onions; crusty rolls and home-made cheese and jellies and pickles and conserves: rich fruit salads and the big butternut cake and sugary doughnuts and spicy cookies—the delectable list is legion, and, to top off with, plenty of aromatic coffee with honest-to-goodness cream, and—best of all—great schooners of fresh cows' milk which, if the city kiddies could drink them, would change their ideas entirely of city milk compared to real country milk.

When we observe the holidays on the farm in such manner, we are doing a lot toward making life more attractive for each and all of us. The "eats" are not the only attractions, however, for the holiday spirit is very necessary and best by far.

On our big dairy farms, so busy and oftentimes burdened with cares and heavy responsibilities, we should nevertheless take time to keep Christmas if other days have to be passed up. Every farm child—and most farms have their children, thank goodness—is entitled to an old fashioned Christmas and the more he does to make that kind come true himself, the happier he will be and the more he will enjoy his own special day. I believe in aiding and

(Continued on page 1008)



THE CHILDREN HANG THEIR STOCKINGS IN FRONT OF THE LIVING ROOM FIREPLACE AND AFTER THE "GRAND OPENING" DEPART FOR THE BARN TO PLAY SANTA CLAUS TO THE CALVES IN THEIR GAILY DECORATED PENS

The Best Dairy Breed



"WHICH is the best breed?" Very few questions have been asked a greater number of times and no other one has been so universally unsatisfactorily answered. More than thirty years ago this publication made the statement: "The most profitable dairy cow does not belong to any one breed. At least it has never been demonstrated that she does." The substance of this has since been given many hundreds of times to beginners with purebreds, and to old-timers who want to back up and start over. Usually the inquirer does not believe this. He cannot understand how one who is familiar with all breeds has failed to pick a "best one".

For when Bill Smith and his boy have threshed out the question and young Bill has shamed and coaxed and finally threatened to leave home unless better cattle are kept, they want action. Having already waited twenty years or so to begin with purebreds, they don't want to waste any time in choosing a breed. When Bill "takes his pen in hand" and writes his dairy paper the simple question, "Which is the best cow?" he is disappointed to receive the oft written reply, "There ain't no sech animal."

So, his editor having failed him, he chooses a breed. Maybe he likes the color of a certain "kind o' cow". Perhaps he chooses because of size or disposition or because some persuasive neighbor argues him into a decision. Sometimes he takes a certain breed because his neighbors have it, though nearly as frequently a breed finds favor with him because his neighbors do not have it.

Which One do You Like?

There are a number of factors worth considering when a choice is necessary. Any one of them may be a sufficient reason for choosing a particular breed, and if Bill Smith and his boy study them all intelligently, they have a good basis for deciding which is to be the breed of their choice. For, while it may not be said in general that any breed excels all others, it cannot be doubted that under the particular conditions of the Smith farm some cow has the qualities to meet the requirements so well that for the Smiths, at least, she is "the best cow".

If a man is prejudiced for a certain breed so he cannot give fair consideration to the virtues of others, his choice is made. Even though another were better suited to his use, it is time wasted to try to persuade him of its superior points. If he has "hankered" for a herd of certain colored cows for years, no other breed will suit him so well and it is doubtful if another would bring him equal profits. Probably more men choose a breed for the rather indefinite reason that they "like it" than for any other. There is no argument which will shake a decision made on this basis—the opinions of others and all the arguments in the world are of no consequence. It may be said, however, that such men usually have sufficient enthusiasm for such a choice to be successful even under adverse conditions.

Geographic Adaptability

The claim used to be made frequently that certain breeds were better adapted to some particular section than others. With that proved, the choice of a breed might be made by a man's post office address. If he lived in Maine or Georgia, for example, climatic conditions would automatically dictate his breed of cattle, or if he lived in rough country a different kind would suit his needs than would be wisely selected if his farm were in the plains district.

It was once held that the Jersey was "tender" and not hardy enough to withstand the cold winters of the northern states, but the Roycroft herd earned its high rank among producing Jerseys in the Upper Peninsula of Michigan and Plain Mary, present Jersey champion, made her wonderful production in Maine. More recently the claim is made that Holsteins are not adapted to southern conditions. Nevertheless many black and whites are doing splendidly there. Where they have failed to make good, the factor limiting their production was in most cases underfeeding. Also, Ayrshire enthusiasts assert that their cow is best qualified for use in rough lands; that she is a hardy grazer. Yet it is well proved that any cow must be well fed before her milk flow commands much attention and that it is not profitable to force milking cows to gain their livelihood on indifferent grazing. It appears, therefore, that a study of geography is not important in deciding upon a breed.

What is Your Market?

The market may determine the breed. Profitable sale of milk, either for city retail or to those cheese factories which do not buy according to test, may require quite a different animal than where the products of the dairy are manufactured into butter. If a basal price is set for 3.5 per cent milk and a premium of $.40 per pound is paid for butterfat in excess of this requirement, for example, a Holstein breeder supplying a product averaging a content of 3.4 to 3.6 per cent has a marked advantage over a breeder of Jerseys whose milk tests 5.3 to 5.6 per cent fat. On the other hand, where the market prefers a fat content close to 4 per cent, the Holstein with a test of 3 to 3.2 is in less favor. The rich color of Guernsey milk gives it popularity with those who can build up a select trade which is often willing to pay a good premium over the usual market price of milk. Ayrshire milk testing 3.8 to 4 per cent finds special favor with many dietitians and makes strong claim to special advantages as certified milk.

When it comes to quantity production of butterfat, the equality of the capacities of the breeds is remarkable. There is some difference in the cost per pound, however. In public tests the high testing breeds have been somewhat more economical in making butterfat. In the Wisconsin cow competition where figures were taken under farm conditions the advantage of the Jersey over the Guernsey was slight but over the Holstein it was of considerable importance. But in most public tests the advantage shown has not been sufficient to indicate a great difference in economy under every day farm conditions. And balanced against this is the greater quantity of milk credited to the lower testers. The fact that one breed or another holds certain records gives little indication of what may be expected in Bill Smith's barn.

Market Price of Breeds

The market value of the different breeds is a question to consider. Holsteins and Guernseys are the best sellers. To the beginner that may or may not be an advantage; while he can dispose of surplus breeding stock at the best prices, that doesn't help him much in starting a herd. For $1,000 he can now secure nearly twice the production value in Jerseys, Brown Swiss, or Ayrshires, for a yearling Holstein or Guernsey heifer which would cost $300 to $350 can be duplicated in butterfat capacity in one of the other three breeds for $175 to $200. If immediate yield at the pail is the prime consideration in the establishment of a pure-bred herd, the lower priced breeds unquestionably offer the best opportunity to the beginner with a limited amount of money to invest. If the sale of breeding stock is the goal, the beginner must take the gamble with all the rest as to the relative prices which will be paid for various breeds in the future.

Some excellent opportunities are sometimes offered in the purchase of an entire herd or of a few animals at low prices. When such a chance favors a man he does well to make that his beginning, irrespective of the particular herd book in which the animals are registered.

What do the Neighbors Own?

Here is the real basis for a choice, "what do the neighbors own?" If the predominant breed in the locality is registered with the American Jersey Cattle Club, there is likely a good reason for its popularity in the community. Innumerable instances illustrate the folly of simply choosing "something different". No one is more lonely than a single black and white breeder in a Guernsey neighborhood, and no one has more handicaps in his struggle to success than a lone Jersey owner in a section where the Brown Swiss cow is in predominate favor.

In a community where one breed is greatly in the majority, the beginner who makes his start with it falls heir to advantages he cannot otherwise have. Buyers are drawn there by the numbers of the breed which can be seen, so that surplus stock brings good prices at private or public sale. Better bulls are available for use than the beginner can afford to own; a bull association can be organized. A local breeders' association brings its benefits; benefits which must be measured in more than direct returns. There is encouragement and stimulation in joining together in the promotion of a single breed—which the man with "something different" fails to receive. A beginner may wisely be guided in his selection by the results of a "cow census" in his neighborhood.

These several considerations are important to the man who would discover which is the "best cow" for his farm: "which one do you like", "what is your market", "market price of the breeds", and "what do the neighbors own". And of these, the last is by far the most important.



The Ayrshire — Type, Health, Persistent Production



THE Ayrshire is the Scotchman's idea of perfection in a dairy cow. Her native home is in Scotland, in the shire of Ayr from which she gets her name. There she grazes the "banks and braes o' bonnie Doon", produces milk with much more than proverbial Sotch liberality, and sells to American importers at goodly prices.

Origin

Though the youngest of the dairy breeds, the exact origin of the Ayrshire is not known. While there was much dairying in Ayr as early as 1700, the cattle of the district of that day were described in 1750 as "small, black and white, ill-fed, ill-shaped, and producing but little milk". About that date, improvement began through the introduction, according to disagreeing historians, of Shorthorn, Holstein, Jersey, and even West Highland, Hereford, and Devon blood. Cosmopolitan in her ancestry, she seems to have borrowed a little here and a little there, choosing the excellencies of the different strains of cattle from which to build her present-day perfections.

Environmental conditions gave the Ayrshire vigor and hardiness. To subsist on the grasses of the rough pasture lands of Scotland required nimbleness and withstanding the chilly winds in a cool climate gave a ruggedness which is characteristic of the breed. Much cheese is made in Ayrshire, which must have been an influence in securing a medium content of fine globuled fat in the milk, making it well adapted for cheesemaking.

First Ayrshires in America

America's first Ayrshires were brought to Canada early in the past century. Later extensive importations have been made to the Dominion. Claim is made that the first animals of the breed in the United States came to Connecticut in 1822 and it is known that the Massachusetts Society for Promoting Agriculture brought over one cow in 1837. Frequent shippings have been made to the present date, important importations being made in recent months. At no time have large numbers been brought over.

The nature of the breed's distribution in America is well stated by Professor C. H. Eckles when he says, "The Ayrshires have never been boomed or even well advertised in the United States, and their increase in popularity has, therefore, been entirely on their merits." To a great extent the red and white cow has stayed in New York and New England, thriving on the hilly lands of the East. Though it is said the first dairy cattle in Ohio were Ayrshires, they did not gain an important place there or in other states of the Middle West. A few herds have grown up on the western coast, but the chief promotion of the breed has been along the Atlantic.

A very healthy activity has come about in the Ayrshire Breeders' Association during the past four years which promises to give the Ayrshire cow the popularity her merit deserves. Her characteristics well adapt her to the dairy farms of many sections where she is now little known. She is now fourth in numbers among the dairy breeds.

Characteristics

The Ayrshire is the happy medium of the dairy breeds—she reaches no extreme. She is neither unusually large nor small; her milk is not the richest, nor yet the lowest in fat test; her adaptation is to average dairy conditions. She is the "in-between" cow of the five breeds.

Ayrshire cows weigh about 1,000 lbs. and the bulls from 1,400 to 2,000 lbs. The color is white and red or brownish-red verging on mahogany. The typical New England Ayrshire is red with only a little white, but the more popular color in other sections, particularly with showyard individuals, is white with only a little red about the head and neck, with a few spots scattered over the body. There is a tendency for the breed to carry a little more covering than is approved in the Jersey, there being more smoothness over the shoulders, along the back, and in the rear quarters. This characteristic, rapidly becoming less pronounced, no doubt persists from the type of those years when considerable attention was given to dual-purpose values. It is excused or approved by breeders on the claim that it lends strength and constitution to their animal which cannot be had in the extreme dairy form. The horn is characteristic, being long and curving outward, upward, and slightly backward. The top line is very strong, the rib deep, the chest full, the barrel large, and the legs straight and strong. The udder is the most perfect of the breeds, attached high behind and well forward and having a flat sole with the teats well placed. The short teat so much objected to in the Scotch type years ago is now seldom found. Ayrshires are prepotently typy. They breed true to form. There is no lover of perfection in animal form who is not strongly attracted by the lines, the vigor and character, and the perfection of udder of the Ayrshire.

Auchenbrain White Beauty 2nd, owned by Penshurst Farm, Pennsylvania, has been selected by several college professors as the best model of a dairy cow. Lessnessock Dairy Loudoun, owned by Wendover Farm, New Jersey, had sufficient type to enable Bob Hildebrand to make what is said to be his most beautiful photograph. It appears on this page. For four years at the National Dairy Show, the Valentine trophy was offered for the best typed cow of all breeds. Ayrshires won it for three years; Kilnford Bell 3d, owned by Adam Seitz of Wisconsin, taking it the third and fourth years.

Ayrshire Longevity

The Ayrshire is notably long lived. She matures a little more slowly than the Jersey or Guernsey, is frequently at her best at ten or eleven years, and continues in profitable usefulness to a greater age than the average of the other breeds. Jean Armour at eleven years produced 20,174 lbs. milk, 774.73 lbs. fat, and, at fourteen years, 10,936 lbs. milk, 436.46 lbs. fat. Lenetta, milking now as a twenty-year-old at the rate of 10,000 lbs. of milk for the year, made 11,450 lbs. milk, 411.14 lbs. fat at nineteen years and 10,814 lbs. milk, 367.71 lbs. fat at seventeen years. Her fifteen and fourteen year milk records average 12,000 lbs. Crimson Rambler has a ten-year average, and Culcraigie Jeanette one for nine years, of over 10,000 lbs. of milk.

The breed is vigorous. Calves are on their feet soon after being dropped and are easy to raise. They do not need hot-house care. It is well proved that the cows are good grazers, managing a livelihood on rough hillsides and places of scanty pasturage where other breeds could not subsist. Unfortunately this fact has placed the breed in the hands of some men who do not feed liberally and who have not given it the opportunities every dairy cow requires if she is to produce well. The vigor of Ayrshires tends to make them disease-resistant and contributes to their longevity and persistency of production. It is in a measure accountable for the excellent reproduction records of Ayrshire cows. They are regular and sure in their breeding, dropping strong, healthy calves year after year.



LESSNESSOCK DAIRY LOUDOUN, THE AYRSHIRE COW WHOSE PERFECTION OF TYPE ENABLED BOB HILDEBRAND TO MAKE HIS MOST BEAUTIFUL ANIMAL PHOTOGRAPH

Milk Average in Fat Content

Ayrshire milk averages a fat percentage of 3.85 to 4. The fat globules are small. The average composition and the small globules adapt the milk to market milk sale, though it would be more accept-

(Continued on page 1007)



The Brown Swiss—The Oldest Dairy Breed

THE Brown Swiss is the world's oldest dairy cow. When the ancestors of the other present day milk breeds were yet wild—small, ill-formed, and giving little promise of ever serving mankind, the mountainsides of Switzerland prospered from the production of Brown Swiss. In early performance, she set a world's record. Other breeds have claimed to fill a dual-purpose but she for hundreds of years cheerfully lived up to a triple-purpose—a three-job requirement. She furnished the Swiss their meat and a bountiful supply of milk, and at the same time hauled the loads of the farms and pulled the plows of the fields. She filled this place for centuries and well deserves the reputation so faithfully earned of being extremely docile and tractable.

Brown Swiss in the United States

H. M. Clark of Massachusetts is credited with bringing the first Brown Swiss to this country; eight head in 1869. An eastern importing company brought over ten more in 1882. Other small shipments came from time to time, quarantine restrictions keeping the number down. McLaury Brothers of New York in 1904 obtained one of the important later lots. Two years after that E. M. Barton of Illinois secured thirty-nine head whose quality made the importation the greatest ever received.

The Brown Swiss is the least numerous in this country of the five dairy breeds. About 20,000 animals have been recorded, and probably not more than half that number are now on American dairy farms. New England and New York State have the great percentage of the breed, though herds in the middle west are increasing. The breed's progress was handicapped from the begininng by the relatively small number of animals imported, the total being less than 200 head. But a factor of more influence is the character of the man into whose hands the breed has fallen. Farmers own it—men who gain their livelihood from their herds and crops. A meeting of Brown Swiss breeders brings together a greater proportion of men who themselves milk cows than will be seen in the conclaves of any other breed. This is a disadvantage as well as a commendation, for these men have neither the time nor the inclination to boom their breed. Under farm conditions the cows have established their high worth as generous and economical producers. There has been no promotion work. Whatever progress has been made must be credited to the cow's good qualities.

Characteristics of the Breed

The system of caretaking in Switzerland has strongly influenced the breed's characteristics. For draft purposes a large, strong animal was required; exposure to the weather for a number of months each year contributed to the breed's hardiness; and the large proportion of roughages in the ration developed a great capacity for handling feed. Brown Swiss are large. The cows weigh 1,200 to 1,400 lbs. and the bulls, 1,500 to above 2,000 lbs. Many Brown Swiss are not brown. Variations in color from silver gray to so dark a brown as to be nearly black are allowed, though a mouse color is preferred. A creamy ring surrounds the mouth and a light stripe usually follows the backbone. White spots, except on the underline near the udder, are very objectionable.

The Brown Swiss cow is not beautiful, except in the fulfillment of the adage, "Handsome is as handsome does". She tends to heaviness and is somewhat plain but is well proportioned and substantial looking. She is a bit slow in maturing, ranking about with Holsteins in this respect. The head is large and throaty and the neck thick. The hind quarters are rather meaty and the general appearance of the animal is more blocky than the form generally accepted as characteristic of a milking animal. Many are faulty in the fore rib, lacking spring, but the barrel is large and of good depth. Critics fault the breed for coarseness, yet the bone is of firm texture and not too large, the handling quality is excellent, and no breed has a superior texture of udder. The shape of udder will bear improvement, though the size is acceptable and the teats of good shape and size.

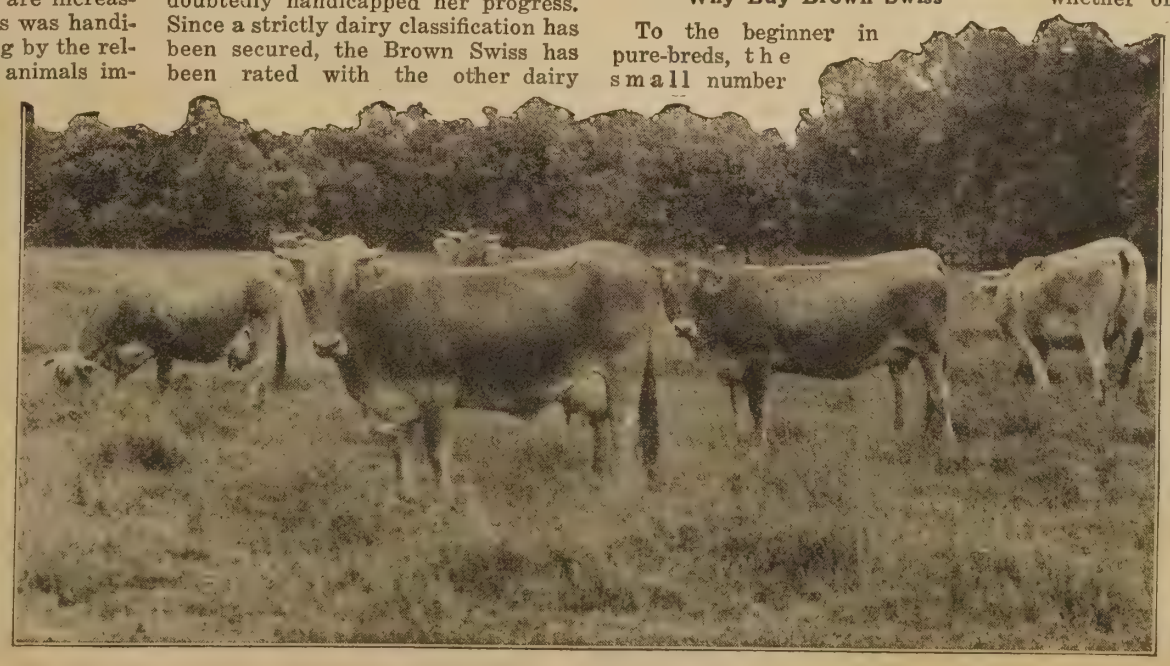
Until 1906 American breeders made the error of seeking a dual-purpose function in this cow, which undoubtedly handicapped her progress. Since a strictly dairy classification has been secured, the Brown Swiss has been rated with the other dairy breeds and marked improvement has been brought about. No one can see the line-up of milking cows in the show ring today without appreciating their strong producing qualities.

The milk of the Brown Swiss is medium in its content of butterfat, the percentage being about 4. This suits it admirably for market milk and for cheese making, the product into which goes so great a part of the breed's production in Switzerland. In that country, the average yearly per capita consumption of cheese is 26.4 lbs., twice as much as the average eaten per person in any other country. The breed ranks high in its average production. At the school of agriculture at Zurich, Switzerland, the Brown Swiss herd for 30 years made 7,500 lbs. milk, containing 3.44 per cent fat. Twenty cows near Luzern averaged 8,400 lbs. milk for three successive years. Six thousand cows supplying the Anglo-Swiss Condensed Milk Company, milked 9 months of the year and fed only hay and grass, averaged 5,115 lbs. of 3.68 per cent milk, according to the United States Consul at Zurich. The Brown Swiss cow, Brienz, completed the largest public record ever made by producing in three days in a public test at Chicago 245.1 lbs. milk containing 9.32 lbs. fat. Last year in Cow Testing Association No. 2 of Lake County, Illinois, the herd of 44 cows on Hawthorn Farm averaged 10,080 lbs. milk, 429 lbs. fat. The cow, Merney, in 1909 in the Wisconsin Experiment Station herd, representing the different breeds, produced 13,653.7 lbs. milk, 554.19 lbs. fat, and made a greater net profit than any other of the 35 cows. On the basis of maximum records, the Brown Swiss has not ranked high, the best production being that of 19,460.6 lbs. milk, 789.16 lbs. fat, made by College Bravura 2nd owned by the Michigan Agricultural College. But the average of the breed is, as Secretary Ira Inman says of the Hawthorn Farm average, "Something to shoot at". All registry records completed for all ages average 10,939.5 lbs. milk, 437.08 lbs. fat.

Why Buy Brown Swiss

To the beginner in pure-breds, the small number of breeders of Brown Swiss constitutes a disadvantage. In a small breed, association affairs move slowly; there is too little publicity; the opportunity for selection in buying is limited; and it is very difficult to create a demand which will take surplus at good prices. The isolated breeder is far less favorably situated than one in a community where many men own the same breed. A very serious fault of the breed in the eyes of many is the tendency to coarseness in both cows and bulls. To those accustomed to dairy type as represented in the form of the Jersey, the heaviness about the head, the throatiness, and the general tendency to coarseness are incompatible with the tendency to turn feed to milk rather than to bone and beef. But even considering this, the Brown Swiss has qualities which command favorable attention. She is a big, strong, hardy cow, qualities in favor on the majority of farms. She is uncommonly docile and by inheritance is fitted to utilize much roughage advantageously. She is exceptionally long lived and is sturdy and hardy. Relatively few Brown Swiss cows fail to breed, the characteristic of the breed being to drop calves regularly to a good age. So strongly is she bred that her sons crossed on common herds sire grades very similar to pure-breds in appearance, transmitting size, vigor, and the power to produce profitably for many years. Numerous claims have given the breed a high rating in economy of production. Few public tests substantiate these claims but it cannot be doubted that the Brown Swiss cow gives a good account of the feed she consumes.

Brown Swiss calves are healthy, very large at birth, and easy to raise. The average weight at birth is around 100 lbs. and 125 lbs. is not uncommon. W. E. Janes of New York states that Benny Blanc weighed 155 lbs. at birth and 795 lbs. at 6 months. The calves not saved for breeding veal to a good profit. It is claimed, whether or not it is an advantage, that in a herd of ten cows the veals sold will pay for a new sire each year.



The proved qualities of the animals of this breed guarantee them a place on the dairy farms of America. Though they have thus far occupied a small part in the dairy husbandry of this country, their owners are optimistic that the future will bring a greatly increased popularity of the Brown Swiss as the farmer's milk cow.

The headquarters of the Brown Swiss Cattle Breeders' Association of America is Beloit, Wisconsin. Ira Inman is secretary.



The Guernsey—The Quality Cow

MARY Marshall gave the Guernsey cow her initial popularity with the American farmer. Her performance at the Pan-American Exposition in 1901 called first attention to the virtues of the "old yellow and white cow." In a six months' public test, with ten breeds competing, the Guernsey produced butterfat at the lowest cost, and made the greatest return for each dollar invested in feed. Fifty cows were entered, five from each breed. Three of the top five were Guernseys and the leader of all was Mary Marshall.

Rueben Haines of Pennsylvania imported the first Guernseys to this country as early as 1818. Fifteen years later a bull and two heifers were brought to Cow Island, New Hampshire. A few herd foundations were secured in the seventies but, when the herd book of the American Guernsey Cattle Club was started in 1877, only 193 animals were registered, 114 of these being imported. Not until 1880-90 were important importations made and the largest shipments have come since 1900. Up to 1901, when Mary Marshall's notable victory drew favorable mention, the breed had not come into great favor with the dairy farmer.

Island of Guernsey Her Origin

The yellow and white cow takes her name from the place of her origin, the Island of Guernsey. The purity of her breeding there since 1819 is made certain by a law passed at that time preventing the landing of cattle on the Island. It is thought that, for at least a century before, no new blood was introduced except slight infusions from the Island of Jersey. The breed's progenitors are said to be the small black cattle of Brittany and the larger red cattle of Normandy, the blood of the latter predominating. One theory of its origin includes among its ancestors the spotted cattle of Switzerland, the Simmenthaler. Evidence of this is seen in the breed's size, quiet disposition, and yellow secretions. The Guernsey has her present perfections through long continued selection from the native stock of over a century ago. Annual exhibitions have contributed greatly in establishing her present distinctive characteristics.

The Guernsey Character

The Guernsey carries the marks of a milk cow. So pronounced is her dairy conformation that no one can mistake the purpose for which she is developed. She is clean of flesh, open in frame work, great in her ability to use feed, strong of constitution, equipped with a milky udder of good size and quality, and is a cow of scale and capacity. She has dairy temperament a plenty; is alert without being nervous. She is larger, rougher, and coarser than her sister breed, the Island Jersey; having less of beauty but more of the appearance of utility. Her head is sometimes plain, her back not always straight, and roughness in the rump is common. She ranks with the Ayrshire in size, the cows weighing 1,000 to 1,100 lbs. and the bulls from 1,500 lbs. to a ton.

The deep yellow color of her milk is the most characteristic quality of the Guernsey. Indication of this is found in the heavy, oily secretions of the skin, most noticeable in the ears, on white spots, and at the end of the tail. The average production is 5,500 to 6,000 lbs. and the test right close to 5 per cent. Persistency of production in an unusual degree is had in the Guernsey. She holds her milk flow throughout the year, in her records frequently producing as heavily at the end of the year as at the beginning. The breed's color is also distinctive, orange-yellow and white being typical. The amount of either may vary, even to the exclusion of white, though too much white is objectionable. The breed is not especially early maturing, ranking between the Jersey and Holstein.

The Guernsey's worst fault is in her breeding qualities. There are many herds where this criticism does not apply, but, on the average, the reproductive powers of the breed constitute its greatest weakness. Calves weigh 65 to 70 lbs. at birth and, comparatively, are not easily raised. Another Guernsey shortcoming is a lack of uniformity in type. Marked improvement has been made in late years but there is still much to be done in establishing a characteristic conformation.

At Her Best in America

The Guernsey is at her best in America. She is larger and more capacious than the typical representative on the Island and produces more liberally. Recognition of her superiority here is given in the sale ring where she greatly outsells an imported animal. The exception to the rule in the wise policies of the American breeder is the foolish fancy which causes the rejection of worthy animals because of black noses. The buff nose is preferred to the extent of greatly reducing the value of a calf because four square inches of skin happen not to be of a certain hue. This, in the face of such authoritative statements as that of Joe Hope's, "I take no exception to a black nose, for I am well satisfied that it is a mark of superior ancestry."

The breed makes its claim to a place on the American farm on the basis of production, quantity, quality, and economy. At the New York and New Jersey Experiment Stations she was compared with three other dairy breeds and made butterfat at the lowest cost per pound. At the Pan-American Exposition where the only public test with all the dairy breeds was made, she excelled all of the nine other breeds in economy of butterfat production. Mary Marshall, a ten-year-old Guernsey, won the test with a production in 6 months of 5,611 lbs. milk containing 301.13 lbs. fat. Not only were the Guernseys most economical in their use of feed but their butter was given the highest score, leading in flavor and in color.

The first Advanced Registry system for yearly production was that established in 1901 by the American Guernsey Cattle Club, and the first Advanced Registry cow and bull in America on the basis of 365 day records were Guernseys. The 9,186 records completed May 1, 1920, averaged 9,042.91 lbs. milk, 452.57 lbs. fat. Three of these were world champion productions; that of Yeksa Sunbeam in 1905 of 14,920. lbs. milk, 857.15 lbs. fat; that of May Rilma in 1914 of 19,673 lbs. milk, 1,073.41 lbs. fat; and that of Murne Cowan in 1915 of 24,008 lbs. milk, 1,098.18 lbs. fat.

Guernsey on Jersey Domain

The Guernsey has fallen heir to much of the old Jersey domain. Her greatest numbers are in New York, New England, Pennsylvania, and Wisconsin. She holds favor in the newer dairy states of the Middle West and now begins to usurp southern Jersey territory by way of the Carolinas and Virginia. The dairy farmer, always a stickler for size in his milk cow, gives much emphasis to this quality. He considers the Guernsey more hardy than the less-favored Island cow of her sister-breed, and chooses her in northern states because of this and also in the belief that she makes larger returns from the abundant roughage crops of the farm.

A Quality Cow

The Guernsey's is a quality product, in fat percentage and especially in its rich golden coloring. Handicapped where milk sells on a low fat basis, she prospers best where a special trade can be secured. In many sections in the East, her product establishes its own market. She is found in many herds in low testing breeds, where her milk "helps out" the color and fat percentage, a little leavening the whole. She holds her own where cream is sold, where butter is manufactured, and where milk is bought on the butterfat basis.

The Battle With the Scrub

Strong proof backs the advertising of the Guernsey bull as "the winner of the battle with the scrub". No bull sires a better grade cow. Many herds of sizey, open-framed, milky grades, producing richly colored milk in bounteous quantity, mark the farms where the daughters of the old red native cow have been mated with sons of the "old yellow and white cow". Notable productions are made by grade herds and individuals have completed justly famous records of persistency and profit. As long ago as 1897 a Wisconsin Guernsey grade began an eleven-year production averaging 8,943 lbs. of milk, 467.7 lbs. of fat.

The progress of the Guernsey cow since 1900 is a striking commendation of her worth. Almost unknown to the dairy farmer then, she now ranks high in popularity. In twenty years there has been an increase in registrations totalling eight hundred per cent. Even now she ranks third among the breeds in numbers and finds the chief limit in her spread in this fact. She is in demand at prices not exceeded by those of any other breed; the policies of her owners are progressive and constructive. The national association has been conservative in its policies but progressive, constructive, and at all times a very strong influence in promoting the breed's good. Lately its extension forces have been greatly strengthened.

The headquarters of the American Guernsey Cattle Club is Peterboro, New Hampshire. W. H. Caldwell is secretary.





The Holstein—Heaviest Milk Producer

IN the days when the shepherds of Judea journeyed to Bethlehem at the direction of the angel of the Lord and returned to their flocks glorifying and praising God for all the things that they had heard and seen, there were herdsmen far to the northwest caring for the cattle now called Holstein-Friesians. Three centuries before the birth of Christ, a people known as the Friesians settled with their flocks and herds of white cattle north of the River Rhine in what is now Holland. Two hundred years later the Batavians came bringing black cattle. These, crossed on the herds of the Friesians, gave the ancestors of the modern black and white cow.

The Holstein, two thousand years after her origin, reflects the environment of Holland. There she fed for centuries on the abundant succulent roughages of the fertile lowlands reclaimed from the sea by dykes. There she developed into a large cow of great capacity, with the strength and vigor necessary to heavy milk flow. From generation to generation she has been so handled and fed that authority has said, "The Holstein in her native country is the best cared for cow in the world."

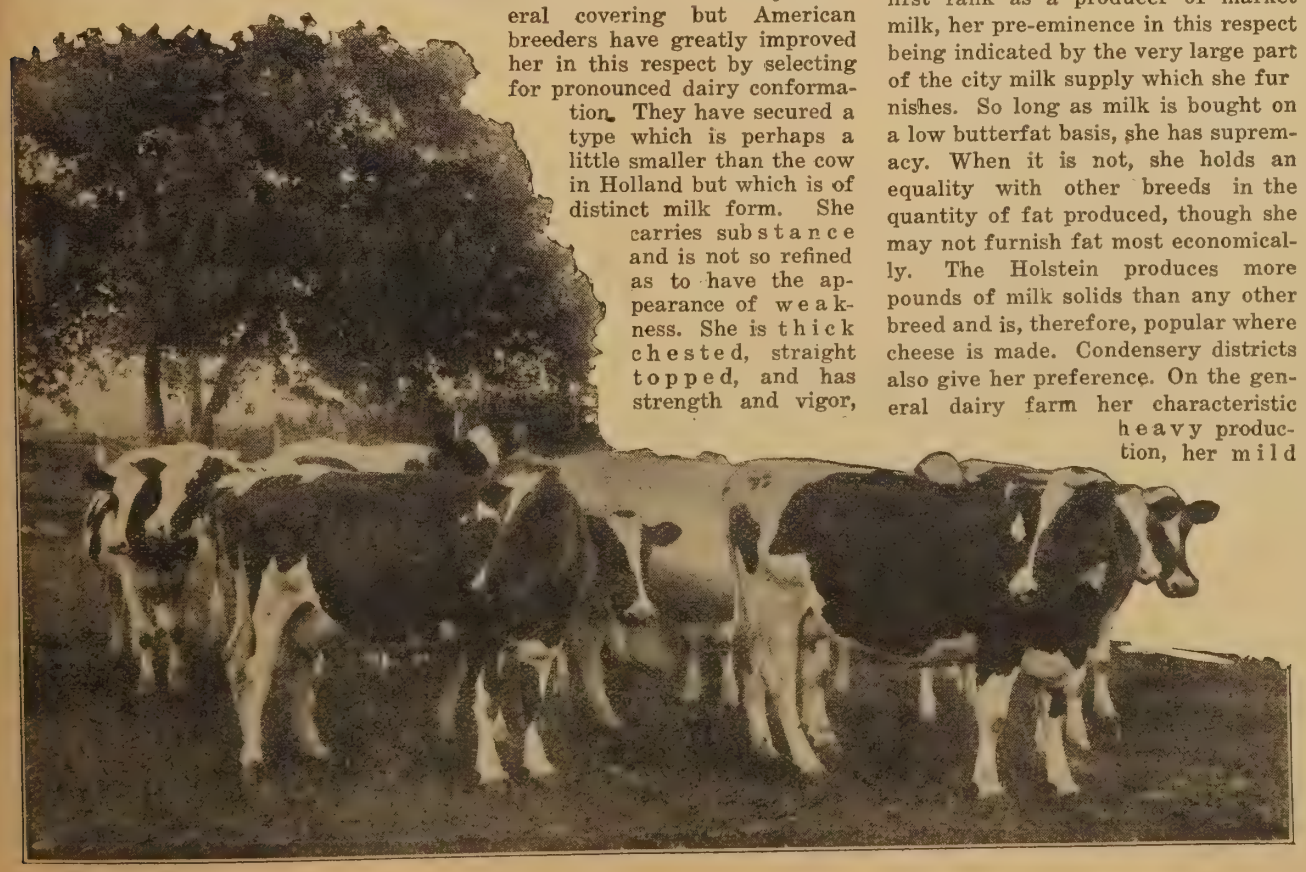
Dutch Brought Holsteins Here

Dutch settlers brought Holsteins to New York State near the beginning of the seventeenth century, some say as early as 1609. The first shipment about which definite facts are available consisted of two bulls and six cows sent by the Holland Land Company to John Lincklaen, Cazenovia, New York, in 1795. The first importation to be kept pure was brought in 1861 to Massachusetts by W. W. Chenery. Between 1875 and 1885 about 10,000 head came over. Few have been imported since that time. The name given the breed, Holstein-Friesian, is the result of a compromise between two rival registry associations which combined in 1885 to form the Holstein-Friesian Association of America. The breed might more properly be termed Friesian, since its origin is principally in the Holland province of Friesland.

As 1920 ends, nearly 1,000,000 Holsteins have been registered in America. It is estimated that more than 400,000 of these are now alive. The same estimate places the total number of breeders at 35,000, of whom 17,815 were members at the end of the association's last fiscal year. Herds of the breed are found in every state in the Union, in largest numbers in New York, Wisconsin, Pennsylvania, and Ohio.

Holstein Characteristics

The Holstein is the largest of the dairy breeds; the cows averaging about 1,200 lbs. and the bulls 1,800 to 2,200. Individual weights greatly exceed these. The color must be black and white, sharply defined and not blended. An animal may not be entirely white or all black and be registered. There is now a popular demand for a large proportion of white, those animals which are mostly black being discriminated against somewhat. This fad has no relation to productive capacity. As imported, the Holstein was inclined to carry a liberal covering but American breeders have greatly improved her in this respect by selecting for pronounced dairy conformation. They have secured a type which is perhaps a little smaller than the cow in Holland but which is of distinct milk form. She carries substance and is not so refined as to have the appearance of weakness. She is thick chested, straight topped, and has strength and vigor, capacity for handling much roughage, and a mammary system which turns out phenomenal quantities of milk. Her milk is light in color, the fat globules very small, and the fat percentage 3.4 to 3.5. Her calves average about 90 lbs. at birth and are vigorous and very easily raised. They make heavy veal weights very early. Holsteins mature slowly, coming to producing age several months later than the Jersey or Guernsey.



Some Faults in the Breed

Faults in the form of the Holstein are greater in number than in importance. She is too often a bit thick in the thighs and shows too great tendency to beefiness; she is apt to be a trifle coarse in hair, bone, and skin, and seems to lack quality and finish. Upstanding, shallow animals and those with sloping rumps and pendent udders lacking fore extension are yet found, though they are becoming less and less common. Her milk is never too rich in fat, but the occasional member of the breed which almost forgets to put fat in imposes too much on a public which likes a "low down cream line". The man who objects to typical Holstein milk, however, because too much has to be milked and cared for to supply a required quantity of fat, has his counterpart in him who objects to alfalfa because there is so much to harvest. Even with these faults, which are rapidly lessening, the Holstein cow well fills the requirements of the farmer who declared his cow must have two things, "a place to hold feed and a place to hold milk".

The Holstein is the world's heaviest milking cow. Her milk, though low in fat, is produced at a lower cost than that of any other breed. She holds first rank as a producer of market milk, her pre-eminence in this respect being indicated by the very large part of the city milk supply which she furnishes. So long as milk is bought on a low butterfat basis, she has supremacy. When it is not, she holds an equality with other breeds in the quantity of fat produced, though she may not furnish fat most economically. The Holstein produces more pounds of milk solids than any other breed and is, therefore, popular where cheese is made. Condensery districts also give her preference. On the general dairy farm her characteristic heavy production, her mild temper, and her adaptability give her high standing.

If Records Told the Story

If world champion records told the story, the Holstein would have everything her own way, for the black and white cow has the highest fat production in every class of the Advanced Registry, from junior two-year-olds to mature animals. In the seven classes the top Holstein records average 1,035.43 lbs. fat; and those of the closest competing breed, 918.94 lbs.; in milk, the seven Holstein records average 28,271.8 lbs., which is 8,380.4 lbs. above the next highest breed average. The ten highest records of the breed average 1,105.86 lbs. fat and the best ten of the breed ranking next, 997.6 lbs. A Holstein cow has made 1,205.08 lbs. fat in a year, another has produced 33,425.3 lbs. of milk. Much attention has been given to the seven-day test. Now the leading breeders are giving increasing emphasis to the 365-day record and placing less faith in the value of the short time test.

The average of the breed is a yearly production of 8,500 to 9,000 lbs. of milk containing 3.4 to 3.5 per cent of fat. The grade in cow testing associations gives a worth while account of herself, in very many instances leading in production. A Wisconsin association, almost exclusively Holstein, averaged 9,034 lbs. milk, 328.6 lbs. fat in the year 1919-20. One herd of 16 cows in this association, part grade and part pure-bred, averaged 13,737 lbs. milk, 502 lbs. fat. Further evidence of the prepotency of the Holstein bull comes from the Iowa State College where grade Holstein daughters of scrub cows produced 94 per cent more milk and 62 per cent more fat than their dams. In the second generation of grades the production of milk was 245 per cent and the amount of fat 168 per cent over that of their scrub grandams.

The future of the Holstein cow in America is well assured. She has more active adherents than any other breed. Her owners are universally enthusiastic over her merits; they are aggressive promoters of their breed. A very liberal extension program is followed by the national association and state organizations are now doing much toward further increasing the breed's popularity. Every Holstein owner is an extension man for the breed—an enthusiast who spares no effort in giving publicity to the excellent qualities of his favorite cow. Her popularity with the American farmer is well deserved. She is the largest dairy cow, makes liberal use of bulky farm roughages, produces more milk and as much fat as other breeds, is a good breeder, dropping large calves which are raised without difficulty, and she exists in such numbers and in such distribution that the farmer knows her and the beginner can make his first purchase easily.

The headquarters of the Holstein-Friesian Association of America is Brattleboro, Vermont. F. L. Houghton is secretary.



The Jersey—Premier Butter Breed

"THE treasure highest in the Jerseyman's estimation is his cow." So wrote the historian more than a century ago. His statement made then, of the breeders on the small isle the Jersey cow put on the map of the world, is true today in all the many countries to which her sterling qualities have taken her. A peculiar sentiment attaches to her ownership as with no other breed. She is the family cow of the world—to countless thousands, the symbol of the dairy industry.

Breed Obtained Through Selection

The year the first president of the United States was elected, the Island of Jersey passed a law against cattle importations which effectively preserved the purity of breeding of its herds. What the Jersey was then, it is now; it has nothing now, through the introduction of new blood, it did not have in 1789. The Jersey cow of the present day is the result of selection from the native stock of the Island critically described by the judges at the first official show nearly fifty years later as "very much out of condition"; "too slightly formed behind and cat-hammed"; "gait, unsightly"; "udder, ill-formed"; "tail, coarse and thick"; "hoofs, large"; "head, coarse and ill-shapen".

The progenitors of the Jersey are not known—the most acceptable theory of the breed's origin makes it an admixture of blood from Normandy and Brittany. Because the cattle of Brittany were smaller, darker, and of more solid color, and with small, black, pointed horns, it is thought these cattle predominate in the Jersey's ancestry. The early improvement of the stock of Jersey over that on the mainland is indicated by Phillip Falle's statement in 1734: "The cattle of this island are superior to the French cattle." It is recorded that from the time of the first show in 1834, "Great attention has been constantly paid to combine beauty of form with butter producing habits."

The Jersey of Today

How great is the accomplishment of the breeders of Jerseys in the past century! The description of 1834 does not define the 1920 Jersey of which Professor C. H. Eckles has written: "A good Jersey cow is the model of what is generally taught to be the dairy form. She has the pronounced wedge shape, an immense barrel for her size, a well developed udder, and does not carry a pound of surplus fat while in full flow of milk."

The Jersey is the smallest of the dairy breeds. The females average 800 to 850 lbs., extreme weights being from 650 to 1,500 lbs. The most common color is fawn, shading to black on the legs and about the head. Animals so light in color as to be nearly white and those which grade from dark gray to black are acceptable. A solid color is preferred, though animals which have white markings may be registered. A black tongue and switch are most common.

The Jersey is the most highly specialized dairy animal. Her head is clean cut; the neck, long and thin; the shoulder, fine and well blended with the middle; the vertebrae of the back prominent and well apart; the ribs well sprung, giving a large middle; the rump, long, level, and wide; and the thighs, thin and free from extra fleshing. The mammary system, in keeping with the body conformation, nears perfection. The udder is capacious, of good quality, and unusually well attached, especially in front. In the hundred points of the score card, forty are devoted to udder, teats, and veins. Jersey milk is the richest in fat, the characteristic percentage being from 5 to 5.5. The fat globules are larger than those in the milk of other breeds. The average quantity of milk per year is around 5,500 to 6,000 lbs.

The breed matures early, the practice being to bring heifers to milk at twenty-four to twenty-seven months. Jerseys have a high degree of intelligence and the cows respond generously to kind treatment. They are of strong nervous temperament which accounts for their ability to produce persistently year after year, though in general appearance they may be somewhat delicate. The bulls, because of this nervousness, are more apt to become ugly and difficult to handle than the males of other dairy breeds. The calves are small at birth, averaging about 55 pounds, and are not as easily raised as those of three of the other breeds.

The Jersey in America

The first Jersey cow in the United States came in 1815. She was three months on the water, calved at sea, and made 8 lbs., 2 ounces of butter in a week, upon landing, from a production of 14 quarts of milk per day. The first foundation stock was brought in 1850, to Connecticut, by Messrs. Taintor, Buck, and Norton. During the seventy years since that time, except when quarantine restrictions prevented, importations have been made annually.

Following the first importations, the Jersey became very popular; the boom being at its height in the late seventies and the eighties. She gained a strong lead over other breeds, having a clear field. With her dairy qualities and the need in this country for dairy animals, she should have established herself so strongly as to hold her leadership permanently. She has not done this. Although her numbers may not now be exceeded by any other breed, (there are 680,000 registrations) it cannot be said that she is today the cow in greatest demand on the dairy farms of America. The price for which the average Jersey sells, very little above that of grades, points clearly to the breed's failure to come into its full heritage.

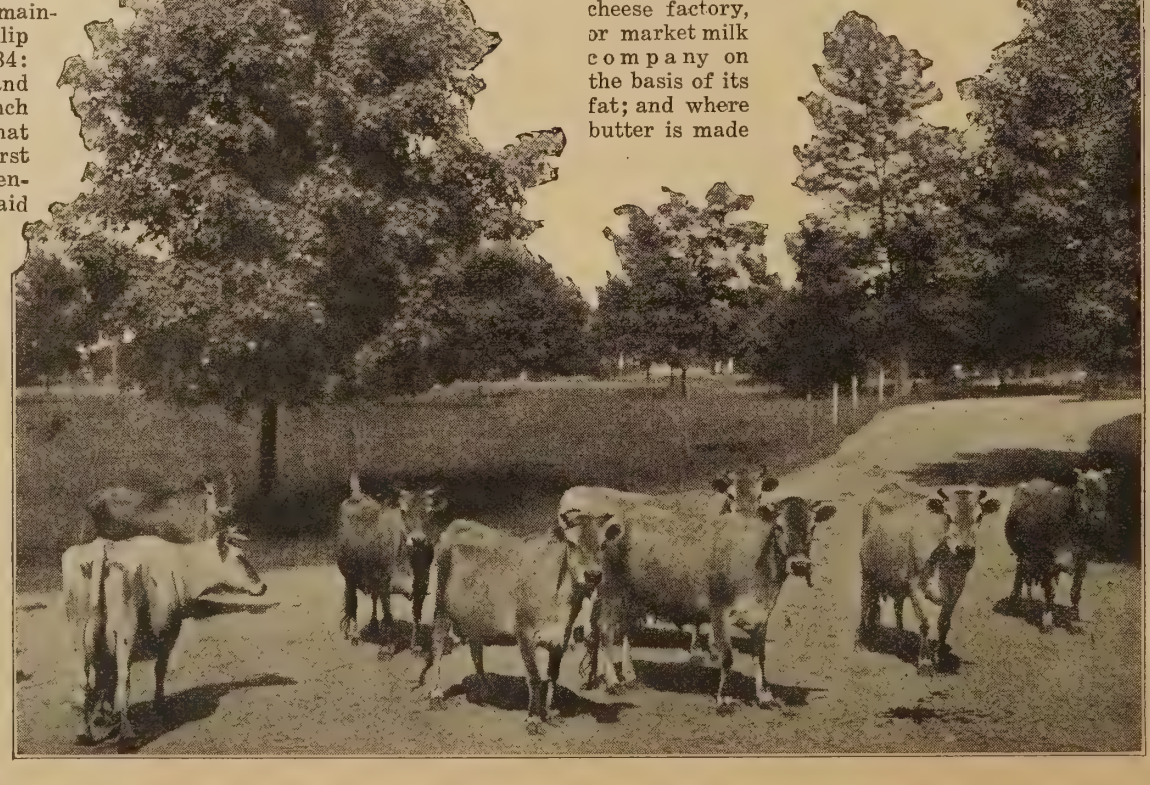
Here is the premier butter cow of the breeds. She is without a peer wherever there are consumers who appreciate quality of milk and are willing to pay for it; where cream alone is sold; where milk is purchased by a creamery, cheese factory, or market milk company on the basis of its fat; and where butter is made on the farm. Acknowledged as queen of the dairy farms of the South, she holds forth strongly in Ohio, Indiana, and some sections of New England. But in the great dairy counties of New York State, Wisconsin, and the newer regions taking up the milk cow, she has not held her own.

Handicaps to Jersey Progress

An early color fad injured the Jersey. Fashion decreed that only solid colored animals were acceptable. As late as 1900 many breeders slaughtered at birth, or at best failed to register, those calves which were so unfortunate as to be born with white markings. The small membership in the American Jersey Cattle Club, due in part to the high fee, is a handicap. At the end of the last fiscal year, the Club's membership totaled only 8572, and there are over 25,000 breeders.

The most serious obstacle in the Jersey's progress in America is the disagreement as to what constitutes the correct type—the small, beautiful, Island bred cow or the larger, plainer, coarser, heavier milking cow of American breeding. At present the price standards strongly favor the former, importations bringing auction averages greatly exceeding those obtained for the choicest of American bred animals. The show ring is given up entirely to Island breeds. Under the present standard of judging the typical representative of the American breds has no chance to win. It matters not that the American type produces more milk and fat, that the highest records in every class are held by its members—the publicity from show winnings and high sale prices has at present placed the Island type in the lead.

It is a sad commentary on the American breeder if after three-fourths of a century he must return yet again and again to the Island of Jersey for new seed stock. Col. Geo. E. Waring wrote as early as 1869, "We have here ample material for the development of such herds as the Island of Jersey never saw." Cows of American breeding have well maintained the breed's laurels. Jacoba Irene made 17,253.2 lbs. milk, 952.9 lbs. fat in 1909 and was breed champion for several years. Sophie 19th of Hood Farm next held that honor with 999.1 lbs. of fat in a year. She has nine yearly productions averaging 12,326 lbs. milk, 706 lbs. fat, a world famous record for persistency. Vive la France, for a time champion of the breed with a four-year record of 14,925.7 lbs. milk, 1,031.64 lbs. fat, has



(Continued on page 1010)



Air Castles On The Farm

Mrs. P. H. Crane



AIR castles? Yes, I'm familiar with them. I have seen so many ruined ones that at first thought it is almost a joke to mention such a thing. When I was in my teens I was so busy building them and they were so shimmering and colorful that I could scarcely make out their lines and they entirely blinded my eyes at times to the dishpan and the broom.

I can see myself now sitting on that log by Riggin's line fence where the wild roses grew so thick—a dreaming, dreaming of the beautiful home all wonderful, with me and a prince in it. I saw myself with my children around me looking like the mother and children you see on the calendars—such a tranquil mother—such angelic children—no trouble to be so. 'Twas a sweet dream.

From that wonderful home we were scattering blessings upon the world freely and without any effort. In my dreaming I saw no road to that glorious, misty place. I just smelled the wild roses and felt estatic.

Some years later, when I found myself dreaming of the future with my husband, the dream took on a somewhat similar form. Our air castle was to have a home where honorable children could grow and to be ourselves of a little use in the world. Then the misty air castle took on more distinct lines and we realized there was a long, rough road between it and us. It takes moral force and some money to grow useful citizens and to be a helpful citizen yourself. We needed to cherish the things that make an honorable citizen and we needed to succeed well enough financially to give that citizen a chance to be useful.

Let it be understood right here that we are only started on the way to the realization of our dreams. Our children are only babies, the oldest 7, and who can say whether they will or will not be useful citizens? And as to financial success, we lack a long way of being out of the woods. Why, our second importation of heifers have not even freshened yet. So as to the value of this, our biggest air castle—to be of use and to train useful children—I can say nothing. But we have gone faster on the road to a competency than we had hoped.

Whoever knows of Crane Bros. knows of the four of us—Perry and Ruth and Vic and Ross—the brothers and their wives. Those who know us at all well know that the boys are usually hatching up some "million dollar idea" as we wives call them. They afford us much diversion, both the ones that fail and the ones that succeed. These are the minor air castles that are helping us to realize our biggest one. It causes me no abashment to speak of them for they have proven to us their value. These air castles were all dreamed while we were awake—very much awake—and usually when we urgently felt the advantage of having some more cash. They were discussed at our common meeting while we milked our Guernseys, if the children were playing a quiet enough game for us to hear our own voices. The hired man was usually getting down silage and could not therefore hear us and be called upon to swear we were all insane.

"I've got an idea," says Vic as he walks down to weigh up.



HOME OF MR. AND MRS. P. H. CRANE AND FAMILY

"So? That's nothing new. Is it a hurting you bad?"

And then he tells us how we could surely make money and happiness for everybody concerned if we would just work out that cartoon idea. It sounded good as he explained it, each of us commending or condemning certain features.

"Be that as it may," said a practical wife," it's not bottling this milk or putting supper on the table right now." And the discussion was tabled until another suitable time.

Next meeting, three days later while milking, we pictured out the characters that were to figure in this series of cartoons which would appear weekly in farm papers and teach the readers valuable lessons while making them laugh. We had lots of fun that evening. The air castle was going good. We girls even did the milk house work while the boys went up to the office to give the thing a deliberate going over. We risked $75 to have cuts made of a few weeks' cartoons to send to various farm papers. Then we stopped work on that air castle. Somehow we never found time to send those samples out. It didn't just quite fit into our line of work and the immediate demands of our real business forced the abandonment of this idea. But it left us with a little more experience and a little more fully convinced that we had better stick to our own line of business.

Then there was that air castle about the "Farmers' Mutual Accident Insurance". Does not the farmer run the greatest risks of being injured? He may fall out of a silo or have an arm broken cranking his Ford, or lose a hand in a corn shredder, or have a mule kick a rib loose. And if farmers had a sound company in which to insure themselves as have the traveling men, why wouldn't it work? We figured out what the loss of an arm was worth—an eye—both eyes——a leg—both legs—total disability, etc. And we put our heads together and decided who we would go to first in promoting the thing. But silo filling came on and some way the castle faded away.

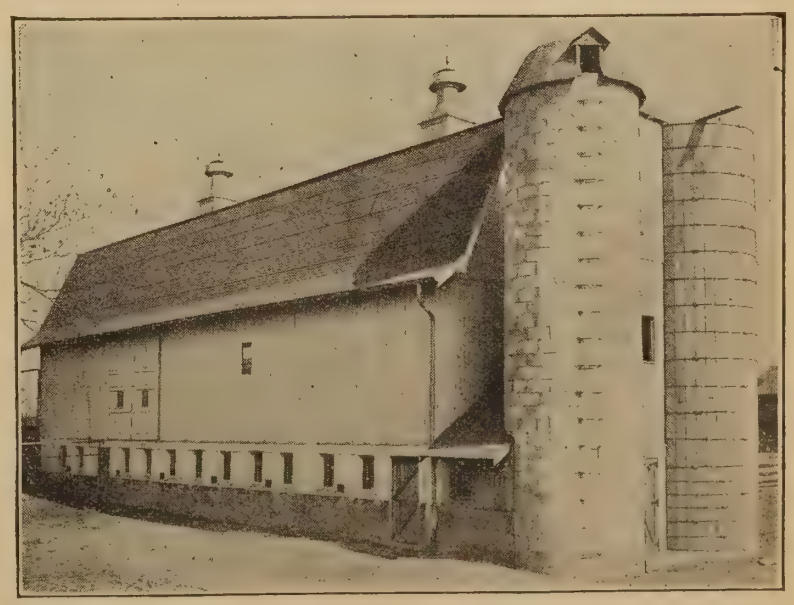
Now, that dairy feed idea of Perry's flourished long and died hard. Has he by chance talked it to any of you? You are lucky, then, for we thought he had talked it to every man, woman, and child in the United States nearly. Anyhow, he convinced a lot of mill men and feed dealers around here that it was the most economic and the most practicable thing in the world. Come to think of it, I do not believe I'll tell you all about that project. We might some time run out of an air castle to think about and then we'll just remodel this old one.

In our experience the main value of air castles, like these I have cited, is to furnish entertainment and to stimulate the imagination. We have builded air castles, however, no more promising than these that are of material value to us. As you may have surmised, we are endeavoring to derive from Guernsey cattle and their products the wherewithal with which to procure the object of our dreams.

If the products of our Guernseys were to help us as they should we had to sell them well. If they sold well it must be because people wanted them. If people wanted them they must be good. So we handled our milk and whipping cream and cottage cheese so that we ourselves pronounced them delectable. They were good the first day, the second day, and every other day. They are good yet and our customers know it. But our products might not have had the enviable reputation they have if we had shied at work or had left the preparation of them to the average help we obtain. Our customers have developed a taste for Crane's Guernsey milk. They have standing orders for it at the market where it is distributed. Our only trouble is that we cannot supply the demand. The customer attributes its goodness to Crane's and to Guernseys. It has made them nickname us "Guernsey Cranes". We tell them to thank the Guernsey for its yellow richness and fine flavor and to thank us for its coolness, sweetness, and purity.

Several of our customers are becoming interested in owning the Guernsey because they believe she will do to tie to. A few Lebanon boys have obtained Guernsey heifers through the Boone Co. Guernsey Calf Club.

(Continued on page 1009)



WHERE "PERRY" REIGNS SUPREME—AND WHERE FUTURE CRANE-FARM AIR CASTLES WILL BE BUILT



Essentials of Successful Co-operation



Eugene Davenport



E. DAVENPORT

IT is with no little trepidation that I accept the invitation of Hoard's Dairyman to write under the above title lest it seem presumptuous for one who has not made a particular study of this highly specialized phase of economic procedure.

But whatever individuals may have done in the study of co-operative farming, the general public is only as yet feeling its way into that kind of co-operation that must characterize the many phases and kinds of successful farming as conditions grow more complicated, and in none will co-operation be likely to figure more prominently or more significantly than in dairying, where it began a good many years ago in the form of the co-operative creamery and cheese factory.

We have much to learn before successful co-operative plans can be worked out for the different phases of farming, from dairying to fruit raising, and some of our failures add emphasis to certain of the essential elements involved. All this the laymen as well as the specialist must understand and recognize if co-operative plans are to succeed. It is this phase of the problem that I shall attempt to treat, feeling that even the best of plans and the best of management will fail unless intelligently supported by the mass of farmers whom it was designed to benefit.

Object of Co-operation

While in certain manufacturing lines such as the making of butter and cheese, co-operative operations seem to be favored, as also in certain breeding operations, yet in general the commonly accepted object of co-operation among farmers is to get better prices; that is, co-operation aims at selling rather than production. And this is right, for the farmer working as an individual is a past master at production, while he is becoming less and less able to market to advantage in a system growing every day rapidly more complicated and uncertain.

For example, the very opening up of markets, the finding of new outlets, the cheapening of transportation, the determination of the kind of pack or package, are all questions that are commonly handled by the dealer and that will have to be taken over by the co-operative association. This is one of the objects of co-operation because the presumption is that the dealer has figured only upon his own interests, whereas it is the belief that attention to these matters by the producers themselves will not only add to their profits but stimulate production as well.

That is to say, the farmer, busy with production, has no means of estimating the demand for what he is producing, much less of exploiting his goods and creating new or extended demands. He cannot afford to advertise. He is powerless against competition, impotent against the evils of inadequate and uncertain transportation and "the markets" are about as much independent of his influence as is the weather, the tide, the earthquake, and other antics of nature.

For example, the principal difficulty with market milk is that the supply is extremely irregular and perishable, while the demand is fairly uniform. Even more destructive of good trade than anything else is the deplorable ignorance of the public about the real food value of milk and its actual cost as compared with other standard features of the dietary. Much progress has been made by judicious advertising, but it has been mostly done not by the producer but by manufacturers and distributors in attempting to dispose of their finished products. The role of the vitamines alone is splendid advertising material for milk, and it may as well be worked up by the producer as by the dealer if only he can and will organize to do it. Here again co-operation is an absolute condition of success.

There is nothing about co-operation that will of itself get us better results than are now being realized except as it originates and sets at work machinery to deal with the details that the farmer has neither the time nor the opportunity to get at.

To be able successfully to size up the demand for any particular goods, to advertise the products and their special brands, to create new demands, to insure adequate and prompt transportation, to harmonize production and consumption, and to steady the market in ways to avoid slumps and smashing losses, are the chief objects of co-operation.

Co-operative marketing means selling in the name of the organization, in which case the individual must expect to lose his identity as well as that of his output. Besides, he must standardize his product and keep it up to grade.

The association is no stronger than the loyalty of its members, and no man is free to come and go as he will, cutting the ground out from under the organization for his own individual and temporary advantage.

What is Involved

Like other advantages, however, those of co-operation must be bought with a price; that is, the individual cannot have the advantages of co-operation unless he will subscribe to the conditions and that is what has led to such frequent failure that many have said that farmers will not work together. Co-operation means, for example, that the individual farmer will combine with others to create a selling organization to take the place of the local dealer.

This also means many other things. It means not only that the new organization must do what the dealer has heretofore done and get into touch with the markets of the world but it means that it must have the support of all the members. It means not only that the organization must hunt markets, conduct advertising and develop trade but it means that the members will as individuals keep out of the markets. As a general proposition the seller must seek the buyer and then please him after affording such information and education as the case may call for, and this is best done co-operatively, not only on the score of expense, but upon the principle that the buyer is annoyed by the huxter. He wants to buy of as few people as possible and have it over.

With co-operative marketing the day of irresponsible dumping of stuff, good, bad, and indifferent, is over. A good many personal liberties must disappear with any plan of co-operation that will work. For example, members of the California Fruit Growers' Exchange are not allowed to handle their own cull apples, much less to sell a few bushels on the side to a fancy market. The personal liberty clause must be wiped off when co-operative plans are made, and the individual must conform to the rules of the association.

Not only that, but he must forego the old temptation of cutting out and selling privately the moment he is able to find a specially good market, then become good Indian again when it suits his convenience to avail himself of the advantages of co-operation. This playing fast and loose with co-operative organizations among farmers is what has broken most of them down. For example, we have only to revert to the early experience of co-operative creameries and cheese factories. The farmers had promised to support the factory, but the moment the local market would justify it plenty of patrons would withdraw their milk and make it up themselves regardless of contracts and obligations the association might have made, justifying themselves by the charge of "mismanagement".

This is what has led most people to believe that no farmers' co-operative plan can long hold together, and this is the reason for certain iron-clad rules for the control of individuals in every successful co-operative association. For the association as such has no existence. It exists only as the individuals who compose it will stay with the job, and see it through, not only in prosperity but in those periods of adversity that are bound to overtake associations as they overtake individuals, corporations, and every form of enterprise.

Contracts

Many co-operative enterprises among farmers take the form of contracts for a term and at a stated price or prices, and the dairy business lends itself especially well to this form of sale.

The advantages of the contract system are obvious in that the farmer knows in advance approximately the terms on which he undertakes to produce, and this is no slight advantage, for he assumes risks enough from weather and from season, from insect and from fungus, from disease and from damage. To be freed from absolute uncertainty as to what his marketable product is to be worth is an object worth considerable sacrifice to obtain.

He must, however, for this purpose standardize his product so far as possible and accept low prices for that portion which does not come up to grade. This burden has always been carried by the dealer, but the moment the producer assumes the advantages of co-operation and especially those of contract, that responsibility passes to him and his association, nor must they consider the difference between standard grades and culls as all loss, for it is not. The bane of co-operative selling is the unwillingness of the producer to submit to grading.

The farmer who produces under contract must not only appreciate the difference between standard and culls, but he must accustom himself to getting perhaps two or three different prices at the same time for different portions of the same output. No factory can place all its contracts at the same figure except in abnormal times like those that have followed the war, when the public is so crazy to buy that the seller may fix the price. But that is abnormal, and in the way of all ordinary business, contracts have to be placed to the best advantage possible. This means sometimes gain and sometimes temporary loss. The farmer who would deal co-operatively must learn to accept them both.

Pot Luck

All of which means in the language of the economist that we must pay for what we get, and that we cannot have our cake and eat it too; which being translated means that we cannot have all the advantages of co-operative

selling and still retain the advantages of individual salesmanship, using the association only when we break down as individuals.

The association once formed becomes a responsible entity with which not only the world but the members must deal if farmers are to realize the advantages of organization.

Not only that, but the organization must accept responsibility and serve the public, not simply exploit it for the temporary advantage of its members. The buying public is the customer of the producer, and as such it should be cultivated and its appetite and buying power developed.

The organizations of farmers must not repeat the error of organized labor. Our labor brethren have attempted to secure all the advantages of organization without assuming any of its obligations and responsibilities. That is why they are failing now, and, unless the policy is changed, the labor unions will dissolve from sheer inability to live a life of unadulterated selfishness. The farmers must profit by this object lesson and see to it that their organizations assume their natural obligations as well as enjoy their advantages, and that those obligations shall be met even at the expense of temporary loss.

There is no machinery, and cannot be, that will assure even a reasonable profit upon every transaction. The very heart and soul of the enterpriser is the slight element of risk involved in serving the public according to its needs and its caprices, and anybody who would avoid that risk with its element of loss as well as profit is simply not an enterpriser, and he will ultimately gamble away even his opportunity to someone who is an enterpriser because he has the fortitude to accept adversity as well as prosperity in the great game of trade.

These, it seems to me, are some of the essentials of successful co-operation among farmers:

First, organizing an association to do what the individual farmer cannot do.

Second, selecting a manager and a board of directors that are not only capable but worthy of the confidence of the membership and the public alike.

Third, supporting the association, observing its regulations, and staying with it in adversity as well as in prosperity.

Fourth, sacrificing the right of the individual to do the best he can for himself, which will sometimes be better than any association can do for him, but presumably not in the long run.

Fifth, expecting the association to spend some money for developing trade, regarding an assured outlet with steady markets rather than "high prices" as the ultimate end in view.

These it seems to me are the essentials of successful co-operation the basis of which is faith. They could be elaborated indefinitely, but I doubt whether much would be added in the elaboration except as we should get into special problems, each of which will manifestly require its own treatment.

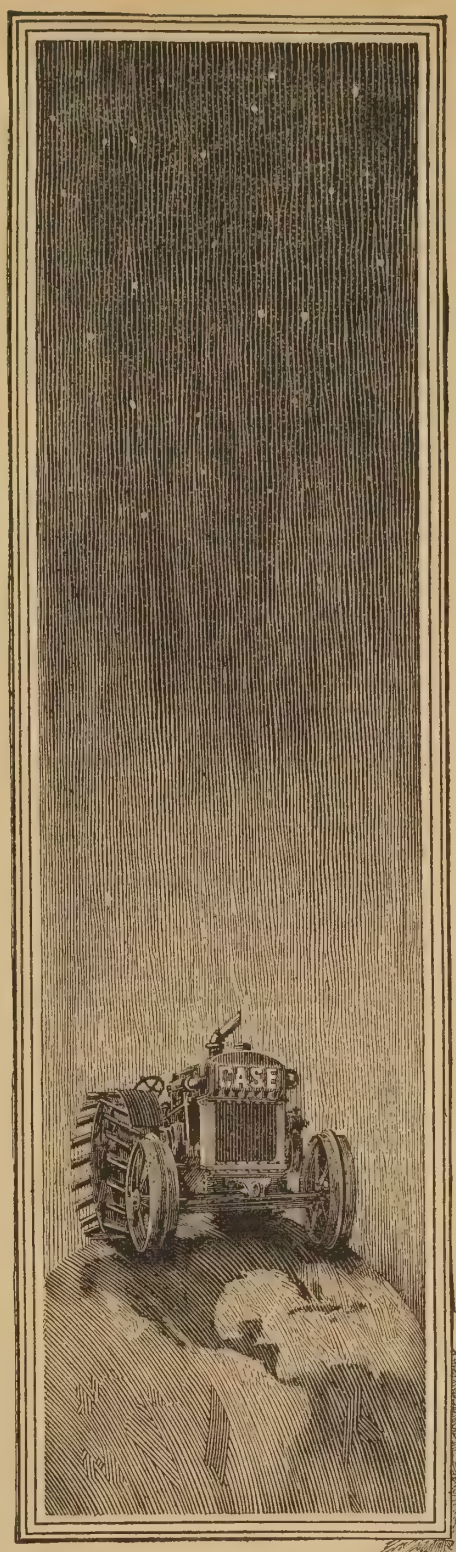
The Limits of Co-operation

The extent to which co-operation will be invoked for purposes of manufacture is manifestly limited. Its use for marketing is practically unlimited so far as we know, at least until the great central wholesale markets are reached.

Whether the farmer through his co-operative organization should even attempt to reach or take over the retail trade is of course a matter of great difference of opinion. The writer's judgment is wholly against the idea that agriculture should ever attempt to take over the entire business of distribution, but rather that it should stop with the enterprise of putting his goods into the world's markets to the best advantage possible where, after all, distribution actually begins.

We speak of the middle man as if the same man gathered the stuff and carried it to the ultimate consumer. Not so, one set of men gathers it together, and another deals with the distribution. It is the first that the farmer can doubtless largely take over and to the advantage of everybody.

The best educated people are those who are always learning, always absorbing knowledge from every possible source and at every opportunity. —O. S. MARSDEN.





Greetings!

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TO you, our legion of friends, old and new, we send our heartiest Yuletide greetings.

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In a spirit of warm friendliness and rejoicing, we wish you the age-old, "Merry Christmas".

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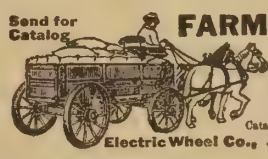


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New World Champion Milk Record Completed December 18

Washington Cow Beats Average of 100 lbs. of Milk a Day for a Year

EIGHTEEN tons and a half of milk—37,454.9 lbs.—over 100 lbs. per day for a year, a new world's record milk production! Segis Pietertje Prospect, Holstein cow owned by Carnation Stock Farms, finishing her year's work December 18, is by this remarkable performance milk champion of all breeds. It took her just 318 days of her 365 to outmilk the perennial lacteal fountain of California, Tilly Alcartra. In her full year she has a margin of over 4,000 lbs. Tilly's marvelous production of 33,424.8 lbs. completed two years ago was believed so great it would stand. What must now be thought of a milk flow of 37,454.9 lbs.?

Segis Pietertje Prospect freshened December 15, 1919, and was put on test three days later. She produced 686.4 lbs. milk in seven days, making 109.6 lbs. in 24 hours less than two weeks after calving. Her largest seven-day and single month's records were made in March, when she made 858.9 lbs. of milk in a week and 3,716 lbs. within the month. One hundred and twenty days after calving she gave 808.6 lbs. milk containing 26.54 lbs. fat. Making "thirty-pound butter records" was a simple matter with her, the only requirement being the presence of a tester—she furnished the necessary milk and fat. Six months after calving she made 743.1 lbs. of milk, 24.72 lbs. fat, in a week, her high milk flow for a day being 111 lbs.

In June the champion made 3,188.7 lbs. milk; in July, 3,121.4 lbs.; and in August, 2,959.9 lbs. When September was ended and 286 days of the test were finished, she had crossed the fifteen-ton mark and tallied a total of 30,698.3 lbs. milk, 958.28 lbs. fat. November 2nd she passed Tilly Alcartra's mark and became world champion with 33,499 lbs. milk, with 47 days to go. On the night of December 14, her total production was 37,134.9 lbs. milk, 1,147.92 lbs. fat. Her caretakers estimated her production by the night of December 18, when the year's test ended, to be 37,454.9 lbs. milk, 1,156.1 lbs. fat. The exact record, with a picture of this great cow, will be published in an early issue.

One of the editors of Hoard's Dairyman saw Segis Pietertje Prospect in November and reports that she shows no ill effects from the extraordinary work she has done. As the Carnation herd averages, she is not an extra large cow, is more white than black, of quiet disposition, and "looks the part" of a champion. She is a splendid individual, possessing such type and conformation as will carry her well up in any show yard competition. She is straight, strong, and showy, and an animal of quality. Her udder is well formed and of fine texture. She appeared to be in the prime of condition and gave less evidence of being "pushed" than did many of her stable mates. She is safe in calf and due about April 1st.

Throughout the period of the test the champion was fed and milked by Carl Gockerell.

Washington, D. C., Weekly News

[Special to Hoard's Dairyman]

WASHINGTON, DEC. 13—The Calder Bill pending in the Senate is attracting considerable attention. Although it is not being seriously pressed for passage at this time there seems to be a determined effort on the part of food and drug manufacturers and associations to insist on its enactment.

This bill provides very simply that goods packed and shipped in interstate commerce in packages need only conform to the federal laws in order to be sold in any state or territory. That is, state pure food, feed, fertilizer, or insecticide statutes, if in conflict with the federal statutes, will be illegal, and non-enforcible so far as they would apply to package goods in interstate commerce.

Two illustrations are given as to effects of this law, if passed. The New York state laws and the laws of many other dairy states provide that feeding stuffs, if sold in packages of any kind, must bear on the tag, or printed label, certain facts as to the material of which the feeds are made, and the contents in terms of protein, carbohydrates, and crude fiber. This law is a great protection to the purchasers of animal feeds, but this kind of labeling is not required by the federal pure food and drug laws, or any other federal statutes; hence the enactment of the Calder bill, it is feared, would make null and void the New York and other similar state laws as to all interstate shipments of feeding stuffs.

The other illustration is in regard to laws controlling the sale of oleomargarine. For example, in Pennsylvania colored oleo may not be sold at all. The Calder bill, if enacted into law, would wipe out this and all other similar state laws as to interstate shipments of oleo. This bill is Senate Bill 3011. Dairy and food commissioners of several states are protesting very strongly against it. It has the argument in its favor that the operation of the federal statutes would be a distinct advantage to many states which do not have adequate state statutes. The reverse would probably be true in those states where more advanced statutes have been passed than Congress has as yet enacted.

Notice has been served verbally on Dr. W. C. Fowler, health officer of the District of Columbia, that legal action is to be taken against him to invalidate his ruling which shuts out milk offered for sale in Washington City by the Merrill-Soule Co., produced on New York State dairy farms from non-tuberculin tested herds. At the time of the controversy last summer when the Maryland-Virginia Producers' Association was perfecting its reorganization, and there was trouble with the Washington dealers over the establishment of fall prices, one or more dealers here made arrangements to get milk from New York State and presented applications from 182 dairymen there for licenses to produce milk for sale in Washington. These New York dairymen were selling milk to the Merrill-Soule Co. of Syracuse, it was stated, and plans had been perfected whereby that company would send the milk here. Dr. Fowler refused the licenses on the ground that the New York herds were not accredited as tuberculosis free—as are all the herds supplying milk to this city. Just what form the action will take has not been disclosed.

The schedule of tariff hearings to be given by the Ways & Means Committee of the House of Representatives, preliminary to tariff revision in the special session of Congress to be called by President Harding soon after March 4, includes three days for the entire agricultural schedules, January 21, 22, and 23. Oils are included with chemicals and paints in the opening hearings on Jan. 6, 7, and 8. So far as learned the butter schedule will be considered on Jan. 21.

The storm over relief for agriculture which nearly swept Congress off its feet during the first week of the session is subsiding somewhat. The sober second thought that the farmers have taken their loss, seventy-five per cent of the crops are already in someone else's hands, the thing that relief was intended for has happened, and whatever relief was now brought about would function for the benefit —chiefly—of some one besides the real farmers, is gradually getting hold. In the Senate the Gronna Concurrent resolution for the revival of the War Finance Corporation seems likely to pass, but there is a strong wave of opposition to it, and a still stronger one in the House. The more conservative measures looking to the extension of credit through the Land Banks or the Reserve Banks are moving slowly. A proposal to put embargoes up against imports, particularly of wool, until a tariff can be enacted, is strongly supported and may pass, but even this has strong opposition from consumers and from manufacturers. The Packer bill is under debate, and the debate bids fair to continue until the supply bills make their appearance, after which all the available time will be put on these bills. In the House a bill was passed on Monday, Dec. 13, restricting all immigration for a period of a year, a compromise between the Union Labor crowd which demanded first four-year restriction, then two-year restriction, and the non-restrictionists. This bill is likely to have "hard sledding" in the Senate where a restrictive proposal based on certain percentages of present alien population seems to be the method which has majority support. Definite announcement is made that while hearings on tax and tariff proposals will be held, no legislation on these subjects will be attempted until the special session.

Farm Bureau Business Organization

Up to date the Rock County, Wisconsin, Farm Bureau has distributed seven carloads of New York apples. These were ordered directly from a farm organization in New York, and have been retailed for the Farm Bureau members of Rock County at $1.60 per bushel. We have 5 more carloads on the road, and expect to have them distributed in a very short time.

It is against the policy of the Rock County Farm Bureau to do very much business. We believe in the policy that a farm bureau should be an educational and fostering organization. At present we are organizing the Rock County Farm Products Company, which will do business for the members in Rock County. This Farm Products Company will handle pure seed, fertilizers, etc.

R. T. GLASSCO, County Agent.

Washington County, Oregon, Holstein Meeting

The Washington County, Oregon, Holstein Breeders' Association at its annual meeting December second elected Frank W. Connell, president; J. F. Peerenboom, vice-president; and O. T. McWhorter, secretary-treasurer. S. C. Inkley, Frank Connell, C. W. Spiering, and others urged closer cooperation of not only Holstein breeders in the county, but of all pure-bred live stock breeders for the purpose of advertising and for building up and creating further interest in pure-bred stock in this locality.

One of the important steps taken by the association was the appointing of a committee to arrange for the selection of a carload or more of the best Holsteins in the county to show at the Oregon State Fair and the Pacific International Live Stock Show in 1921.

Oregon. O. T. MCWHORTER.

Ayrshires Average $485

The first Ayrshire consignment sale ever held in the South was that at Sandhill Fair, North Carolina, recently, when an average of $485 was reached. Consignments were made by Ashbrook Farm and Wendover Farm, New Jersey, and Strathglass Farm, New York. The top priced animal of the sale was Wanderer Princess of South Farm, which went to Pinehurst Farms, North Carolina, for $1,700. This farm also purchased Otterkill Isabell at $1,150. H. G. Waring of North Carolina paid $500 for White Beauty's Myrtle. The heaviest purchaser at the sale was Pinehurst Farm.

CONTENTS

Success Depends Upon the Man - - 990
The Dairy Optimist - - - - - 990
Xmas and the Herd - - - - - 991
Christmas on the Dairy Farm - - - 992
The Best Dairy Breed - - - - 993
The Ayrshire—Type, Health, Persistent Production - - - - - - 994
The Brown Swiss—The Oldest Dairy Breed 995
The Guernsey—The Quality Cow - - 996
The Holstein—Heaviest Milk Producer - 997
The Jersey—Premier Butter Breed - - 998
Air Castles on the Farm - - - 999
Essentials of Successful Co-operation - - 1000
New World Champion Milk Record Completed Dec. 18 - - - - - - 1002
Washington, D. C. Weekly News - - 1002
National Dairy Association Annual Meeting - - - - - - - - 1003
First Aid in Time of Trouble - - - 1003
The Oxen Talk in Their Stables - - 1003
Quality and Consumption - - - - 1004
New Fertilizer Discovery - - - 1004
Holiday Reflections - - - - - 1004
Prices and the Dairy Situation - - - 1004
The Tuberculin Test - - - - - - 1005
Farmers Should Use More of Their Own Products - - - - - - - 1005
Fat in Buttermilk - - - - - - 1005
Crops for Peat Soil - - - - - 1005
Home Grown Dairy Rations - - - 1005
Cleaning Test Bottles - - - - 1005
Twin Calves - - - - - - - 1005
Dairymen's League Elects Officers - - 1006
Her Christmas Wreath - - - - 1008
Value of Pure-bred Sires - - - - 1009
Dairying Thirty Years Ago - - - 1010
Senate Passes Collective Bargaining Bill 1010
Last of California Educational Butter Scoring - - - - - - - 1010
Christmas at Cloverdale - - - - 1012
New York Butter Market - - - - 1015
Junior Letters - - - - - - - 1017
Imports of Dairy Products - - - 1019
Veterinary—Scours—Impotent Bull—Breeding Query—Sore Teats—Rash—Lice - - - - - - - 1020

Coming Events

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

Jan. 5—Iowa Holstein Breeders' Association annual meeting, Iowa State College, Ames.

Jan. 11—Wisconsin State Horticultural Society, Madison.

Jan. 11-12—Certified Milk Producers' Association of America meets at Ansonia Hotel, New York City. Sec.-Treas., Harry B. Winters, Albany, N. Y.

Jan. 11-13—Wisconsin Dairymen's Association, Madison, Paul C. Burchard, Secretary, Fort Atkinson.

Feb. 1-4—Manitoba Dairy Association will meet at Fort Garry Hotel, Winnipeg. Secretary, L. A. Gibson, Winnipeg.

Feb. 1-10—Mid-Winter Farmers' Course, Madison.

Feb. 1-10—Wisconsin Live Stock Breeders' Association, Madison. Geo. W. Davis, Secretary, Madison.

Feb. 4 & 5—State Live Stock Judging Tournament (roundup), Madison.

Feb. 16—18, 1921—Virginia Dairy Show and Annual Convention of the State Dairymen's Association held in Roanoke. Secretary, Frank A. Buchanan, Blacksburg, Va.

The Oxen Talk in Their Stables

LUMAN W. COLTON, ILLINOIS

'T WAS in the olden time, when cows were kept in the good old fashioned way. These cows were fastened in rigid stanchions, watered once a day from an icy tank, stood in a terrible draft whenever there was a high wind, had insufficient bedding that was seldom shaken up or changed, were fed marsh hay and dirty cornstalks, milked at irregular hours, and never curried.

On that Christmas Eve, as the old custom was, they were permitted to talk for an hour before midnight. The weather had been severe, their hardships worse than common, and not much was said during the first few moments of their short yearly tongue-license. Then, amid the commonplace remarks that were being exchanged, Tiny, one of the younger cows, broke out suddenly with: "What do you suppose I dreamed last night, sisters? It was so very wonderful that I must tell you of it, although it may make you feel bad."

"Do tell us," said several of the older cows. "Life is so dull here, that anything is welcome for a change," although they were surprised to hear such a quiet cow as Tiny speak up; she was only a two-year-old, and had scarcely said a thing when they talked the previous Christmas Eve.

"I saw," continued Tiny, when thus reassured, "myself in a wonderful barn, with whitewashed walls and ceilings. I stood on some kind of soft, springy stuff that felt good to my feet, and had lots of nice, dry, chaffed straw to lie down upon. My stanchion turned some way when I turned my head to either side, and gave way enough so that I could lick that sore spot on my side. I had a manger all to myself so I did not have to eat too fast in order to get all my own feed. And such a supper! I don't know the names of the things, but there was a nice forkful of what must have been silage, with a mixed ground feed on top that had something besides corn and oats in it. And when I had this all eaten up they gave me a nice lot of wonderful rich hay. I never tasted anything like it before. It had lots of leaves on it, and smelled so nice that I could have eaten it all night. And at my side was a dish full of water warm enough to drink comfortably, that I could reach whenever I wanted a drink. A kind man came along and gave me a good combing and brushing, until I felt like a new cow. And the barn was so warm that I didn't have to stand there and shiver. Believe me, I went to bed early, it felt so good to lie on that soft bed, and then when I woke up, here I was, back in this hole," and Tiny sniffed dejectedly at her uncongenial surroundings.

The other cows coughed a bit—a bad wind came up, and they were cold. "You have had a wonderful dream, Tiny," said one, "but it sounds like a fairy tale. If we had things like you described them, we would be in paradise, but I guess we never will have. The only time we ever have any fun is when we are out on pasture. If cows had a Santa Claus I'd wish that he take me to such a home. But let's hope he gives us an extra bundle of cornstalks apiece for our Christmas dinner." And as the hour passed, and their tongues were silenced for another year, each cow, before she lay down, paused a moment on her knees, and prayed that Tiny's dream might soon come true—if not for them—then for some other more fortunate sisters.

National Dairy Association Annual Meeting

The annual meeting of the National Dairy Association was held on Friday, December 3rd, at the Auditorium Hotel, Chicago. One hundred and twenty members were present in person or by proxy. The Board of Directors presented a review of the year's work with recommendations for the future, and the report of the treasurer showed a very healthy financial condition of the association.

The main subject of discussion was the building of a home for the National Dairy Industry at some central point in the country where all dairy interests would be brought together, and where shows and conventions could be held.

A committee was appointed to investigate the whole question of building, how to arrange for its construction and where to locate it. A full report will be made to the membership and to the public as soon as the committee has investigated the subject in its entirety.

The old board of directors was re-elected and a committee was appointed to develop new and important features in the show that will be of greater usefulness to the average dairyman. Another committee was appointed to bring about closer community of interest between all field forces working for dairy improvement, leading to a greater use of the annual show as a common terminal for purposes of comparing each year's progress in the dairy work of the whole country.

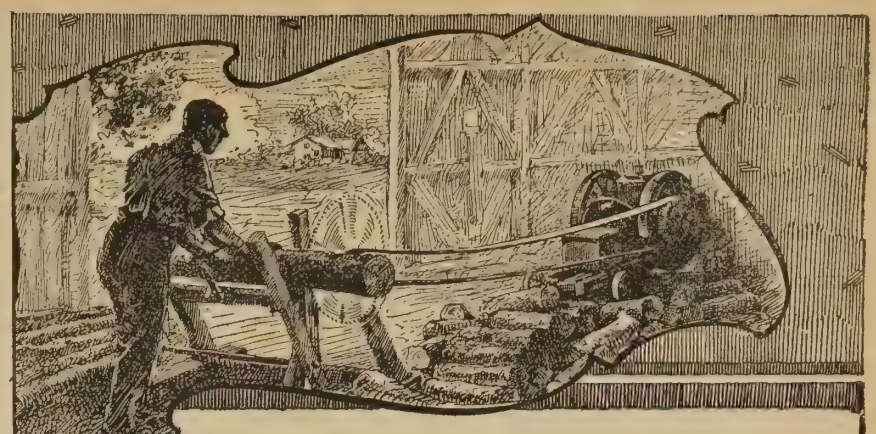
The directors' report showed a healthy increase in exhibits of all kinds and an increase in attendance at this year's show.

At the meeting of directors immediately following the annual meeting, the officers were all re-elected, as follows: H. E. Van Norman, president; Col. G. Watson French, vice-president; J. A. Walker, vice-president and treasurer; and W. E. Skinner, secretary.

First Aid in Time of Trouble

Animals get sick, and the first question is, "What can I do?" or "What is it?" To answer these questions and to give information concerning the more common live stock diseases the Wisconsin College of Agriculture has **just** issued a circular entitled, "First Aid to the Stockman". It is not technical and it is not intended to take the place of the veterinarian, but it does list some of the more common diseases, describes their symptoms, and outlines methods of prevention and treatment.

This circular will be sent free to residents of Wisconsin who apply for it. Residents of other states may secure copies by enclosing five cents with their application to the College of Agriculture, Madison, Wis.

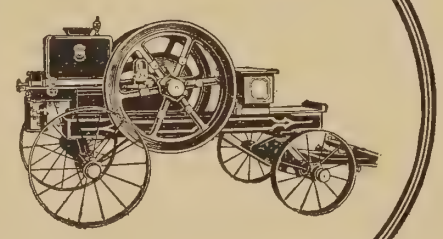


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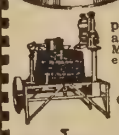
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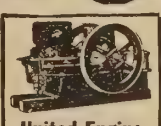
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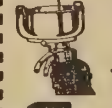
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EDITORIAL COMMENT



IN the plea of the United States Department of Agriculture for creameries and milk producers to put up an ice supply for next summer, this statement is made: Last year one creamery returned over $2,600 worth of milk and cream to its patrons and a milk plant received nearly 50,000 gallons of sour milk in one year. These are heavy losses which can well be attributed to carelessness or poor methods of handling milk and cream. It does not, however, tell the whole story nor measure all the losses. Whenever patrons are careless in the production of the raw material for the manufacturer of butter, cheese, or market milk, the quality of the product suffers and this leads to decreased consumption. Instead of building up a larger demand for dairy products, which is so desirable in this country, it causes an under-consumption.

There are thousands of dairymen in this country who, with little effort and care, can harvest a crop of ice—one of the real paying crops of the farm. Some dairymen have springs and arrange for cooling their milk with well water; this gives fair results. But in every instance where a farmer is so located that he can harvest a crop of ice it should be done, for it pays.

QUALITY AND CONSUMPTION

Our attention was recently called to a family buying a certain brand of butter, the quality of which was poor. Without any particular discussion it was decided that another brand should be purchased. The change was made and the result was that the consumption of butter in that family increased at least twenty-five per cent.

This incident points out clearly and forcibly that if the dairy interests wish the people to consume more dairy products and pay a price for them in keeping with their cost of production, they must produce a high quality of product. No amount of advertising and of pleading that dairy products are selling below the cost of production will cause the consumer to change his attitude or lead him to consume more unless they are of good quality. The man who milks the cows and prepares the milk and cream for market is the one who has the largest control over the quality of our dairy products.

NEW FERTILIZER DISCOVERY

We are sure our readers will be interested in learning of a new discovery which may revolutionize the fertilizer industry. The Weekly News Letter of the United States Department of Agriculture reports that the Bureau of Soils has discovered a process of extracting phosphoric acid from phosphate rock by heating mixtures of this mineral, sand, and coke to a smelting temperature in a fuel-fed furnace.

The old process of making phosphoric acid in phosphate rock available immediately as plant food was to mix an equal quantity of sulphuric acid with phosphate rock, the resulting product containing only one-half the percentage contained in the rock from which it was derived Through the heating process, it is possible to produce a commercial fertilizer which will contain 50% soluble phosphoric acid. Raw rock phosphate contains about 32%, and if this rock is treated wth sulphuric acid it will contain only 16% acid phosphate. When the acid phosphate is extracted by heating, ammonia gas is mixed with it and the result is a solid product known as ammonia phosphate.

At least, two large savings are made. In making phosphoric acid available by the use of sulphuric acid, a loss of two-thirds of the rock is sustained. This is an immense waste of phosphate eliminated by the new process. The second great economy is a saving in freight and this is no small item. The Bureau of Soils reports that this product is similar in properties to the ordinary 16% acid phosphate, is convenient to handle, and may be used by any intelligent farmer who has technical knowledge of reducing the quantity placed upon the soil to guard against direct contact with seed. It is to be hoped that in the near future this product will be manufactured on a large commercial scale, for it will be the means of furnishing phosphoric acid to the farmers at less cost.

HOLIDAY REFLECTIONS

The advent of Christmas and the holiday season should cause all of us to lay aside our material anxiety and consider how much our friends and families contribute to our happiness. The seeking of wealth, power, and distinction never has or never will bring enjoyment or contentment as will wholesome friends and family associations. The world is in a turmoil. It is full of discontent and sorrow. We have famine in the Far East; in the war stricken countries a struggle for peace and necessities of life; and in America an adjustment of economic conditions. Each section believes it has the most serious problems to solve and the hardest row to hoe.

In our own great land our troubles are largely of our own making, for our desires for gain, for luxuries, and for everything that humanity craves have led us beyond our earning powers and our credit has been extended to the limit. While all this has brought about a strained condition; has created a serious economic crisis; has caused strong men to wonder what the final outcome will be, yet we have within our reach an adequate supply of food and clothing and, above all, friends and our families. We should not be too much disturbed over the adjustment of material wealth when the fundamental things in life's happiness have not been destroyed. Greed and selfishness of men are at the bottom of most of our troubles. Our times have given opportunity for men to exercise their powers for selfish gain. We have all tried to get too much and now we are face to face with the adjuster, the accountant of all ages.

We must appeal to our best side at this Yuletide season and bring ourselves in an attitude of mind that our plight may be corrected without the sacrifice of homes or the dissolution of our friendships. The opportunity is ours for serving one another, of giving to those less fortunate than ourselves. Herein lies the opportunity of true happiness and a noble life. Let us pause for the moment, as the angel of good tidings hovers over our land, and recount our blessings and extend to our friends, neighbors, and all mankind a Merry Christmas and a Happy New Year.

PRICES AND THE DAIRY SITUATION

It is well to consider now and then the factors which influence the prices of dairy products and dairy cattle. For the past five or more years the milk producers of this country have formed organizations for the purpose of securing better prices for milk. The work of these associations has been of material benefit to their members and they filled a large and important place in the development of our dairy industry. The undue emphasis put upon prices has, we fear, led too many dairymen to lose sight of other important factors.

The coming of the great world war brought about unstable conditions and disrupted business relationships. The prices of many commodities advanced unusually fast while others remained almost stationary. Dairy products did not advance in price as rapidly as did the cost of producing them. This caused discontent and led producers to protest and to organize in order to secure proper remuneration for their products. This condition led many farmers to consider that the price for which their products sold was the largest and most important factor in giving them proper returns. While the prices for dairy products must never be lost sight of, yet when men place their whole attention upon securing better prices, they ignore factors far more important in controlling prices than any effort that can be put forth to get proper returns for dairy products. When dairy products become too high in price there is a decreased consumption and so-called substitutes find a much larger market.

In the years 1913, 1914, 1915, and 1916 oleomargarine replaced whole milk to the extent of about two and one-half billion pounds and in 1919 to the extent of six billion pounds. It is not to the advantage of the dairy industry to have conditions that lead consumers to use so-called substitutes, but this is the outcome whenever prices of dairy products get beyond what they consider more than they can afford to pay. One of the deep regrets of the present dairy situation is that the farmers themselves reasoned, as did many other consumers, that dairy products were too high in price and so used oleomargarine. We do not believe the prices for milk, butter, and cheese were more than they should have been to make adequate returns to the producers, considering cost of production, and character of cows kept, but nevertheless the prices became so high that so-called butter substitutes and milk substitutes found a larger demand. Producers should know these facts for they are important, especially to those engaged in carrying on the work of milk producers' associations.

There is no real surplus of milk, butter, and cheese. On October 4th it was reported that we had on hand 250,000,000 lbs. of condensed milk, about one-twentieth of our annual production of condensed milk or less than one-fourth of one per cent of our total milk production. This small surplus has been a tremendous factor in depressing the prices of market milk and we believe too much emphasis has been put upon it. It has been calculated by Professor K. L. Hatch of the Wisconsin College of Agriculture that if every man, woman, and child in the United States would double their consumption of milk this surplus would be absorbed in a single day. It has been pointed out by scientists, not directly interested in the dairy industry, that the population of the United States does not consume one-half as many dairy products as it should. In surveys that have been made by dairy councils, it has been found that the children of the farm are consuming less milk than the children of the cities. It is our opinion that if the children of the farm would drink more milk and the farmers quit purchasing oleomargarine there would immediately be created a demand beyond the present potential supply of milk. Here, then, the farmers have within their own power the opportunity of doing away with one of the most important factors in depressing the prices of their dairy products, namely, so-called surplus.

In considering the factors influencing prices, we must not overlook the low producing cow which so many dairymen are satisfied to keep. The poor cow is not only unprofitable to her owner, but the milk that she produces tends to create a so-called surplus and it is a material force in depressing the prices of all dairy products. The man who keeps unprofitable cows is doing more to depress the prices of dairy products than all the other forces combined. There is only one suggestion that can be made to such a man and that is: cull out the unprofitable cows. It should be stated that with the present prices of feed and of milk and its products the dairy farmer can make more money this winter feeding good cows than he did last. It should also be borne in mind that all industries are suffering and are being forced to adjust their business to a different basis because of the decline in the prices of their commodities.

The effort to secure high prices for dairy products has caused the dairy farmer to neglect the quality of his product. When butter, cheese, and milk are of good quality the consumers naturally eat more and when poor, less. The dairy farmer

should also show the consuming public that he believes in his own industry and this means that he must stop consuming so-called substitutes and use more milk and milk products. All of these factors the dairy farmer can control. It is only good business to pay larger attention to them and not go price mad. In other words, the dairy farmer should consume more of his own product, eliminate the poor cows and breed better ones, produce on the average a higher quality of milk and cream, and give the closest attention to raising crops suitable for making good rations.

Further, he should not hesitate to contribute his share towards advertising the food value of milk and its products. Consumers will not pay what dairy products are worth until they appreciate their importance and food value.

The Tuberculin Test

HOARD'S DAIRYMAN:—I have been reading with much interest the reports of your herd with regard to the tuberculin test. My herd seems to be in the same position as my foundation cows were all healthy nine years ago, and I have never allowed a cow from outside on the farm during this time. Two years ago I decided to place my herd under federal and state supervision and had my first test a year ago. This test revealed one reactor, a fresh heifer 2 years old, and upon post mortem examination they found two calcified lesions about the size of a pea, one occurring in one of the lymphatic glands and the other on the edge and under the flesh of the liver. At this test we had six go suspicious, which were tested in 120 days with a double dose and all were clean. These tests were all subcutaneous.

This fall I had another test, with the intradermal and ophthalmic as a check. Do you like this test, and how do you read it? Would you call a slight lacramation in the eye suspicious or would you call it a reactor? Then again with the swellings; we had a number that we could not agree on, several as large as a kernel of wheat and two a size larger, all with typical incrustations. We also had some cows with no swellings.

Now I feel this way about it, all swellings are reactors in the intradermal if they are hard, typical swellings, no matter what their size, but I feel that the lacramation is not sufficient to condemn an animal.

Do you think there is any danger of giving the cows a tolerance by using so much tuberculin?

Michigan. E. C. R.

We believe that this method of procedure in the use of the three tests is excellent. The authorities agree that this combination of tests is more searching and will eliminate more tubercular animals from the herd than any one given test.

The view regarding the interpretation of the intradermic test seems to be in line with that held by authorities on the interpretation of the test—that is, that any swelling the size of a pea or larger should be considered a reaction. As to the interpretation of the ophthalmic test in herds in which a large percentage of reactors are revealed a profuse and continuous lachrymation should be regarded as very suspicious. In fact it might serve the herd owners' interest best by considering such an animal a reactor. However, in a herd with reliable "good history" we would not consider a lachrymation as suspicious unless the animal was suspicious to one of the other tests in combination, then we would consider her a reactor.

As to producing a tolerance in the cattle by the administration of the amount of the tuberculin used in applying one combination test, we do not think that this would obtain if the animals were not tested more often than every six months. Of course, we are aware that we must take cognizance of the question of tolerance in dealing with tuberculin in our herds and we are also aware that reactors may not react on a subcutaneous test sixty or ninety days or even six months afterwards and still show visible lesions of tuberculosis on post mortem, but as to whether this phenomena is due to tolerance or some other agency we do not know.

Farmers Should Use More of Their Own Products

HOARD'S DAIRYMAN:—All over the country we hear the cry that there is an overproduction of milk and that buyers are refusing to buy at any price. If this is true, and it looks as though it is, what is the reason?

We have tried to produce all we could but we have done it thoughtlessly; we have put it on the market without paying any attention to marketing and advertising. We have allowed our dairy products to find their own market while the so-called substitutes have been advertised everywhere.

But, who are using these substitutes? Is it just our city friends? No! Farmers and dairymen are supporting an industry that is undermining their own. Think of it, a farmer, milking cows twice a day, year in and year out, going to meetings in the attempt to get more for his products, yet he does not eat his own best product! Any man that is interested in dairy cattle and uses a substitute is getting too much for his milk if it is only a dollar per hundred. He is a detriment to the dairy business and his fellow dairymen should shame him when they see him buying the substitutes.

If he were only talked to, the average farmer would take the penny away from his eye so he would see for himself that there is a dollar in sight. Every cow milker should get acquainted with his national and state dairy council organizations that are trying to advertise the dairy products and get people to use more of them. He should donate a certain per cent of his sales to these organizations.

The merchants of Darien say that the sales of oleo have been cut half since the cow testing association started an "Eat More Dairy Products" campaign, but they say that one-third of the oleo they sell still goes to farmers. They say they get 2 cents for selling butter and 5 to 7 cents for selling oleo, but even at that they would be willing to stop selling it for they realize how dependent they are on the prosperity of the dairy farmer. They will stop sales when the farmers don't demand the substitute. If we will all put our heads together, instead of an oversupply of milk we will be wondering where we can get milk enough to go around.

Now is the time for farmers to cut the cost of production by culling the boarder cows and feeding the good ones better, raising the good calves and raising them better and knowing how to feed right for economical production.

Wisconsin. GEO. L. MOSS.

Fat in Buttermilk

What is the standard per cent of fat that the buttermilk must have? I find sometimes in my buttermilk as much as two per cent.

Lima, Peru. H. M.

In a properly operated creamery where special care is taken in churning, the buttermilk will seldom exceed 0.2% in butterfat and it frequently drops below 0.1%. In plants which ignore the importance of the exhaustiveness of churning and which do not systematically check it up by testing the buttermilk, it is not uncommon to find the test amounting to from 0.5% to 1% or more.

As it is difficult to correctly determine the per cent of fat in buttermilk by the ordinary Babcock test, the results of the test frequently do not show all the fat present in the buttermilk. In testing buttermilk it is well to use the skimmilk test bottle having the specially constructed double neck. It is especially necessary to see that buttermilk is stirred thoroughly before sampling, as the curd settles to the bottom very rapidly and it is the curd that holds the bulk of the fat contained in the buttermilk.

Crops for Peat Soil

I have 80 acres of peat land. Kindly inform me what crop can be grown on peat soil.

Minneapolis, Minn. A. K.

Peat land varies so much in composition that it is rather difficult to state just what crops may be best adapted to it. In some cases it is very difficult to bring under cultivation and, in others, it is susceptible to drainage and proper fertilization so that it will produce wonderful crops.

Peat lands that are shallow, well decomposed, and underlaid by clay or silty clay, are the most desirable types to reclaim. Those that are coarse and deep and underlaid by coarse sand are the least desirable. Where there is extensive moisture, the land must be drained and if there is a considerable growth of grass and brush this must be removed. The soil is quite likely to be deficient in potash and, if so, needs an application of this in order to produce good corn. There is also the possibility that phosphorus may be needed for the best results.

Almost any crops are suitable to these types of land but they have been most generally considered desirable for trucking purposes or for the growth of other intensive crops. However, corn on a peat soil that is properly fertilized makes most excellent growth and is quite superior to the usual up-land soil.

Home Grown Dairy Rations

HOARD'S DAIRYMAN:—The average dairy farmer tries to raise as many of his necessary feeds at home as possible. In the great dairy regions of this country he has most easily available the following: clover or alfalfa hay, corn silage, and the cereal grains.

In order to determine whether these materials are adequate to feed the high producing dairy cow, Professors Hart and Humphrey of the Wisconsin College of Agriculture have conducted two sets of experiments, the complete data of which has just been published in the Journal of Biological Chemistry.

The first experiment dealt with a mixture of clover hay, corn silage, and the cereal grains. It was found that no combination of these materials would keep up the milk flow of the heavy milking cow, and that she produced her milk at a considerable loss of body protein tissues. The moderate milking cow, that gave only 20 to 25 lbs. of milk a day, by being given a large feed allowance, was able to get along very nicely.

The second experiment was conducted in the same manner, but alfalfa was substituted for red clover. The grains used were corn, barley, oats, or a mixture of the three. The alfalfa used was not especially selected, but was a commercial product grown in the West. The alfalfa hay was cut in a feed cutter, and the grains were ground. The animals were fed all they would consume.

A nutritive ratio of 1:7:9 was made possible with the materials used. There seemed to be no difference in the efficiency of the ration whether the grains used were corn, oats, barley, or a mixture of the three.

Contrary to the results of the red clover experiment, the cows given alfalfa hay maintained their milk flow at a maximum point, and did not draw upon the nitrogen tissues of the body.

For a period of four months, therefore—the length of these experiments—it seems certain that a home grown ration of alfalfa hay, corn silage, and the common farm cereals will maintain a high flow of milk without injury to the cow.

The grain was fed, on an average, in the proportion of one pound to every three pounds of milk, a practical rule much in force.

Wisconsin. W. A. FREEHOF.

Cleaning Test Bottles

HOARD'S DAIRYMAN:—We have read with interest the articles you have recently published on the above subject. Not until the middle of the fourth year of testing work did we have a sign of the brown coating on our bottles—though our system of cleaning them was identically the same. It puzzled us to know the underlying cause. We finally found an expert who told us it was caused by an excess of iron contained in some batches of sulphuric acid. We tried to remove it—first with muriatic acid, concentrated lye, etc., none of which would budge it. The B. B. shot remedy will remove it, but if one cares to save time take equal parts of concentrated sulphuric acid and potassium bi-chromate. Fifteen bottles can be cleaned as quickly as one can be cleaned with shot. We prefer to empty the bottles on some undesirable vegetation that is found in or near most all yards—except in winter, it is thrown on an old trash pile or the snow. A well made quart cup with a lip is used for mixing the samples—also filling and washing the bottles in place of a tin can used by some.

Wisconsin. F. L.

Twin Calves

In the case of twin calves is a bull born twin with a heifer sterile, or is he as sure a breeder as bulls of a single birth?

Modesto, Calif. G. M.

It is very unusual that a heifer twinned with a bull will breed. Twins, where both are female, will breed and twin bulls will breed; also, a male twinned with a heifer calf will breed. It is so unusual that a heifer twinned with a bull will breed that we consider it unwise to raise such an animal for the small chance that she will reproduce.



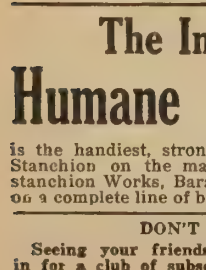
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Dairymen's League Elects Officers

H. H. LYON, NEW YORK

THE annual stockholders' meeting of the Dairymen's League was held this year in Utica, N. Y. It was explained that this was a special informal meeting, since the regular official meeting must be held at the office in Jersey City, N. J. At the hour of opening there was a crowded house, every seat appeared to be occupied in the very large armory used for the meeting. It seems that three per cent of the membership must be represented to constitute a legal meeting. It was found that far in excess of this number were regularly represented.

President Cooper, in his address, noted the unsettled economic conditions of the country but he believes that we are coming to a better condition for agriculture. He mentioned that the Dairymen's League appears to be the largest and strongest dairy organization in the country, and that its action is being closely watched by those in other organizations. He reviewed the difficulties that have been encountered practically every month since the first of April in trying to negotiate sales. Then he came to the point where the serious difficulties of October first commenced when some twenty-five per cent of our members were deprived of a market. The remarkable stand made by those left out was strongly complimented and this compliment received the most hearty applause. He went further and urged that those few who have been compelled to surrender and sell independently should not be considered traitorous. They are temporarily surrendered to the enemy but they will soon be fighting with us again.

Manufacturers of dairy products have been obliged to sell products at a loss. The League plants have also sold at some loss where they have been obliged to manufacture. The average loss or return below League prices has amounted to practically fifty cents a hundred for the milk so manufactured. Just as soon as we can get the pooling plan in operation it will be possible to avoid such losses. It is admitted that markets are now demoralized. The time is ripe for us to strengthen our organization and give it power to help clear up the situation. Advertising has been neglected because there were no funds with which to pay the bills. Give us the pooling project in working order and we can draw for funds in proportion to the service they are to receive. Out of the present situation there will dawn a new day for the American farmer.

Secretary Manning announced that there are 1,120 branches now operating, 89,496 members now on the books, and that these men own 946,651 cows. There are doubtless some who have dropped out of business but no one knows how many. It is estimated that this may be ten to fifteen per cent. The price of milk for 1920 has averaged about $3.28 per hundred, or forty cents under the cost of production as estimated by the Warren formula. The price, however, is much in advance of that obtained in unorganized territory. The use of milk in the city has been increased by about nine thousand cans. In relation to the pooling, it is found that dealers' propaganda has had some influence with business men, banks, etc., and there has been influence from such sometimes detrimental to the success of pooling.

When it came to the treasurer's report it was found that over $408,100 has been expended, or more than $11,000 in excess of receipts. There are certain advertising contracts that will reduce or wipe out this difference. There is a balance on hand November 30th of $162,756.81.

Coming to the announcement of the election of delegates from the various districts much interest manifests itself. It was expected that there would be conflicting interests and reports. Some three or four districts delayed but not long.

Director N. F. Webb of Cortland spoke of the G. L. F. Exchange. Seven hundred thousand dollars of the million wanted as capital has been secured and more is coming. Already a million and a quarter pounds of timothy is ordered. At the feed end, 300 cars of feed has been sold. A feed man of twenty years' experience in a big wholesale business is in charge. Dairymen ought to support this agency for the sake of retaining it in efficiency as well as to save themselves on the costs of feeds purchased.

Two addresses at the convention stand out prominently. One was by vice-president J. D. Miller and the other by W. J. Kittle of Chicago. Mr. Miller is a gray-haired gentleman, somewhat under size, speaks deliberately but with force. He could be heard to the furtherest end of the hall, and he is called the "youngest man" of them all. He carried the convention almost to a man, receiving the applause even of those who do not fully approve of the form of pooling plan. His plea was for the acceptance of the contract as it now stands, and he proved his point if any speaker does that. It was freely predicted that pooling will now come through with a rush. Delegates were enthused.

Vice-president Miller went over the whole situation as though he were summing up a case before a jury. Indeed he may have been doing just that, and his jury was composed of two thousand farmers. Of McCann, he said here had been employed a man with a trenchant pen with long years of experience in "misunderstanding facts". Soon he came to the pooling contract. He did not deny that it has "teeth" in it. It must be strong to protect the faithful against the unreliable and the vacillating. Article 10 is often the stumbling block. Mr. Miller could not see how ten cents can be called for, but in some emergency there may be in some month even more than that needed. It would be unwise to limit it for then the enemy would know just where to strike and how to proceed in order to embarrass the most. Directors have been elected today, men known by the men who selected them in each district, and in whom "you have confidence". "Now don't put them in a straight-jacket". "This cause is worth fighting for and worth praying for." "It means the future of the farm industry in the United States."

The resolutions committee did a big stroke of business, and every one of the resolutions offered had something alive in it. They favored a tariff on dairy products to cover differences in labor. They approved the support of the G. L. F. Exchange. They wanted an advertising campaign for milk and dairy products. More stringent laws are needed on oleo and the substitutes for milk. Uniform inspection is desired and that by the state health department. They would

bond all buyers of milk for the protection of the dairyman. The pooling contract was endorsed and a half dozen reasons for it strongly and concisely stated. No change is wanted in article ten. Most of all, the convention accepted all this without a dissenting voice. Dissenters were there but in such small numbers that to protest would have been unwise. There was enough of the uncertain all through the day to cause intense interest, but not a thing appeared to mar the smoothness of the convention.

Eighteen of the 24 members of board of directors were re-elected. This action as well as the other business transacted will have to be confirmed by the legal meeting in Jersey City on December 14. After this formality is completed the board will proceed to organize and elect officers. The directors for the ensuing year are: Harry Culver, Amenia; John S. Petteys. Greenwich; Harry Bull, Campbell Hall; Chester Young, Napanoch; B. M. Kilpatric, Roxbury, J. D. Beardsly, New Berlin; R. D. Cooper, Little Falls; Kenneth Fee, Mooers; A. F. Spooner, Richville; L. H. Putnam, Black River; F. H. Sexauer, Auburn; Bradley Fuller, Utica; D. F. Putnam, Cazenovia; H. J. Kershaw, Sherburne; N. F. Webb, Cortland; Paul Smith, Newark Valley; W. U. Rixford, Wellsville; W. G. Dodds, Canandaigua; Geo. S. Pickens, Cattaraugus; J. D. Miller, Susquehanna, Pa.; J. D. Campbell, Wellsboro, Pa.; Geo. W. Slocum, Milton, Pa.; and L. M. Hardin, Sussex, N. J. Messrs. Young, Fee, Fuller, Putnam, Dodds, and Milks are the new members of the board, the others being re-elected.

The Ayrshire—Type, Health, Persistent Production

(Continued from page 994)

able if it were more highly colored. The milk is well suited to cheese making for which it is much used in Scotland. In Canada, the breed is very popular in cheese districts. It is claimed that Ayrshire milk is especially valuable for infant feeding. It is noteworthy also that a large number of certified milk plants use the Ayrshire.

In quantity of milk production, the Ayrshire has not excelled the Holstein, effort being made to secure a liberal flow of average test milk. In total fat produced, the Ayrshire averages about the same as the other breeds. While some creditable records have been made, the Ayrshire has not been a leader in phenomenal productions. There is no doubt but that the cow has the ability—if she is put under the conditions which have surrounded the record makers in other breeds.

Garclaugh May Mischief, owned by Penshurst Farm, holds the breed's highest milk record with a production of 25,329 lbs. milk, 894.91 lbs. fat. The largest fat record is that of 955.56 lbs. fat in 22,596 lbs. milk, made by Lily of Willowmoor. The ten leading records in the mature class average 21,741 lbs. milk, 851.69 lbs. fat. The production of the average cow on test is indicated in figures from 118 records completed late in 1920. These average 10,779 lbs. milk, 432.01 lbs. fat. Those on mature cows average 11,897 lbs. milk, 472.72 lbs. fat. In the Roll of Honor division, the 300-day records completed average 9,964 lbs. milk, 404.92 lbs. fat.

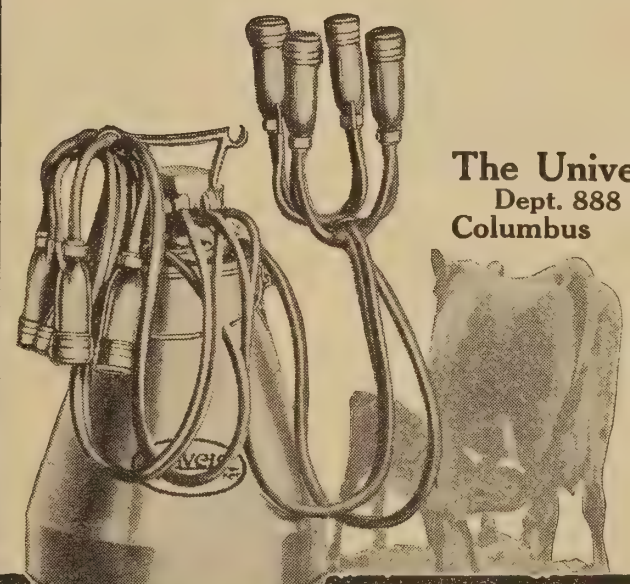
The office of the Ayrshire Breeders' Association is at Brandon, Vermont. The secretary is J. G. Watson.

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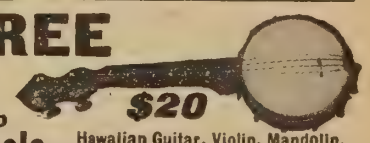
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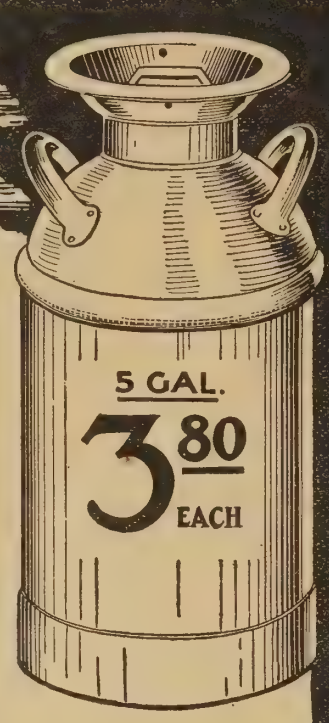


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The Climax can shown herewith is a splendid can for wagon use, for delivering milk and cream to the creamery, etc.

SIZE	WEIGHT	PRICE
5 gal.	11 lbs.	$3.80
8 gal.	15 lbs.	$4.60
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"Dandelion Butter Color" Is Big Prize Winner

Be sure and use Dandelion Brand Butter Color and give your butter that June golden shade which brings top prices —pleasing the eye and tempting the palate.

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In many of the State Buttermakers' Shows, first awards were won by users of old reliable "Dandelion Brand." You can't miss by giving a trial to the butter color which helps 90% of the successful buttermakers of America.

Never gets rancid. Doesn't affect flavor.
Doesn't color the buttermilk. Leaves no sediment.
Colors more butter to the gallon.

Dandelion Brand Butter Color is purely vegetable and fully meets requirements of all Food laws—State and National. Ask your jobber for prices.

WELLS & RICHARDSON CO., Inc. BURLINGTON, VERMONT

Her Christmas Wreath



THE cups are won, the ribbons here
To prove she did her clever part.
And, if I hold her portrait dear
It proves I have a loyal heart.
Dumb animal, you say, and smile,
Tho' I have known some humans, who
Gave less in service, less in all;
The rugged virtues, large and small
Were far less lovable and true.

I hang a wreath with loving care
Around the picture of "Brown Bess",
And, as Kris Kringle scents the air,
My thoughts are most of her, I guess.
A noble friend, devoted, true,
Blue ribbon winner of them all,
I voice her charms, her pedigree,
The gifts of prizes brought to me,
Queen of a humble dairy stall.

The cider sparkles in the glass,
The tree is glimmering with light.
I see the joyous children pass,
And all the universe is bright.
But there's a wreath for one who brought
Part of this Christmas happiness.
A tribute paid — a thought for her
That makes the sluggard pulses stir —
My thoughts are most of her, I guess!

—W. LIVINGSTON LARNED.

Christmas on the Dairy Farm

(Continued from page 992)

abetting the children of our dairy farms in observing Christmas to the limit, for such good times will keep them on the farm just so much longer, and, in spite of our dairy troubles which have a way of eternally bobbing up, the cow is going to remain on her job for a while longer and produce the liquid which assures new sleds and skates and dolls and toys on Christmas morning.

And when we get too troubled or discouraged, we can think that the gentle animal with which we earn our living was present two thousand years ago at the most wonderful happening of the age, and today she bids fair to keep her place in the hearts of all men two thousand years hence—because there has never been a substitute, and never will be, invented for her.

So while the children are hiding mysterious bundles and stringing the corn and winding the wreathes and peering hopefully up first one chimney and then another in an agony of fear that they may hang their stockings at the wrong one, the dairyman and his wife, too, are pausing a moment in their busy whirl to keep faith with Father Christmas. And if they send a grateful thought out to the warm barns where the herd stands, who can blame them, for, although it is not written, I imagine that Joseph and Mary depended also on those gentle kine who kept them silent company that Christmas night long, long ago.

Air Castles on the Farm

(Continued from page 999)

This calf club is another of our air castles. It came about in this way:

As we worked it first with our pure-breds, we missed being in a dairy community and more particularly a Guernsey community. We dreamed of the advantages to be gained by being part of a center famed for its Guernseys. We lived in Boone County. How could old Boone be made a Guernsey center? Could such a thing be possible? Outside of a few neighbors who were convinced of the value of the Guernsey by frequent contact with our herd there was no burning interest in them. There was not another Guernsey in the county nor in adjoining counties to my knowledge. You know it is said you cannot teach an old dog new tricks. Then how could Boone County be a Guernsey center when the men in it fed steers or at best permitted the women to milk a few Shorthorns or Jerseys to obtain pin money.

"Begin on the child," came the answer and then we remembered the calf club idea. Boys' and girls' clubs had worked out successfully in other lines, why not in this? So we called C. R. George, the dairy extension leader, from Purdue and with him went over the possibilities; conferred with Chas. L. Hill as to obtaining calves and went to Jas. Staley, president of the Farmers' State Bank of Lebanon, who then promised to finance the club and is still cheerfully boosting for it. This project was started about three years ago. Now there are at least 250 pure-bred Guernseys in our county inoculating some 60 families to their value, besides about thirty pure-breds that have been put out in clubs in adjoining counties. It takes time to organize and encourage a calf club and many discouragements come and exacting situations have to be met.

In our experience in Boone County it has taken hard work and the pulling together of the club youngsters and their parents to make a go of the thing. When one member of a family is away doing work for the club it adds to the work of the ones at home and so we all take a just pride in our achievement. These minor air castles that have so well succeeded, namely, the proving of the value of Guernsey products and the demonstration of the value of the Guernsey herself, have helped us on the road to the land of our dreams. Is it any wonder we are loyal dairymen and that we love our gentle, unpretentious Guernsey friends?

Value of Pure-bred Sires

HOARD'S DAIRYMAN:—The year's work, recently completed, of the Lake County (Illinois) cow testing association No. 5 has shown some interesting results in regard to the comparative value of pure-bred and grade sires. Pure-bred bulls have been used in six of the association herds for a period of five years or longer. Ten of the herds have been using grade sires up until the last year. These ten herds, however, carry a few pure-bred cows which naturally increase somewhat the figures which are given below. The average milk and fat production, together with the average profit over cost of feed from each animal in the two groups of herds have been as follows:

Pure-bred sires: milk, 7,772 lbs.; fat, 272.89 lbs.; profit, $94.99. Grade sires: milk, 6,167 lbs.; fat, 239.93 lbs.; profit, $79.12.

These figures show a gain for pure-bred sires over grade sires of: Milk, 1,605 lbs.; fat, 32.96 lbs.; and profit, $15.87.

Counting 20 cows to a herd this would indicate a total profit over cost of feed of $317.40 a year. Figuring the cost of a pure-bred sire at $200 the profit amounts to 158.7 per cent. One would look a long way to find the most gilt edge of securities capable of making a return that would approach this figure.

Illinois. ORIN CROOKER.

Birds as friends of agriculture are entitled to consideration from the farmers. When the snows come the birds find it difficult to make a living. Crumbs and suet placed outdoors may save bird lives.

DODGE BROTHERS
BUSINESS CAR

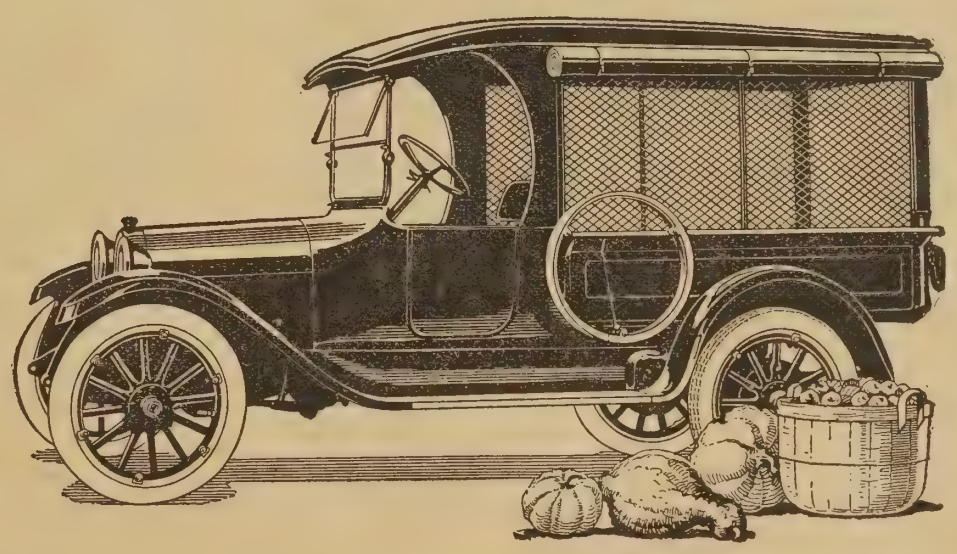
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Section of Natco Silo wall showing still air spaces and steel reinforcing

Keeping Silage

THE perfect silo must be absolutely air-tight, since air causes silage to mold and rot. The glazed tile walls and tight-fitting cypress doors of Natco Silos seal the silage like fruit in glass jars. It comes out sweet and succulent to the last forkful.

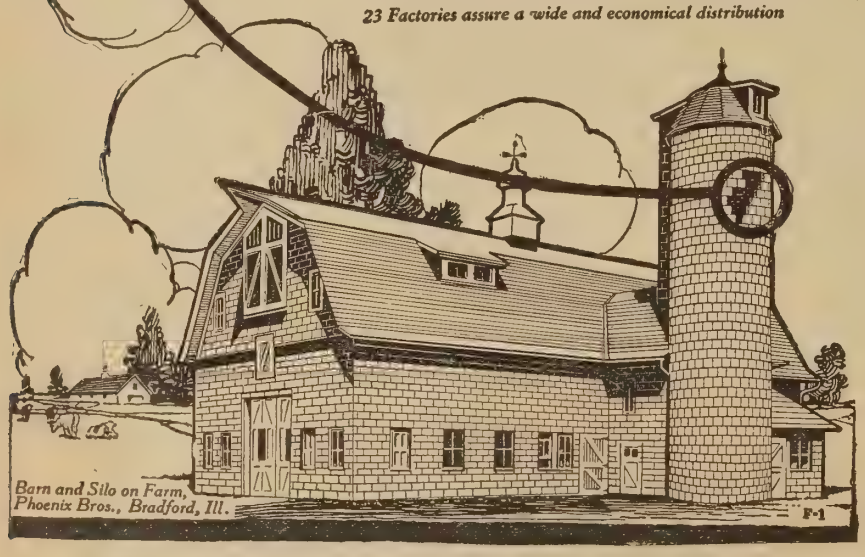
Natco Silos

are strongly reinforced with high grade steel bands, doubled in the bottom courses where the pressure is greatest. The double-shell tile also increases the wall strength and provides for secure mortar joints. The still air spaces conserve the natural heat of the silage—resist frost. Heavy galvanizing protects all exposed ironwork.

Ask your building supply dealer for prices on Natco Silos. Write for FREE book, "Natco on the Farm."

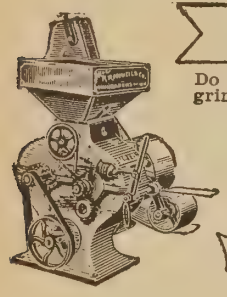
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Weyman-Bruton Company, 1107 Broadway, New York City

The Jersey—Premier Butter Breed

(Continued from page 998)

made in her first four lactation periods 3,596.85 lbs. fat. This exceeds Sophie 19th of Hood Farm's first four records by 843 lbs., and the first four records of the best persistency record of other breeds by 577 lbs. Plain Mary, the present champion of the breed, produced 15,255.9 lbs. milk, 1,040.07 lbs. fat, in a year.

The Jersey cow has given a good account of herself in production tests. There are now completed 15,000 yearly records and 7,200 cows are on test. In the largest public breed test, that at the St. Louis Exposition in 1904, twenty-five American bred Jerseys represented the breed and won the test. The winning cow was a Jersey. Thirteen of the leading fifteen cows in the test were Jerseys, as were nineteen of the first twenty-five. The average of all Register of Merit records completed is around 7,800 lbs. of milk containing about 420 lbs. fat.

The Jersey's Future

The dairy farmer's preference for the type of the American bred Jersey may not prove her superior to the Island cow. That is not necessary. The fact is the American farmer wants size in his cow. He has indicated definitely enough that he will not accept the small typed cow from the Island. The Jersey's future here depends on the willingness to place increased emphasis on production. Perhaps the breed may profit from the lesson of Mohammed and betake itself to the mountain. If the farmer can have the type he desires, the cow will do the rest and the breed will more nearly reach the end sought in the Club's slogan to make the Jersey "Everybody's cow everywhere."

The office of the American Jersey Cattle Club is at 324 West 23rd St., New York City. R. M. Gow is secretary.

Dairying Thirty Years Ago

Taken from the Issue of Hoard's Dairyman of December 26, 1890

Will any sort of legislation keep unhoused agricultural machinery from going to decay?

Oleomargarine Seizures

Pittsburg, Pa., Dec. 11—Collector Warmcastle today seized $10,000 worth of oleomargarine in the wholesale stores of the Western Butter Company and the Keystone Butter Company. This is but the first of a wholesale seizure, as the companies are accused of scratching the stamps from the oleo kegs and selling to retailers, who dispose of the "butter".

The retailers will also be proceeded against. They are in a peculiar position. If they do not buy a United States stamp, both the government and state will be after them, and if they do, the state will sue, as a state license prohibits the selling entirely. A score of prominent firms are involved.

Good judgment of foods and the laws that govern them is worth a fortune, especially to a dairy farmer. The cow is a very deep and profound fact in the sum of his existence. It is a question every hour in the day with him whether he is measuring that cow by the standards of good or bad judgment. It is not talent but correct judgment that helps the dairy farmer along. To have sound judgment he must have correct knowledge of the cow and the treatment that is due her if profit is expected from her. One thing more is necessary. He must be an energetic man. If he is lazy or indifferent in his desire for knowledge—lazy in his mental digestion of it, lazy in the formation and execution of his judgment, he will have a lazy man's reward, and there is no help for it.

There is hardly a family in the land that ought not to consume double the milk and the products of it, that it now does; nor scarce one that would not get its compensation for such additional consumption of dairy food in better health and a saving of money expended for food not so good.

A Canadian expert claims as a result of experiments that twice as much food is needed to maintain a 1,000-lb. cow at a temperature of 32 degrees as is needed at 68 degrees. Every degree of heat less takes 2 per cent of the food to make up the loss. It is easy to figure from this scientific basis the value of a warm barn.—A Live Stockman.

Senate Passes Collective Bargaining Bill

The collective bargaining bill passed the Senate December 15 and now goes to conference. This bill authorizes "farmers, planters, ranchmen, fruit growers, and dairymen" to organize for the purpose of marketing their products in interstate and foreign commerce. It provides for collective processing, preparing for marketing, and handling in selling of everything grown on the farm. The associations, according to the provisions of the bill, can operate with or without capital and can make any necessary contracts or agreements to carry the provisions of the bill into effect, so long as the organization is run for the benefit of its members.

The federal trade commission has the power, by this bill, to determine when such associations as are formed under its provisions are too strongly influencing prices. If the commission's recommendations in such cases are not followed, complaints may be taken to the federal courts.

The bill is reported to have met considerable opposition in the Senate but the southern and western combination of votes passed it.

Last of California Educational Butter Scoring

In connection with the convention of the California Butter, Cheese, and Ice Cream Makers' Association, was held the Third Educational Butter and Cheese Scoring Contest, in which T. J. Harris and G. D. Turnbow acted as judges.

There were fifteen entries of butter. Mr. John Reichneuth of the Bodega Co-operative Creamery won first, with a score of 96.625, second place was won by G. R. Jaehnig of the University Farm Creamery, with a score of 96.25, and third place was won by Harry Wolf of the Crystal Creamery Company with a score of 96.125. Mr. Sommers of the Northern California Milk Producers' Association won first in cheese, with a score of 92½. Mr. Hyatt of the University Farm Creamery won second, with a score of 92. One remarkable feature of the contest is the fact that all but one of the fifteen entries of butter received a perfect score on composition. This is by far the most remarkable record ever made in any of the contests conducted by the University.

This is the last of the 1920 contests and the results will be announced shortly and the award of the certificates of merit made.

California. G. D. TURNBOW.

"I SHALL pass through this world but once. Any good, therefore, that I can do or any kindness I can show to any human being let me do it now — for I shall not pass this way again."

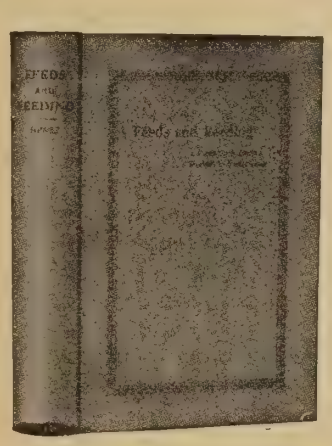
As you read this Christmas issue of HOARD'S DAIRYMAN and think of the many other issues you have received, and will receive all containing some bit of practical help or inspiration to you — *don't you think, at the same time, of many neighbors and friends who need and would enjoy the "Dairy Gospel" as much as you do?*

HOW better could you express the spirit of good will that is in the air these days than to step to the phone and say something like this to those good men:

"Bill, I have just been reading the Christmas issue of Hoard's Dairyman and while I was reading it the thought came to me that you would enjoy reading such a paper. I am going to send in my subscription today — why not let me send yours with it? Read it this year on my say-so! How much? $1.00 per year — or three years for $2.00. I always take it for three years at a time. Don't have to bother renewing so often that way. What do you say, Bill? Glad to do it — and you'll never be sorry! Good-bye'."

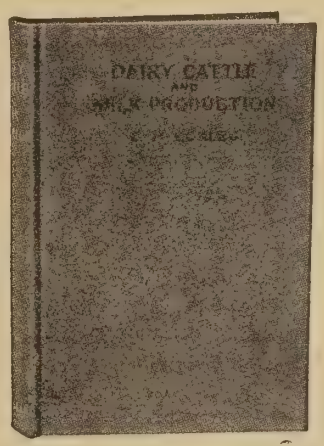
If you will go out of your way just that much to help your friends and Hoard's Dairyman, we shall be pleased indeed to send you, in return, for your trouble, any one or all of the books below. They are four of the best books in our library; books that any dairy farmer could read with interest and with profit.

Pick out the one you want, step to the 'phone — and give Hoard's Dairyman, the "other fellow" and yourself a lift!



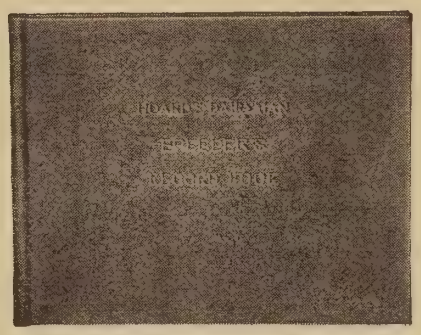
"FEEDS AND FEEDING"—Henry

The very latest edition. 701 pages—and every page loaded with facts regarding the feeds for and feeding of domestic animals for profit. This book is the result of a life time of research and study on the part of W. A. Henry, formerly Dean of the Wisconsin Agricultural College, a book that it will pay you to study. The price of this book is $3.85, but we shall gladly send it to you for a club of six subscriptions (either new or renewal and either one year for $1.00, or three years for $2.00 each.)



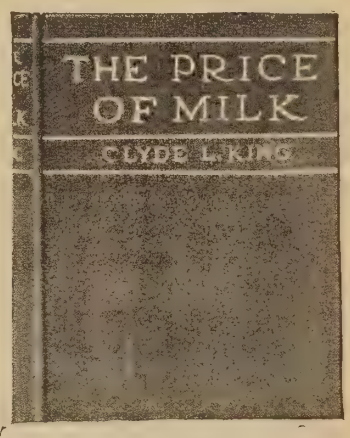
"DAIRY CATTLE AND MILK PRODUCTION—Eckles

A book which we'd like to sell every reader of ours who is interested in dairy farming. It is a complete and practical summary of the various breeds of dairy cattle, pointing out their respective characteristics and adaptability to various conditions, the judging and selecton of the individual cow, calf feeding and raising, management of a dairy herd, stable construction and dairy farm management are ably discussed. The price of this book is $2.00, but we shall gladly send it to you for a club of five subscriptions (either new or renewal and either one year for $1.00 or three years for $2.00 each.



"THE BREEDERS' RECORD BOOK"

For the breeder of registered stock. 96 pages—and on each page is space for a sketch of the animal, a five generation pedigree, the breeding record, and the production record. This book is very nicely bound in a good cloth cover and lettered in gold on the front cover. We have sold hundreds of these pedigree books to our readers, and have received many compliments on their appearance and practicability.: The price is $2.50, but we shall gladly send it to you for a club of four subscriptions (either new or renewal and either one year for $1.00, or three years for $2.00 each.)



"THE PRICE OF MILK"—Clyde L. King

In a few weeks since this book appeared it has established its place beside "Feeds and Feeding", "Dairy Cattle and Milk Production", and the other books that are a constant source of help for the seeker after reliable information on dairy questions. The discussion of this subject is sane and reliable. It is a book that every milk producer should read and study, so as to understand the problems and economic fundamentals of the marketing question. The price of this book is $2.00, but we shall gladly send it to you for a club of four subscriptions (either new or renewal and either one year for $1.00 or three years for $2.00 each.)

Your Own Renewal May — and We Hope Will — Be Included With the Club

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A DEPARTMENT FOR THE DAIRY FARM BOY

Christmas At Cloverdale

"WHY, Bob, where did you come from?" exclaimed his mother, rushing forward with extended arms to greet him. "College hasn't closed yet, has it? I hope you are not sick, dear," and she searched the depths of his penetrating blue eyes, to find there a trace of evidence that her suspicions were or were not well founded.

"Nothing's the matter with me, mother, excepting that I'm ready for some of that dinner I smell frying out there," as he jerked his head in the direction of the open kitchen door. "Golly, but I did hoof it out here, mother! Only took me forty-five minutes to make four miles and I wouldn't brag about the condition of the roads either. Never saw them so bad to Cloverdale," he added, "and I'll admit it made me tired, mother," as he fell into the nearest chair and, like most other boys, he tossed his cap in the direction of its accustomed place in the corner of the kitchen he had always claimed as his.

"Well, I'm surely warm, yes, hot," he complained as he ran his fingers through his damp hair. "I must be getting soft indeed if I can't stand that walk without warming up in this way. Who's out there, mother?" he whispered, pointing in the direction his cap had taken. "I heard a noise like someone walking around. Got a maid now?"

"Aunt Ella," came the whispered reply. "She's been here a month, and I don't see any signs of preparations for her leaving either," she smiled. "But you know, dear, Aunt Ella's always welcome."

"What's matter, don't they get along well?" he grinned mischievously. "If they don't, I'll bet it isn't uncle's fault. Aunt Ella's too much like the Pilgrim fathers, or maybe mothers would sound better," he added dryly. "Too stern and too set in her relations with other people! Fine time we'll have this Christmas with her sticking 'round. Well, if she starts any of her sermons to me, I know what I'll do, just do as I please," and he arose to remove the heavy cardinal sweater which was not adding anything to his comfort.

"But you haven't said why you came this early," spoke his mother as she followed him from place to place about the room.

"Nothing important about that, mother. I just got through with my exam's earlier than I had expected to, so there wasn't any use in sticking 'round any longer than that. Jimmy came, too," he volunteered.

"Well, it's too bad that we didn't know you were coming, Bob, so father could have met you at the station and, besides, your favorite Pete needs the driving. He acts like a two-year-old every time he is led out to the trough, I'm almost afraid to have your father hitch him up alone. He is such a cut-up."

"I'll take that out of him before I go back," said Bob stoutly. "Guess we both need the exercise for that matter. Where's dad?" he inquired. "Doing chores I suppose. Guess I'll go out and give him a lift, incidentally surprise him too," and as he stepped toward the kitchen to get his cap, he was greeted by Aunt Ella's form blocking the doorway.

"Merry Christmas, Aunt Ella!" he cordially exclaimed, extending a hand toward her which she took, it seemed, only because she was forced to. "Aren't you going to give me one of your baby kisses?" he laughed, trying to be himself in her cold presence.

"No, sir, I'm not," she cut him short. "You're too big to be kissed by any one excepting your mother; besides, there might be other babies to be kissed now, who may be just a little more deserving than you are."

"Bet I've got a new cousin, Aunt Ella! Come show him up," he teased, of course not believing a word he was saying.

Much to his surprise, Aunt Ella had no come-back, but merely gave him a half pleasant smile as she turned to her work in the kitchen, while Bob prepared to make for the barn to assist in the evening chores. "Oh, I wish she had some children of her own, then maybe she would let me alone," and he planted a tender kiss upon his mother's soft cheek.



DAD ENJOYED THE TRIP TO MEET MARY AND PETE NEEDED THE EXERCISE

"Now don't you two stay out there and let everything grow cold before coming into supper," she warned with a threatening finger. "Dad's been out there long enough now to have everything done up by this time. Why, I didn't realize it was quarter of six," as she looked up at the big timepiece that had faithfully regulated the Ramsay doings since the birth of Bob.

"I'll hustle him in, mother; 'twon't take the two of us very long to finish up, and don't you go and try to soothe Aunt Ella's feelings either when I'm gone by telling her that I didn't mean what I said," he whispered. "I did mean every word of it, and if she opens up on me again with that line of stuff, I'll go and spend Christmas with uncle," and away he dashed to the barns.

"Spot, you old rascal," he called to the dog which had been but a puppy when he left home for the first time. "Don't you dare growl at me; I'm your one boss, don't you know that and if it hadn't been for me, where would you be today! Yes, where would you be today," he repeated as he hugged the wriggling dog. "Awful glad to see me, aren't you, old boy, but don't put your dirty paws on my new clothes," and he playfully slapped him across the ears with his gloves. "Come on now, let's go and find dad."

At the mention of dad, away Spot tore up the steps leading to the well filled mows of fragrant alfalfa. Then he stood at the top of the trap door, looking intently down while all the time he kept up a continuous whine of joy as he waited for Bob to come.

"Say, old man, you don't play fair," scolded Bob. "Why didn't you wait for me; that's no way for a friend to act. I wanted to surprise dad and here you've gone and given the secret away." But Spot only looked dog-wise at him and again proceeded to express his emotions by jumping all over him once more.

"Who's there?" called his father from the mow.

"Hey, dad, if you don't take care of your dog and teach him better manners, I'll give him a beating up and then I'll come up there and treat you the same. Guess you both need it anyway," he snickered.

"Well, by jinks, by gum," his father yelled down at him. "Dreams are funny things!"

"What's that got to do with me, dad? I'm not a dream; I'm a regular guy, and I've come to take a few square meals with you, haven't I, Spot?" grabbing the dog bodily and tossing him over onto the loose pile of alfalfa that lay upon the floor.

By this time his father had reached the bottom of the ladder, exclaiming, "Where are you, you little son-of-a-Ramsay?" whereupon Bob reached up from where he was sitting, caught the tail of his father's leather chore coat and with a tug brought him down onto the pile of hay between himself and Spot. "Now, am I a dream?", he laughed as the two hugged each other, as his mother had always accused them of doing in regular school girl fashion.

"How did you get here so early?", but before Bob could make reply, he added, "I dreamed last night that you came home yesterday; that you were fired from the agricultural college for not 'tending to business and now here you are! Come across and explain," knowing full well that Bob would not disappoint him. Too great had always been his confidence for that.

And when Bob had explained all, his father hopped up and did a few fancy steps on the chaff-covered floor, saying as he finished, "Big doings for your ma and me now, son. We do get lonesome for you at times and I wouldn't give a tinker's d— if you were only through with it all."

"I feel the same too, dad, but time goes fast and I'll soon be here again for good and I'll bring you and mother a daughter, who'll make things lively enough 'round here for you both. Now we must go into supper, dad. We can't stand here talking and keep mother waiting and allow a perfectly good meal to get cold. Come on, let's go," as he took his father by the arm. "I'll help you feed after supper, 'twon't take us long."

"Guess you are saying two words for yourself and one for mother," joked his father. "Well, you always did like to eat and I see you haven't gotten over it yet," as they walked out of the barn.

"Mother!" exclaimed Bob as he opened the door and entered to the tune of a pair of youthful lungs being exercised to their limit. "Why, dad, you,"—but just then his mother stepped in from one of the bed rooms. "Mother!" and he stared first at her and then at his father; "what does this mean? Are you keeping any secrets from me? Have I got a little sister or, better, a brother?" he begged excitedly. "Where is he?"

His father broke into a loud laugh. "Bring them out, Ella; you can't keep it a secret any longer. I told you it wouldn't work! Bring them out and present Bob with his Christmas gift. "But Bob couldn't wait. He had already disappeared and when he showed up again, he was carrying two husky baby boys, cradle and all, followed by his aunt who was threatening him with everything she could think of if he spilled them in his haste.

"Well, if that isn't a bird of a pair!" he exclaimed peering into their tiny faces with their blinking eyes. "From what children's home did you get them, auntie? Do you know their ancestry? You know you might raise them only to break your heart," he added mischievously.

"If you'll give me time, young man, I'll tell you all about them," she began, but somewhat embarrassed as she noted the fun her brother John was having out of the awkward situation in which she had been placed. "They are from my own home, Bob, and their ancestry is a good deal like yours for I am their mother, and I don't think they will grow up to break mine or any one else's heart either. "Jimmy here," and she stroked the head of the one who had been making all the noise, "is the twin brother of Bob, and this is Bob," as she lifted the other from his warm bed and laid him gently in his arms. "They are mine, both mine," she said with pride, "and you can claim them

for your cousins, if you wish to. Now what have you got to say?"

"Well, let me collect my senses, Aunt Ella. This just about excels the Einstein theory if what you've said is true. You make the eighth natural wonder of the world," he laughed aloud. "And so you thought you would surprise me on Christmas morning with this present, did you? But good for you, Bob, Jr., for giving the secret away as soon as you did," and he brought the tiny bundle of flesh and soft white clothes up to his face, and gently kissed the delicate little mouth.

"Oh, Bob! Mind! Don't do that," exclaimed his aunt in alarm." 'Tisn't good to kiss babies on their mouths. They might catch germs," she admonished, "and you must be very careful about that hereafter."

"Germs, nothing," answered Bob in disgust. "That's what the mouth is partially made for, that and eating, and if it was used more for those purposes and less for talking, we'd all be better off, at least that's been my experience," he grinned in the direction of his father. "Uncle must have had a funny courting experience, if you made him practice what you are preaching. All right though, I'll obey you in this matter, if you'll remember what I said this afternoon," and both smiled sheepishly at the other. "Ready to give me my kiss now, auntie?" he further teased. "The one which you refused this afternoon, and I'll let you plant it right where it belongs, too.

"How do you think Jimmy Greene will like his namesake, Bob?" she asked.

"Like it!" he returned. "He'll be as proud as he was when he was elected captain of the football team. He'll have to like it or I'll know the reason why. 'Twas a great idea to name them after us, Aunt Ella. What made you do it? You couldn't have done better!"

"Oh, I thought it would be nice to have my boys named after two big men, because I am sure now that you and Jimmy will be two of the best men this community has ever turned out, and it will be a fine thing to have you two for ideals. You know example is a great thing, Bob."

"Guess my batting average is going up some," he commented. "We'll try to make them walk the narrow path though and I hope that neither we nor they will ever disappoint the high ambitions you have always had for us," he seriously added.

The long evening wore slowly away as the happy family sat about the room enjoying the warmth of the cheerful fireplace. Bob had popped enough corn for a family of twice the size, and his mother had filled the big fruit dish with rosy apples from the well stocked cellar. They had talked about everything of interest that had happened since Bob had left home that fall, when suddenly his father broke out with, "Mother, we might just as well tell our other secret, seeing that Bob already knows Aunt Ella's. You're too old to have to wait for Santa Claus, aren't you, son, and seeing that Christmas is but a few days away, we might just as well let old Santa in tonight and get the excitement over with. What do you say, mother?"

"I guess it doesn't make much difference, father," she replied, studying the puzzled expression on Bob's face, "and certainly not now that you have mentioned it. "I knew that you couldn't keep it at the time we planned it should be a secret. You've been uneasy all evening about it, just waiting for an opportunity to spring it. So now go on; get it off your mind, so you'll be able to sleep tonight," she smiled.

"This is the most peculiar Christmas I've ever had," broke in Bob. "Everybody acts so mysterious like! Secrets about everything! Wish I had planned a few too, to keep you all guessing." But the truth of the matter was that he did have a secret for them, and he had determined to keep it as such. He had asked Mary, the girl he expected to be the future Mrs. Bob Ramsay, to spend Christmas and the few days following at his home and she had gladly consented to do so. And so they had planned to keep it as a surprise until she really arrived at Cloverdale.

"There's nothing very mysterious about what we have to tell," began his father. "I've been thinking of this for a long time and it is but recently I have been able to put it across. You remember the old Jenkins' place that joins us on the other side of the forty acres across the road? Well, it's ours now, son; I bought it shortly after you left for college this fall."

"I don't see why you wanted to keep that a secret," Bob interrupted. "Why didn't you write that to me in one of your letters, mother?"

"You'll see why, son, if you will be patient," she replied.

"Go on then, father," he anxiously urged. Then turning to Aunt Ella he added, "Patience is one virtue though which I don't seem to have."

"As I said," contir ued the father, "that farm is now ours; that is, it belongs to the firm of John Ramsay & Son at present."

"But, father," broke in Bob, "we've got enough already; what do we want with more?"



THE CHRISTMAS QUARTETTE FOR THE NICOLETTI BOYS

"You see, son, it's like this. First of all I got the place for a song and, as I had the money, I figured it would be a good place to invest it. And now for the secret!" By this time Bob was so interested that he was up on his feet, standing directly in front of his father.

"Now, my boy, when you are through with your college training, and that isn't very far away either, you may want a farm of your own; not that we don't want you to come and live with us, but because we really think you will want your own home, according to the plans you seem to be making. But if for any reason those plans do not mature, you are welcome to stay right here with me. But it will be up to you to make your choice, and now here is the deed to the farm," as he drew it forth from the deep pocket of his smoking jacket. "It's yours, son, from now on and it is all your mother and I could afford to give you this Christmas, and still hold the good will of Santa."

"'I don't know what to say, dad," answered Bob, as he started to pace before the fireplace. "It would be useless for me to jump up and down, clapping my hands and saying how delighted I am like I used to at other Christmases. You and mother both know that I can't begin to thank you for all that has already been done for me, and since I can't decide right now what will happen when I am through college, I'll have to expect the farm to be run under our firm name for the next few years. But it will make so much work for you to look after, dad."

"That's just it, son, but I am safeguarded. I looked out for that. Since you now have the deed, the job of seeing that the farm is properly conducted will be up to you. It can be done, even though you are in college. You'll be home often enough to advise your renter, and it will give you a chance to put some of those pet theories the professors are teaching you into practice. You won't have to worry about the help situation right away for there is a family living on it at the present time, and it will take them a few years to make enough to even consider moving. I've got that family of Italians that worked our sugar beets this summer, living on the place. They are a thrifty bunch, son, and I'll bet this farm against yours that they will make good. So there you are and you can go to farming now as soon as you wish," he concluded in happy satisfaction.

"Do you mean to say, dad, that those Nicollettis are living there? Why, they can't work as much land as that! Angelo, Pietro, and Mario are nothing but kids! Antonio is the only one who will be of any consequence for some time!"

"Don't fool yourself, son. Those kids, as you call them, can hoe about as many beets in a day as the old man and Antonio can. Besides, Lina, Mario, and Giuseppina work outside just like men. You musn't measure these foreigners like you do Americans. They are accustomed to working and they all pitch in."

"Yes, but what agreement did you make with them?" asked Bob.

"Not any, that's up to you. They're waiting for you to make them one. I told Pietro, Sr., that everything would be all right, and to go ahead and do as much of the fall work as possible and, let me tell you, every acre that could be plowed this fall has been turned over. So I guess they are pretty anxious for you to come over and fix up the deal."

Bob's face was flushed with the excitement of future possibilities. "Guess I better get to bed while I'm able," he laughed. "My head is certainly beginning to whirl at the thought of so much on my hands." Then, turning to his father again, he asked, "Is there any stock on the place, dad? And before giving him time to answer, he added, "Of course they will have to run a dairy farm in this section or they'd starve to death. That's a cinch, isn't it, dad?"

"That'll be up to you and Nicoletti, son. But answering your first question about the stock on the place; they have a few head, nothing to speak of though, and now, mother, I guess we are ready for your part of the secret," he suggested with a mischievous twinkle in his eyes.

"More secrets!" cried Bob, quickly facing his mother. "No, no! I've had all I can stand for one dose; if there are any more, keep them for tomorrow."

"Sorry, son, if you can't bear the load, but it is very necessary for you to know all tonight now that your father has opened up everything in this way, and since I haven't told any secrets, I think it is my turn. I'll make mine short," she smiled at the family.

"All of your Nicollettis are to be with us on Christmas Day, Bob. We have invited them for dinner and we want them to see what a real American Christmas is like. Dad has saved a pure-bred calf for each of the boys. This will be their Christmas gift from us all, and I am giving the girls new dresses. This will give them a good start toward a good herd of cattle and it will make the boys appreciate the advantages of a good stock. We don't want any more scrub stock to come into the neighborhood if we can help it. It's taken a long time to educate people away from it," she concluded. "And now what do you think of my secret, son?"

"The best yet, mother! It's all so splendid! Won't they enjoy one of your good dinners, and to think of the presents you are going to give them! Mother, you are great! And I'll just bet back of it all your scheme is to try to Americanize them as quickly as possible."

"Now the big thing for tomorrow is to get ready for them. It means work for everybody," she emphasized, "so I think we had better be off to bed," and she arose to make the first move. The others quickly followed, and as Bob started for the stairway his father slyly cautioned, "Remember you're on the farm now, Bob; no college hours here; feeding starts at six o'clock."

"Don't worry about me, dad; I'll beat you to it, see if I don't," and up the steps he dashed, calling good night to every one as he went. "Gosh, but this is all so strange," he chuckled to himself as he jumped into bed. "Whoap! There they go," as the crying of his cousins reached his ears. "Bet I woke them up when I dashed up the steps! Go to it, you little rascals," he laughed, as he pulled the covers up over his head to shut out the noise. "Give Aunt Ella enough to think about so that she'll mind her own affairs from now on." Quietness soon settled over the household, however, and Bob was farming in his dreams.

True to his prediction, he was the first one out the next morning. The fire in the kitchen range was throwing its warmth to all corners of the room as the pitch filled tamarack crackled and snapped in its grates. "Everything's fired up, dad," he said as the latter started for the furnace room. "I've been down there and I guess I caught it just in time. We should have banked it better last night."

The before-breakfast chores were completed in a hurry, consequently the men were in for breakfast before it was ready. "Guess I'll phone Pietro," remarked Bob to his father, "and tell him that I'll be over some time this morning to make him a proposition about the farm," and he stepped toward the phone. "Or won't they be up yet?"

"Up! I should say they would be," answered his father. "They've had breakfast by this time. Mrs. is trained to get up in the morning," he winked at Bob, at the same time glancing in the direction of his wife who was fussing over the eggs that were spattering in the frying pan. "But I'd ask him to come over here," he suggested. "Remember he is your renter."

"Good idea, dad," he said as he took down the receiver and called for the

(Continued on page 1016)



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows, fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey heifer calves, 3 to 5 weeks old, from record sires, $25 each crated, C. O. D. Also springer cows, heifers in carloads. Pure-bred bulls. W. J. PETERS, West Chicago, Ill. 22*

High Grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Serviceable Holstein bulls—30-lb. son of 37th heads the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

Holstein bull, ready for service, 4 dams averaged 105 lbs. milk in 1 day, 38 lbs. butter 7 days, $150. ROY HARRIMAN, Appleton, Wisconsin. 21-3

If you want the very best, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves. $25.00 each, I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 21-4

Registered Holstein bulls, old enough for service. Fine individuals. Best of breeding, $100. Yearling heifers, $100. Older heifers bred to 36-lb. bull at low prices. My 36-lb. herd sire at a bargain. DR. BLACKBURN, Cuba, Ohio. 21-5

12 high grade Holstein heifer calves, 60-lb. dams, yearly record sire. $27 crated. Shipped C. O. D. ERNEST FERO, Route 5, Whitewater, Wis. 23-4

We now offer for quick sale a few sons of Pabst Korndyke Blackberry, our $7,150.00 herd sire. Good opportunity to secure thirty-pound breeding at very reasonable prices. SIGMADALE FARM, Oxford, Wis.

Registered Holstein Bulls, aged 2 to 12 months. Farmers' prices. BAINRIDGE FARM, E. E. Bain, Prop., Lisle, Illinois.

Outstanding individual. Grandson of Pontiac Korndyke with 44-lb. breeding. Ready for service. Price $300. NELSON PAUL, No. Manchester, Indiana. 23-2

Do you want the very best? I offer beautifully marked, high grade Holstein heifer calves at only $20. Registered bull calves, $40. Will ship C. O. D. and if calves don't satisfy don't take them. J. M. McFARLAND, Watertown, Wisconsin. 23-3

For Sale—30 high grade Holstein milkers and springers. Will sell one or all. FRED JOHNSON, Waupaca, Wisconsin. 23*

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

STOCK FOR SALE

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS, Mankato, Minnesota. 19*

Six registered Guernsey bulls for sale. All serviceable age. Dams A. R. records, 500 to 660 pounds fat. Sale list. Photographs. HOMER RUNDELL, Livingston, Wisconsin. 19*

Guernseys for Sale—From Federally Accredited herd. Bull calves, two bulls ready for service, sired by Clara's Sequel and out of high testing dams. Also ten pure-bred females. LLOYD RUNDELL, Roberts, St. Croix County, Wisconsin. 22-3

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

A son of Ne Plus Ultra, good show bull. Also a son one year old by bull offered out of cow that made 40 lbs. milk a day and 50 lbs. fat in 30 days. H. C. HURLEY, Rockville, Md. 20-5

For bargains on May Rose bulls with type and production, write KUHTZ BROS., Waukesha, Wis. 21*

Registered Guernsey bulls. Good breeding. Bargains. FRED RAY, Lake Mills, Wisconsin. 21-3

For Sale—Registered Guernsey bulls and females, with Advanced Registry breeding, at moderate prices. Herd is Federally inspected. Write for list. HELENDALE FARM, Athens, Wis. 17-spl

For Sale—Registered Guernsey bulls of serviceable age, May Rose and Sequel breeding. Dams have good A. R. records. ORE HILL FARM, Dale E. Rundell, Livingston, Wisconsin. 22-spl

Serviceable grandsons of Langwater Rosie. A. R. sire and dams. C. M. McCONNELL, West Salem, Ohio. 15-spl.

Fine, young Guernsey bull, excellent breeding. Dam on test, $125.00, express prepaid. W. G. UDELL, Cambridge, Ohio. 22-2

Registered Guernsey bull calves from 1 month to 1 year. Some from A. R. dams. OTIS A. MARKEN, Valders, Wisconsin. 22-5

Registered Guernsey heifer calves for $150.00, delivered. Sire's 5 nearest dams average 725 lbs. fat. PINE HILL FARM, Howard City, Mich. 22-3

To make room for registered stock will sell few choice grade Guernsey young cows and bred heifers sired by and bred to registered A. R. bulls, from heavy milking dams. QUINEILO FARMS, 297 East Water, Milwaukee. 21-3

100 head of pure-bred and grade Guernseys. A great bargain for someone who can handle that number. Address BOX 518, care Hoard's Dairyman. 23*

Guernsey bull calves from seven to ten months old of good breeding. ANTON O. BERGE, Valders, Wisconsin. 23-2

For Sale—Daniel Rilma 49395, a junior 4-year-old Guernsey bull of merit. Price $150. HARRY W. DOTY, Savanna, Illinois. 23*

For Sale—Bull calf from cow producing 650 pounds of butterfat in twelve months. Price, $150.00. Calf born March 29, 1919, nearly black in color weighing about 750 pounds. Sire, a grandson of Sophie 19th, who holds the world's record for butterfat of all breeds. Dam, a seven-sixteenths Jersey cow weighing about 1,250 pounds. SHERMAN NURSERY COMPANY, Charles City, Iowa. 18-6

For Sale—Jerseys. Cows, heifers, calves, 1 bull ready for service. LEROY KUNEY, Adrian, Mich. 22-2

For Sale—Jersey bulls, two, best breeding, fine individuals, eleven and thirteen months old. Kodak pictures. THE MAPLES FARM, Route 5, Box 169, Independence, Missouri. 23-2

St. Lambert Jersey herd and show bull. All Register Merit breeding. Dam, 665 butterfat. Golden Rioter of Roycroft 104778, finest show bull in state, sure and gentle. An exceptional offer at $200 to avoid inbreeding. BROOKSIDE JERSEY FARM, Arthur Zenz, Lancaster, Wisconsin.

Registered Brown Swiss bull calf. Grade heifer calf. WM. REHBERG, Tomah, Wisconsin. 22-2

For Sale—Brown Swiss registered bull, 2 years old, $100. Young Poland China boars with papers, $6.00 each. SPRING PARK FARM, Route 2, Weyauwega, Wisconsin.

Ayrshires—Special sale next ten days foundation stock of the best breeding and type. Three heifers six weeks to two months old, $125.00 each. Eight heifers 6 months old, $150.00 each. Offer bulls not related to females, ages six months to serviceable age at $125.00 to $250.00 ADAM SEITZ, Waukesha, Wis. 22-2

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

EXCHANGE

To Exchange—200 acres Central Wisconsin wild land, clear, for registered Holsteins. H. DEJEAN, 326 No. High, Janesville, Wisconsin.

For Sale or trade for high grade Holstein cows or heifers one steam threshing rig in good condition. Price $2,000.00. JOHN H. FLANAGAN, Regal, Minn.

SWINE

Tamworths for sale. Champion stock, young bred sows and three-month pigs. WALN, Westtown, Pa. 21-4

Registered Berkshires—April boars, open and bred gilts. Harpending breeding, reasonable prices. QUINEILO FARMS, 297 East Water, Milwaukee. 21-3

SHEEP

Shropshire sheep, bronze turkeys, Toulouse geese. McCRADIE BROS., Hendrum, Minn. 22-3

DOGS

Airedales—Puppies from registered parents for sale. FRED SCHROETER, Grafton, Wisconsin. 20-4

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

POULTRY

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 19-5

Bourbon Red turkeys. Toms $10.00. Hens $6.00. MAURICE RECTOR, Rockford, Michigan. 22-2

Pure-bred White, Holland Turkeys, Toms and Hens. Extra good. MRS. J. A. GRIFFIN, Quarry Hill, Madison, Wisconsin.

GOATS

For Sale—Two Nannie Goats, milking variety, born last April, will freshen next April. Four dollars each. JONES ELM FARMS, 426 St. Mtg. St., Sparta, Wis.

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00, 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Empire milking machine outfit, consisting of one gas engine, one No. 4 pump and tank, four 70-lb. silver double units or pails. A bargain at $700.00. Address BOX 822, Chicago, Illinois. 22-4

For Sale—Empire double unit milking machine complete, used eight months. A-1 shape. $150.00. Reason, out of business. FRANK DECHANT, Waukesha, Wisconsin. 22-2

Special—Stover 7 horse-power, kerosene engine, $300.00. 4 Calf-Way units complete, $400.00. Pump and vacuum tank complete, $300.00. This outfit can be used on a 100- or 200-cow dairy. First check for $1,000.00 buys complete outfit, or any of the above can be bought separately such as 1 unit, single aluminum pails, single pulsator, pet cocks, etc., for half price. Used 2 months, dairy sold out. F. C. FREEMAN, P. O. Box 185, Los Banos, Calif.

For Sale—Fairbanks-Morse 12 H. P. Engine and 500-gallon tank. SUNNY REST SANATORIUM, Racine, Wisconsin.

For Sale—Material to build 2 tile silos, also good milk wagon. GOLDEN RULE DAIRY FARMS, Brazil, Indiana.

Dairy Equipment—30-gallon combined churn and worker. 30-gallon steel cream vat, Filler for pints and quarts. Milk cooler, 10 bottle Babcock outfit. Everything new. Unusual opportunity. W. H. DAWSON, Scottdale, Pa.

For Sale—Colt Lighting Plant, never used, in original crates, $175. Empire double unit milker, slightly used pump, tank, unit, complete, $175. M. F. GOULD, Cassadaga, N. Y. 23-3

For Sale—New No. 17 De Laval Separator with belt attachment. Cost $150, sell $100. Guaranteed. J. D. FROMAN, Liberty, Missouri.

Lowest prices on Empire, B-L-K, Universal, Sharples, Perfection and Nu-Way machines. Do you need extra units or pumps? Get my prices first. L. L. OLIVER, Winchester Hotel, Syracuse, N. Y.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

No. 1 Alfalfa hay, $18.00 per ton, immediate shipment. BROOKSIDE FARM, Buffalo Gap, S. D. 21-3

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 20-10

Alfalfa Hay Wanted—Would like to exchange four registered Holstein cows ($250.00 each) for alfalfa hay. M. F. GOULD, Cassadaga, N. Y. 23-2

SEEDS

No. 1 Alfalfa Seed—$10.00 bushel, sack lots, F. O. B. Jerome. WILLIAM VEAZIE, Jerome County Farm Bureau, Jerome, Idaho. 22-3

Want to Buy—Medium red clover, alsike, and timothy seed. DADMUN BROS., Whitewater, Wis. 23*

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

DAIRY FEED BAGS

Bags—We buy second-hand bags; pay one-half freight on 200 or more. LINCOLN BAG CO., Springfield, Illinois. 3-spl

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, "The Tobacco of Real He-men," 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 23-4

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, 5 pounds, $2.00; 12 pounds, $4.50. Postpaid. DALTON DORON, Mayfield, Ky. 23-2

MILK PLANTS

Opportunity to purchase or become interested in new milk plant with $100,000 business developed. Sells pasteurized milk, cream, butter, ice cream, etc. Only plant in Central Missouri town of 25,000. Dairy farming fast becoming leading industry of county and milk production large, with Holstein herds showing highest butterfat record in state. Address BOX 519, care Hoard's Dairyman. 23-4

DAIRIES

For Sale—A fully equipped, old, established dairy, together with stock and all equipment, and will rent or sell farm. The winters are mild; feed is cheap; milk retailing at 25c per quart with customers for all we have to offer and eighty-two customers on our waiting list. If you are interested and in the market for a real business proposition, write to me for particulars and details and if you are not, do not waste my time nor yours, by writing to satisfy curiosity. J. M. SPRINGER, Box 11, Tulsa, Oklahoma. 23-4

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

FARMS FOR SALE

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadelphia, Pennsylvania. 8*

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin. 13-13

For Sale in Clark County, Wisconsin: 80-acre farm, 75 under plow, 5 acres timber. 1½ miles to town and high school, ¼ mile cheese factory. 2 silos, good buildings, 18 registered Holstein females, herd sire, horses and machinery. Terms easy. LOCK BOX 123, Granton, Wisconsin. 18-6

New York state dairy farms for sale. Catalogue free. HILLIS FARM AGENCY, Hobart, Delaware County, N. Y. 19-6

For Sale—Stock farm, 220 acres, splendid condition. JAMES W. GRAVES, Owner, American National Bank, Richmond, Virginia. 21-4

Free maps of Mississippi, showing views and describing the famous Black Prairie alfalfa, corn, clover, stock and dairy belt in Northeastern Mississippi, where Lincoln Harbold of Iowa, largest hog feeder in the world, has located; good water, schools, hard roads, creameries; healthy climate; best general farming and stock section in the South. WISHART REALTY CO., Aberdeen, Miss. 22-2

Must be sold at once. 80 acres level land, 15 acres cleared, 15 acres easily cleared, firewood, log house and barn, 1½ mile to railroad village, school and creamery. Price $3,200. For terms, further information and literature address EV. LUTH. COLONIZATION CO., Dept. 23, Merrill, Wis. 22-2

For Sale—Choice Ohio farms. All sizes and prices, some great bargains. Write for list. I. J. MILLER, JR., Conneaut, Ashtabula Co., Ohio. 22*

Modern dairy farm, well located on good road in Waukesha County. 200 acres, comfortable brick house, furnace heat, running water. Horse barn, two large, connected modern dairy barns, two silos, tile milk house. A complete breeding establishment, conveniently near Waukesha and Milwaukee. Price reasonable. R. E. BENSON, Dousman, Wisconsin. 22-6

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

We have productive farms to sell for the value of its buildings. NEW YORK FARM AGENCY, Westfield, N. Y. 19-spl

For Sale or Rent—A modern up-to-date dairy farm, ½-mile from the town of Traer in Tama County. Best equipped dairy barn in the state. For particulars write ADAM H. HOTZEL, Box 129, Traer, Tama County, Iowa. 23-3

For Sale—150 acres 5 miles north of Neillsville, Clark Co., Wisconsin. For particulars write owner, FRED LEAR, Richland Center, Wisconsin.

For Sale or Rent—335-acre stock farm, north central Otter Tail Co., Minn., together with herd of Guernsey cattle and all machinery necessary for farming the place. Good soil and buildings. New barn just completed at a cost of $11,600. Located on shores of a beautiful lake four miles from Dent and 12 miles from Perham, Minn. If you want to rent, do not write unless you have plenty of help to handle a large farm and can furnish first-class references. Can give possession at any time. A. MARCKEL, Perham, Minn. 23-3

200-acre equipped farm with 4 horses, 23 cows and heifers, bull, flock poultry, 6 wagons, sleds, haying machinery, full implements, gas engine, stovewood, 50 bu. potatoes, 30 tons hay, 300 bu. grain, vegetables, etc.; convenient four thriving towns; loamy tillage, big crops hay, 40-cow wire-fenced pasture; estimated 2,500 cords wood, 1,500 R. R. ties; timber; assortment fruit; good 8-room house, basement barn ties 26 head; silo, 300-bird poultry house; has yielded $4,000 year income; owner alone, makes low price, $8,200, easy terms. Details page 18 Strout's Free Illustrated Catalog Bargains 33 States. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

Come to New Jersey for dairy farming. Markets sure. Land prices low. Ideal living and working conditions. Write LAND REGISTRY, State House, Trenton, N. J. 23-2

South Dakota—You can buy land here producing as abundantly at ⅓ to ½ price demanded in older states. More agricultural wealth per capita is produced here than in any other state. The state loans money to its farmers through its own Rural Credit System. Write today for information, DEPARTMENT OF IMMIGRATION, Irwin D. Aldrich, Commissioner, Capitol F-15, Pierre, South Dakota.

For Sale—120-acre farm. House, barn, buildings complete. School house, stores, churches, on farm. $60.00 per acre. Write for description. C. B. BOICE, Owner, Newfield, New York. 23-2

For Sale—By widow, 225 acres, fertile, black top, clay bottom land, nearly all cleared, level. Drainage ditches all in, some tiling. 3 flowing wells, buildings. 4 miles to R. R., gravel road. No better land anywhere. 21 registered Holsteins go with place. Terms. M. A. SAMS, Owner, Coleman, Mich.

Big farm bargain in New York. 396 acres, fine upland, raises large crops of corn, hay, oats and potatoes, large fields can be tractor worked, two to four miles from three small towns, nine miles to city of 14,000. Good nine-room house, fine cellar, barn 36x70, three stories, cement basement, barn 34x36, cement floor, milk house, ice house, shop, granary and wood house, well at house, water piped to barn. Buildings and stock insured for $13,800.00. In the New York milk zone, league price for December being $3.50 per 100 lbs. for milk testing 4%. For quick sale, owner includes 4 horses, 41 cows, bull, all farm machinery, milking machine, also all hay and grain at time of sale. Possession given at any time. Low price of $16,000.00 for everything, $7,000.00 to be paid when possession is taken. Thirty of these cows averaged $170.00 each in 1920. I. R. DAVIDSON, Route 1, Oneonta, New York. 23-spl

FARMS FOR RENT

Wanted—A good opportunity for a man who knows how to farm and make money out of pure-bred cattle. The farm is stocked with pure-bred cattle and equipped with good buildings and machinery. Applicant must be willing to invest some money as the division of the proceeds will include equal shares of live stock raised and sold. Do not answer unless you can furnish proof of ability to accomplish results. Address BOX 492, care Hoard's Dairyman. 21-3

For Rent or on shares with or without stock, two dairy farms 1½ miles from Binghamton, New York. 180 acres each, adjoining, modern. Address 4 CHESTNUT ST., Binghamton, New York.

WANTED TO RENT

Experienced farmer and city milk distributor would like to lease on share basis for term of years, or with option to buy, a farm connected with a retail route, or one so situated that route could be established. Have plenty of help. Address DAIRYMAN, 215 S. Milton Ave., Syracuse, N. Y.

Wanted—To rent or operate a good farm. Address BOX 525, care Hoard's Dairyman.

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

HONEY AND CHEESE

Honey and cheese of superior quality in family size packages. Price list free. I. B. ROSA, Monroe, Wis. 21*



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Firemen, brakemen, for railroads nearest their homes, everywhere. Beginners $200, later $300 monthly (which position?). RAILWAY ASSOCIATION, Desk, W5, Brooklyn, New York. 21-4

Wanted by March first. Single man to work with herd of A. R. O. Holsteins. Must be willing to help take care of cows on test as well as all other work in barn. Prefer young man with clean habits who is a hustler. Give references and salary expected in first letter. KILPATRICK BROS. CO., Beatrice, Nebr. 19*

Railway Mail Clerks Wanted. $135 month. Sample examination questions free. FRANKLIN INSTITUTE, Dept. F 118, Rochester, New York. 20-5

We want, immediately, young married man qualified in official testing and calf raising, for registered Holsteins and Jerseys. Excellent living conditions, and a permanent position for a man who can deliver satisfaction. FLOWERDALE, Drs. Flowers, Props., Dallas, Texas. 22-2

Man wanted on dairy where milking machine is used. Some experience in feeding dairy cattle. Good wages to right party. G. C. LINDSEY, Route 3, Aberdeen, South Dakota. 21-3

Wanted—Man and wife for work on dairy farm near Chicago. All modern farm improvements; farm buildings and grounds in first-class condition. Either salary or shares for right party. Address BOX 505, care Hoard's Dairyman. 22-3

Wanted at once—Good, handy man to work on 100-acre farm and dairy. Must be reliable and not afraid of work. CRYSTAL SPRING STOCK FARM, Littlestown, Pennsylvania. 22-3

Wanted—Experienced, reliable, married man for steady work on large stock farm. Salary $100.00 per month with free house rent, garden spot, wood, potatoes. Will be expected to board help at $35.00 per month. Also want good single man for steady work. Salary $60.00 per month with board and room. Prefer man with dairy experience. Address BOX 503, care Hoard's Dairyman. 22-3

Men Wanted—Railway mail clerks, $110 month. List positions, free. FRANKLIN INSTITUTE, R 149 B, Rochester, N. Y. 23-spl

Wanted—Single man to milk Holstein cows on test. Small high grade herd. Good living conditions. Good opportunity for right man. Fourteen miles from city. Give experience, references and salary desired first letter. FREDMAR FARMS, (City Office 3550 Lindell Ave.,) Saint Louis, Missouri. 23-2

Wanted—Single man for general work on Holstein farm. Year round position. W. J. PESTER, Whitewater, Wisconsin. 23-2

Herdsman wanted for registered Jersey herd. Competent single man. Must be good dry hand milker, careful feeder and good calf raiser. Good wages and bonus at end of year. Address with references to BOX 507, care Hoard's Dairyman.

Wanted—Single man for dairy and barn work. Must be good dry hand milker and willing worker. Give habits, past experience and salary desired in first letter. Address BOX 521, care Hoard's Dairyman.

Wanted—Good, honest, reliable working foreman, capable of getting results in a herd of high class Guernseys where A. R. records are of value. About 100 head, all ages. Place must be run on a profitable basis. Must board necessary help with decent, common cooking. Give references, past experience and wages desired in first letter. Address BOX 522, care Hoard's Dairyman.

Wanted—Intelligent, single, dependable man for bottling house. Middle-aged, good worker, must have experience and reference. Good position on large, modern dairy farm, bordering town of 40,000. State wages. Only good, steady man need apply. FITCHOME FARMS, Aurora, Illinois.

Wanted—Single man on modern dairy farm for seven-day test work and to assist in general farm work. State experience, references and wages. Address BOX 514, care Hoards' Dairyman.

MISCELLANEOUS

Wanted—Ten thousand good dairy cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Orders handled. Leasing or feeding contracts available. Address NEWLANDS PROJECT ALFALFA ASSOCIATION, Fallon, Nevada. 20-4

Edward Louis Gregor—Information as to his whereabouts is greatly desired by his mother. He left his home in Portland, Oregon, one year ago at the age of 15. Has blue eyes, brown hair and was 5 feet, 6 inches in height. Has a large V shaped scar on left arm. Any information regarding him will be greatly appreciated. MRS. F. GREGOR, 179 W. Blandena St., Portland, Oregon. 22-4

Special until Christmas: Large double crested yellowhead parrots at $9.00. Male singing canaries at $12.50, female, $4.00; per pair, $15.00. Birds shipped safely anywhere. Pet stock of all kinds, bought and sold. Address MICHIGAN BIRD CO., Dept. 640, P. O. Box 442, Muskegon, Mich. 22-2

HELP WANTED

Wanted—Qualified men to act as A. R. supervisors in Connecticut, either full or part time. DAIRY DEPT., Connecticut Agricultural College, Storrs, Connecticut. 23-2

Wanted—Housekeeper, at once or by January 1, 1920, by young widower with two small children. Address BOX 513, care Hoard's Dairyman.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Experienced manager on Holstein or Guernsey farm. Have successfully tested and fed cows of both breeds and can handle men. Wants position where opportunity will be given to produce results. Best of references. Address BOX 475, care Hoard's Dairyman. 19-5

Associated interests of any sort wanting a super farmer and dairy live stock breeder, who wish to create proper housing conditions, and obtain correct equipment for farm and buildings, or am open for position as field secretary for cattle clubs, or agriculturist to Corporation. Address BOX 500, care Hoard's Dairyman. 22-2

Young man, clean, wishes permanent position on a farm in Iowa or Wisconsin. Knows how to milk, and handle horses, references if required. State wages and particulars. Address C. H. SCHLIEPER, Route 1, Campbell, N. Y. 22-3

Position wanted as farm manager. Single, agricultural college training, life time experience with live stock and crop production, up-to-date with farm implement and tractors, 10 years in managerial capacity, best of references. Address BOX 509, care Hoard's Dairyman. 22-8

Farm and dairy manager, with energy, push and proven ability, desires position on large, modern, certified milk or stock farm, institution or private estate where results will be appreciated. Seventeen years' experience in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and dairy. Breeding for results a specialty. No proposition too large. Married. Age 38. Excellent reference. Address FARMER AND DAIRYMAN, 4463 North Uber Street, Philadelphia, Pa. 19-spl

Young, single man wants position about January 1 for general farm and dairy work. Prefer hiring by the year. Reference. LAWRENCE RASMUSSEN, Ogdensburg, Wisconsin.

Wanted—Position on dairy farm by young man. Have had some experience. FRED TEVFEL, Route 3, Box 100, Rocky Ford, Colo.

Position wanted by married couple, age 30, without children, on ranch or farm in California. Four years in last place. Familiar with all kinds of farm stock and machinery. Best of references, open for engagement February 1. WARD CARPENTER, Enosburg Falls, Vermont.

Wanted—Position as farm manager by married, agricultural college man. Lifetime practical experience, pure-bred livestock. Certified milk. Executive ability. Excellent references. Please give full particulars. Address BOX 516, care Hoard's Dairyman.

Position Wanted—Single man wants position on milk wagon or truck. A position where they like to have a man stay. Can give good reference as to my ability. Address BOX 515, care Hoard's Dairyman.

Situation wanted as manager on stock or general farm or cattle ranch by a married man, thoroughly experienced in all lines. Able to produce results. Address BOX 517, care Hoard's Dairyman, Fort Atkinson, Wisconsin. 23-2

Farm superintendent with 18 years practical and scientific experience, open for position on large up-to-date dairy farm. Understand soil conservation, machinery of all kinds, pure-bred cattle, A. R., etc. Address BOX 506, care Hoard's Dairyman. 22-2

Position wanted by single, reliable, energetic young man as herdsman. Lifetime experience, familiar with A. R. work, good calf raiser, can furnish best of references. Only first-class places considered. JAMES SHORTTE, 5907 Francis Ave., Cleveland, Ohio.

Wanted—Position working manager; married, 32; 15 years' experience in testing and feeding cows for A. R. work and high production. Permanent job desired. Address BOX 520, care Hoard's Dairyman.

Experienced herdsman, single, wants position. Understands feedings and can produce results. Best references. Address BOX 526, care Hoard's Dairyman.

Wanted—Position as manager on dairy farm. Full knowledge of modern dairy methods and breeding. Southeastern states preferred. Write at once. Address BOX 523, care Hoard's Dairyman. 23-2

Wanted—Position by two first-class young men in large dairy barn. Satisfaction guaranteed. $85 month and board each. Address BOX 524, care Hoard's Dairyman.

New York Butter Market

NEW YORK CITY, DECEMBER 14—A substantial recovery in Danish exchange during the past week has served to revive interest in the butter market. The increase in the value of Danish money makes it necessary that the Danes receive fully 3½c more for their butter than before the advance in order that they may net last week's price for it. One result of the advance in exchange is the withdrawal of 2,000 casks of consigned Danish butter, which arrived in a shipment of 10,070 casks last week, from sale as the exporters feel that they must receive a greater price than the one that now prevails for their butter. It is generally felt that there will be lighter shipments of Danish butter during the coming months than have been expected. It is quite possible that Danish exchange may again decline if shipments are curtailed as the Danes are buying freely of feeds in this country and the balance of trade between the two countries may become so favorable to the United States that a further slump can not be avoided. In that event shipments will undoubtedly become larger.

With the advance in Danish exchange, receivers became more optimistic with the result that there has been an upward trend to butter prices for the last several days. Buyers, who are quick to note changes in sentiment among receivers, have become more active and have shifted much of their buying back to tubs. Danish butter which was moving readily is now dragging to a considerable degree. In addition, much of the last shipment is very moldy and is not up to standard in other respects. The prevailing price of Danish butter, in wholesale lots, is 49@51½c, although that of poorer quality is selling as low as 47c in some instances.

The latter part of last week brought forth a rumor that there was an awakening of export demand for butter. It has been found, however, that there was no foundation to the report as there was no purchasing of American butter to fill foreign orders. The rumor started because of a Canadian deal with England which affected some Canadian butter that was being held in this city. At the present time there is little likelihood that England or any other European country will purchase any of our butter. The Food Control of England will continue in operation until the passing of winter which means that individual butter handlers in that country will not be allowed to purchase foreign butter on their own initiative.

On last week Monday, the quotations on high grade butter advanced one-half cent and the price of extras became firmly established at 52c. The market continued to gather strength but there was no further change in quotation until Thursday when the price advanced 1½c. There was no change in that quotation until yesterday when there was an advance of one-half cent and it was followed by a similar advance today. While the price trend is upward for fancy butter, undergrades remain unchanged. The principal reason for that is the fact that there are considerable quantities of Argentine butter in local stores and warehouses that can be purchased at prices as low as 36@38c. As that butter is of the quality of fair seconds, it is extremely hard to move domestic seconds at any price. Good commercial firsts are at a disadvantage as they must compete in price with high quality Danish butter. That fact is tending to cause a very wide range in the quotations on firsts. With the curtailment of shipments of Danish butter, if such a condition does materialize, it is expected that there will be a greater demand for medium to low quality butter. Established quotations today are as follows: Extras (92 score), 54½c; higher scoring than extras (93 score or higher), 55@55½c; firsts (90—91 score), 46@53½c; firsts (88—89 score), 41@45c; and seconds (83—87 score), 36@40c.—W. B. LIVERANCE.

MARKETS

CHICAGO, Dec. 16—Butter—Creamery, extras, 51c; standards, 43¾c; dairy firsts, 37@47c; seconds, 33@36c.

Eggs—Ordinary, 64@68c; firsts, 72@73c.

Cheese—Twins, 19¼c.

MILWAUKEE, Wis., Dec. 16—Butter—Creamery, tubs, 50c; prints, 51c; extra firsts, 46@48c; firsts, 44@45c.

Eggs—Fresh, current receipts country candled, cases returned, 65@70c; checks, 40@42c; dirties, 45@47c.

Cheese—Twins, 22c; Daisies, 22½@23c; Longhorns, 23½@24½c; fancy Brick, 22@23c; Limburger, 1 lb., 24c; 2 lbs., 23c.

NEW YORK, Dec. 16—Cheese—Dull; state milk, common to specials, 20@28c; skims, common to specials, 10@20c.

Butter—Firmer; receipts 9,609 pkgs.; creamery, extras, 54½c; state dairy tubs, 33@52c; imitation creamery, prints, nominal.

Eggs—Weaker; receipts, 42,399 cases; nearby white fancy, 89@90c; nearby mixed fancy, 75@88c; fresh firsts, 80@85c.

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HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

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is the time to purchase a silo, have it shipped early and haul in the winter on good roads. CORN BELT hollow tile silos thoroughly and beautifully glazed are permanent, fireproof, paint proof, repair proof. Include tile chute, tile feed room, steel back ladder and hip roof rafters. Special discounts for early shipments.

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January 14th, 1921

IOWANA FARMS BERKSHIRES

50 Bred Sows and Gilts
Several Herd Sires

All strong in the blood of our Great Foundation boar, RIVAL'S CHAMPION 112500. IOWANA BERKSHIRES are famous for their Uniformity of Type, and their Quality combined with Size.

The entire herd is being dispersed to provide room for further development of our Holsteins. This is your opportunity to select what you want at your own price from the best of Berkshire herds. Don't neglect it.

Write for private sale catalog of selected yearling and spring boars; also for catalog of our January dispersion of females announced above.

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Paterson vegetable parchment wrappers

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YOUR butter is just as good as any other. Quite likely you think it's just a little better. But the housewife doesn't know this. It's the *package* that impresses her.

An attractive, clean and sanitary butter package will sell all around one that has just an ordinary wrapper.

That's why butter wrapped in Paterson Vegetable Parchment Wrappers gets the gratified attention of the customer. It sells through its attractive and appetizing appearance.

Buy Paterson Vegetable Parchment Wrappers in lots of 5000 or more, and we will print your advertisement on them in attractive form and in inks that are guaranteed not to stain the butter.

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Write today for Big Special Offer and Low Direct Factory Price on Ottawa Log Saw. Strictly a one-man outfit that will *Beat the Coal Shortage* and make big money.

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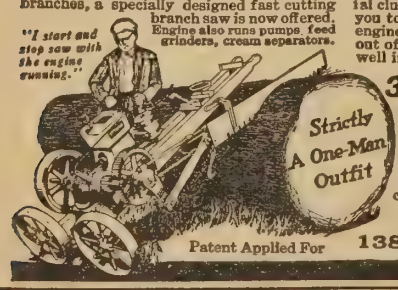
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CHRISTMAS AT CLOVERDALE

(Continued from page 1013)

number of the Nicollettis. "Hello, Pietro, this is Bob," he began.

"Who dissa man?" came the response.

"Can't you hear me, Pietro? This is Bob," he repeated.

"Ah, yessa! De begga de Ramsay boy," came this time.

Then Bob began to giggle as he hear Pietro yell to some of the noisy children. "Stoppa dat a noise," he heard him say to one of the boys who was evidently trying his musical ability on an old accordion. Then before Bob had time to send another word, Pietro apologized by saying, "Mario, he likka to make a begga de music."

"Sounded fine, Pietro," said Bob, "but say, Pietro, can you come over this morning, say about nine o'clock?"

"Sure I comma, and I bringa de old woman and alla de kids too," he volunteered.

"No, Pietro, I only want you today. You'll all come tomorrow."

"Alla right, Meester Ramsay, but I tinka you wanta to see all my familie; it's alla right though, so I comma alone dissa time."

"That's right, Pietro," returned Bob, "and I'll expect you not later than ten anyway," and he hung up the receiver, chuckling to himself as he sat down to breakfast. Following the meal, he beckoned his father into the latter's office, quietly closing the door after them. "Now what?" asked his father raising a quizzical brow.

"I didn't intend to let you in on this, dad," he began, "but I see that I am forced to. I've made a bad mess of things by asking Pietro over this morning. You see I've asked Mary to spend Christmas with us and she has accepted and she'll be here on the 10:15. Now if I keep my appointment with Pietro, I'll have to ask you to meet her at the station, much as I hate to disappoint her."

"Maybe she won't be so disappointed as you think, son," he answered slyly, "especially when she sees your father."

"I'll trust you, dad, with all your charm for girls," he laughed back. "But will you go?"

"Wouldn't miss the opportunity, my boy! In fact, I shall be delighted! But how will I know her?"

"Easy, dad," came the quick reply. "Just walk up and down and introduce yourself to the swellest looker that gets off that train. And that will be Mary! Nothing like her ever gets off at this burg, so you can't very well make a mistake," he boasted.

"I'll be on the job, son, but don't you get jealous if Mary takes a liking to me," he joked.

"Hope she does," he replied dryly, "because she is all that I have to give you and mother for Christmas," as the two left the room.

"What have you two been whispering about now?" asked his mother. "Up to some mischief, I suppose! I haven't seen dad act like this for some time, Bob. What have you been telling him?"

"Just gave him his Christmas present, mother, or at least told him what it's going to be," he carelessly answered, winking at his father.

"What did he give you, father?" she asked in all seriousness.

"Don't know yet. Got to go to the city and get it myself," he replied, struggling into the fur of his beaver overcoat.

"Dad will bring yours in the same package, mother, so you needn't look so jealous. He understands that he is to share equally with you, don't you, dad?"

"Excepting that I have the advantage of seeing it first," he laughed as he left the house.

Pietro arrived at the appointed hour, and after what he tried to make a formal greeting of the family, but more foreign than formal, he was ushered into Bob's father's office, followed by Bob. "Well, how do you like the farm, Pietro?" was Bob's first question.

"I likka it fine," came the quick, emphatic reply.

"Well, it should not take long then for us to reach an agreement, Pietro."

"Only dissa," he quickly interjected. "De old woman and me, we likka to own alla de stock; de horse, de cow, and de peeg; how dat strikka you?" he asked, evidently intent upon the ownership of something.

"Yes, but you've got to have more than one horse, and more than one cow and pig, Pietro," Bob trifled.

"Yessa, yessa," he replied to this excitedly. "But we wanta alla dem, you know."

"Just what I was going to suggest, Pietro. It will be much better for you to own all of the stock, at least until I come home for good; then we can make other changes if necessary. So that's easily settled. Now I am going to rent you the place Pietro for a period of three years, providing you want it for that long and that you live up to your part of the agreement we make here today. You are to stock the place, and provide sufficient machinery to run it with, and for your share you are to take two-thirds of the gross returns and I will take one-third. We'll split even on the taxes and building insurance and also on repairs of buildings and fences. Any new buildings go up at my personal expense. Little things like what crops to grow and how to treat the soil, well, we can just work together on those; that will be best, I think. I'll be over next week with the papers."

Pietro had listened intently and it was quite certain that he was satisfied, for as they arose to leave, he searched his ragged pocket and brought forth two cigars, one of which he stuck into his mouth, while the other was offered to Bob, saying as he did so, "I bringa you a beega, blacka ceegar, and I hope you likka dat too, likka I do!"

To which Bob answered, "No thanks, Pietro; I don't smoke." A disappointed expression spread over his face as he returned it to his pocket, and he added as if to pass it off, "we alla comma tomorrow to deener," and then he started away.

Bob's father arrived with Mary at about eleven. Bob was not only excited from the morning's events, but in addition quite plainly embarrassed now as he turned Mary over to his mother and Aunt Ella. His mother, too, was a trifle upset at the unexpected arrival, but she soon recovered her usual composure and Mary was made to feel as though she had always known the entire family. Bob was elated at the reception accorded Mary. As he said to his father later on in the day, "I knew you'd like her, dad, and do you blame me?"

"Only wish I was young again," he replied with a roughish smile. That afternoon Bob and Mary went to cut a Christmas tree, while his mother and father drove to town to get the trimmings and to do some other Christmas shopping, and the evening was spent in putting on the finishing touches in readiness for the Nicollettis. The family retired early, with the exception of Bob and Mary who were left to themselves to talk things over,

as his father remarked before leaving them. And talking wasn't all that took place, for the diamond which Mary flashed on her left third finger the next morning did not fail to catch the observing eye of Mr. Ramsay as the family sat at the breakfast table. Bob noted that the discovery had been made and he knew it would be followed up with remarks that would probably be a little embarrassing to both himself and Mary. Then as if to avert some catastrophe, he broke out with, "Mother and dad, here is your Christmas gift," as he covered Mary's ring finger with his hand. "And this is the proof," as he exposed the ring. "Mary is now to be considered a part of our family, at least I hope so," he blushed.

A brief silence followed. Aunt Ella straightened up and moved uneasily in her chair. She was indignant; that was quite certain. Not that she didn't like Mary, but just because she had always allowed herself to act this way with everything that concerned Bob. But she kept her silence for which Bob was thankful.

"Ahem, ahem," came from his father as he prepared for action. Then much to the relief of the two young people, he began. "My dear son and Mary, I know how you both feel. This is one of the happiest moments in your lives, or perhaps it would be more appropriate to have said this along about midnight," he wisely corrected. "Whatever makes you happy, son, adds happiness to the lives of your mother and me, and all that I can add at this time is that we hope you always will be as happy in each other's companionship as you are now. Mary, we gladly accept you into the family circle, and now I wish to congratulate you both," as he arose and shook hands warmly with each of them.

Mrs. Ramsay was too deeply affected to say anything, and, as Bob saw her wipe a tear away, he said, "Never mind, mother, I shall always be your boy. Mary has agreed to share me equally with you," he gulped, trying hard to swallow the lump that had risen in his throat.

By ten-thirty, the chores had all been finished up and the family was in readiness to receive the Nicollettis by eleven. Nor did they have long to wait after that, for across the frozen forty they came stringing along, the elder Pietro leading the way.

"Looks like we are going to entertain all Italy," Bob snickered, his face pressed close to the cold window pane. "They're all there, at least I have counted nine of them. But mother, Mrs. is carrying a small red bundle and she handles it like a baby."

"That's what it is, son. Caruso is the youngest; he is now about three months old."

"You didn't say anything about that, dad, when we were talking about the family. "Well, I am satisfied if Pietro is," he laughed. "It means another farm hand in about three years. How would you like to own all of them, Mary?" but Mary only blushed as she glanced shyly toward his father, and Bob realized he had made a mistake.

Mrs. Ramsay was at the door to greet them with a Merry Christmas, and as fast as they were released from the grip of her warm hand shake, Bob and Mary ushered them into the cheerful warmth of the big living room. There were no formalities to contend with as Bob had said in cases like this, and he was right for all felt at ease at once. Mary had all she could do to keep the younger members of the family entertained, but she proved herself equal to the occasion, although it was a difficult task, for like most children they all wanted that which they could not have. Finally she hit upon a program, the charm of which worked its wonders. She sat down at the piano and began to play an Italian Christmas hymn. Instantly the room was quiet, and the Mrs. Nicolletti smiled her satisfaction and pleasure at Pietro and hugged the tiny Caruso just a little closer to her breast. But when Mary's sweet voice broke into words, she was completely hypnotized. The comfortable rocker in which she sat ceased its rocking and its occupant sat stone-like, staring the depths of her dark eyes into Mary.

"Ah, you angel, you blesseda angel," she commented when Mary had finished. "Oh, so beautiful! so beautiful!" was all that she could say. And a tear stole silently down her olive skinned face. The children gathered about the piano and begged for more, and when their mother had partially recovered herself, she too came to Mary and begged with the children, saying, "Oh, dat makka me tinka so much of home in Italy and de leettle baby we lefta buried dere."

All of this deeply touched Mary's sensitive feelings. She sat thoughtfully for a minute, and then she turned and sang several other hymns, familiar to all peasant Italians. Finally she hit upon one which even the children knew, and after a little urging from their mother, they sang it through with Mary, much to the enjoyment of everyone. Then she taught them to sing "Hark, the Herald Angels Sing", and by the time they were called to the dinner table, they were singing as though they had always known it.

To have watched the Nicolettis eat, would be evidence sufficient to demonstrate the merits of the Christmas dinner. But to listen to the noise made by the smacking lips as they closed over full mouths was appreciation supreme for Bob's mother as she moved about quietly from one to the other to see that each plate was well filled. Everybody laughed when Mario announced with a mouth already altogether too full, "Dissa pie so good, why you not makka one likka it, mamma?" as he bit savagely into it.

During the afternoon there was more singing, and apples, pop corn, candy, and nuts enough for ten families like this. The candles on the Christmas tree were lighted while it was being robbed of its gifts. There were dresses for the girls and Mrs. Nicolletti and shoes and mittens for the boys and their father. The mother was too overcome to say much, but her sad, pleading eyes conveyed what she might have said to her husband, for he arose and warmly grasped the hand of Mrs. Ramsay, saying, "We all tanka you so mooch. You and alla de other been sucha gooda angels!"

The presentation of the pure-bred calves was to be held for the last event of the happy day, which was now fast wearing itself into the gray of the evening. Bob had arranged for this and during the afternoon he had slipped out to the barns and harnessed the two sleek Percherons, Jim and Nancy, so as to be ready to take the calves to their new home, where they were to be the foundation of another pure-bred herd.

It didn't take much urging to get the family out to the barns on the pretext to see the Ramsay herd. Even Mrs. Nicolletti consented to go when Mary agreed to remain behind and take care of Caruso. Once inside the stable, Bob didn't wait for them to look over his father's fine cattle. He led them directly to the pen that held the four black and whites that were doomed to leave the best home that ever a calf had.

Bob knew from his knowledge of calves that they wouldn't stand for much ceremony. He lined the four boys up along the wall, saying as he did so, "now you fellows stand right where you are so as not to scare the calves." They obeyed as if they were under military guard, ready to face the firing squad. Then he quickly worked himself in among the calves and shoved the first, a fine young bull toward Antonio, saying, "This is yours, Antonio, Santa left him here for you. And this is yours, Angelo, this one is for you, Pietro, and this for you, Mario," as he pushed the smallest of the four toward him, saying as he did so, "they are yours, boys, and you are to keep them to help build up a good herd of cattle for your father and yourselves."

The three older ones didn't know what to make of it all as they bashfully gazed from one to the other. But not so with Mario. He fell to hugging the little white face that was trying to nibble his chubby fingers, as he gurgled Italian love words to it.

"Oh, you gotta so mooch, Meester Ramsay," broke forth the mother filled with emotion at the sight before her. "We tanka you so beeg," as she spread her arms wide apart to express the bigness of her appreciation. "We gotta nottings to geeve you back."

"I don't want you to give anything," returned Bob as he fastened a warm blanket on each of the calves to protect them during the cold ride which they were about to take, adding as he looked up at the boys, "Santa Claus did all of this."

Then with the help of Antonio, he quickly hitched the powerful team to the sleigh, loaded the calves into its deep straw filled box and together with the three oldest boys dashed out of the yard and up the road toward their home. He returned in time to take the rest of the family, and Mary gladly accepted his invitation to accompany them. And as they drove home in the pale moonlight of the early evening, both agreed that a Christmas spent in making others happy carries its own reward.

Junior Letters

Hoard's Dairyman Juniors:—I am 12 years old and am in the seventh grade. I have lived on a farm for 8 years and like it fine.

We have 27 head of cattle, 15 milk cows, 10 yearlings, 1 little calf a month old, and a pure-bred Jersey bull. Our cows are all dry but one. I like Jersey cows best. I have two cows and the calf. We also have three horses and a pony. The pony is mine. We have 100 acres; 70 are in cultivation and the rest in pasture.

Wishing all the juniors good luck.

Oregon. Robert L. Gibson, Jr.

Hoard's Dairyman Juniors:—I have been going to school every day since our school started. That is one reason why I have not written before. I am in the fifth grade.

My father has joined the cow testing association. The cow tester said we had a good start. One of our best cows tested 6.3%. We are milking eight cows at present. Their names are Rilma, Pancy, Rosey, Reddy, Dayrose, Star, Litsgoo, and Bopeep. Rilma is my cow. We have mostly Guernseys and some Shorthorns but papa wants to sell all of the Shorthorns and get only Guernseys.

The nearest railroad center near my home is Spring Grove. It is eight miles to town.

Well, I guess my letter is getting rather long. I will close. I wish some of the juniors would write to me and I will answer any letter I get. My address is Box 57, Route 3, Spring Grove, Minn. Evelyn Quandahl.

Hoard's Dairyman Juniors:—I received the fob, button, and creed and was very glad to get them.

My brother and I have a rabbit. We have 8 cows, one heifer, and 4 pigs. I am 9 years old and in the 6th grade.

Wisconsin. Richard Delwich.

Hoard's Dairyman Juniors:—My sow gave birth to seven pigs. I am going to join the calf club next year. I hope the juniors will write to me. My address is R. 2, Box 144, Woodstock, Va. David Gochenour.

Do You Belong to the Juniors Club?

If you are a dairy farm boy between ten and eighteen years of age, and if your father or some member of your family is a subscriber to HOARD'S DAIRYMAN, we want you to join the HOARD'S DAIRYMAN Juniors Club.

The Juniors Club consists of several thousand boys like you, banded together to help each other get more pleasure and profit from farm life, and to have the advantage of associating with other boys who live and work and think as you do.

It costs nothing to join the club—and there are no dues. All you need to do to join is just to fill out the coupon and send it to us. We'll at once enroll you as a member and send you a watch fob, a coat lapel button, and the "Dairy Farm Boy's Creed". Do it now—then you'll soon be a full fledged member of the HOARD'S DAIRYMAN Juniors Club.

COUPON

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Fort Atkinson, Wisconsin.

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I am ——— years old and like _____ (name breed) cows best. Send me the watch fob, button, and creed and enroll me as a member.

Name _____

P. O. ——— State ——— R.—

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112,205 lbs. milk in exactly 9 years
9 calves in 9 years
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4th highest Junior 4-year-old
17,062 lbs. milk, 4.23% as Junior 4-year-old
12,257 lbs. milk, 4.15% as Senior 2-year-old
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12,426 lbs. milk, 544 lbs. butter as Junior 2-year-old



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Write for prices.

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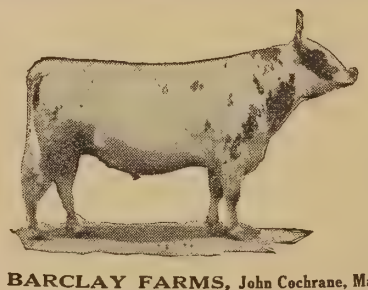
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the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

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Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.

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For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.

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The total imports of dairy products for the ten months ending October 31, 1920 and 1919, were as follows:

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The total increase in imports of dairy products amounts to the equivalent of nearly 560 million pounds of whole milk. During this same period, our exports of all dairy products decreased equivalent to one billion pounds of whole milk, making the total slack of imports and exports something over one and one-half billion pounds of whole milk. This is nearly 2% of our total milk products and represents the product of some four hundred thousand average cows in the United States.

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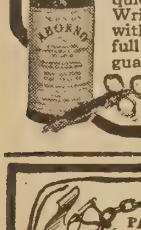
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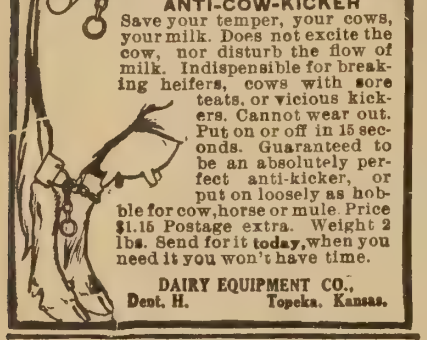
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VETERINARY

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Scours

1. I want to learn how to raise calves. We are having a great deal of trouble here with young calves. The calves are taken from the dam when 24 hours old. They are then fed the dam's milk at the rate of 3 lbs. twice a day or 2 lbs. three times a day for about two weeks. The milk is then increased ½ lb. provided the calf is alive and well. Meanwhile we attempt to teach the calves to eat a small amount of the following grain mixture: 4 lbs. of each of the following, shelled corn, whole oats, and bran and 1 part of oil meal. They are given mixed clover and timothy hay and oats straw as they learn to eat it. In many cases the calves have a sort of a fit and die in a few hours. I have overcome this largely by a liberal use of castor oil.

2. We recently had three heifers die. These were 6 to 9 months old. These had been getting 4 lbs. of separated milk twice daily. They also received 2 quarts of the above grain mixture and mixed clover and timothy hay and oats straw. We tried to never give them as much hay as they would eat and they often ate their bedding of clean oats straw. They were in excellent condition. The symptoms began with rather violent scouring and then constipation and apparently pain. Castor oil had little effect.

3. Another trouble that we are having here is to get our cows with calves. We have washed the cows with the following solutions: B-K, permanganate of potash, baking soda, and are now using boric acid. We use these 2 or 3 times a week. Please do not tell us to have the local veterinarian. We seem to have exhausted his knowledge on the subject and he lives 20 miles from here. I want to learn, if possible, how to do this myself.

Sparta, Ky. H. G. I.

1. Do not allow calves to chill in cold or wet. Make them drink very slowly and have the milk blood warm. Fast drinking often causes fits. Instead of the ration mentioned allow calves to help themselves to whole oats, with bran and oil meal from a self-feeder. If possible put in a big lump of chalk for the calves to lick. If trouble starts, mix half an ounce of formaldehyde with fifteen and one-half ounces of freshly boiled water and add a teaspoonful of this mixture to each pint of milk fed. Limewater is useful in the same way, but allow one ounce per pint of milk. If other treatment is necessary give a dose of castor oil in milk and then triple sulpho-carbolate tablets in a little water every three or four hours. The dose of tablets is from 15 to 30 grains each time. Pneumonia sometimes is associated with the most fatal forms of scours and may be prevented or treated with a special biologic. Consult your veterinarian about that.

2. Sudden change of feed would be a likely cause of scouring in these cases.

3. The articles referred to exactly cover these cases, for you may be sure that endo-metritis is present and the infection with the germs of the abortion disease is the likely cause. Flushing out of the vagina will not suffice. It is absolutely necessary in all such cases to treat the womb and for that a trained expert must be employed. He may be able to instruct you how to do the work, but that rarely is successful.

Impotent Bull

Please inform me as to what kind of reaction I can use on my Guernsey bull, 7 years of age. He is very slow at serving and refuses some altogether. He is penned where he can see the herd. At present I am feeding 4 qts. of ground oats, 30 qts. corn and soy bean silage. Hay is the second cutting of timothy. I can get most any kind of feed and will do anything to make him serve.

McLean, Va. B. H. W.

Get the bull out of that pen and make him work daily in a treadpower or harness, or at least turn him loose in a paddock where he can butt at a big, smooth stump or block of wood suspended by chains from an overhead beam. Abortion disease infection is not the cause of the bull's indifference, nor would the journey cause such an effect. Lack of exercise is the chief cause and we should advise you to stop feeding silage and timothy hay and substitute clover or alfalfa hay and a ration of oats, bran, and oil meal.

Breeding Query

I have a young cow, 2½ years old, that had her first calf in April, 1920. As she was only 24 months old at that time I gave her 5 months rest before breeding her again. I took her to our bull November 3 with the intention of having her bred. Today, November 24, she is in heat again and again she is with the bull. She is very much in heat but does not let the bull serve her. I am leaving her with the bull all day, hoping that thus she may take the bull yet. The bull was fed grain until one year old. After that I stopped the grain and am keeping him now on alfalfa only. By such a light service is alfalfa not sufficient to keep him in good shape and to aid his development sufficiently?

New Me... R. C. P.

Never allow a bull to run all day or half a day with a cow when she is in heat. One service is sufficient at each period of heat. Service should be allowed as soon as the cow is seen to be in heat. You probably let the cow go too long before trying her with the bull. It is dangerous to let a well fed cow to go five months unbred. An all alfalfa ration is too loosening and irritating for a bull. It may help to induce impotency. Feed other roughage with alfalfa and also allow bran, oil meal, and ground grain. More services would be good for the bull, if he is properly fed and actively exercised every day. Before having the cow bred again syringe out her vagina daily with lukewarm water containing a heaping teaspoonful of table salt to the quart. Injection may have prevented infection.

Sore Teats

I have a small herd of pure-bred Guernseys and am having trouble with their udders becoming sore. I notice they have caked up between the teats and finally form a scab; also the teats seem to do the same thing.

Salisbury, Md. J. E. S.

Chapping from cold after wetting of the teats with filth from stall floors or yards may cause such conditions, if you are sure it is not ringworm. Bathe the parts twice daily with hot water containing all the boric acid it will dissolve; then dry gently and apply benzoated oxide of zinc ointment. If that does not suffice stop the bathing and rub in a little iodin ointment twice daily and if that is not effectual substitute 10 per cent oleate of mercury. The latter must be washed off before milking. Remove causes mentioned.

Rash—Lice

1. Some of my cows have a scabby rash on the upper part of their udders. We thought it was cowpox, but seem unable to get rid of it. What is it and what is the remedy?

2. What do you advise using for small gray lice on cattle?

Standish, Mich. M. O.

1. Cowpox mostly affects the teats and causes oval sores which scab over and then form pits or pocks which remain for some time. New crops of pustules break out now and then, so that the disease remains for some time. It has to run its course. For a condition such as you describe we think benzoated oxide of zinc ointment would be appropriate after bathing with hot water containing all the boric acid it will dissolve. Keep stall floor clean. Milk with clean, dry hands.

2. Groom cattle with a hard brush dipped in raw linseed oil as often as found necessary, or use a solution of coal tar dip made according to directions given by the manufacturer. Rid the stable of lice by cleansing, disinfecting, and whitewashing.

GUERNSEYS

Harbor Hill Guernseys
Masher's Galore 8572 A. R.
Increased the Average Production Credit of 12 A. R. daughters out of A. R. dams by 181 lbs. We offer his double grandson out of another daughter also making a better record than her dam.
C. H. Hechler, Superintendent
Box 30, Roslyn New York

Guernsey Cows
I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.
Herd under Federal Inspection
OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Forestdale Farm
3 Bully Baby Bulls 8 Handsome Healthy Heifers — 2 to 18 months
from Superior Standard Sires, also a few A. R. matrons. May Rose Breeding. Tuberculin tested. $250 lowest price.
R. D. DeForest, Amsterdam, N. Y.

Falcon's Grenadier (65834)
Dropped Feb. 12, 1920
Sire: *Falcon's Proud Warrior* (*47559*). Pronounced by many experts as "the greatest son of Langwater Warrior".
Dam: *Stockbridge Olive* (*30883*), from a noted family of high producers. Olive has an A. R. record of 11,503.2 lbs. milk, 617.36 lbs. fat and dropped two calves during the year.
Grenadier is a high class, well grown bull; priced very conservatively at $600 f. o. b., Litchfield.
Write about him today.
Falcon's Flight Farms, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS
Choicely bred males and females for sale. (The natural increase of the herd.)
Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.
Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

Meadowland Guernseys
Sixty-five females, priced conservatively, are offered from which to make selections.
MEADOWLAND FARM, Litchfield, Conn.

We Offer For Sale
Simplicity's Winner of Iowanola (54404)
Born August 25, 1918. A show bull. First prize in class and member 2nd prize get of sire, Waterloo Dairy Congress, 1920.
Sire, Cherub's Winner (34180). The sire of all the animals that won all of the cups and trophies awarded at the N. D. S., 1920.
Dam, Simplicity of Haddon (47876), A. R. 7607. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. A big, strong, typy cow, a very easy milker and a good breeder.
Write for further information. We have a few younger bulls.
Mountain Bros., Carrier 403, Des Moines, Ia.

Do You Want A Guernsey Bull
Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls
Our last 9 official records average over 510 lbs. fat, including all ages. Our herd sire has 8 A. R. daughters, including one with 572 lbs. fat in Class GG. His three nearest dams average 822 lbs. fat. Send for pedigrees and prices on young bulls with this backing.
Folly Farm, Box 587, Libertyville, Ill.

Hillswold Farm
Shrewbury, Mass.
Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right and animals guaranteed to suit. **W. A. Cloues, Mgr**

Sale Announcements

Jan. 4-5-6. Holsteins. The Moyer Sale, Syracuse, N. Y. H. A. Moyer, Director.
Jan. 12—Holsteins. Waukesha Co. Holstein Bull Sale at Waukesha, Wis. W. L. Baird, Sec'y.
Jan. 12-13—Holsteins. New York State Breeders' Sale, Syracuse, N. Y. New York Holstein-Friesian Association, E. R. Zimmer, Sec'y.
Feb. 1, 1921—Holsteins. Watertown Holstein Bull Sale at Watertown, Wis. Francis Darcey, Sale Manager.
Feb. 26—Holsteins. John Wuethrich's Holstein Sale at Greenwood, Wis.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 3—Holsteins. Clark County Quality Sale at Owen, Wis. J. Wuethrich, Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.



Economy in Production ← GUERNSEYS → Quality of Products



Four highly qualified field men have been employed by The American Guernsey Cattle Club, for the purpose of reaching the small dairymen, and assisting them with problems they face. This is one means by which the national association is advancing the interests of their popular breed. We will gladly furnish you with information and advice.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H11, Peterboro, N. H.

READY FOR SERVICE



DISTURBER OF PROSPECT 61173
DROPPED OCTOBER 4, 1919

Sire—Anton's King Confidence No. 43517. Dam—Sally of Prospect No. 49680, A. R. 5593.

Besides having six May Rose crosses this young fellow is a wonder for type and individuality.

His sire's dam has a record of 764.65 lbs. of butterfat as a junior four-year-old. Disturber is priced to sell quick and guaranteed in every way.

Hoard's Dairyman Farm, Fort Atkinson, Wis.



"Get" of Pencoyd's Secret Marose

This bull won first prize, senior and grand championships at the New England Fair, Connecticut and New York State Fairs. His "get" (4-mo.-old calves) was first at The Eastern States Exposition and fourth at the National Dairy Show with thirteen "gets" shown. His heifer calf, Appletree Point's Dolly Dimple, was Junior Champion at New England Fair, first prize at Eastern States Exposition, and was Junior and Grand Champion female at Connecticut State Fair. His bull calf was unbeaten in all eastern shows and won at Waterloo and National Dairy Show. Write for prices on May Rose calves that combine type and production.

U. A. Woodbury, II **Burlington, Vermont**

Waukesha — The Guernsey County

Nearly two hundred members in our Association. Many of the best sires of the breed are being used. We can supply your wants. Pure-breds or grades, male or female, all ages. Prices will interest you.

Come to the County or Write

Waukesha County Guernsey Breeders' Association

F. E. Fox, Secretary **Waukesha, Wisconsin**

LONE TREE FARM

GREEN LAKE, WIS.

Has in its Herd 15 A. R. Guernseys and 11 R. of M. Jerseys
And Carries About 16 Cows on Test.

To inquiries for BULL CALVES we give full, honest particulars and stand behind every animal sold.
Jersey Sire—A Son of Pogis 99th. Guernsey Sire, Langwater Islander.

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Just What You Want!

An 8 months old bull calf. Partly white, light fawn, very fine individual.

SIRE—Cream Cup's King Regent of Allenwood 33889, by Allenwood King Regent 23641 and Allenwood Cream Cup 41291 who has a record of 436.89 lbs. fat Class G.

DAM—King Regent's Fanny of Allenwood 2d 73637, now on test in Class FF and will finish between 500 and 600 lbs. fat and has milked as high as 49 lbs. in one day. She is a daughter of Noble Regent 31691 and King Regent's Fanny of Allenwood 58290 who has a record of 347.64 lbs. fat at 2 years.

CORIUM FARM, F. J. Rueping, Owner, **Fond Du Lac, Wisconsin.**

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - **Waukesha, Wis.**

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, **Waukesha, Wis.**

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

For Sale

Craigamoor Raritan 24912 (A. R.), whose daughter now on test will make over 600 lbs. fat in AA. Also 4 sons 2 to 10 months old out of A. R. dams. Write for full description.

E. F. JONES, **Barron, Wis.**

Guernsey Pedigrees Tabulated

Typewritten, $1.00 each, satisfaction guaranteed.

Private herd books written up, and entire management taken of Guernsey sales. Write for information.

F. E. FOX

Waukesha, **Wisconsin**

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - **Fort Atkinson, Wis.**

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS

James H. Murphy, Mgr. **Delavan, Wisconsin**

Gordondale

Guernsey bull calves up to 10 months offered for sale. They are out of A. R. dams with good records and have several generations of A. R. backing. Good individuals and priced to sell. Herd under Federal Supervision.

Write for particulars.

L. E. Gordon, Jr., **Nelsonville, Portage Co., Wis.**

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, **Appleton, Wis.**

Here's Your Opportunity!

Good Grade Cows in car lots. Pure-bred Males, Females with type and good producing ability. Investigate.

Fox River Valley Guernsey Breeders' Asssociation
Harry Leppla, Sec'y, Appleton, Wis.

BIRCHWOOD GUERNSEYS

Young bulls for sale sired by Sunkistson No. 45371 who has thirteen dams in the first four generations that have A. R. records that average 582 lbs. fat, and out of officiallly tested dams.

M. L. Welles, **Rosendale, Wis.**

Unusual Bargain

A 4-year-old bull presenting a most desirable combination of May Rose—Masher Blood Lines. Half brother to 16 A. R. cows. Splendid individual, whose breeding value is proven by his outstanding calves in our herd.

First check for $200.00 takes him.
Tristram Farm Co., **Eau Claire, Wis.**

4 Bulls of Serviceable Age

for sale. Sired by Prince Royal of Edgemoor whose 4 nearest tested dams average 721 lbs. fat. They are from tested dams or dams now making good on test; daughters of Noble Governor of Walnut Ridge, a double grandson of Governor of the Chene. Write for complete information.

Geo. S. Love & Sons, **Waukesha, Wis.**

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Island Farm

Type and Proven Producing Ability

are combined in the bull calves we offer from time to time. Sired by Beda's May King 11893 and Gold Lassie's Julian 27704.

Write us your wants.

A Federal Accredited Herd.

Address: ISLAND FARM, Floodwood, Minn.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by

RADISSON FARM, **ANOKA, MINN.**

Shorewood Farm Offers

Sons of Ladysmith's Cherub, three times National grand champion. One of his first daughters to finish made 591 lbs. fat in Class G. Others equally as promising now on test.

These bull calves are from 3 months to serviceable age out of dams with records up to 777 lbs. fat. They combine size, and type with persistent production.

SHOREWOOD FARM, **Crystal Bay, Minn.**

Guernseys

Best May Rose breeding. Both sexes and all ages from an Accredited Herd. Write your wants and send for lists.

E. S. Person, **Minot, N. D.**

Barry Farm

Offers for sale a bull calf born July 2, 1920, by Langwater Raider and out of a cow on A. R. test. Also a few heifer calves.

Herd under Federal Supervision.

Far Hills, Somerset Co., **N. J.**

AYRSHIRES

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

Orchard Lodge AYRSHIRES

Stock for sale, all ages.
Both sexes, prices reasonable.

G. W. STOLLER, Johnstown, New York

HOLSTEINS



First check for $120 takes this bull born May 30th, 1920. His dam is one of the best cows in our herd; she will be put on yearly tests the next time she freshens. She has a record of over 20 lbs. at the present time. The calf is sired by a bull whose two nearest dams averaged over 30 lbs. He is a good individual, very growthy, and is bound to develop into a high class bull. **For further information Write**

BERTLEY FARMS - Glenwood, Ill.

WANTED

Typical Show Bull

Light colored with popular breeding and 30-lb. dam 90 lbs. milk daily. Would consider bull with 20-lb. 2-year-old record dam if dam could be purchased with bull.

Write

E. A. Hardy, Rochester, Mich.

Bull Calf

G. S. Colantha Johanna Lad

Dam's record 3 years old	22.01
Dam's dam record 3 years	28.26
Dam's dam's dam 3 years	29.53
Sire's dam's record 4½ years	41.27
Next three dams all over	30.00
14 nearest dams average	30.00

Born March 4. Splendid individual.

Write for extended pedigree and photo if interested.

Priced at $500. F. O. B. Cortland.

W. H. MACE, Cortland, N. Y.



King Oak Segis Pontiac
Our Herd Sire

A Herd Cannot be Better Than Its Sire

You can put green goggles on a cow and feed her sawdust. It's cheaper, of course, but will the cow give milk?

It's the same way with a herd sire. A poor one will probably sire just as many cattle, but what will they amount too?

If you intend to get anywhere raising Holsteins, you must use the best sire that money can buy.

We had this in mind when we bought King Oak Segis Pontiac and his full brother, Oak Dale Segis Pontiac. But there was one other reason why we bought these two great bulls. They carried the blood lines we wanted.

There are five strains of Holsteins that look pretty good to us and quite a number of our fellow breeders. They are so good in fact that we have decided to affect a combination of all of them.

Our foundation dams were selected with this in mind and now with the help of our wonderful Herd Sire, King Oak Segis Pontiac, assisted by his full brother, Oak Dale Segis Pontiac, we are well under way with our great work.

We have a few foundation cows and young sires for sale which might interest you. Write us or, better still, come and see our herd and let us tell you more about the great work we are doing.

OAK DALE FARMS

INCORPORATED
BREEDERS of HOLSTEIN FRIESIANS
Austin Minnesota

Three Holstein Bulls

fit for service, sired by sons of King Segis Pontiac. Pure-bred and grade females, any age, in carload lots for sale.

W. R. GATES. Fort Atkinson, Wis.

Introducing—

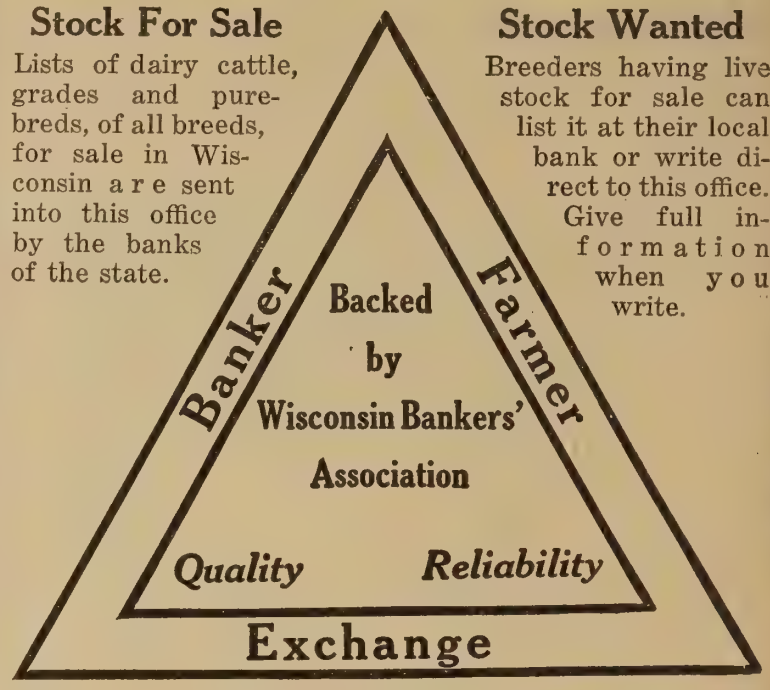
The Banker-Farmer Exchange

Stock For Sale

Lists of dairy cattle, grades and pure-breds, of all breeds, for sale in Wisconsin are sent into this office by the banks of the state.

Stock Wanted

Breeders having live stock for sale can list it at their local bank or write direct to this office. Give full information when you write.



Are You in the Market for Cattle ?

Do you want good registered or grade females — Holsteins, Guernseys, Jerseys, Ayrshires or Brown Swiss? Do you want one, a carload or several carloads? Do you want a herd sire? We can help you get them. Breeders all over Wisconsin list what they have for sale with us.

Write

Banker-Farmer Exchange
D. H. Otis, Director, 1822 Chadbourne Ave., Madison, Wis.

Wisconsin's Greatest Holstein Bull Sale

JANUARY 12th, 1921

70 Pure-bred Bulls

of serviceable age or near serviceable age, selected for breeding and individuality. Most of them sired by bulls whose dams have records of over 30 lbs. in 7 days or 1,000 lbs. in a year.

Watch For Further Advertisement

Waukesha County Holstein-Friesian Breeders' Ass'n
254 Broadway Waukesha, Wisconsin

Head Your Holstein Herd with One of These Young Bulls

They Will Bring to It, Individuality—Production—Breeding

No. 1—King Gewina Pontiac, a grandson of King Pontiac Champion (116 A. R. O. daughters), and from a 27.46-lb. dam. She is a granddaughter of Piebe De Kol Burke and Pearl of the Dairy's Joe De Kol.

No. 2—Johanna Colantha Cornucopia Boy, a grandson of Maplecrest Butter Boy De Kol (15 A. R. O. daughters) and from a 20.91-lb. dam.

No. 3—A grandson of Colantha Johanna Lad 8th (33 A. R. O. daughters) and from a 28.67-lb. 5-year-old granddaughter of Dutchland Sir Pontiac Rag Apple.

These youngsters are priced so you can afford to buy one. Take your choice. Write

ED. FAY, R. 1, BLOOMER, WISCONSIN

Holstein Bull

Old enough for service. Three-fifths white. Combines good individuality and high production. Sire: Son of Korndyke Segis Johanna and high record cow. Dam: A 21-lb. 3-year-old, now on yearly test.

Dairy Dept., N. D. Agr'l. College, Fargo, N. D.

A Son of King Pietertje Ormsby Piebe

whose dam is the world champion butter producer as a Jr. 4-yr.-old, enough said. The dam is on yearly test and is a daughter of the great sire, *Sir Gerben Pauline.* Ready for heavy service. Information:

G. Zwaagstra, Granger, Iowa.

Young Herd Bull For Sale

Iowana Spring Brook Fayne 214743. Sire—Sir Johanna Fayne 42147. Dam—Spring Brook Rose Pauline 100972; milk 20,379.30 lbs., butter 851.67 lbs. For further particulars, price and pedigree write

J. D. Froman, Liberty, Mo.

Bull For Sale

Faultless Individual, born in January from A. R. O. Dam. Well grown and Prize Winner in October show. Herd tuberculin tested. The best calf I ever sold at the price, $200. Photo and pedigree on request.

Arthur C. Daily, Springfield, Mo.

CARRY ON



OLATHE SIR BESS ORMSBY MERCEDES
BORN JUNE 29, 1920

Here's one that will "Carry On" for You

By Sir Bess Ormsby Mercedes No. 184275 and from Olathe Lady De Kol No. 223983 A. R. O. 16.8 lbs. butter from 453.8 lbs. milk. He combines the blood of two of Erickson's best bulls, the 37th and Sir Daisy Queen De Kol.

Price $150.00.

W. S. Comings, Eau Claire, Wis.

Other calves of similar breeding.

Waukesha County

Contains more tuberculin tested cattle than any other county in the world. There is more attention paid to official records than in any other county in the world.

When in the market for foundation stock, grades or pure-breds of all ages, write or wire for information to

Waukesha County Holstein-Friesian Breeders' Association

Office—254 Broadway, Waukesha, Wis.

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ollie, sire of world's youngest 1,000-lb. 2-year-old, good individuals from tested dams, some with yearly records. These calves grow into profitable sires. Write

WALCOWIS FARMS
Lake Geneva, Wisconsin

A Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 lbs. as a heifer; second dam 24.79 lbs.; third dam 28.88 lbs. Bull mostly white, very good individual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record 19.75 lbs.; second dam 18.75 lbs.; third dam 21.45 lbs. Half white. A show bull. Price $200.

For complete information and pedigree write

A. M. Anderson, Whitewater, Wis.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in 1 year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.



Mr. Dairyman—

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
O. W. Norris, Owner, E. Loehndorf, Herdsman

$100 to $200

buys a good bull. Sired by very typy, 26-lb. bull and from tested dams up to 25.46 lbs. butter in seven days.

Tuberculin Tested

H. W. Crawford, R. 5, Campbellsport, Wis.

First State Sale

ROCHESTER, N.Y.
JAN. 12-13
1921

Buy From New York's Best
Guaranteed Under Retest
Every Animal Individually Selected

A competent judge has spent more than six weeks in the selection of these animals from 60 leading herds.

Every animal over 6 months of age tuberculin tested with subcutaneous, intradermal and ophthalmic test and guaranteed under the 60-day retest.

Every animal of breeding age is recently fresh or will freshen at time of sale or is heavy in calf.

This sale, made possible by the united efforts of more than half a hundred of New York State breeders will bring together what will undoubtedly be as choice an individual collection of Holsteins as has been offered in public sale.

They invariably "turned over" their herds and allowed the choice of as many animals as the selection committee believed would maintain the high ideals established at the outset. With so wide an opportunity, it has been possible to select animals that could not ordinarily be purchased at any price—animals that are perfect in point of individual quality, have the very best of breeding and are free from every disease—just the sort of animals that ought to appeal to discriminating buyers. A brief review of the entries shows the following are entered:

Two handsome 30-lb. cows in calf to a son of a 42-lb. cow.
A 34-lb. 4-year-old with a year record of better than 700 lbs. as a 3-year-old.
A daughter of a 32-lb. cow in calf to a grandson of May Echo Sylvia.
A young bull backed by two generations of 31-lb. and 600-lb. cows.
A 27-lb. daughter of a 32-lb. cow due at sale time.
A 36-lb. cow with better than 760 lbs. milk also with splendid yearly record.
A 27-lb. daughter (646 lbs. milk) of a 36-lb. cow with 700 lbs. milk.
The Grand Champion cow at the New York State Fair and her daughter.
A Spring Farm King Daughter from a 30-lb. daughter of a 36-lb. cow.
A 26-lb. 2-year-old granddaughter of a 36-lb. cow.
10 COWS ABOVE 30 LBS. BUTTER

A son of the youngest heifer in the world with 30-lb. records.
A young daughter of King of the Pontiacs from a 30-lb. dam in calf to a 36-lb. sire.
The highest record daughter (34-lb.) of Sir Prilly Segis bred to a son of the New York State Champion.
A 31-lb. 3-year-old in calf to a son of a 30-lb. cow.
A son of a cow that has twice made better than 30 lbs. as a 3-year-old.
A 26-lb. daughter of the world champion 44-lb. 4-year-old.
A 27-lb. daughter of the only six times 30-lb. cow.
A young son of Ormsby Korndyke Lad from a high record dam.
A 35-lb. daughter of a 32-lb. cow.
A May Echo Sylvia granddaughter from a 27-lb. yearling.
25 FROM 30-LB. DAMS

The above is not to be taken as a complete list of the "stars" in the sale. Since the animals have been chosen from so many herds, many of them supporting different strains, there will be found in this sale daughters of practically every great sire in the east. It is a sale of the type so rarely held and thus one which high class breeders should not overlook attending.

The sale will be held on the Rochester Exposition grounds January 12th and 13th — the two days immediately following the annual meeting of the New York Holstein-Friesian Association. The cattle chosen for this annual event are truly representative of New York's best. Catalogue will be ready for the mails January 1st and will be sent only to those making inquiry for it.

New York Holstein-Friesian Association

E. R. Zimmer, Secretary Syracuse, New York

NEW YORK HOLSTEIN-FRIESIAN ASSOCIATION
THE NURSERY OF THE BREED

175 HEAD 60 Consignors

Special Bull Offer!

Ear Tag 1094

Study the Production that Backs Him:

His Sire's Sister was Grand Champion at the Pacific International Exposition, and has just broken the world's record for her age.

His Dam produced 604.7 lbs. of milk in seven days.

His Sire's Sire has 140 daughters in our herd, among them three who hold records for their age, and ten champions of America's largest shows.

His Dam's Sire has a daughter who holds the butter production record for thirty days in the United States, also a number of 30-pound four-year-old daughters.

His Sire's Grandsire is the sire of the only cow who ever averaged 100 pounds of milk a day for 365 days.

His Dam is by a Grandson of COLANTHA 4TH JOHANNA who produced 1247.8 pounds of butter in 365 days.

We will guarantee this bull free from any disease and a breeder, and when he gets to you if you are not satisfied you can return him at once at our expense.

Price $600

Write for Pedigree and Information

Farms:
Western Farm, Seattle, Washington
Eastern Farm, Oconomowoc, Wis.

Carnation Stock Farms
"Home of Contented Cows"

Offices:
Chicago, Illinois
1211 Consumers Bldg.
Seattle, Wash.
1211 Stuart Bldg.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Remember—

When You Buy A Bull From Hollyhock Farms

You Have Our Entire Organization Back of You. You have the benefit of our advertising and of our test fores. The chances are far better than even that the dam of the bull you buy will later increase her record and the bull increase in value. Consider those things when you want a bull and write us about a son of S. P. O. M. 41st or of King Pontiac Artis Sadie Vale, the 34-lb. son of K. K. S. V. that formerly headed our herd.

We have a few good ones for sale—1 or 2 of serviceable age.

Gustave Pabst's Hollyhock Farms

Fred J. Southcott, Manager **Dousman, Wisconsin**

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cows and Heifers

A Few Good Bulls

Because I am overstocked, I am offering some very good registered females for sale. They either have A. R. O. records or are from A. R. O. dams.

Can also offer some excellent young bulls by a 33-lb. sire and from A. R. O. dams with records up to 28 lbs.

Every animal sold is guaranteed to be as represented.

Write or come and see for yourself.

J. D. McDonald West Salem, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

ORMSBY BULL - Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct iescendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.
TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac
THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.
FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

4 Serviceable Bulls

ALL SONS OF THE 1235-LB. YEARLY SIRE

Sir Korndyke Bess

The Dams' yearly records all over 800 lbs.

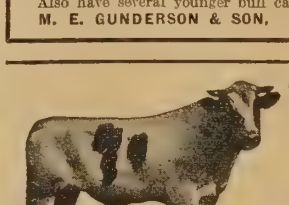
R. E. Benson - - Dousman, Wisconsin

$73 plus $9 for each month of age, buys a Serviceable Son of

Sir Pietertje Ormsby Mercedes 43rd

"43rd's" sire is "Old Piet". And his dam the long-distance cow, Aaggie Wayne Peep, with 34.59 lbs. butter in seven days and 1,250.35 lbs. in a year. She also holds the world's record for five consecutive years with 4,992.03 lbs. butter. Dam of young bull is a daughter of the 32.52-lb. sire, Beauty Pietertje Prince.
Also have several younger bull calves with 2 and 3 crosses of Sir P. O. M. blood.

M. E. GUNDERSON & SON, Oconomowoc, Wisconsin



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Wayside Lawn Farms

offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

Your Choice of **50** Young Bulls

They Are Out of Yearly Record Dams And Sired By—

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his grandams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow—the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms

Winterthur - - - Delaware

HOLSTEIN CATTLE

R. M. Smith, Supt. Marinette County Asylum Peshtigo, Wisconsin, writes:

"I am thoroughly convinced that the Holstein cow is the greatest Institution cow in the world. That is one place in particular where the Holstein cow is superior. She saved this Institution, saved my reputation as to judgment."

Send for Free Booklets

The Holstein-Friesian Association of America

101 American Building Brattleboro, Vermont

M. & P. Healthy Holsteins

A year ago we sold a bull calf to a Virginia breeder. The dam of that calf has just finished a year's record of 17,600 lbs. of milk, 800 lbs. of butter. Was he pleased? His letter states "The bull is growing nicely, and I am glad his dam made so good a year's record."

We supply this kind at moderate prices. Write

Markham & Puffer

Avon - New York

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Yearling Bull

Ready For Service

Here is a show bull whose dam has a 3-year-old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.

The first check of $150.00 takes him.

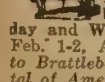
G. G. Burlingame, Cazenovia, N. Y.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

McKAY BROS., - - CADDOA, COL.

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb. 1-2, Apr. 5-6, June 7-8, 1921.** *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

EVENTUALLY, WHY NOT NOW—

Buy A Son of a 30-lb. Cow

Born October 2, 1919

A fine individual, straight and well built, about ⅞ white. Sire, son of Colantha Johanna Champion, 57 A. R. O. daughters, and Duchess De Kol Korndyke, 21.65 lbs. at 9½ yrs., having a world champion daughter. Dam, a 30.48-lb. daughter of Johan Hengerveld Lad, 65 A. R. O. daughters, full sister to a twice 30-lb. cow. Have two more of similar breeding. Pedigrees and prices on request.

Ontonagon Co. Farm - Ontonagon, Mich.

T. G. Roberts, Herdsman. J. S. Netterarer, Sec.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich.

Edinboro Lake Farm

Show Type HOLSTEINS Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

I Will Take Your Note

For Better Than a 30-lb. Bull

I will ship anywhere, express paid, for $550, 6 months time allowed or a discount for cash.

HIS SIRE is King Gerben Maid Lyons, a 33-lb. son of Rag Apple Korndyke Boon, herd sire at Friesland Farm, whose tested daughters include a number of 20-lb. 2-year-olds. "King's" dam, a 33-lb. 3-year-old with a 31-lb. daughter, is now going at a 1000-lb. clip on year test.

HIS DAM, Jessie Fobes Maud Burke, a 28.86-lb. 4-year-old granddaughter of Colantha Johanna Lad, is one of the very best producers in our herd. Her dam is by Canary Paul Fobes Homestead and is from a 27-lb. daughter of that great sire, Homestead Jr. De Kol.

Write or Wire

Otto T. Schauble Pilger, Nebraska

A Few Bulls at Bargain Prices

Old enough for service. Sired by Sir Rag Apple Korndyke Hengerveld and from good A. R. O. dams. These bulls are well grown and right in every way. Photo and extended pedigree upon application.

Patterson & Dickinson, Bellefontaine, Ohio

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

A Son of Hester Aaltje Korndyke the 46-lb. Cow

He was born April 23, 1920, is straight and well grown.

His dam, Hester Aaltje Korndyke, made 46.79 lbs. butter in 7 days. His sire, Sir College Cornucopia 2nd, is from a 35-lb. dam.

The two nearest dams of this calf average over 41 lbs. This calf is priced to sell.

Write or wire.

BROWN BROS., Hartford, S. D.

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.

KITTLE BROS., Holland, Ohio.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

GEO. E. STEVENSON, Scranton, Penna.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind.**

Whitehurst Farm

Offers for sale Holstein bull one year old. Sire has four A. R. O. daughters and is a son of Canary Homestead Oak De Kol. Dam has 18,000 lbs. of milk in 365 days at four years of age. Grandam has 19,600 at five years and great grandam has 19,800 at five years old. Grandam has two A. R. O. daughters, one with 16,000 at 2 years and the other with 18,000 at four years. Dam has one daughter with 12,000 at two years. These records were all made under ordinary dairy conditions.

A. F. Randolph, Proprietor

Canton Illinois

Woodell Farm

Offers a Few Serviceable Bulls

Sired by a son of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.

Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

Buffalo Creek Farm Holsteins

This yearly record bull calf for sale, born Nov. 28, 1919.
Name, King Lavera Ormsby No. 297926. Sire: King Pietertje Homestead Ormsby No. 221488. Dam: Lavera Hortensia Bawn 2d, No. 124734, with a record of 26,010.2 lbs. of milk and 1,050.55 lbs. of butter in a year. Write for price and pedigree. This calf won 5th premium at the Dairy Show.
Herd under Federal Supervision.

H. L. BINGHAM, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

FOR SALE—A Few Splendid Cows Bred to —



These Famous Sires

SIR PIETERTJE ORMSBY MERCEDES 37TH

He already has two 1,000-lb. three-year-olds and a 900-lb. junior two.
A full sister has twice made over 1,000 lbs. in 305 days.
Dam:—Spring Brook Bess Burke 2d. 1,290.91. Two other records above 1,000 lbs.

SIR PIETERTJE ORMSBY MERCEDES 41ST

His daughters are real producers and show ring winners. One of his daughters was grand champion at the Dairy Cattle Congress, defeating the National Champion.
Dam:—Spring Brook Bess Burke 1,094.16, "Greatest Mother of the Breed".

And You Know Their Sire —

SIR PIETERTJE ORMSBY MERCEDES, the world's greatest sire of show ring winners and yearly producers. Thirteen of his daughters have made above 1,000 lbs. Twenty have made over 20,000 lbs. milk in a year.

We are offering a few splendid cows—not culls—bred to these bulls at prices that will move them quickly. Come and look them over.

E. C. SCHROEDER FARMS *(Fully Accredited Herd)* **Moorhead, Minnesota**

Major Oliver S. Johnson



The Dairy Auctioneer

Tipton, Ia.

Grandsons of "Count" and "Piebe"

I have just purchased from the University of Nebraska, which owns the highest record son of PIEBE from BEAUTY GIRL PONTIAC SEGIS, the World's Record Daughter of COUNT,

Eight Young Bulls

from six to eighteen months old, all from good A. R. O. dams. Individuality faultless. Beautifully marked.

Most Popular Combination of Breeding of the Day
They Won't Last Long Write Me At Once For Prices

J. M. HACKNEY

ARDEN FARMS, 602 Merchants Bank Bldg., St. Paul, Minn.

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.

BLUEBELL FARM, RICEVILLE, IOWA.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

ECHOLAND FARMS

Offer a few bargains in bull calves sired by Chief De Kol Ormsby, a son of the world's record 4-year-old daughter of S. P. O. M. The average for his 2 nearest dams is 1,279.29 lbs. butter and 27,276.9 lbs. milk for the year.

Write or come and see them.

EGIL BOECKMANN, White Bear Lake, Minn.

WILSONDALE FARMS

Young Holstein Bulls Backed by Yearly and Seven-Day Records

Herd under Federal Supervision

We have several young bulls up to 17 months of age, sired by Maplecrest Sir De Kol, whose dam made 31.07 lbs. of butter and is a daughter of Daisy Grace De Kol, former World record Junior 4-year-old in the yearly production division.

These bulls are all well grown, and are of show type individuality. They are from dams with records up to 31.70 lbs. of butter in seven days, and 640 lbs. of milk.

Included in the above are a few young calves from 2 to 4 months of age from untested dams, which I will price very reasonable for immediate acceptance.

Prices and full description, with photographs will be furnished upon application.

These calves should be seen to be appreciated.

C. A. WILSON, Prop., Decatur, Illinois

Her Son Sired by K. P. O. P. Is For Sale



KIRBY MARTHA 2D

He is K. P. O. P. 20th, a splendid individual, 7 months old and very well grown. King Pietertje Ormsby Piebe, his sire, is a sire of show ring winners as well as a long-distance bred sire.

Kirby Martha 2d, his dam, produced 32 lbs. in 7 days and 978.58 in a year as a 4-year-old.

His 2 nearest dams average 1,184 lbs. butter, 24,288.8 lbs. milk as 4-year-olds. We offer him on easy terms of payment.

Write for more information.

Hargrove & Arnold Norwalk, Iowa

Herd Under Federal Supervision

SIR JOHANNA FAYNE



42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS

DAVENPORT, IOWA

ROME FARM HOLSTEIN FRIESIANS

Son of Woodcrest Sir Clyde

Born Dec. 1919—light in color. *Dam*:—A yearling with 14.7 lbs. Butter 7 days, and a 10-month record of 451 lbs.; she by K. K. S. V. 24th and from a 30-lb. cow. *Sire's dam*:—33 lbs. 7 days and 970 lbs. a year. He is perfectly straight—a splendid individual. He is priced to sell. Write about him today

W. B. BARNEY & SONS - - CHAPIN, IOWA

YOUNG BULLS

Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.

Hubert Stuckart, - Raymond, Iowa

365-Day Milk Production

Still Another One

The May bull has been sold, but we offer another grandson of Sir Pietertje Ormsby Mercedes out of a granddaughter of Colantha Johanna Lad, born July 30, 1920. A handsome calf and well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within the reach of the farmer or small breeder.

Cerro Gordo Farms, Mason City, Iowa

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

If you knew of a way to put money in your pocket you'd take advantage of it, would'nt you? Well there is a way.

BOOST

Boost this Holstein-Friesian game — the biggest business on earth.

Naturally we have felt the pressure of these abnormal times of readjustment after the war—what business has not—but we have a business that has weathered the storm better than any other.

The Holstein cow has not been affected—she has gone right on milking, making her yearly contribution in the way of a splendid calf—and paying a handsome profit.

What other business on the face of the globe can make the same showing?

Concerns holding large stocks of merchandise are practically paralyzed, so far as active business is concerned because of the slump in values. A stock of merchandise lying on a shelf does not produce any income.

Is that true of the Holstein cow? It is not. She goes right along producing her tremendous amount of milk daily—to say nothing of her calves.

If men in other lines of business had as much to brag about as we have — they would do limitless advertising.

What we need in this Holstein game is boosters.

We're Boosters. Are you?

J. M. HACKNEY

Minnesota Holsteins



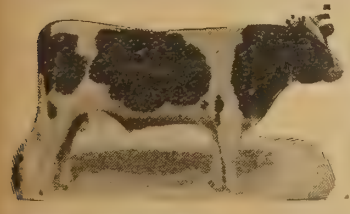
Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Just About Ready for Service — $500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.



Lola Segis Pontiac Homestead

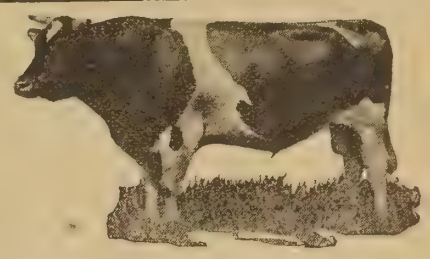
the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

Serviceable Sons of "Piebe"

are for sale. We have several from well bred, good, year record cows, cows with records up to 1,100 lbs.

Piebe Laura Ollie Homestead King is the phenomenal present day sire with 7 daughters that average over 20,000 lbs. milk as 2-year-olds. He is a show bull as well and his sons and daughters have been winning at the shows this fall.



Better write us at once or, better still, come and see us.

MINNESOTA HOLSTEIN CO., V. S. Culver, Sec'y & Mgr., Austin, Minn.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINFRAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.

E. J. BROSIOUS, - - Stillwater, Minn.

Hitch Your Wagon

to a STAR. If you want the blood of King Segis Pontiac Count and haven't the money to get a son, investigate King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired." Our bull circular is stamped. We are waiting for your address.

Flecks Farms, Faribault, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d, a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Mankato Holstein Farms

Our Herd Bulls

King Colantha Ormsby Bess, A Sir Pietertje-Bess Burke combination. Nine dams average over 1,000 lbs.

A son of Ormsby Korndyke Lad. Ten daughters over 1,000 lbs. butter, eleven over 22,000 lbs. of milk.

A son of Sir Pietertje Ormsby Mercedes 14th, that great transmitting show sire.

Both Males and Females For Sale

Marlow & Randall, Mankato, Minn.
(*A Federal Accredited Herd*)

MONEY

Is Hard to Get. So Are the Right Kind of Bulls!

We have both. Don't go without the bull you need just because money is tight. LET US HELP YOU. We also have a few females. WRITE FOR OUR BARGAIN LIST AND PAYMENT PLAN. Every milking animal in our herd has an official record. We need the barn room. Take advantage of this opportunity. SATISFACTION GUARANTEED.

GRAHAMHOLM FARMS, Holstein-Friesians
Federally Accredited.

H. R. Searles, Mgr., Rochester, Minn.

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

RICHLY BRED

HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes,** a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby,** a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.

Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

Sir Ormsby Segis Korndyke

grandson of Pietertje Maid Ormsby on sire's side and from a good daughter of King Segis Pontiac Count, heads our herd. Our bulls are all sold but we will book orders for future delivery. We have a few good high grade cows and heifers for sale for cash or on time.

ISLAND PARK STOCK FARM,
Hanscom & Anderson, Props.,
R. F. D. No. 1, St. Cloud, Minn.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Make Your Cows Happy- And They Will Give More Milk

It is Christmas — what better gift for faithful, ever working cows than James drinking cups?

Cold weather thirst—the great thief of the winter milk pail—vanishes completely when James drinking cups are installed.

With James cups, your cows can drink whenever they like, as much as they like, at the temperature of water they like, any minute of the day or night.



No More Icy Water

There is no more going thirsty three-quarters of the time—no more herding the cows out to drink and herding them in again—no more frozen tanks to chop open—no more day-after-day, body-freezing, wind-biting, winter chore to worry about in watering your herd. James drinking cups put an end to all this, once and for good.

Hundreds of dairymen have found out that they were not giving their cows enough water to drink.

When they installed James cups, the amount of milk received from the herd increased suddenly.

But there was no magic about it.

It was simply the natural consequence of following out natural laws.

Just as too little feed means too little milk; so not enough water cuts down milk yields.

Proven by Milk Records

An investigation was made in 28 herds (759 cows) where milk records were kept. One herd showed an increase of from 5 up to as high as 10 lbs. per cow, per day, just as a result of giving the cows all the water they wanted whenthey wanted it.

Four herds reported an average increase of 4 lbs. per cow, per day; three stated 3 lbs.; five showed 2 lbs., three 1½ lbs.; one ¾ lbs.; one reported an increase in milk yield valued at $8.56 per cow, per year; one averaged $5; one $10; one received 3% increase; one 8%; two 10%; one 12½%; one 20%; one 33⅓%; and only one herd out of the 28 found that the increase was "not much." An average increase per cow per day of 2.45 lbs.

And now you ask yourself the question, "Can I afford James Cups in my barn?" "Would it not be better to wait until next year?"



You Lose by Waiting

The plain fact is that if next year some one were to make you a gift of the James cups, you would lose money by waiting.

Two pounds milk per cow per day, for the 200 days the cows are in the barn, means 400 lbs. of milk, which at $3 per cwt. is a total of $12 for the season.

In these days when feed and other costs are high, can you afford to neglect this extra profit?

Don't put off this drinking cup proposition. Write us at once for a definite price estimate covering a drinking cup installation in your barn.

Barn Book Free

If you are interested in other labor saving equipment for the dairy barn such as cow stalls, carriers, steel pens, ventilators, etc., or if you are interested in up-to-the-minute ideas in the planning of the new barn, ask also for our big barn building and barn equipment book "The Jamesway No. 23".

James Mfg. Co., Ft. Atkinson, Wisconsin. Elmira, New York

The James way

Labor Saving Equipment for the Dairy Barn

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HOARD'S DAIRYMAN

A WEEKLY JOURNAL OF DAIRY FARMING



Fort Atkinson, Wisconsin

December 31, 1920

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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FOREIGN SUBSCRIPTIONS may be sent through news dealers and book sellers in all foreign countries.

All foreign countries in the Postal Union $2.50 a year; not in the Postal Union $3.00, including postage.

Correspondents must not expect us to acknowledge the receipt of letters containing remittance for subscription. The receipt of Hoard's Dairyman is sufficient notification that money has been received. The label on the paper will show date to which subscription is paid. In case of renewals, if date on label is not changed within two weeks after remittance is sent, inform us at once.

We solicit advertisements of meritorious articles needed by the farmer. We try to keep our advertising columns clean and wholesome, that they may merit the patronage and confidence of our readers. Unwholesome, immoral, and quack medical advertising are excluded. A sincere effort is made to exclude frauds, irresponsible and unscrupulous firms. We will always take it as a favor to be notified whenever any advertiser's dealings with a subscriber are in bad faith or evidence a lack of business honor. Advertisers generally recognize the readers of Hoard's Dairyman as an up-to-date class of farmers, who farm with business-like methods, and we hold our columns for the patronage of only those with whom our readers can deal with profit and satisfaction.

ADVERTISING COPY must be received eight days previous to the date of publication. Advertising to be classified or changes in advertising must reach us twelve days previous to date of publication.

Entered at Fort Atkinson, Wis., as second class matter.

A unique bonus has recently been offered to the dairymen of Effingham County, Illinois. H. J. Rucker, the farm adviser, has been promoting the tuberculin test in this county for some time, and, in conference with the milk buyers, he obtained a bonus of ten cents per hundred pounds of milk produced from a tuberculosis-free herd, under federal supervision.

This is the same Southern Illinois county that recently signed 17 members to the State Holstein-Friesian Association, and which took first prize with a Holstein County herd at the Illinois State Fair. T. R. LOVETT.

Indiana Dairymen Will Meet at Lafayette

The annual meeting of the Indiana State Dairy Association will be held at Purdue University, Lafayette, Thursday, January 13, 1921. A program of unusual value to the dairymen of the state and in keeping with the new problems of the dairymen is being prepared and everyone interested in the dairy business should make an effort to be present.

On the following day, January 14th, the State Dairy Breed Associations will hold their annual meetings. This will enable the breeders of dairy cattle to attend the two conventions as well as to attend the sessions of the annual Purdue short courses held during this week. It should be an unusual round-up of dairymen. Special plans are being made for a dairymen's banquet on Thursday evening and the committee in charge of the program is anxious that the dairymen will bring their wives to this convention. They can attend the dairy association program, the Indiana Home Economics Association meetings or the women's sessions of the farmers' short courses. A detailed program of the meetings will be issued and copy of same can be secured by writing C. R. George, Secretary, Lafayette, Indiana.



THE DAIRY OPTIMIST

W. LIVINGSTON LARNED

The Finer Purpose

The New Year dawns with hopes held high,
And visions spreading o'er the sky.
Once more we say: "A better year,
A nobler voice for God to hear."
The purging thought—the wish to do,
Brings faith a little nearer you.

If we but want to mend our ways,
Some subtle sense the wish obeys.
Religion rests in strong desire,
Although we may be tried by fire.
Each new resolve—each sweeter thought,
By wireless stations soon are caught.

The love we bear for those around—
The reverence for seed and ground—
The cleaner challenge of the soul—
These represent a higher goal.
The slate is clean—the year is new,
Let's plan for finer things to do!

Dairy Joe's Philosophy

Every time I draw up a set of New Year's resolutions, some fool cow kicks over the bucket and makes me cuss or a hired hand neglects his work and causes me to mistrust mankind.

I have changed my plan of operation this New Year—I'll resolve not to break the resolution that I made last year—and broke.

I've promised myself, beginning January 1st, that I'll not question judges at county fairs when they give the other fellow the blue ribbon—but I can't help but think my cows ought to come in first, just the same.

A New Breed

"Had lots of folks spending the holidays with you this year, didn't you? City folks? Have enough turkey to go round?"

"Yep. But there is one thing sure; I'll have to find a new breed of bird that is breast all over and white meat in the wings."

Resolutions

The feeling of remorse.
The writing down of new resolutions.
The resolve not to smoke a pipe.
The promise not to scold the boy.
The sense of satisfaction.
The lost carried around in a vest pocket.
The boasts you make to the wife.
The first day you keep 'em all.
The second day—but getting harder.
The third day—hungry for the pipe.
The fourth day—a sneaky smoke back of the barn.
The argument with yourself about it.
The scolding of the boy because he failed to cut that stove wood.
The lost list.
The resolve to start all over again next year.

If You'll Stay Here

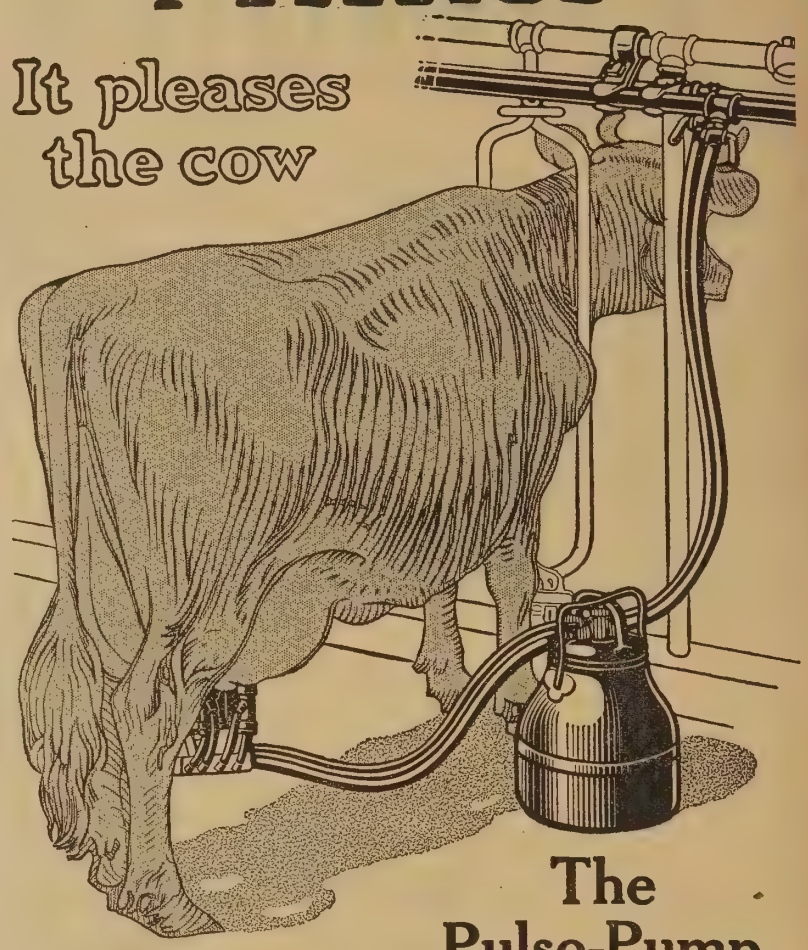
Boy, I'll give you acreage,
Seeds to plant it with, and all,
Pick your tractor from the page,
There'll be harvests in the fall.
Out there, yonder, on the hill,
Is a pasture, fair and fine.
For your herd—a cow or two,
Just as pedigreed as mine.

Calves? Of course, a pair of them,
Take your pick—and of the best.
That brown youngster is a gem!
Take another from th' rest.
In the barn your own, fine stalls,
Bags o' feed and everything,
It's the heart of me that calls!
But I want you in th' spring.

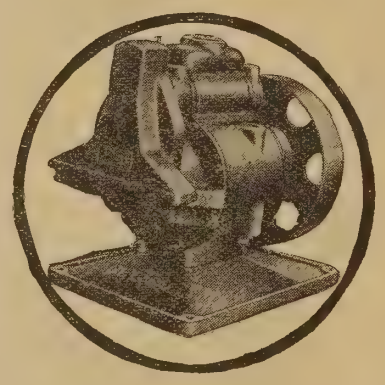
Motor car and three nights off
Just to see th' picture shows.
There's a new road, building, son,
For th' comin' of your beaus.
Best of all—a mother's love
Mixed with mine, is waiting here.
And a good-night kiss for you
When th' trouble times are near.

The De Laval Milker

It pleases the cow



The Pulso-Pump



(The Pulso-Pump is not shown in the part of the Milker installation pictured above. It is connected with the power in any convenient part of the barn)

The De Laval Pulso-Pump produces the vacuum which draws the milk from the cows, and it also controls the action of every Udder Pulsator.

This combination in one unit of the vacuum-producing and pulsation-controlling features of the Pulso-Pump is a decided forward step in milking machine construction.

The mechanism of the Pulso-Pump is entirely housed in to keep the oil in and the dirt out; it runs in oil, evenly and quietly.

The Pulso-Pump is built with Hyatt roller bearings and the construction throughout is such as to insure uninterrupted and satisfactory service without the need of adjustments or attention, other than the addition of oil about once a week.

The De Laval Milker is a distinctly different type of milking machine. It is alternating, positive, uniform and gentle in action — and requires no adjustment of any kind. It is faster, more reliable and more sanitary than any other method of milking.

The De Laval Milker is sold with full knowledge of the fact that more is expected of it than of any other milker — due to the Company's reputation for service and satisfaction to users of De Laval machinery.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway New York | **29 East Madison Street Chicago** | **61 Beale Street San Francisco**



Improvement Comes Through Co-operation



Ed. Nordman



ED. NORDMAN

UNREST from our economic evils is general. The complaints which are heard from all sides are the best signs of the discontent which prevails in society. They come from almost every group. Farmers complain that they do not get the right compensation for their products—consumers, that they pay too high prices for these products.

This disagreeable situation has become worse during the last few weeks. The prices on some farm products have dropped so low that farmers have decided to hold their products rather than to sell them at a loss. On the other hand, the consumers generally have not felt to the same extent this fall in prices. This situation seems to be bewildering, to say the least. And it forbodes many hardships both to producers and consumers.

To alleviate this state of things many remedies have been proposed. It is impossible, however, in this article to enumerate all of them. The people who propose them belong to either of the two following groups—those who believe that action by the federal or state government can remedy the situation or those who consider that the only remedy is to be found in the pressure of the people themselves.

A study of the economic history of America during the last few years shows that neither of these factors alone can remedy the present abnormal situation. The only worth-while results can be obtained by a combination of these two factors. Both the federal and state governments can do a great deal by passing suitable laws and devising various systems to enforce them. But laws, no matter how well devised to meet a situation, will not be effective unless they have the support of the people themselves. And even this support cannot be effective unless it is expressed through organization.

The whole secret of the disadvantageous position which the farmers occupy in respect to the business men with whom they deal is that they are not sufficiently organized. It is because of this that they are unable to keep watch and thus prevent the passage of laws unfair to them and it is because of a lack of concentrated organized effort that they are unable to exercise the necessary pressure to have favorable laws and decisions enforced.

There is only one form of organization which will benefit the farmers and that is co-operation which is an association on equal and equitable terms of persons for their common benefit.

When Farmers Co-operate

Co-operation among farmers in Wisconsin is not a recent event. Farmers begin to co-operate when they feel that they do not get large enough returns for their products or when they have to pay exorbitant prices for the supplies they need. The feeling of a need for co-operation in Wisconsin began shortly after the Civil war and co-operative enterprises began to appear during the days of the granger movement. But up to quite recent times co-operative efforts on a large scale in Wisconsin were marked by a number of failures. Farmers had to learn how to co-operate. They had to learn that co-operation can succeed only when certain conditions are present. Co-operative societies must grow from smaller to larger units. They must be formed by farmers living in the same community and who have identical interests. Co-operation, moreover, to be successful must be undertaken first in a field where there is no competition from a powerfully organized monopoly. And, above all, a co-operative society ought to be truly co-operative, which means that the value of shares held by one stockholder should be limited to a certain amount and that each stockholder should have only one vote notwithstanding the total amount of his shares.

There are many signs that co-operation is making headway among Wisconsin farmers. The number of successful co-operative societies exceeds the number of those which have failed. A hopeful sign of the way the co-operative idea is getting hold of the Wisconsin farmers is the number of attempts which are being made toward the federation of individual co-operative societies engaged in the same line of business. The spirit of co-operation which is rapidly spreading among farmers is valuable because it serves as a warning that the farmer will ultimately be in a position to deal with well organized business through effective associations of fellow farmers. The result will be that the bargaining power of the individual farmer will increase and he will be able to treat with the business men on equal terms. Outside of the increase in the bargaining power there are other and important advantages which result from co-operation. Co-operation enables the farmer to put the business activities of his farm on a basis similar to that of a large scale business. The needs of the individual farmer for supplies are relatively small. By combining his orders with those of other farmers he is in a position to place orders for supplies in large quantities and thereby obtain better prices. Co-operative marketing, on the other hand, by making possible large shipments reduces proportionally the expenses incidental to individual marketing.

Value of Co-operating

Co-operation is, moreover, of inestimable value in improving the business methods of farming. The individual farmer does not have much time to devote to the business side of the management of his farm. He is tied to his farm much more than the manufacturer to his plant. Because of the standardized system of production in the urban industries the manufacturer can afford to leave the management of his plant to foremen and managers and is in a position to devote the greater part of his time to the business and financial phases of his enterprise. The farmer, on the other hand, cannot leave the management of his farm to his hired men. Not only must he closely supervise his men but he must dig in and work along with them. He has very little spare time to locate the best places to market his products and to buy his supplies. By uniting with other farmers he is in a position to hire a competent man to handle his products, one who is responsible to the co-operative association of which he is a member. This manager can keep in touch with the fluctuations in prices, can find the best market, and in general can find buyers who will offer the highest prices.

From what has been said above, it is clear that the hope of the farmer for fair and just returns on his products is in co-operation. By co-operating, farmers are in a position to deal as equals with organized business, they are able to reduce the cost of production by obtaining supplies at low rates, they will reduce the cost of operation in marketing and they will be in a position to locate the best markets for their products.

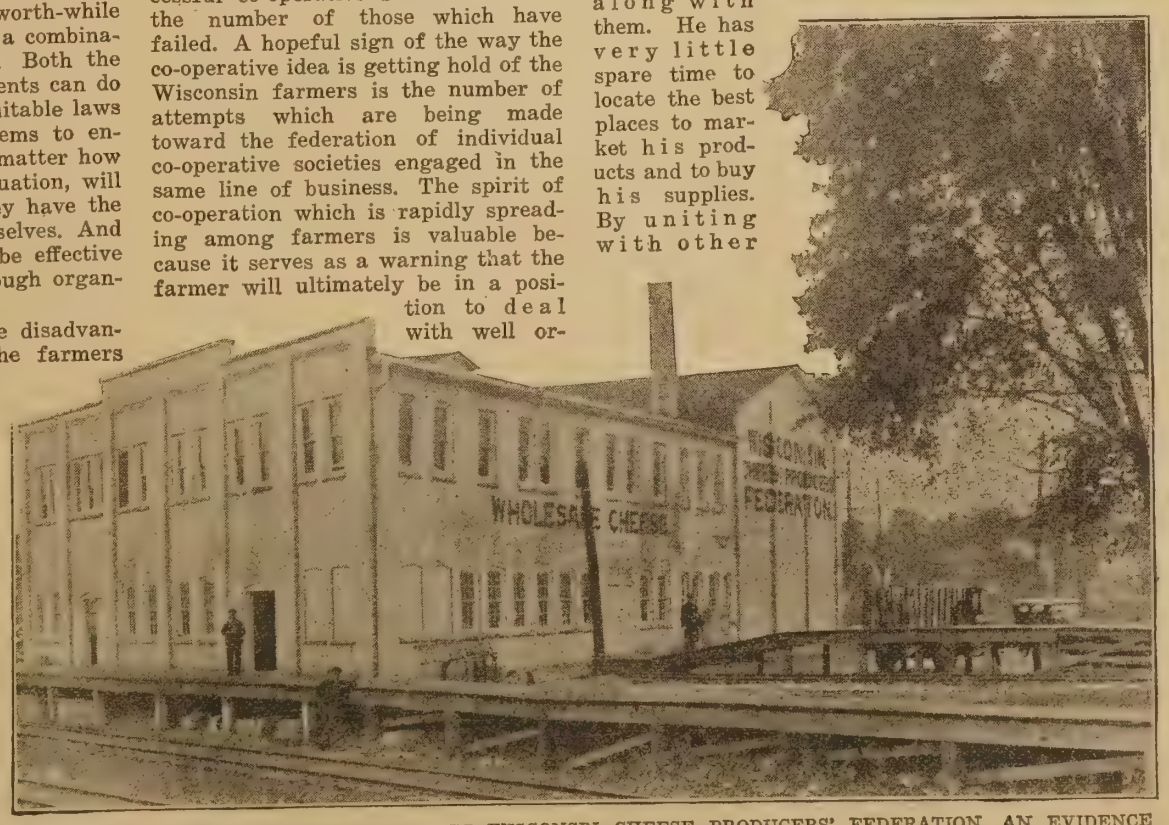
Co-operation works, then, towards the improvement of the economic position of the farmer. The next problem to be considered is how to improve the position of the consumer.

The general opinion seems to be that the interests of the farmers and consumers are antagonistic. When consumers pay high prices for farm products they are apt to lay the blame on the farmer thinking that the full price goes to him. As a matter of fact, however, the high prices paid by the consumer do not necessarily mean correspondingly high prices for the farmer.

Commodities cannot be transferred directly from the producer to the consumer. There must be certain agencies whose business it is to transfer these commodities. These agencies are known under the name of "middlemen" and they are an indispensable part of the distributive system. And so far as these agencies work efficiently and receive a remuneration commensurate with their services, they are of real value to society. There are, however, in many branches of distribution more middlemen than are necessary for the transfer of commodities from producer to consumer. In other words, there is a duplication of services. These unnecessary middlemen represent an unnecessary expense which is charged to the price the consumer pays and deducted from the price the farmer receives.

The discrepancy, between the producer's price and the consumer's price is due, however, to a very considerable extent, to the arbitrary fixing of

(Continued on page 1038)



WAREHOUSE AND COLD STORAGE OF THE WISCONSIN CHEESE PRODUCERS' FEDERATION, AN EVIDENCE OF PROGRESSIVE CO-OPERATION

The American Farm Bureau Federation

J. R. Howard, President



J. R. HOWARD

WHEN a national organization of any group or class of individuals leaps into existence almost over night and in less than a year's time gathers to itself a high grade, paid-up membership of over a million members, with state organizations in thirty-three states, it usually means one or both of two things; either there is a tremendous need for that organization or there is a tremendous driving force pushing it along. Since no "driving" tactics have been used in connection with the organization of the American Farm Bureau Federation, I believe it is fair to conclude that there has been and is today a tremendous demand and need for such an organization as the founders of the A. F. B. F. visualized.

All have united to make this organization a huge success. The farm press has been particularly liberal and untiring in its efforts, the various state agricultural colleges and experiment stations, the U. S. Department of Agriculture, and even other farm organizations have all gotten behind the idea embodied in the A. F. B. F. and have pushed it to the front. Even the general public has been quick to accept the idea of a great national organization of farmers with strong, centralized authority.

But, of course, the growth of the A. F. B. F. has not been quite so startlingly rapid and spontaneous as might appear at first glance. We must remember that many of the state units which make up the present national organization have been in existence for several years and that the county units which make up the state organizations have in some instances been in active operation for from five to eight years. In fact, it is this method of organization, growing from the county units to the state units and from the state units to the national unit, rather than vice versa, which we count the greatest strength of the organization. It is a natural movement from the ground up rather than from the top down.

But what do the members who have so readily put up their money and so willingly given of their time look to the organization to do for them? What is it that they expect the American Farm Bureau Federation to accomplish?

Undoubtedly they look to the A. F. B. F. to lead the way in the curing of their economic, legislative, and social ills. This was the idea firmly imbedded in the minds of that group of earnest, forward-looking farmers who met in Chicago in November of last year and laid the foundation principles—and this is the idea no less vividly in the minds of the individual farmer who signs up his three-year or life membership and pays at the rate of $5 to $15 per year. To their minds the A. F. B. F. is not to be a mere debating society, but a thing alive and vibrant with action—an instrument with which to reshape and carve out the destinies of agriculture on a higher plane and scope.

And this is the central idea that has dominated and influenced the every act of the officers and executive committee of the American Farm Bureau Federation. We have tried to keep in mind that we are building permanently—building for next year and the year after and for all time. Rather than make a hasty decision or take a hasty step which might reflect discredit to the organization, we have preferred to proceed slowly, making certain that each step is right. On that foundation alone can we build a structure that will stand and endure.

Tackling the Marketing Problem

But with all our caution we feel that we have made real progress. We have, first of all, endeavored to knit our organization together into a harmonious, well ordered unit. We have tackled the great problem of efficient marketing of farm products and now have a committee of seventeen of the best marketing men in the United States working out the principles and details of a plan which, when finally completed and adopted, should revolutionize marketing methods and secure for the farmer a greater portion of the consumer's dollar. It is too early yet to announce just what plan will be adopted, but the progress made is encouraging.

One committee is working on the marketing of grain, another on the marketing of live stock, and the Federation has called conferences which will probably result in a committee to work on the marketing of dairy products and another to cover the truck and vegetable field.

Our presentation of the farmer's viewpoint on the railway rate increase case before the Interstate Commerce Commission was practically the only argument made for the public. It is believed that the statistical data presented by our representative after several months of investigation was effective in bringing about the reduction of a billion and a half dollars in railroad valuation on which the rates were computed.

We have attacked national legislative problems and have already had considerable success in getting favorable action before Congress and through the various commissions and bureaus at Washington. Our Washington office is constantly at work on the farmers' legislative and economic problems and the review of a month's activities at that office discloses an amazing variety of interests, all of which intimately affect the farmer's well being.

A Month at Washington

A hurried review of a recent report of the Washington office shows: a study made of the general financial and credit situation including a number of conferences with the Secretary of the Treasury and the Governor of the Federal Reserve Board; securing through the Interstate Commerce Commission a readjustment of rail-lake rates so as to encourage water transportation of grain; intercession with the Attorney General in connection with action brought against the California Raisin Growers' Association; securing modification of prohibition rulings so as to enable cider to be freely produced and sold; investigating conditions in the canning industry with a view to getting better prices for canning stock; protesting to the President against the proposed removal of a member of the Federal Reserve Board who had shown an understanding of the farmers' credit needs; securing from the U. S. Treasury Department official approval of a Farm Account Book which will enable the farmer to make his returns with much less trouble; studying the income tax system of England; securing an emergency supply of refrigerator cars for the peach and grape shippers of New York State; arranging for daily telegraphic market news throughout the Middle West in co-operation with the U. S. Bureau of Markets; protesting to the Attorney General against the acceptance of the stockyards disposal plan proposed by the packers; appearing before the Federal Horticultural Board to argue a change in policy as regards the establishment of quarantine, restricting same to portions of states rather than quarantining an entire state; investigations concerning the organization, scope, purpose, and present efficiency of the International Institute of Agriculture at Rome; studying the world wool marketing situation and investigating the possibility of utilizing wool supplies through the making of blankets and cloth on a toll or cash basis for the farmers' use; presenting to the Department of the Interior arguments relative to Arizona homestead eviction cases and Wyoming water rights cases; taking up with the Interstate Commerce Commission the matter of reclassification of nitrate of soda so as to secure a freight rate more nearly comparable with the commercial fertilizer rate; prosecution of cases of alleged discrimination against co-operative shippers in Indiana; investigating the possibility of a coal famine in the Northwest during the coming winter; and many other matters of a similar nature.

In addition to this, "getting ready for Congress" is, of course, a game all in itself.

The A. F. B. F. Legislative Program

A great number of bills of outstanding importance to the farmer are now before Congress or soon to be introduced. The most important of these are listed below:

The Capper-Volstead Bill, designed to remove all doubt as to the legal right of agricultural producers to market their products co-operatively.

The Kenyon-Anderson Bill providing for the creation of a commission which shall regulate the operations of meat packers through a system of licensing.

The French Truth-in-Fabric Bill would require manufacturers of woolen fabrics to honestly label their products in such a way as to show the final consumer the percentage of wool and the percentage of shoddy used.

Standard Containers (Vestal Bill), a bill to standardize baskets, hampers, and other containers of fruits and vegetables so as to require them to conform to well known and easily recognized sizes and shapes, thereby eliminating confusion and fraud.

The Kahn-Wadsworth Bill authorizing the government to operate the air fixation nitrate plant at Muscle Shoals, Ala., for the production of nitrate for fertilizer.

The Nolan Bill is a bill drafted and backed by labor and manufacturing interests and designed to shift a much larger share of the tax burden on the shoulders of the farmer. The bill provides a flat tax of one per cent (in addition to all other taxes) upon all land values in excess of $10,000 excluding, however, the value of all buildings thereon.

A German Credit Bill (Smith Bill). Congress will be asked to grant a credit to Germany approximating a billion dollars, to be used in buying agricultural products and other raw materials in their country, this being approximately equal in amount to the funds now held by the Alien Property Custodian.

The Townsend Highway Bill. Farmers favor a national road policy which will provide farm-to-market roads rather than "through" roads designed principally for long distance hauling and touring. The present Federal Aid system, involving the 50-50 principle whereby the government stimulates road building by matching state and local funds, is believed to be better suited to meet the road building needs of the country as a whole than is the "through" road plan proposed in the Townsend Bill. Due provision must be made, however, for "through" roads in undeveloped sections.

Farm Financing Measures. The Federal Farm Loan Act must be strengthened and extended. All questions of the constitutionality of the tax exemption feature must be removed.

The Federal Reserve Act must be amended so as to permit of freer and more direct access to the benefits of the act by producers of agricultural products.

A Rural Credits Bill embodying the necessary features to provide operating funds to worthy farmer borrowers not having ordinary commercial banking credit must be provided.

Taxation of Profits vs. Taxation of Capital. In anticipated tax revision measures the farmer demands that the principle of taxation of profits and income rather than the taxation and consequent reduction of production capital be observed. Any attempts to eliminate the excess profits tax and place the burden on weaker shoulders must be opposed.

Tariff Policies. The farmer demands compensatory privileges, either through tariffs or basic trade provisions, as a protection against the agricultural competition of countries having a standard of living not on par with our own, and as an equalizing offset to the great benefits constantly enjoyed by the industrial world by reason of extensive tariff protection.

Support of U. S. Department of Agriculture. Believing the U. S. De-

(Continued on page 1039)



Putting the Farm on a Business Basis

W. F. Handschin



W. F. HANDSCHIN

In attempting to work out the most successful organization for a dairy farm we need to have two kinds of information. First, we need to know the facts and principles involved in the organization of farms in general, as well as dairy farms in particular; and, secondly, we must have the detailed facts regarding the particular farm under consideration.

The first class of information will be obtained largely through the study of the principles of economics, farm management, and accounting as applied to dairy farming; the second can be secured only through a detailed study, by means of records, accounts, and analysis, of the particular farm business to which the general facts and principles are to be applied.

The Field Still New

While the definite information available regarding the principles involved in the organization of dairy farms is still far from complete, a good beginning has been made, and much valuable data is being added by the various agencies interested in the collection and interpretation of such facts. Most important among these agencies are the state colleges and the United States Department of Agriculture; cow testing associations and other associations of dairymen, both state and local; the farm bureau; and various other organizations, both public and private, primarily interested in getting at the real facts regarding the business of dairy farming.

Much Information Already Available

We have facts on the distribution of farm property investments, such as land, buildings, machinery, equipment, and live stock. We have information as to the difference in the productive capacity of individual cows, the importance of selecting for high production by means of performance tests and the possibilities for improvement through the use of better foundation stock. We have information on the selection and combination of feeds and the most profitable methods of feeding.

We have made a fair beginning in showing the degree of diversity in production which will probably be most profitable for the dairyman, when measured by the net return for the entire farm as a unit. That is, the extent to which the dairy farmer will find it profitable to grow crops for feed or sale, and to what extent he may be justified in taking up the production of other classes of animals such as swine, sheep, or poultry.

We have considerable data showing both the man and horse labor requirements per acre and per cow, for farms in several important dairy regions. We know the cost of producing dairy products not only in terms of money, but, what is much more important, in terms of the feed, man labor, horse labor, and shelter requirements.

Size of Farm

Much of the discussion regarding the size of farm in this country has not given sufficient recognition to the differences between the United States and the older and more densely populated countries. While we are constantly having our attention called to small dairy farms, which have been unusually profitable, the usual conclusion that they are profitable because they are small and well tilled does not seem to be generally warranted.



PIGS IN ALFALFA. ECONOMICAL PORK PRODUCTION IS AN ALMOST NECESSARY ADJUNCT TO PROFITABLE DAIRY FARMING

The results of the farm management contest, including accounts from 150 farms, conducted jointly by Hoard's Dairyman and the Department of Farm Management of the University of Wisconsin during the year 1913 as reported in Hoard's Dairyman for April 10th, 1914, indicates that the most profitable dairy farms in Wisconsin are approximately twice as large, as measured in acres and total capital, as the average farm in the counties in which they are located.

Boss, Benton, and Cavert reporting in Bulletin 172 of the Minnesota Station on "Factors Influencing Profit" draw the following conclusions, based on their study of 400 farms in one of the most highly developed dairy counties in Minnesota: "Five factors were found to be important in obtaining satisfactory labor incomes: (1) size of farm; (2) crop yields per acre; (3) returns per unit of productive live stock; (4) number of days of productive labor annually accomplished per man; and (5) number of days of productive labor annually accomplished per horse." Also that "The size of the farm business is a factor which usually very greatly influences the size of the labor income. With other factors the same in a large business as in a small one, the large business will return the greater labor income.

Nicholls and Hutson in Bulletin No. 127 of the Kentucky Station make the following statement based on their study of 162 dairy farms: "On the average, the good sized farms made larger profits than the smaller farms."

Warren, in Bulletin 349 of the Cornell Station based on an analysis of the records of 2,743 farms, draws the following general conclusions: "Of course, there are other important factors for success in farming, but on the great majority of farms the area in crops, the yield of these crops, the returns per animal, and the diversity of the business are the most important factors."

On the basis of all of the data available, the most profitable dairy farms are those which range from 50 to 100% larger in the size of their business than the average farms. It would seem to be fairly well demonstrated, therefore, that farms of average size or smaller which make unusual profits under the present economic conditions obtaining in the United States do so in spite of being handicapped in size rather than because there is merit per se in "the small farm well tilled".

Distribution of Investment

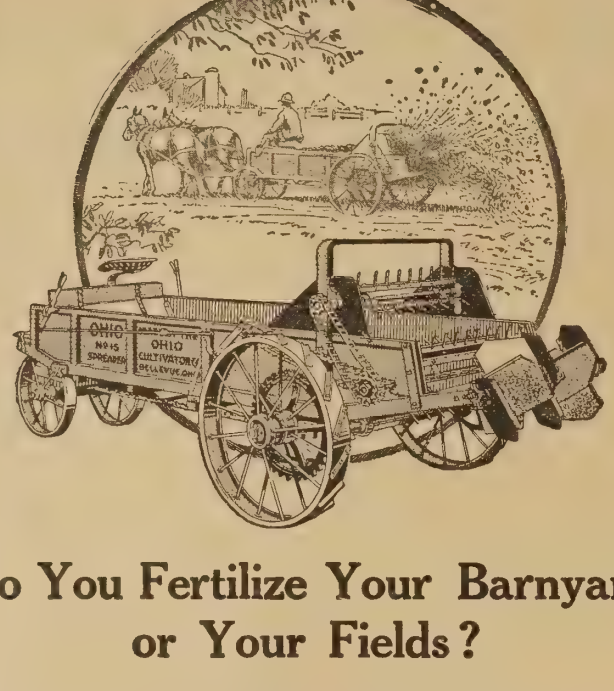
The distribution of investment in the various items of farm property depends in large measure on the amount of capital available. The dairyman whose capital is limited should give serious attention to the question of getting control of a business large enough to offer adequate opportunity to fully utilize not only his labor but his managerial skill. It may be to his advantage to rent all or a part of his land. In case he is very limited as to capital, he may also rent all or a part of his live stock and equipment. If we may quote again from the conclusions drawn by Warren in Cornell Bulletin No. 349, published in 1914, we shall find the question admirably summed up in the following paragraph: "For efficient farming in New York an investment of $10,000 to $20,000 is usually necessary. In states where land is higher in price a larger amount is needed. Occasionally a farmer does well with a capital of $5,000 or even less, but such instances are not numerous. With less than $10,000 it is usually necessary to work with very inadequate equipment, poor stock, and too little land. The capital need not all be owned by the farmer. The land and some of the stock may be furnished by a landlord, so that the tenant farmer need not have a very large capital. One who owns a farm may borrow part of his capital or may own some land and rent additional land."

Where it is possible for the dairyman with limited capital to rent land, stock, and equipment on reasonable terms, he will do better to do so than to handicap himself by trying to operate entirely with his own limited capital. While he may well look forward to the time when he may be able to own his own land and equipment, until he can do so on advantageous terms he will do well to be guided by economic experience.

For the dairyman who works largely or entirely with his own capital there is still the problem of making the best distribution of his investment. He must decide what proportion of his capi-



A SCENE FROM NORTHERN ILLINOIS WHERE RED CLOVER AND DAIRY FARMING GO HAND IN HAND



Do You Fertilize Your Barnyard or Your Fields?

The manure pile beside the stable door is washed by the rain and soaked by the drippings from the eaves, and in six months one-half of its fertility is in the only soil on the farm where crops are never grown.

The hauling and spreading of what is left—using the old farm wagon—is the sort of work that drives the farmer's boy to city tasks.

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tal he will invest in land, buildings, machinery and equipment, and live stock. In most of the important dairy regions of the Middle West, as based on the census returns, the investment in land makes up from 60 to 70 per cent of the total investment. On the basis of the somewhat more detailed studies made in several important dairy regions, the proportion invested in land is even higher for the most profitable farms. This is perhaps due, in most cases, to the fact that these farms are larger than the average, and the investment in buildings and equipment therefore makes up a relatively smaller proportion of the total investment than it does on the smaller farms. That is, it is possible to make more efficient use of buildings and equipment on the larger farms. The investment in these items is therefore less per acre.

While the proportion of the investment in buildings must necessarily be higher for the dairy farm than the general farm, it is important to keep it down to the lowest possible point consistent with: (1) comfortable housing for animals; (2) economy in operation, particularly in the use of man labor; (3) satisfactory housing for feed, machinery, and miscellaneous supplies; and, (4) a reasonable upkeep and depreciation charge.

An investment of $30 to $50 per acre in farm buildings, i. e., exclusive of the farmer's dwelling which is a personal item, means an annual expense of from $3 to $6 per acre per year for this item alone. That is, it may frequently equal or even exceed a fair rental for the land in the community. This is especially likely to occur when the investment in buildings is high or the farm is small. When both of these conditions obtain on the same farm the burden becomes doubly heavy.

The same general principles apply equally to the investment in machinery and equipment. While it is smaller per farm and per acre, the carrying charge for upkeep and depreciation is relatively higher. The amount invested in these items should therefore be kept down to the lowest practicable minimum.

The proportion of the investment in live stock will be determined by the amount of stock which is to be carried. If all of the crops produced are to be fed, the proportion of investment in animals will be higher than where only a part of the crops are fed on the farm. If the farm is to be stocked to the point where additional feed must be purchased, the proportionate investment in animals, buildings, and feed will increase.

The question of investment in live stock is necessarily also affected by the quality of the animals carried. If high grade or pure-bred animals are used, the investment in this item is higher than with low grade or scrub stock.

The Productive Organization

We come now to the question of the organization of the cropping system and the relation which it shall bear to the system of animal production. In working out the productive organization of his farm, the dairyman needs to think not only of the herd and its profits but of its relation to the crops and other stock of the farm from the standpoint of making the largest net return for the entire farm business as a unit. He must decide whether he will attempt to grow all or a major portion of the feed; whether he will grow some crops for direct sale, or whether he will depend to a considerable extent upon purchased feed to carry his animals. He can answer these questions best perhaps by studying the results of successful dairy farmers.

Diversity of Production

Pearson, in Illinois Bulletin No. 216, entitled "The Cost of Milk Pr duction", reports that for 680 dai farms, located in Kane and McHen counties, (1911—12) the average ca receipts per farm were $2,448 f milk, while the other receipts fro various sources were $1,647. That more than 40% of the farm receip were from sources other than the sa of milk.

The results of the 150 farms stu ied in the Wisconsin Farm Manag ment contest already referred to, sho that these farms received on the a erage 23.07% of their total receip from crops; 36.1% from the sale live stock; and 36.29% from the sa of live stock products. The farms ca ried on the average 5.21 horses, 17. cows, 20.39 ewes, and 6.65 brood sov per farm. If we study the data f the ten most profitable out of the t tal of 150 farms we find that pra tically the same proportions of oth animals were kept in addition to t dairy cows. That is, these farms we to a considerable extent diversifie they grew good crops, raised most their own feed, and fed it to dai cows, sheep, and swine, with the m jor emphasis in the dairy enterpri

Warren in Bulletin No. 349, say "A well balanced combination of ca crops and live stock usually pays be ter than does either extreme. The be combination varies with the amou of money that the farmer has, wi the quality of the live stock kept, a with the profits that come from cro Even with very profitable live stock nearly always pays to have some ca crops to at least a fifth of his tot sales. Unless the returns from li stock are very poor or unless t amount of money is very limited, usually pays to get at least half the income from stock."

Importance of Man Labor

In all lines of farming the cost man and horse labor is growing in i portance. This is true of dairy far ing, especially where man labor mak up a larger proportion of the total e pense than in more general farmin In the production of dairy produc man labor makes up from 20 to 30 of the expense of production, whi it makes only 5 to 10% of the e pense involved in the production pork, beef, and mutton. It is ther fore doubly important to make t most economical use of man labor dairy farming. This is to be accon plished mainly by means of a good r tation and diversification with li stock. These make possible a mo even distribution of labor throug out the year, so that each man a complishes more work. In developin efficiency and economy in handlin farm labor, management is of fir importance. Labor economy is large a matter of wise planning, whethe there are two or twenty men on th farm.

Keeping Farm Accounts and Record

Much emphasis is laid on cost a counting for the farmer, on the im portance of his knowing how much costs to produce corn, oats, whea beef, milk, and wool or other far products.

While it may never be possible fo any large proportion of farmers t determine their costs of productio for individual crops or animal prod ucts, it is important that farmer generally should have such informa tion regarding costs to determin which of their enterprises yield th greatest profits. Such information i already available in considerabl measure for many sections wher dairy farming is of importance. Fo most farming regions fairly definit standards are known as to what yields can be secured for the various farm crops. We know what are rea sonable standards for dairy cows per month or per year or in relation to the

kind and amount of feed consumed. We know standard requirements as to the number of crop acres which can be worked per man and per horse in most of our important types of farming. Fairly satisfactory standards as to the labor requirements are also available.

Applying Data Available

It is possible for the farmer to make all of the major adjustments in the productive organization of his business. This would include, mainly, records of crop production, feeding records, records of production for milk, butterfat, and other annual products, and a record of the inventories and financial transactions of the farm business as a whole. With such records available the farmer can make an intelligent analysis of his business and go ahead with a somewhat systematic organization of his farming operations.

Cost of Production and Price

For those who are expecting large returns from cost accounting as a means of price fixing, the writer can hold out little encouragement. Costs for the same product differ so widely on different farms and with different men, as to make the satisfactory fixing of prices on the cost basis impossible. A certain proportion of the producers engaged in any line always have costs so high as to make the matter of assuring them their costs of production out of the question. Any arrangement which does not assure, or guarantee, to all producers their costs of production will of necessity result in dissatisfied producers. Besides, if the least efficient producers are all guaranteed a profit we shall have no means of eliminating those who do not render an adequate return.

Those of us who do not believe in complete socialism must, it seems to me, be forced to the conclusion that without this constant process of elimination we can have no healthy industrial life either in agriculture or elsewhere. The bankruptcy court, the employer who weeds out the least efficient worker, and the competitive market which forces the inefficient farmer to accept a price below his cost of production constitute, after all, the public's best guarantee that it is being better served than it might be under a non-competitive system.

It is plain that a large proportion of farmers must have cost of production "plus a reasonable profit" if they are to continue producing. Otherwise they will transfer their activities to other lines of production. It does not follow, however, that at a particular time, or for any given article, the farmer or any other producer will be assured of getting back his costs of production. Just now farmers are suffering because they are being forced to sell some of their crops at less than it cost to produce these crops. But the same is likely true for automobile tires and other important commodities.

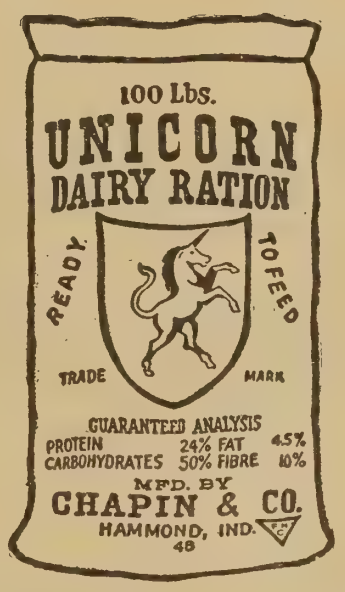
While costs must correspond with prices in the long run, they do not necessarily correspond at any given time. Nor can they correspond for all producers of the same commodity at any time. The writer believes there is still much work which must be done by farmers before we can have even a fairly satisfactory distribution of farm products and a reasonably just basis for prices between producer and consumer. In spite of the fact that the law of supply and demand does not ever operate with 100%, or even 90% efficiency perhaps, it has not been repealed, as many would have us believe. It has only been set aside here and there by government control, and because of violently abnormal conditions growing out of the war. It will be, in spite of many difficulties and inequalities, the chief factor in helping us to return to a normal financial and business basis.

While cost figures will have some value in the marketing of farm products, their chief value would seem to be in their application to the productive side of the business. They serve to point out which enterprises or products are returning the largest profit, as well as those which are responsible for losses. Cost data should serve as the means whereby the dairy farmer can analyze his business and work out the most effective organization from the standpoint of the essential requirements for successful operation.

Summary

Summed up, the requirements for the successful dairy farmer may be stated as follows: (1) He must have a business large enough to represent an economic unit for the region and type of farming carried on. (2) He must grow good crops. (3) He must feed the crops to good live stock, and be a good feeder and caretaker. (4) He must introduce a reasonable amount of diversity with crops and live stock in order to make the best use of his man and horse labor. While other factors may be of importance for the large majority of dairy farmers, the factors mentioned are of first importance in contributing to the success on a business basis.

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A McHenry County (Ill.) herd of 23 grade cows produced $743 worth of milk from $164 worth of Unicorn, fed straight.

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But have you figured feed against milk?

You may be astonished to find that for each dollar you spend for feed you are getting a return of only $2 or $3 in milk.

Where Unicorn is fed, $1 paid for feed brings you a return of $4 or $5 in milk.

Your own ration may be getting the milk, but it is not getting the profit.

Change to Unicorn. Get the same amount of milk, with less money spent for feed. The saving is clear profit.

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My Creed of the Out-of-Doors

I believe in the wonder of the out-of-doors, in the inspiration of the stars, and in the allurements of life in the open, and

I believe in the strength of the hills, in the silence of the night, and in the music of the birds and trees.

I believe, also, that my body was made for action, that my mind was made for thinking, and that my heart was made for loving in unison with the life in nature.

I believe that to laugh and sing, to swim and walk, to study and play, to eat and be happy, to be kind and free, to grow strong and good, is my God-given right.

I believe, too, that to be happy, I must be good, that to be worthy I must be kind, that to be loved I must think love.

I believe that God is as near as man, that I can hear Him in the brooks and pines, and that happiness and lasting peace are mine, as I live in the atmosphere of kindness so near me in the life or the open world.
—RUDOLPH CARE STOLL.

Bulletins of the Week

Brood Coops and Appliances, by D. M. Green. Farmers' Bulletin 1107, U. S. Dept. of Agr., Washington, D. C.

Poison Ivy and Poison Sumac and Their Eradication, by C. V. Grant and A. A. Hansen. Farmers' Bulletin 1166, U. S. Dept. of Agr., Washington, D. C.

Forestry Lessons on Home Woodlands, by R. R. Mattoon and A. Dille. Bulletin 863, U. S. Dept. of Agr., Washington, D. C.

The Price of Milk, by Professor Clyde L. King, formerly milk price arbitrator for the state of Pennsylvania. A book of unusual interest to milk producers. Will be supplied by Hoard's Dairyman on receipt of its regular price, $2.00.

Effect of Winter Rations on Pasture Gains of Yearling Steers, by E. W. Sheets and R. H. Tuckwiller. Bulletin 870, U. S. Dept. of Agr., Washington, D. C.

Cottonseed Meal Low in Price

SANDERS SOSLAND, MISSOURI

WHILE all feedstuffs have been under extreme pressure on markets, the high protein feeds, particularly cottonseed cake and meal, have experienced the most radical price readjustment. Linseed cake and meal, also bran and shorts, alfalfa, manufactured balanced feeds and the whole grains, have undergone a rather sharp revision downward, but none has maintained the pace set by the by-product of cottonseed. On the basis of the protein unit values of the various commodities used in dairying and other live stock operations, cottonseed cake and meal are the cheapest feeds available on markets of the United States. For instance, cottonseed feed, with a protein content practically three times as great as that of bran, is selling at an actual discount under the wheat mill offal in most consumptive channels.

A serious lack of demand brought about the depression in cottonseed cake and meal, which is now selling at an actual discount under the levels prevailing before the world was plunged into war in 1914. Cake and meal of 43 per cent protein content is being offered rather freely in Texas, one of the most important crushing states of the South, around $23 to $24 a ton for prompt or January shipment, basis crushing plants. The price at Little Rock, in Arkansas, averages around $27 to $28 a ton, and around $28 a ton in Memphis. Basis the Kansas City market, probably the greatest distributing center for the protein feed, cake and meal of 43 per cent protein content and of prime quality is being offered around $31.50 and $32.50 a ton. Indicative of the extremely bearish sentiment which still pervades the market, is the fact that Texas crushers are offering prime cake and meal for February shipment down to $22.25 per ton, so it is generally presumed that, without an absorptive demand on the basis of the current prices for prompt shipment, values must necessarily work down to the February level.

Cake and meal at $22 to $23 a ton in Texas compares with a price at the opening of the crop year around $65 to $70 a ton. During the period of record-breaking markets the past two years, cottonseed feed sold at about four times the present prices—and was very difficult to obtain even at those sensational figures. Then, it was not a question of price, but of obtaining supplies. With the exception of a brief period in July of 1915, about the time the now memorable buy-a-bale movement was in progress, when cake and meal sold down to $18 a ton, the current quotations are the lowest in many years. In 1911, for instance, cake and meal sold up to $28 a ton, basis Texas.

Dairymen, range cattle handlers and other feeders, while providing the principal outlet for cottonseed cake and meal, are comparatively small buyers. The excellent fall and early winter weather, together with the superabundance of various feeds in the country, have allowed a sharp reduction in the demand. Radical depression in cattle prices also has been a factor in the small buying by cattle feeding interests. The manufacturers of fertilizer and commercial mixed feeds, who normally absorb thousands of tons of cottonseed cake and meal, have bought very sparingly on this crop, due largely to the almost stagnant demand for their own products. And the exporters who, before and even during some of the war period, provided an outlet for the great bulk of the domestic production by crushers, have bought on an exceptionally small scale thus far on the crop. The foreigners are seriously lacking in credit with which to make purchases in the United States, and they are more concerned about financing the purchases of wheat and wheat flour rather than cottonseed cake and meal. It is improbable that European countries will become important buyers of the high protein feeds in the United States this winter, in which event it is doubtful whether values will enjoy any material upturns.

There is a considerable surplus in the hands of crushers, speculative jobbers and other interests, and some time will be required to work off this surplus. Also, it is probable that the crushing season will be longer on this crop than in previous years, owing to the slow sale of cottonseed, the producers having been keenly disappointed over the prices offered them, less than $20 a ton. In this connection it is interesting to note that, though operations of mills have been limited to little more than half capacity, owing to slow seed sales, the market has been under extreme pressure. This does not offer much hope for rapid upturn in prices later in the season.

In face of the present weak position of the market, bearishness as to the price outlook is necessarily tempered by the fact that values already have undergone radical revision downward. The bulk of the crushing is expected to be out of the way before the close of winter, and crushers, instead of accumulating stocks for the spring and summer feeding demand, are making a strong effort to work off their production as rapidly as turned out. They have been seriously affected by the strain in credit, and they have not the credit facilities to tie up in large stocks. Therefore, the supplies may not be so abundant in the spring and summer, and firmer prices may result. Still, the prospects for a broadening in the demand for feed are of a character which lead one to temper enthusiasm on the bullish side of prices.



MAY WALKER OLLIE HOMESTEAD

She has just finished a year's record of 22,534.7 lbs. milk containing 876.24 lbs. fat as a 4-year-old and carried a calf 254 days of that period. She is a daughter of Piebe Laura Ollie Homestead King, the sire that has more 2-year-old daughters with records above 20,000 lbs. milk than any other. She is owned by the Minnesota Holstein Co.

Wisconsin Marketing Conference

Every group concerned with the readjustment of Wisconsin's agriculture and allied industries to present day conditions, will be represented in the "Get-together Market Conference" to be held in Madison, February 1 to 10.

Every organization of state-wide scope is being invited to participate in the convention. And the representatives of these groups are inviting to meet with them, to consider these definite questions, manufacturers, distributors, and consumers of farm products.

Plans for the convention are being laid by officials of the various bodies represented. The subjects to be considered in the course of the conference include possible legislation to make credit more readily available to the farmers, means of improving the transportation facilities of the state, and other problems of interest to the consumer and producer. Out of this program it is planned to develop a state agricultural policy.

The one man in America who knows most about world food conditions and world markets for raw products, outside of Herbert Hoover, is Dr. Alonzo E. Taylor. He will be at the conference to give the information he has collected. Throughout the war and since, he has divided his time between this country and Europe in a study of the very questions which every farmer is asking. He leaves the conference to sail to the continent to continue his observations of economic conditions. He will discuss "The World's Food Supply" and "The World's Buying Power".

"We propose to find out if anything can be done to straighten the road between the farm field and the family dinner table", say the officials of the prospective conference. "True to expectation, farm prices have fallen first and farthest and the constantly widening gap between producer and consumer is still further spread apart.

The farmers' prices today are determined largely by world conditions. The prices paid by the consumer of his product are too often artificially and locally controlled. Wisconsin's agricultural forces propose to get at the facts, remove unnecessary obstructions, smooth and straighten the road.—Wis. College of Agriculture.

HIGH WISCONSIN PRODUCERS

BROWNIE of Linwood, a senior four-year-old Guernsey in the Corium Farm herd, Wisconsin, has just completed a test in which she is credited with 831.07 pounds butterfat from 16,296.8 pounds milk. By this record she becomes the second cow in Class B. She freshened November 28, 1919; she produced 42.5 pounds of milk on her first test day and on her last test day, 36.5 pounds. This is the second A. R. record for Brownie of Linwood, her first being 10,761.7 pounds milk, 532.01 pounds butterfat at two years of age, making her a class leader in Class GG.

Brownie of Linwood was sired by Imp. Clara's Sequel, winner of several prizes and sire of 31 A. R. cows. Her dam is Lisette of Mt. Pleasant. She was bred by Homer Rundel of Wisconsin.

Another class leader just developed at Corium Farm is Bell's Paragon of Fox Valley who completed a year's official test on December 2 with a production of 11,740.7 pounds milk, 627.01 pounds butterfat, at 4½ years. This gives her tenth place in Class BB. Bell's Paragon of Fox Valley is sired by Wedding Bells of Waukesha, the sire of four A. R. cows. Bell's Paragon of Fox Valley was bred by P. H. Kuhts, Wisconsin. She carried a calf during 265 days of her test. Two half sisters of Brownie of Linwood are now on test, one of which will finish at about 550 pounds of butterfat.



BROWNIE OF LINWOOD

BELL'S PARAGON OF FOX VALLEY

E. M. JENISON.
Wisconsin.

Oregon Dairy Council's Work

HOARD'S DAIRYMAN:—"All difficulties are settled and the hatchet is buried way down deep." This was the report Charles Eckelman gave at the last meeting of the Oregon Dairy Council when he reported on conditions now existing with regard to the relations between the Oregon Dairymen's League and the Portland milk distributors.

Friendly relations now dominating both parties are progressing and general confidence is restored, according to the statement of the members, and great interest is being shown in the work of the Oregon Dairy Council. The council helped to the best of its ability in giving publicity to the Pacific International, which was a great show. It assisted the ice cream men in advertising their Pacific Coast convention held in the Portland municipal auditorium and the butter and cheese makers in their state convention December 9 and 10 in the Portland hotel. A feature of the latter meeting was the address by P. M. Brandt on dairy council work and possibilities.

The council has succeeded in starting milk stations in 12 Portland public schools where there are undernourished children and each school day now 3,800 children are being served with half pints of milk. The council started the stations after investigating conditions with the cooperation of Dr. Edna Eames, chief medical inspector, and the principals, teachers, and parent-teacher circles. Committees were formed and plans made to finance the stations. The council gave 1,000 straws, 1,000 tickets, and $5 cash to each as a starting fund. In one school where there are many poor children whose mothers work by the day, the parent-teachers raised a fund of about $300.

In one school the Chi Onega sorority girls are planning to operate a station and are planning a Christmas dance to raise the money. In another school the council started the work and the tuberculosis society is financing it. Some of the stations are practically self supporting where there are not many poor children. Great credit is due the milk distributors who have donated some milk and who have taken a great interest in the milk stations.

In addition to the serving of milk the children have milk leaflets and are given talks on health, cleanliness, nourishing foods and their values and many subjects that make them better citizens.

The new board of the council will meet December 15 and elect officers. The secretary, Edith Knight Hill, in her annual report said: "I feel that this dairy council child has had a good start and has been guided past the pitfalls and I now turn it over to you, a strong young person, ready to do effective service for humanity, needing the guidance and the strong hand of a man of marked ability to lead it out into a broader field. Its educational work has touched every part of Oregon and I feel it has done good. It has a good name and sound educational and moral backing and now some capable man must give it the financial backing it deserves. I think the council is past the stage of babyhood.

Oregon. E. K. HILL.



C. LARSEN

Professor C. Larsen, for fourteen years head of the South Dakota dairy department and since 1918 also director of extension, has accepted the position of director of dairy marketing for the Illinois Agricultural Association. He will work with the Illinois county farm bureaus in marketing their products co-operatively and economically. His first work will be to assist the Southern Illinois Milk Producers' Association in establishing a co-operative milk marketing organization for the city of St. Louis.

Coming as a lad from Denmark, Professor Larsen worked on an Iowa farm and through Iowa State College, earning his bachelor's and master's degrees. He then returned to Europe to study dairying conditions and came to the South Dakota State College in 1907 as head of the dairy husbandry department.

Professor Larsen has built the South Dakota Dairy Department from a beginning with one student to a point where hundreds enroll annually.

There were 14 permanent county farm bureaus in the state when Mr. Larsen took charge of the extension work. There are now 46.

Wisconsin Register of Production

The first official Register of Production for cow testing associations has recently been issued by the Wisconsin College of Agriculture in cooperation with the Wisconsin Dairymen's Association. It contains a list of all cows in these associations that have produced over 365 lbs. of fat during the cow testing association year, providing the owner joins an association the succeeding year.

The purpose of issuing this register is stated as follows:

"1. To secure better breeding, better feeding methods, and better care for Wisconsin dairy cows.

"2. To emphasize the necessity of judging a bull according to the work of his daughters.

"3. To increase the purchase and sale of cows on the basis of yearly production, and of calves and bulls on the production of their dams.

"4. To establish recognized yearly records for pure-bred and grade cows when these cows would otherwise be without records."

The publication discusses the basis of profitable production, gives the rules governing entry in the register, and details the production record of the 421 cows entered. The average yearly record of these cows is 9,464 lbs. milk containing 407.8 lbs. fat, 27 cows producing over 500 lbs. fat. The feed consumption of each cow is given, which provides figures for analysis and shows how the good dairy farmer is feeding his cows.

This circular of forty-eight pages is put out under the title of "Profitable Cows" and should be of value not only in demonstrating how such cows are handled, but also give the prospective buyer information as to where forward looking breeders of good cows are located. Copies of this circular will be supplied on application to the College of Agriculture, Madison, or the Wisconsin Dairymen's Association, Fort Atkinson, Wisconsin.

A Better Beet Contest

The beet growers of Fond du Lac County, Wisconsin, have found a friend in their county farm bureau. The county bureau has got these men together and it proposes to attend to securing an agreement with the sugar companies providing for a better contract. Some of the changes asked are as follows:

The attempt will be made to have only one company ship from each station. This is so that the company will have a sufficient acreage to find it profitable to install a mechanical unloader at such station.

Other recommendations are that a contract will provide that the sugar company will have no mortgage or lien on the growing crop and they will not have the authority to force delivery of an unprofitable crop; also that the grower can secure beet pulp at cost according to the amount of beets he furnishes the company.

On prices it is being asked that the bonus to be paid the growers shall be based upon a twelve months' average price of sugar rather than on a four months' average of October to January, as it now stands. It is also asked that the item of labor costs be definitely fixed and should it be necessary to increase them that the farmer will be compensated by increased price per ton of beets delivered. It is also asked that the growers have some consideration paid them as to fixing the price to be paid for beets, with some thought given to the cost of production.

Jersey Cattle Notes

For week ending Dec. 10: Number of animals registered: Bulls, 158; cows, 384; total, 542. Number of transfers recorded: bulls, 231; cows, 725; total, 956.

Belgian IMPORTED MELOTTE

Jules Melotte—*"The Edison of Europe"*—has again placed his **Great Belgian Melotte Cream Separator** on the American market and is continuing his pre-war offer to the American farmer. *Free Trial—Small First Payment—Easy Terms—Duty Free.*

You, who have wanted the world's greatest separator, write for catalog right away. Find out why 500,000 Melotte Separators are in use today. Read how in England, where every penny must be saved, more Melotte Separators are in use than all other makes combined. Before buying any separator find out how the Melotte has won 264 Grand and International Prizes and every important European contest the last 16 years. Mail coupon now for our great offer.



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You are not to sent one cent until you have used this Great Belgian Melotte on your own farm and thoroughly made up your mind that it is the separator you want to buy. Keep it for 30 days—use it just as if it were your own machine. Test the wonderful Melotte.

Self-Balancing Bowl

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Easy Payments After 30 days, when you are completely satisfied that the Belgian Imported Melotte is, by far, the best cream separator to be found any place in the world (a big statement, but true), then make a small payment down. Settle the balance in small monthly payments. The Melotte pays for itself from your increased cream checks. Mail the coupon *now*—today.

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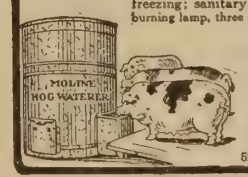
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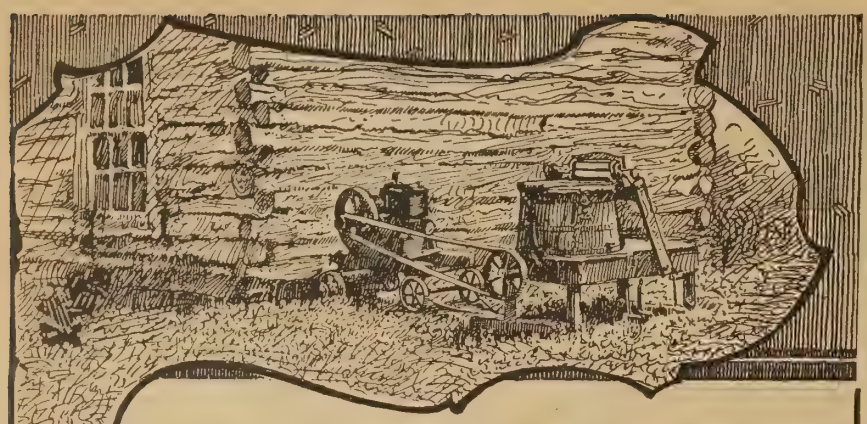
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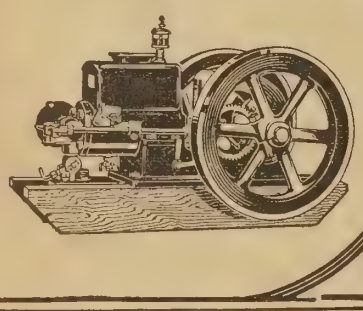
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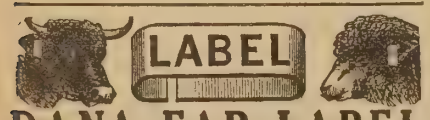
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Improvement Comes Through Co-operation

(Continued from page 1031)

prices on the part of private individuals. The power to fix prices comes from monopoly of trade and a consequent control of the market. The result is that in certain branches of distribution such as the packing trade, the sugar trade, and the wool trade, the possibility of competition is shut off and any attempt on the part of independent concerns at competition is crushed. It is clear that this power of private individuals to fix prices gives them the opportunity to charge a higher remuneration than their services justify. It is also clear that the extra remuneration which they receive is deducted from the share either of the producer or the consumer. It is this privilege, acquired through monopoly, which creates the abnormal situation of a group of individuals having the power to appropriate more than the just value of their services.

It is, moreover, important to bear in mind that distribution is only one phase of economic life and can be considered effectively only in connection with the other phases. Any fundamental defect in production reflects itself in distribution and vice versa.

The processes of production, distribution, and consumption are closely related. It is impossible to draw a clear line between them. Because of that a fundamental defect in any one of these three fields causes certain defects in the other fields. It is clear, then, that we must work towards a system in which everyone concerned in the production, distribution, and consumption of goods receives a remuneration equal to the services he renders. This can be attained through co-operative organizations of producers and consumers and through an arrangement whereby the prices of commodities will be fixed by an agreement between all the agencies concerned in production, distribution, and consumption. This ideal arrangement can be attained only by slow and gradual steps. Until then the present system of distribution must be gradually improved through the elimination of waste and unnecessary expense, a free field must be left for competition, and anything that hinders free competition must be done away with.

It is clear that this gradual process of improvement depends to a very considerable extent upon the progress of co-operation and the development of co-operative associations. Co-operation in marketing and buying is the best method to eliminate the unnecessary waste and expense and it also gives the necessary strength to bring about improvements in our economic system.



How waste in distribution comes from poor handling. Potatoes are scooped into the graders with forks and the resulting bruises and injuries are a source of rotting in storage.

New England Holstein Breeders Organize

The reorganization of the New England Holstein-Friesian Breeders' Association came to a successful close December 9th at Pittsfield, Massachusetts, the last of a series of meetings scheduled for the purpose. Through this campaign New England breeders are assured of a minimum budget for the three years 1921—24 of $21,000. This makes it possible to engage a field secretary and the necessary assistants to improve Holstein interests throughout the northeastern states. This secretary's work will consist not only in developing markets for surplus breeding stock of pure-bred and high grade Holsteins, but in fostering appreciation of the value of the black and white cattle among New England dairymen themselves.

Forty-five meetings were held in the six states comprising the New England group. Two meetings were held each day. President D. D. Aitken of the National Association spoke at all of the 45 meetings held, except a few meetings in Maine. R. C. Pollock of the Extension Service of the National Association who has helped in all the state association campaigns was another principal speaker. Co-operation by the county agents and the state agricultural departments and the colleges did much to help the work.

Through this association New England breeders will have their 30,000 pure-bred Holsteins and countless black and white grades recognized as to their immense importance in the production of the $40,000,000 supply of milk required each year for the congested areas of New England. Taking New England as a unit, only two states have more pure-bred Holsteins—New York and Wisconsin. A better market for the surplus stock of the breeders of pure-breds and grade black and whites will mean hundreds of thousands of dollars in revenues not now obtained.

President Aitken urged the breeders to eliminate the 5,000-pound producer and work towards the cow which will average 10,000 to 13,000 pounds of milk a year. He advised improving herds by grading up by the use of a pure-bred sire in community breeding, making it possible for smaller breeders to use good bulls. He spoke for increased use of dairy products on the farms as well as in the cities and the elimination of standards in different states now tending to increase the cost to the consumer and to confuse and hamper dairymen in the production of milk and its marketing.

A meeting of all of the members of the New England Holstein Breeders' Association will be held at some central point, during the last week of December or early in January. At this meeting new officers and new directors and an executive committee will be elected and the work of carrying on the association's business for the 3-year period definitely mapped out.—Holstein-Friesian Extension Service.

Missouri Creamery Short Course

A short course in creamery operation will be offered at the University of Missouri at Columbia from January 2nd to February 27th, 1921. Topics to be considered are creamery and milk plant management, creamery butter making, market milk, ice cream making, dairy bacteriology, judging dairy products, dairy machines and refrigeration, and milk production.

The children may not be getting their pint of milk a day. Have you thought out ways of making sure that each one takes his share?

Knowing things to be true that are not so, makes lots of trouble and misery in this world.

The American Farm Bureau Federation

(Continued from page 1032)

partment of Agriculture to be a highly essential factor in the development of American agriculture and that the products and benefits of its labors will be shared by all, the farmer insists that adequate financial support be provided for this, the only important producing department of the government.

The Program of Work

In order to properly correlate the tremendous variety of angles of the work it has been necessary to departmentize the organization. We now have in the process of formation the following departments: Department of Farm Economics and Statistics, Department of Transportation and Rates, Department of Marketing and Co-operation, Department of Education and Publicity, and the Legislative Department. In a general way the program of work of the Federation may be suggested by the outline given below.

General

1. To develop a completely unified national organization to act as spokesman for the farmer and to adequately represent the farmer and the farmers' interests on all occasions.

Educational

1. To create in the urban mind a better conception of the farmer's relationship to other units in the social and economic structure.

2. To re-establish agriculture in the public mind as the foremost industry, on which all others depend, and, in the prosecution of which man reaches his highest plane of development.

3. To encourage and assist in the development of food production to its highest state of efficiency.

4. To foster and develop all those lines of endeavor which make for better homes, better social and religious life, better health, and better rural living in every sense.

5. To conduct referenda on various national questions to determine farm sentiment before determining legislative action.

Legislative

1. To safeguard the rights and interests and to assert the needs of the farmer whenever occasion may arise.

2. To establish without question the legality of collective bargaining.

3. To insist upon the presence of farmer minds on all boards and commissions appointed by Congress or the President.

4. To defend the farmer's viewpoint in all matters relating to tax levies, tariffs, currency, banking, railways, highways, waterways, foreign markets, the merchant marine, territorial acquisitions and all similar legislative matters involving questions of policy, in any way affecting agriculture.

5. To insist on some arrangement between capital and labor which will insure freedom from disrupting and criminally wasteful strikes.

6. To strengthen the Federal Farm Loan Act and secure in addition the establishment of a system of personal credits.

7. To demand the regulation, under government supervision, of all commercial interests whose size and kind of business enables them to establish a monopoly dangerous to the best interests of the nation.

Economic

1. To extend co-operative marketing of farm crops to the point in the distribution system so that the maximum benefits are secured for the producer and, incidentally, for the consumer.

2. To limit the profits and reduce the costs of distribution in all lines not handled co-operatively.

3. To so estimate the effective world supply of any farm product and to so regulate the flow to market as to eliminate sharp and extreme price fluctuations.

4. To establish new foreign markets for surplus American farm products.

5. To provide cheaper sources of fertilizer and more economical means of production.

Executive

I. Department of Education is organized under the direction of a committee of three and the following general lines will be inaugurated:

1. A weekly news letter to farm publications.

2. Special news and story service to farm publications.

3. Co-operative service with farm bureaus, and so forth.

4. News and stories to city dailies.

5. Feature stories in magazines of the city press.

6. Service to rural weeklies.

7. Publications of special pamphlets, speeches, and so forth.

8. Miscellaneous publicity methods.

II. Department of Farm Economics and Statistics organized under direction of a committee of six. The principal functions to be taken up at once are along the lines of a careful study of agricultural statistics.

1. Improved cost accounting methods for farmers.

2. Crop statistics and forecasts.

3. Price analysis.

4. Weather reports with specific reference to agricultural needs.

5. Study of world's supply of agricultural products, crop conditions, and policies adopted for their needs.

6. Credit analysis.

7. Tendencies in tariff, merchant marine, and internal revenue legislations, ocean freights, and so forth.

8. Foreign competition.

III. Bureau of Transportation organized under the direction of a committee of four to function as follows:

1. Help to improve the service of our railroads to the greatest extent possible.

2. Prevent excessive transportation burdens on farm products.

3. Help to simplify traffic as a whole.

4. Trace tendencies, constantly, in the rates and regulations on agricultural products.

We cannot but feel that the A. F. B. F. has caught its stride in excellent shape in the first year of its existence. Many formidable organization obstacles have melted away and the program of work is well under way. Enough in the way of quick results has been already secured to satisfy the membership that with increased strength and whole hearted support the Federation may readily become one of the most powerful forces in the land. It may well fulfill the expectations of those who see in it a means of reshaping the fortunes of agriculture and of placing the farmer in a position of affluence and power equal to that of any other large group found in American society.

All that we need is a united front and loyal generous support. With these in full measure there is nothing within reason which the A. F. B. F. cannot accomplish.

Time to Look for Mites

This is the time of the year to be on the constant lookout for the presence of mites on the fowls, and particularly in the poultry house. These insect pests not only lower the vitality of the birds, and thus render them liable to disease, but their presence has a decidedly bad effect on egg production. Frequent spraying of all cracks and crevices of the house and the undersides of the roosts with kerosene or 5 per cent carbolic acid will greatly help to eradicate mites, and thus add to the comfort and general health of the birds.

Five Remarkable Years' Jersey Records

With the completion of her fifth official year's record Duke's Rachel Interested has proved her persistency. She was first started on Register of Merit test at two years and seven months of age; her last record was completed at the age of eight years and five months. During this time she has dropped five calves and is safely in calf again.

The first four of her records are Class AA; had she been bred about a month earlier during her last test she would have qualified for five AA records. As it is, she carried her calf about four months of her last record. In her five records she has averaged 10,752.4 pounds milk, 584.25 pounds fat. She was sired by Interested Prince, which has fifteen sons and forty-seven Register of Merit daughters, which have completed seventy-five years' tests. She was bred by Rufus A. Sibley, Massachusetts. She is owned and was tested by Ayer & McKinney, New York.—AMERICAN JERSEY CATTLE CLUB.

The noblest question in the world is: What good may I do in it?—BEN FRANKLIN.



2.50

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A combined strainer and filter for the price of strainer only. To use the Chapman as filter, insert a layer of cotton and sheet of gauze between the two screens.

The filter will remove bacteria, dandruff, hair, blood corpuscles, straw and other substances that a strainer only can't catch. Thus will greatly improve the quality and flavor of the milk and prevent it from souring quickly.

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Less 100 yards ..... 12½c per yard
100 to 150 yards ..... 10c per yard
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15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

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CONTENTS

Indiana Dairymen Will Meet at Lafayette 1030
The Dairy Optimist - - - - - 1030
Improvement Comes Through Co-operation 1031
The American Farm Bureau Federation 1032
Putting the Farm on a Business Basis - 1033
My Creed of the Out-of-doors - - - 1035
Cottonseed Meal Low in Price - - 1036
High Wisconsin Producers - - - 1036
Oregon Dairy Council's Work - - - 1037
Wisconsin Register of Production - - - 1037
A Better Beet Contest - - - - 1037
New England Holstein Breeders Organize 1038
Missouri Creamery Short Course - - 1038
Five Remarkable Years' Jersey Records - 1039
Wisconsin Dairymen's Association - - 1040
Removed from Accredited List - - 1040
Butter Market Steady - - - - 1040
Cheese Market Lower - - - - 1040
The Dairy Farmer and the Farm Loan Act - - - - - - - - - 1041
Cost of Producing Milk - - - - 1042
Buy a Bull - - - - - - - 1042
Tuberculosis a Private and a Public Question - - - - - - - 1042
Laws and Work - - - - - - 1042
Cheap Food Affects All - - - - 1042
The Cow the Best Market - - - - 1042
Curing Pork - - - - - - - 1043
Choosing Cattle Names - - - - 1043
Velvet Beans in Ration - - - - 1043
A Well Question - - - - - - 1043
Casein for Skimmilk - - - - - 1043
Milk or Cream - - - - - - 1043
Uncle Sam's Hired Men Who Serve You - 1044
Milk Costs in Oregon - - - - - 1044
Cheese Factory Bookkeeping - - - 1044
Washington, D. C., Weekly News - - 1045
Feed Market Still Inactive - - - 1045
Cow Testing Associations - - - - 1046
Thinking Through - - - - - - 1048
Price of Alfalfa and Dairy Cows - - 1048
Jerry Greene, Yer Honor - - - - - 1050
The Right Dairy Sire - - - - - 1053
Ayrshires Lead Ohio Association - - 1054
Survival of the Fittest in New Hampshire 1054
Holstein Breeders' Sale - - - - 1054
Waukesha Co. Winter Holstein Sale - - 1055
A Rural Woman Dissatisfied - - - 1055
Veterinary—Oil Meal to Cows Near Parturition — Teat Troubles — Abortion—Treatment After Dehorning—Abortion 1056
Sudan Grass Pasture in Kansas - - 1059
Value of Organization - - - - 1059

Coming Events

Jan. 4—6, 1921, Wisconsin Cheesemakers' Association meets in Milwaukee. Secretary, J. L. Sammis, Madison, Wis.

Jan. 5—Iowa Holstein Breeders' Association annual meeting, Iowa State College, Ames.

Jan. 11—Wisconsin State Horticultural Society, Madison.

Jan. 11-12—Certified Milk Producers' Association of America meets at Ansonia Hotel, New York City. Sec.-Treas., Harry B. Winters, Albany, N. Y.

Jan. 11-13—Wisconsin Dairymen's Association, Madison, Paul C. Burchard, Secretary, Fort Atkinson.

Jan. 10-14—Annual Farmers' Week at Purdue University, Lafayette, Ind. The annual meeting of the Indiana State Dairy Association will be held Jan. 13.

Feb. 1-4—Manitoba Dairy Association will meet at Fort Garry Hotel, Winnipeg. Secretary, L. A. Gibson, Winnipeg.

Feb. 1-10—Mid-Winter Farmers' Course, Madison.

Feb. 1-10—Wisconsin Live Stock Breeders' Association, Madison. Geo. W. Davis, Secretary, Madison.

Feb. 4 & 5—State Live Stock Judging Tournament (roundup), Madison.

Feb. 16—18, 1921—Virginia Dairy Show and Annual Convention of the State Dairymen's Association held in Roanoke. Secretary, Frank A. Buchanan, Blacksburg, Va.

Wisconsin Dairymen's Association

The Wisconsin Dairymen's Association will hold its forty-ninth annual meeting at Madison on January 11, 12, and 13. It is expected there will be a representative gathering of dairymen from all over the state, special attempt being made to secure representation from the 115 cow testing associations now in operation. The last day will be largely devoted to testers and special cow testing association problems.

There are many attractive and unusual features fixed on the program. The afternoon of the first day will be devoted to discussions of tuberculosis and there will be a practical demonstration of the three tests, how they are applied and how interpreted. In addition there will be a post-mortem of a reacting animal to show how this is done and where tubercular lesions are most often found.

On the afternoon of the second day there will be a discussion of practical feeding problems which will be followed by a trip through the stables to observe the results of Professor Hart's interesting investigations and feeding trials. It will offer a splendid opportunity for dairymen to see the results of improper feeding and how science explains them. They will see cows that abort because of deficiencies in their feed and they will see how a ration of dry feed and silage when supplemented by turnips or rutabagas will make milk production



NEBRASKA DAIRY JUDGING TEAM, 1920

Reading from left to right: G. A. Milby, W. T. Gray, C. Rydberg, Professor B. H. Thompson, Coach. This team stood highest in judging Guernseys and won the Guernsey cup at the National Dairy Show.

increase. No brief announcement can commence to indicate the great value of this one session alone, and the above outline is only a small part of the interesting experimental work that will be seen.

During the week there is to be a milk campaign in progress in Madison and dairymen can have an opportunity of seeing how consumption of dairy products can be increased by proper publicity. Just now this should be of special interest to dairymen as they feel the pressure of lowering prices.

A strong list of speakers, including Professor Eckles of Minnesota, has been secured. Dairy farmers, busy though they are, can well afford to attend. Room reservations will be made and programs supplied on request to A. J. Cramer, College of Agriculture, Madison.

An informal meeting of the Wisconsin Dairy Council will be held at the Park Hotel on the evening of the tenth. Important matters of vital concern to the dairy industry will come before this meeting and it is hoped that as many as possible will arrive in Madison to attend this session. PAUL C. BURCHARD, Sec.

Removed From Accredited List

Since the beginning of the work three years ago, the United States Department of Agriculture has removed 74 herds of cattle from the list accredited as being free from tuberculosis. The presence of one or more reactors was the cause for removal. The number of herds taken off the list is small compared with the total number of accredited herds, which now exceeds 4,000. The Federal Bureau of Animal Industry makes it plain that the list includes the names of only those persons who keep tuberculosis out of their herds.

Reactors Found in Most Cases

In most cases where reactors were found among cattle which had passed the requisite number of official tests, reinfection was traced to carelessness. Either the accredited animals had been permitted to run in pastures with infected cattle or else animals of doubtful health had been brought on the premises and stabled with the others. This is in violation of the agreement which the owner signs when he applies to have his herd tested. In one instance a breeder with an accredited herd purchased an entire herd whose history he knew little about. About half of the animals bought reacted to the tuberculin test when it was applied. But instead of segregating for a time those which did not react, he immediately added them to his officially accredited herd. This was one of the herds taken from the list following the discovery of several reactors.

"The breeders must realize," a bureau official declared, "that if they take chances, tuberculosis is likely to gain a foothold again and if it does the herd can not stay on the list." In only 5 instances out of the 74 "discredited" herds the presence of reactors could not be explained. This is considered a small number in proportion to the nation-wide extent of the work. Where only one reactor is found in an accredited herd it is possible for that herd to get back on the list again within 6 months if a retest at that time shows the herd to be clean. When several reactors are found it takes from a year to a year and a half for the herd to again become accredited. In all cases reactors must have been removed.

There is increasing evidence also that cattle which, though not reactors, are "suspicious" should be looked upon as a constant source of danger. Frequently the disease is so far advanced in such cattle that they fail to respond to the test yet are more dangerous to the herd than some reactors. Suspicious animals can not be officially condemned, but breeders who are familiar with the situation sometimes permit them to be slaughtered rather than jeopardize the health of other animals.

Guarding Animals at Shows

"Another important precaution in tuberculosis-eradication work," the bureau official added, "is the showing of cattle at fairs and exhibitions. Owners of accredited herds are now demanding that such herds at least be kept in separate barns so that they will not have to mingle with untested cattle. Some fair associations have gone so far as to require a tuberculin-test certificate for all cattle shown. Another risk—and it is a serious one—is to buy cattle from herds you know nothing about. Even when such animals are tested and reactors are removed there is a risk that even those which pass the test are not all entirely free from recent infection, especially when the original herd may have been half diseased. It is much safer to purchase cattle from a breeder who is known to have healthy stock."—U. S. Department of Agriculture.

Butter Market Steady

[Report by U. S. Bureau of Markets]

Taken as a whole, butter markets showed a little improvement during the week ending December 11. Since the sharp declines at the close of the previous week, prices on fancy butter have held and even slight advances were registered in some markets.

Arrivals of Danish butter were heavy during the week, but the rumor prevails that Great Britain is contracting for larger quantities of Danish butter for delivery after the first of the year and that will lessen the exports to the United States. Holders of Danish butter were inclined to move this butter as rapidly as possible even at much lower prices now current. Some of the last arrivals have developed mold.

Holders of storage butter refuse to discount the market and withdrawals continue short of last year. A fairly liberal surplus over a year ago is expected when final reports are completed.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending December 11, 1920, and the corresponding week last year were as follows:

	Week ending Dec. 11 1920	1919
	cents	cents
New York	52.75	73.20
Chicago	48.33	68.70
Philadelphia	52.91	73.00
Boston	52.00	72.80
San Francisco	48.33	65.20

The receipts of butter at these markets for the week were 6,196,354 lbs. as compared with 5,587,963 lbs. a year ago and 5,827,104 lbs. last week.

Cheese Market Lower

[Report by U. S. Bureau of Markets.]

Prices took an unexpected tumble during the week ending December 11, but there was little activity. Unless goods begin to move better, further price concessions are not unlikely. Some dealers in Wisconsin report carrying over as much as 75% of their current week's receipts. Dealers who have fancy holdings in storage, however, are not particularly alarmed as there remains 4 to 5 months in which to move it. Holdings are not excessive and consumptive demand so far is good.

The average wholesale prices on American cheese (style Twins) for the week ending December 11, 1920, and for the corresponding week last year were as follows:

	Week ending Dec. 11 1920	1919
	cents	cents
New York	27.58	31.50
Chicago	23.54	30.93
Boston	25.25	32.75
San Francisco	27.50	30.49
Wisconsin Boards	20.95	30.69

The receipts of American cheese for the week at the four markets first mentioned and at Philadelphia totaled 2,557,052 lbs. as compared with 2,766,272 lbs. a year ago and 3,376,193 lbs. last week.

The good old custom of reading aloud under the evening lamp is an antidote to many forms of present-day restlessness.

Uncle Ab says: Only a lazy man wants an easy job; the hard jobs are the ones worth doing.



J. E. STALLARD, GUERNSEY FIELDMAN WHO WILL WORK IN THE MIDDLEWEST

The Dairy Farmer and the Farm Loan Act

GUY HUSTON, ILLINOIS

HOW can the farm loan act help the dairy farmer?

Any system of finance which can make readily and easily available money at low rates of interest and on convenient time can help any farmer who desires to expand his operations or install improvements.

This article is not so much intended to tell the dairy farmer what to do with his money when he gets it as it is intended to show him how and where he can get the money.

To be sure, the purpose to which borrowed money is to be put usually governs the length of time the loan is to run and often determines also the rate of interest. However, the general influence of the farm loan act upon country banking is to give a greater degree of elasticity to the whole business of farm credits, so that the farmer who needs money can get it in whatever amounts his credit and standing warrant. Under these new conditions, as we shall see, the farmer is better enabled to finance himself in almost any undertaking, whether it be erecting new buildings or buying sires and new female stock.

Many farmers have felt the need of short-time credits more than they have felt the need for the long-time loans. These will be interested in a study of how ample and convenient provisions for long-time loans as contained in the farm loan act have a direct and helpful influence upon the short-term credit situation.

Those who borrow of the land banks created or authorized by the federal farm loan act are given 33 to 35 years in which to repay the principal. The loans are made on the amortization plan, and the annual or semi-annual payments are small, amounting to only 1% of the face of the loan. The rate of interest is low. The rate cannot exceed six per cent, but if interest rates in general should be reduced, the borrower has the privilege and the right to pay off his loan negotiated at the higher rate of interest, and to refund it at whatever low rate of interest may prevail at any time after the fifth year.

By these generous provisions, many of the irksome conditions which hitherto have accompanied the making of loans on land mortgages have been removed. The farmer who makes a long-term amortized loan is in a much more comfortable position than if he had made a loan running three to five years. He knows that he can meet at each interest-paying period the small additional payment required as an installment to be paid on the principal. And he knows that if he meets these small annual or semi-annual payments he is in no danger of a foreclosure.

The money for the long-term loans is supplied from the wholesale money markets in the great commercial centers. In other words, it is outside money which has come in to carry the farm mortgage loans. The local banks are relieved from the burden of carrying the long-time indebtedness, and consequently a larger proportion of the local funds are available from which to make short-term loans than would have been available had not these long-time loans been cared for by outside capital.

In a word, much local money which, under ordinary circumstances, would be invested in farm mortgages becomes at once available for short-term loans.

One of the difficulties in financing agriculture has been the inability of the local banks to supply adequate funds. Heretofore, they have been called upon to find money to lend on farm mortgages quite as well as to find the money with which to buy live stock or machinery, or with which to erect buildings. The ability to supply ample funds for short-time loans for use in productive operations has been limited automatically by the amount of local money available for all purposes. During the three years that the farm loan act has been in operation (and the farmers have not made nearly so large a use of it as they should have made) a considerable improvement in short-term credit conditions has been noticed.



CALIFORNIA DAIRY PRODUCTS JUDGING TEAM THAT WON FIRST PLACE IN THE PACIFIC INTERNATIONAL LIVE STOCK SHOW

Standing, left to right: G. R. Jaehnig and E. C. Spainhower. Front row: L. H. Nielson and G. D. Turnbow, coach.

G. R. Jaehnig and L. H. Nielson won first and second places in the judging of all products and also won first and second places in the judging of cheese. Mr. Nielson also received first place in the judging of milk.

Take the state of Iowa—in three years the farmers of Iowa have borrowed forty-seven millions of dollars of the banks operating under the farm loan act. This means that Iowa farmers have secured forty-seven millions of dollars under conditions which will give the borrowers 33 to 35 years in which to pay off this debt. Doubtless a considerable part of this sum was devoted to the re-financing of old indebtedness formerly carried on mortgages given to life insurance companies or to great estates or savings banks engaged in the practice of lending money on land mortgages. However, also, a considerable portion has been devoted to the re-financing of loans that were made by farmer to farmer, by father to son, and by seller to buyer. These old loans made between local parties often involved only a small amount of actual cash, the seller accepting a part payment (often a small payment) and taking a note and a mortgage for the remainder. Under the new plan the seller gets his money because the same is advanced by a joint stock land bank or a federal land bank, and this money so advanced he can put into the local bank or lend out on notes secured by chattel mortgages, or possibly on notes given by men whose credit is such as not to require a chattel mortgage.

The point of all this is to show that the re-financing of the farm mortgage loans on the long-term plan does increase the amount of local capital available for the ordinary local purposes of local banking.

Now we are very near the point where we can see how the farm loan system can help the dairy farmer. With more local money available, the banker is more nearly able to supply the needs of all the borrowers of good credit who apply to him.

Right at this point, it is well to consider that the farmer who has been alert enough to place the loans on his land through the banks of the farm loan system where the annual payments are small and surely within his ability to meet, even in the lean years, is a much better financial and moral risk from the standpoint of the local banker than the farmer who has to struggle along with a five-year mortgage hanging over his head, which necessarily involves either the payment of a large sum within a comparatively few years or the re-financing of the loan with commissions and abstract and appraisal charges taking a large part of his legitimate earnings which otherwise might be used in financing his farm operations.

The farmer who has the loan on his farm placed under conditions so that he can handle it comfortably is in a much better position to secure a short-term loan from the local banker for seasonable operations.

In making a loan, the banker's first duty is to his stockholders. He must make sure that the borrower is able to repay the loan promptly. It is not enough that the security should be ample. The banker does not care to become a merchant, or an auctioneer, selling the things he has had to take over on defaulted notes. What the banker wants is the money. Therefore, he wants to know that the farmer to whom he lends is in a position to pay promptly when the loan falls due. The banker must know, in the case of the farmer, just as he must know in the case of a merchant, that the borrower will have the money when it is due. He must know what the borrower's income is likely to be, and he must know what if any other demands the farmer must meet. He cannot be a safe banker and be lax about these things. It is not his own money he is lending; he is a trustee of the funds of the community. Therefore, the stockholders and the depositors (and the government) require that he shall exercise great care in making loans.

Knowing this, the borrowing farmer will readily understand that if he has his mortgage loan in the farm loan system, where there are no commissions and no renewal charges, and where he has 33 to 35 years in which to repay the principal in small annual or semi-annual payments, the banker can be reasonably certain that a short-term loan made to buy live stock or to erect buildings will be repaid promptly, because the farmer will not be harassed by having to meet uncertain demands in connection with the mortgage on his farm. A farmer who carries his mortgage loan in the farm loan system is entitled to get money at the local bank when he needs it to buy a bull or additional cows, and to get it for the length of time he requires it, because the banker can tell with satisfactory accuracy the ability of such a farmer to meet his obligations.

Thus, we see that the two benefits which may come to the dairy farmer (or any other farmer) from the farm loan act are these: First, an increase in the amount of local capital available for short-time loans; second, a considerable improvement in his own condition and his own financial standing as a borrower at the bank.

Here, then, is a considerable relief in the field of short-term credits.

Still another advantage which comes to the farmer who makes use of the farm loan system may be found in the fact that often the farmer may use the money which he borrows on his farm as operating capital. He may use it to build up his herd, to buy sires, or blooded female stock. He may use it to improve his plant, to install water and light, to build new barns, new silos, to erect windmills or power plants, or to buy milking machines, or whatever is required to expand his operations.

True, the farmer who takes advantage of the farm loan system to borrow the money which he intends to use as working capital may not have constant use for the entire amount he borrows. He may have an accumulation of idle funds at certain seasons of the year, while at other seasons the entire amount will be employed. And, of course, it is evident that he must pay the land bank 5½ or 6 per cent throughout the year for the entire amount he borrows, whether it is all employed all the time or part of it is idle part of the time. What then is the farmer to do with his idle funds? Well, what does the merchant or manufacturer do with his idle funds? The city business man deposits his idle funds in the bank, and the bank pays him interest on his daily balances. Is not this, then, the practice for the farmer to follow? True, he will be paying 5½ or 6 per cent to the land bank and will be receiving only 4 per cent, perhaps, from the local bank. This looks like a loss; and it is. But it is only for a few months of the year, and the loss of 1½ or 2 per cent is to be considered as a guarantee that he will have the money when he needs it. Of course, if the farmer cannot make this borrowed money earn him more than 6 per cent, then he ought not to borrow working capital. But if the farmer can borrow money at 6 per cent and use that money in such a way as to make it pay him 10 per cent or 20 per cent when he sells his crop or his milk or his live stock, then he is warranted in borrowing working capital, and need not worry his head off about a loss of two per

(Continued on page 1048)

EDITORIAL COMMENT



MUCH complaint has been entered of late against the profiteer and speculator. It is generally agreed that they have no place in our economic system as they do not contribute to the building of our country. While we all agree on this there seems to be a disagreement regarding the keeping of poor cows. Just why should any person keep cows that do not return their cost of feed? Who forces farmers owning such cows to keep them?

"I HAVE no sympathy with any farmer movement that proposes to corner or establish monopoly prices on food products but we demand the right to be allowed to market our crops in an orderly way and as the consumer wants them." This is the succinct remark of J. R. Howard, President of the American Farm Bureau Federation before a bankers' meeting in Chicago. This brief statement enunciates a great principle to be followed by all farm organizations if they expect to be successful. It is recognized by Mr. Howard and every other clear thinker on farm topics how utterly futile it would be, even if it were right, for 6,000,000 or more farmers to attempt to form a monopoly for the purpose of cornering farm products and fixing monopoly prices. Such a thing cannot be done. It would not only be a waste of time to attempt such an undertaking but it would lead to destruction the organization which entertains any such idea. It should be the purpose of every farm organization to improve methods of marketing, to lessen cost of production, and to eliminate wrong and evil economic practices.

COST OF PRODUCING MILK

The Dairy Division of the United States Department of Agriculture has made a rather detailed study of the cost of producing milk. In a recent bulletin setting forth the information regarding the cost of producing milk it is shown that 56.4% of the total cost of producing milk was for feed and bedding, 23.5% for labor, 17.6% for other costs, and 2.5% for depreciation. The requirements for producing 100 lbs. of milk during the winter were: Concentrates, 29.4 lbs.; dry roughage, 92.9 lbs.; succulent roughage, 143.3 lbs.; bedding, 9 lbs.; human labor, 1.0 hours; horse labor, .1 of an hour; other cost, $.576.

The statement is made that during summer, milk could be produced at much less cost, there being required comparatively small quantities of concentrates. It is well for dairy farmers to consider these figures for it will emphasize how essential it is to keep efficient cows. No farmer can ever expect to make a profit on a cow that produces 150 lbs. of fat in a year. If such a cow were ever to become profitable there would be such an overproduction of milk by the better class of dairymen that the market would be literally flooded and prices would go to everlasting smash-up.

BUY A BULL

This is the time to buy a bull. Prevailing prices are the lowest in many months. In recent public auctions and at private sale, pure-bred dairy sires have sold for little more than their beef values because of a greatly weakened demand. One who visits many breeding farms says of the bulls for sale: "The woods are full of them".

Bulls aren't going out of style in dairy herds. Fully as many are needed as ever. The present slack sale for them is the result of a determination among buyers to wait for still lower prices. The bull calf which they planned to buy last fall and raise for use a year from now has not been purchased. On some farms cows which should now be in calf have been allowed to "run over" because the owner is waiting before buying a bull. When the demand is good, prices are high; when there is the least buying, values are low. This is the time to buy. Prices may make still further declines, but those at present are surely favorable. It is quite as likely good sires will not be cheaper. Certainly it is expensive to wait longer if a bull is needed now.

Especially is the time opportune for the owner of a grade or scrub bull to exchange for a pure-bred. The bologna market will pay nearly as much for his sire as is required to purchase one with a production pedigree. Particularly is this true if a mature bull is to be disposed of and a pure-bred calf secured. The man who has excused the use of a nondescript bull on the claim that "pure-breds cost too much" need wait no longer. This is the time to buy a bull.

TUBERCULOSIS A PRIVATE AND A PUBLIC QUESTION

The eradication of bovine tuberculosis from dairy cattle is both a public and a private question. It is a public question in so far as it affects public health and a private question in so far as it affects the owners of cattle and their profits. The public has a right to demand that their dairy products come from healthy cows and it is the duty of those who own cattle to carry out the necessary provisions to free their herds from tuberculosis.

Since the public is concerned in eradicating tuberculosis from all dairy herds, it is only fair that it bears a liberal portion of the expense incurred by the elimination of animals suffering from tuberculosis. The owner should bear a part of the loss, because it is important to him that his herd be free from disease. A cow suffering from infection requires more feed to sustain her and produces less product. The owner is constantly sustaining losses both in production and from the death of animals when tuberculosis is present. Since he profits by having a clean herd he should bear at least some of the expense when an animal is slaughtered. There is still another reason why the owner should bear some of the expense. If he bore none of the loss when his animals were destroyed there would be less incentive for the owner to exercise the care necessary to keep his cattle free from tuberculosis.

The federal government and the state governments should be more liberal than they ever have been in paying for condemned animals. In the first place, we believe the owners are entitled to a more liberal compensation; and, secondly, a larger indemnity would encourage eradication of tuberculosis, which is highly desirable to both producers and consumers.

LAWS AND WORK

Those who are looking for laws to bring relief to our sick nation have not given our situation serious consideration. Laws cannot correct conditions brought about by extravagance, over-expansion in business, and waste. Laws may be enacted which will provide more equal opportunities, and assist in suppressing evil practices in business, but they will not grow crops or distribute them; build homes; manufacture clothing; or build railroads. Those who think laws can be passed that will heal up the wounds of the nation are doomed to disappointment.

The nation is very much in the same position as a young man who buys a farm and is able to make but a small payment on it. We all know what this young man must do to clear his farm. He cannot pay his debt by complaining about it or talking about what his neighbors should do or by waiting for the government to help him. If he is a wise young man he will belong to some farm organization whose business it is to look after the welfare of agriculture. This must be done or the farmer will continue to receive the short end of the evener. But the young man's efforts must be put forth in the operation of his farm. He must work with a vengeance and apply himself intelligently. So with the nation we must delegate to those in whom we have confidence the power of running our government and business affairs, but we ourselves must go to work.

We are suffering from too many ideas; we have too many cracked brain would-be savers of the country, and all they have been able to do is to create confusion. Work—plain, every day work—with hands and head, and not laws, is needed to restore our industries as well as ourselves to normal. Let service be our New Year's resolution.

CHEAP FOOD AFFECTS ALL

The decline in prices of farm products was hailed with delight by those who purchase them. It seems to many that if food and clothing could be purchased cheaply the solution of the high cost of living and for making a fortune would be solved. These people forget that agriculture is the basic industry of the nation, that unless farm products bring a good price the laborer of the city cannot expect to receive good wages, and the manufacturer cannot expect to sell his commodities. It is estimated that the shrinkage in prices of farm products has amounted to between six and eight billions of dollars. This means that the farmers will have just that much less money to spend for necessities, luxuries, etc. When the farmers' purchasing powers are decreased the purchasing powers of others are likewise decreased. What is there to be done about it? Farm organizations are taking more interest in economic questions, in legislative matters, and in activities of all kinds than ever before. This is a healthy situation, for in the past the farmer has not had as active a part in guiding industry, in making laws, and in various other ways as he should for the good of the nation or for the good of agriculture.

We welcome the new attitude which the American farmer is taking of all things public and especially towards his own business. Through this effort, organized as it is, the laborer, the manufacturer, the merchant, and the banker will be led to see that if we are to have a prosperous nation its fundamental industry must be prosperous. Cheap food and clothing means cheaper wages in the cities and much idleness until industry can be adjusted to the new order of things.

THE COW THE BEST MARKET

The dairy industry has not suffered decline in the prices of its products as much as some other branches of agriculture. The dairy industry has always been able to hold an enviable position during a crisis of a readjustment period.

The condensed milk industry had a severe setback when foreign demand for its product ceased, but this industry takes less than 5% of our total milk supply. The prices of mill feeds and by-products have fallen at least 50%. Oil meal which was worth $90 or more a ton last year can now be purchased for less than $45 per ton. Cottonseed meal is cheaper than oil meal. Bran is selling for less than half of what it was a year ago, while the price of market milk has decreased between 30 and 35 per cent, butter about 23%, cheese from 25 to 30%, and cows about 40%. The demand for good butter is greater than the supply.

So far as the prices of mill feeds are concerned the dairyman is in a better position for making a profit from his cows this winter than he was a year ago. We believe the future for the dairy farmer is quite as bright for making a profit during the coming months as it has been in the past. This is no time for the dairyman to lessen his efforts in the improvement of his herd and equipment or practice economy in feeding his cattle. Every effort should be put forth to build up a high producing herd of cows and then provide them with adequate rations for making milk.

The cow offers a better market today for farm products than can be found anywhere else. Good business demands that farm products should be sold to the market that brings the largest returns.

Curing Pork

In one of your 1919 issues you gave a recipe for curing pork in liquid form. I used it last year and found it fine, but have lost the recipe and would appreciate it very much if you would be so kind as to give it to me.

Capelville, Tenn. R. T.

The formula for curing pork by the brine method is as follows: For each 100 lbs. of meat use 8 lbs. salt, 2½ lbs. sugar or syrup, 2 ounces saltpeter, and 4 gallons of water.

In warm weather 9 or 10 lbs. of salt is preferable. Allow 4 days' cure for each pound in a ham or shoulder and three days for bacon and small pieces. For example, a 15-lb. ham will take 60 days; a piece of bacon weighing 10 lbs. will take 30 days.

The brine should be made the day before it is used, so that it will be cool. All the ingredients are poured into the water and boiled until thoroughly mixed. Place ham on the bottom of the container, shoulders next, bacon sides and smaller cuts on top. Pour in the brine, and be sure it covers the meat thoroughly. In five days pour off the brine and change the meat, placing the top meat on the bottom and the bottom meat on top, then pour back the brine. Repeat this operation again on the tenth and eighteenth days. If the pickle becomes ropy, take out all the meat and wash it off thoroughly, also the container. Boil the ropy pickle; or, better, make new pickle. When each piece of meat has received the proper cure, take it out of the pickle and wash it in lukewarm water, string, and hang in the smokehouse.

Choosing Cattle Names

What is the system used in naming registered cattle of the dairy breeds?

Mulvane, Kansas. W. W.

There is no system in universal use in the naming of cattle for registration. Each owner has worked out the plan which seems to suit him best.

In some cases, a prefix is used which gives the name of the owner, the name of the particular family of the animal, or the name of the farm. Another identification in the name is the one most commonly in use of giving a portion of the dam's or sire's name—sometimes both. The practice is made in some herds of giving new animals names which begin with the same letter as do the names of other animals within that particular family in the herd. For example: A local farm may call a cow within a certain family "Ivy of Koshkonong". In the same herd, closely related animals will be found to have names beginning with the letter "I".

Velvet Beans in Ration

Is it possible to make a properly balanced ration for dairy cattle out of velvet bean meal, corn cob meal, alfalfa hay, and ensilage? If not, what should be added to it and why? Is it possible that this is too heavy and heating a diet?

Nashville, Tenn. B. R. P.

The two roughages, alfalfa and silage, if of high quality, give a very good basis for feeding. Combining the velvet bean meal and corn and cob meal should give a profit from dairy cows. We would mix these two concentrates in about the proportion of 300 lbs. of corn and cob meal to 100 or 150 lbs. of velvet bean meal. There is some advantage in adding other feeds to this mixture for the variety secured, but this mixture alone should give good results. Grinding the cob with the corn lightens the mixture and makes it much easier to handle than if velvet beans and shelled corn were ground together, in which case it would be necessary to use ground oats or bran to lighten up the mixture.

A Well Question

Our well is 28 feet deep and about 3 feet of water is as much as there ever is in it. Quick sand keeps coming in and leaves less reservoir room. I have wondered if a 4-inch monolithic silo about 4 or 5 feet in diameter might be sunk deeper as a whole and if it could be let down until a slate or a hard substance would be entered into. Do you think that this would prevent sand from entering?

A neighbor has a 90-ft. deep drilled well and it is not sufficient for watering much live stock. How deep need one go and what might be the possibility of getting an artesian well or a liberal supply with a drilled well?

Birmingham, Ohio. J. J. L.

It would be impossible to say just what veins of water you would be likely to strike in digging a well deeper unless one is very well acquainted with the geology of the surrounding country. I do not believe that you would be justified in going to the trouble and expense of constructing a portion of a concrete silo in your well to keep back the quick sand which fills it up from time to time. I would suggest that you secure several joints of 36-inch bell end sewer pipe for this job. It is true that one cannot work very well in a 36-inch space, however one can use a short handled spade and a digging iron if the digging iron becomes necessary. If you dig the hole deeper other joints of 36-inch sewer pipe may be added on as deep as you care to carry the well. These joints in the sewer pipe might be sealed up with a very weak mortar made of one part of cement to about four or five parts by measure of sand. Water will penetrate such a cement mortar.

I have seen other curbs used instead of the sewer pipe; however in a short time this material will decay and allow the quick sand to fill the well again.

Pa. College of Agr. R. U. BLASINGAME.

Casein for Skimmilk

Kindly inform me which is the best and most profitable way to extract casein from skimmilk.

Mount Vernon, Wash. E. R. K.

There are two principal ways of extracting casein from skimmilk, one is by the use of sulphuric acid and the other is by the use of sour whey or rennet. The product of the first process is called acid casein and the product of the second process is called natural casein. Most of the casein manufactured is acid casein and the demand for the natural casein is very limited in this country.

Manufacture of Acid Casein—Use a wooden vat of suitable size. Run the skimmilk into this vat from the separator and heat the skimmilk in the vat with live steam to 130 degrees F. Then add slowly one pint of crude sulphuric acid (strength 66%) to each 1,000 lbs. of skimmilk. Distribute this acid over the entire vat when adding, stir the skimmilk thoroughly until curdled, then drain off the whey, using a strainer covered with cheese cloth so as to retain any fine particles and prevent their loss. Now rinse the curd with cold water. This can be conveniently done by turning a hose on it. Press this washed curd and grind it, using a peg mill similar to the cheese curd mill and then dry the curd.

The drying is done by spreading the ground curd on trays which are placed on shelves in a drying chamber, which simply consists of a room or vault with steam pipes.

In the drying of the curd, care must be taken that the temperature is not excessive. The temperature of the drying chamber should be held down to a temperature of 120 to 125 degrees F. Exposure of the curd in the drying room to excessively high temperature causes it to become dark and otherwise injures its properties for commercial purposes.

The trays on which the ground curd is placed for drying usually consist of wooden frames covered with fine wire screen about as fine as mosquito netting. The screen consists of galvanized iron wire. These trays or sieves are made of convenient size and are placed on top of one another and the curd is spread on these trays from about one-fourth to one-half inch thick.

In the drying room the heat is supplied by means of running steam pipes along the walls or elsewhere. The presence of one or more fans in this room greatly hastens the drying process. Some manufacturers of casein use a specially built drying closet built of such width and height as to accommodate two rows of trucks loaded with curd trays. These kilns may be about five feet wide, from ten to twenty feet long, and about five to six feet high. A fan draws a current of hot air through a steam radiator and blows this hot air over the trays on the trucks. It usually takes from twelve to twenty-four hours to accomplish the drying at 120 to 125 degrees F.

In some cases it is desired to pack the curd wet and to ship it to the buyer in this condition. In this case it is best, after washing the curd, to cook it in hot water at a temperature of 165 degrees F. or higher until it mats together and practically fuses into a mass like a very heavy dough. When this condition has been reached, the water is strained off and the curd is turned over and sufficiently manipulated with shovel or rake so that it drains well and that the matting together into one mass is complete. The wet, cooked curd is shipped in sacks or barrels. The cooking and matting of the curd has for its purpose the prevention of mold in this wet curd.

Sour curd may also be made by allowing the skimmilk to sour and then proceeding in similar manner as above described but without using any sulphuric acid, but the process is considerably slower and the curdling action is less complete.

Manufacture of Natural Casein—Place from two to three inches of sour whey in a vat, then run the skimmilk into the vat. The whey not only acts as a starter because of the acidity it contains but it causes the skimmilk to curdle because of the action of the rennet which was used in cheese making. Heat the contents of the vat to 150 degrees F., then stop heating. Allow the milk to stand a few hours and again bring the temperature to 125 degrees F. When the curdling is completed stop the stirring and allow it to cool. When the batch is cooled, run off the whey. In case the milk does not curdle thoroughly repeat the above operation. This is usually not necessary during warm weather, but may have to be done in winter. After the whey is drawn off treat the curd in the same manner as stated under acid casein.

The acid casein made by the use of sulphuric acid represents by far the most practical and most rapid process of making casein for industrial purposes, and this casein when properly made dissolves readily in any alkali and has many commercial uses, while the market for rennet casein is relatively limited. O. F. HUNZIKER.

Milk or Cream

We have a herd of 28 Holstein grades and registered, selling whole milk to condensery, getting only $2.10 per hundred for 3.5% milk, less 25c per hundred for hauling. I have thought of quitting selling to the condensery and separating our milk, feeding the skim to a big bunch of late fall pigs and calves, selling the cream once a week to a dealer in town for 45 to 55 cents per pound. Which operation would be the more profitable, taking into consideration the present price of grain?

Pearl City, Ill. H. J. H.

With the creamery dealer paying 45 cents per pound for fat, there would be a return of $1.57 for cream in 100 lbs. of 3.5 per cent milk. The actual amount might be slightly less than this owing to either a slightly lower test of milk or to a possible loss in separation; however, this latter should be inconsiderable if the separator is correctly operated and in good condition.

For feeding hogs, skimmilk is valued at one-half of the price of a bushel of corn. With corn selling at 80 cents per bushel, this would make skimmilk worth 40 cents per 100 lbs., and 100 lbs. of milk will yield approximately 85 lbs. of skimmilk. This skimmilk would then be worth about 35 cents, making a total return of $1.92 on 100 lbs. when the milk is sold as cream.

In this computation we have assumed that the price of 45 lbs. of fat is net with no deductions for hauling. While it would be proper to add some charge for the use of the separator and the time spent in separating, this would be an inconsiderable amount if a good quantity of milk is produced.

The present net price for whole milk is $1.85, which would mean that the cream separation would give 7 cents more per 100 lbs. for the milk. If the butterfat sells for 55 cents, the return from the sale of cream would be $2.27, or 42 cents more than is received for milk at the present time.

If the skimmilk is to be fed to calves of good quality and for which there is opportunity of sale at attractive prices, we believe one can count on a better return than we have computed for skimmilk. There is a possibility, of course, that eventually there will be a better price for whole milk than at present, but if this should prove to be true or if the butter market should be considerably lower, then it would be still possible to change back to the whole milk method of selling.

In calculating the comparative profitableness of the two methods of disposal, merely multiply the test of the milk by the price received for butterfat and then add to this one-half of the value of a bushel of corn, deducting any charges for cream hauling that there might be. Compare this price with the net price the condensery would pay. There are, of course, other factors to be considered, chief of which is the value of skimmilk in growing calves that will appeal to the buyer and that can be sold at relatively better prices. There is also the tendency in all condensery districts not to raise calves to maturity. This we consider a somewhat faulty practice. Indeed many of our dairy farmers find the sale of their surplus cattle one of their largest items of income.

Uncle Sam's Hired Men Who Serve You

Dr. J. K. Haywood, Chairman of Insecticide and Fungicide Board, Saves a Billion and a Half a Year to Farmers

DIXON MERRITT

This is the tenth of a series of articles this publication is running, in co-operation with the U. S. Department of Agriculture, to acquaint our readers with the type of men who are making possible the wonderful service the department is rendering and stands ready to render our readers, that those not now availing themselves of these services may do so.—EDITOR.

MAN'S most dangerous enemies are the insects. The smallest things in the visible creation, they are capable of such tremendous increase and expansion that uncontrolled they would exterminate the human race in short order. The larger part of control comes from the operation of that mysterious thing that scientists call the balance of nature. In plain language, that law is that every form of life sustains itself by preying on other forms of life, and thus all forms together hold each form in check. That law in operation would prevent the destruction of the human species by insects, but it would not prevent almost intolerable damage to man himself, to his live stock, and to his crops. Scientific control, added to natural control, enables the farmer in very large measure to save himself from the ravages of the insects, and, in the aggregate, makes possible the production of billions of dollars of wealth in the United States each year that otherwise would be destroyed by pests.

Twenty-five years ago the United States Department of Agriculture brought from the experiment station at Cornell University a young chemist, John K. Haywood by name, and put him to work in the Bureau of Chemistry doing a number of things in relation to stock feeds, mineral waters, and other subjects equally widely separated. Before he left Cornell he had tried to make an analysis of Paris green and found that no definite means had been discovered for analyzing insecticides. When he came to Washington he confirmed his previous opinion. A few people had examined a few insecticides, but there was no branch of chemistry that could be called insecticidal chemistry. Prior to that time there were men recognized as agricultural chemists whose work had to do with feeds, fertilizer, and chemistry in relation to the growth of plants, but none of them was even expected to know why any preparation was or was not an insecticide or fungicide. Haywood started out to develop an insecticidal and fungicidal branch of chemistry. How well he has succeeded is shown by this fact: When he began his work, any man undertaking to write a book on chemistry could not have filled a single page with any degree of accuracy on insecticidal chemistry. Today no man could write a book on agricultural chemistry without devoting at least a full chapter to insecticides and fungicides.

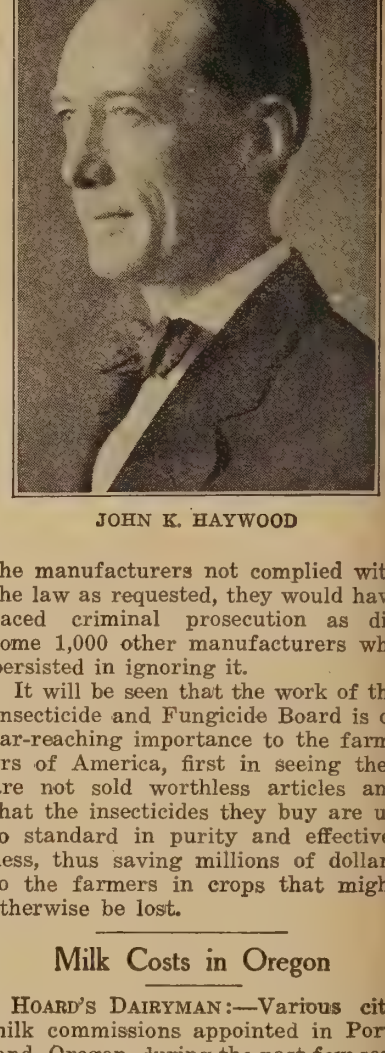
All food crops, all live stock, and the great cotton and tobacco crops are subject to the ravages of insects and diseases. The animal crop loss from insects and fungi in the United States is estimated to be in excess of $1,500,000,000. What the losses would be without insecticides and fungicides of sufficient potency to kill the bugs no one dares to approximate. Insecticides and fungicides are, therefore, as necessary a part of farming as fertilizers, or even plows and cultivators. In addition to seeing that the insecticides and fungicides on the market—preparations that have a commercial value of some $40,000,000—are not misrepresented, the Insecticide and Fungicide Board performs a conspicuous service in assisting manufacturers to perfect preparations that will adequately protect crops from insects and diseases. Thus millions of dollars' worth of farm products are saved annually.

The most recent contribution to the nation's welfare along this constructive line has been Dr. Haywood's work in connection with calcium arsenate, the only effective agency in combating the cotton boll weevil, an insect that destroys millions of dollars' worth of cotton annually. The Bureau of Entomology had developed this insecticide in an experimental way. Dr. Haywood carried out the work on a commercial scale. He perfected a commercial process of manufacturing calcium arsenate and contributed it to public use. Now manufacturers of calcium arsenate are using Dr. Haywood's process. In the past two years 13,000,000 lbs. of calcium arsenate of a value of $2,600,000 have been manufactured, and it is estimated that the manufacturers will put out twice that quantity next year. The fact of greatest importance, however, is that an effective control of the cotton boll weevil has been developed. Just how much of the cotton crop has thereby been saved can not be estimated, but 10,000,000 pounds of calcium arsenate, enough to treat 2,000,000 acres of cotton, was shipped into the cotton belt during the past season.

There was urgent need for legislation to safeguard the public from fraudulent preparations, and Dr. Haywood initiated the work of fostering and organizing the sentiment that culminated in the passage of the Insecticide Act of 1910. This law, the first draft of which was prepared by Dr. Haywood, prohibits the manufacture, sale, or transportation of adulterated or misbranded insecticides and fungicides intended for use by the farmer, orchardist, truck gardener, and animal and poultry raiser, in combating and controlling insect pests, plant diseases and bacterial and parasitic diseases of animals. The law also covers disinfectants and insecticides used in the home and in public places.

The Department of Agriculture's Insecticide and Fungicide Board, which directly administers the act, is composed of three scientists in addition to Dr. Haywood—Dr. M. B. Waite, pathologist in charge of fruit disease investigations in the Bureau of Plant Industry; Dr. A. L. Quaintance, entomologist in charge of deciduous fruit insect investigations in the Bureau of Entomology; and Dr. J. A. Emery, assistant chief of the Biochemic Division of the Bureau of Animal Industry. These scientists and their assistants have devised many new methods for examining insecticides and fungicides to determine whether or not they are adulterated, and for determining in the laboratory the probable value of the products in the field. The methods perfected have been published for the use of insecticide and fungicide manufacturers, and for the use of other scientists in testing such products. Considerable work has also been done with regard to the action of various insecticidal substances on vegetation and the action of various compounds and substances against insects and fungi.

The board has collected and examined nearly 8,000 samples of insecticides and fungicides. In some 1,400 official cases manufacturers were informed that the claims set up for their products were inaccurate. They were advised either to modify their advertising to fit the actual facts or to perfect their products to meet the advertising. To do the latter was quite impossible in a good many instances but there were also many cases where, with the assistance of the board, the preparations were made more efficacious than they had been before. The board might have prosecuted these 1,400 cases but it felt that possibly the manufacturers were honestly under a misapprehension regarding their preparations and gave them the benefit of the doubt. Had the manufacturers not complied with the law as requested, they would have faced criminal prosecution as did some 1,000 other manufacturers who persisted in ignoring it.



JOHN K. HAYWOOD

It will be seen that the work of the Insecticide and Fungicide Board is of far-reaching importance to the farmers of America, first in seeing they are not sold worthless articles and that the insecticides they buy are up to standard in purity and effectiveness, thus saving millions of dollars to the farmers in crops that might otherwise be lost.



OREGON AGRICULTURAL COLLEGE DAIRY CATTLE JUDGING TEAM AT THE PACIFIC INTERNATIONAL LIVE STOCK SHOW

Upper row, left to right: Herbert Nelson, Roy C. Jones, Coach. Lower: Edgar A. Biersdorf, Alfred W. Loy.

Milk Costs in Oregon

HOARD'S DAIRYMAN:—Various city milk commissions appointed in Portland, Oregon, during the past few seasons by the mayor to settle milk distribution difficulties have been at a loss for a basis of procedure because of varying opinions on the cost of milk production. Without this information there seems to be no logical starting point for a sound economic decision.

The most recently appointed commission has appealed to the Oregon Agricultural College for aid and as a result the Farm Management Department, with the co-operation of the county agents in Multnomah, Clackamas, Washington, and Columbia counties, has instituted a cost accounting system on the farms of two hundred dairymen, fifty in each of the four counties. R. V. Gunn, farm management demonstrator, will devote nearly all of his time for the next several months to close supervision of this piece of work which is regarded as of unusual importance by those familiar with dairy affairs in the vicinity of Portland.

Oregon. F. L. BALLARD.

Cheese Factory Bookkeeping

A cheese factory is ordinarily a comparatively small business and the usual bookkeeping methods are not applicable even if the maker and manager were competent for this class of work, a condition that seldom exists. None-the-less, when the items of expense are guessed at or overlooked, definite losses are suffered and bad conditions of operation are continued in ignorance.

To meet the need of the cheesemaker the Wisconsin Experiment Station has recently issued Bulletin 321, "Cheese Makers Save by Figuring Costs." The authors, Sammis and Juve, present a practical and workable system that should interest cheesemakers. Residents of Wisconsin can secure a copy of this bulletin free of charge by writing the Agricultural Experiment Station, Madison. Residents of other states will be supplied at a cost of five cents a copy.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, DEC. 20—The fact that Congress has foregone the usual Christmas vacation and is remaining in session except for four days, December 23 to 27, is the best indication of the seriousness of the situation as viewed by the lawmakers.

Attention shifted suddenly this week from the financial proposals to the tariff. The War Finance Corporation reviver passed the House on Saturday, stripped of the last vestige of agricultural complexion, and now is back in the Senate for conference or acceptance of the House amendments. In the meanwhile, the House Ways and Means Committee decided on Friday to report on an agricultural emergency relief tariff bill, and in three days whipped such a measure into shape by steam roller methods, and reported such a bill.

The bill as reported provides for a tariff sufficiently large to be nearly prohibitive on wheat, flour, corn, peanuts, rice, potatoes, beans, onions, lemons, cattle, sheep, wool, mutton, and vegetable oils. It will be known as the Fordney Emergency tariff of 1921.

This measure is the culmination of a series of conferences in which it seemed to be determined that the relief afforded by the War Finance reviver would be slight and perhaps greatly delayed by the prospect of a veto by the President, and some time in getting the Finance Corporation under way, even should he permit the measure to become law. The embargo asked for by wool and sheep interests and others met strong manufacturing opposition as well as the statement from the State Department that such law meant serious treaty disturbances. The tariff plan seemed more workable and of quicker action, hence the bill as stated.

The bill as introduced fails to meet the approval of many persons and of many interests, not the least of which is the dairy industry which gets no relief of any kind from the bill as reported. A strong plea was made in committee by Representative Frear of Wisconsin and Representative Green of Iowa for the inclusion of butter but this, and a proposal to include frozen meats, evoked the positive statement from members of the committee that they would not stand for these items.

Representatives of dairy organizations put the butter tariff straight up to the committee and to other members of Congress as soon as the fact was known that a bill would be reported, but the attitude of Congressman Longworth of Ohio, Treadway of Massachusetts, and Tilson of Connecticut, and others representing districts far from agriculture, was too strong to be overcome. However, the game is not played out as yet, and the effort will be shifted from the House to the Senate which will not get the bill until after New Year's, and a strong effort is to be made to secure a butter amendment before the bill leaves the Senate. Persons interested in this can help by writing or wiring their senators asking for a tariff on butter, and sending copies of the letters and telegrams direct to Senator Porter J. McCumber, ranking member of the Senate Finance Committee.

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The argument for this tariff is a very plain one. Butter has withstood the impact of big imports better than most commodities, but this is due to the strong organization of the dairy industry in part, and to the heavy demand for the rest, and is not an argument against a semi-prohibitive tariff at this time. The imports have been the largest ever experienced, over four hundred per cent greater than in the largest previous record. The imports for ten months of 1920 amount to nearly 31,000,000 pounds, as against seven and a half million pounds last year. The butter industry can not stand this impact indefinitely, and all reports indicate that larger imports are to be expected rather than smaller, if tariff relief is not given. The falling off in export business in condensed milk has created a demand for additional domestic butter markets which makes this protection against foreign imports doubly necessary at this time.

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The National Grange, the National Board of Farm Organizations, and the American Farm Bureau Federation have agreed to support any reasonable plans which can be put through to put the butter tariff in the emergency bill. The National Dairy Council, the National Dairy Union, and the Creamery Butter Manufacturers' Association have been represented in the preliminary work.

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Interest in dairy circles attaches to the plans of the Near East Relief and its big money campaign, and bigger program of relief work in Armenia. The proper financing of this work carries with it a potential market for a large amount of dairy products, especially condensed milk, now badly needed in the Near East. This is a commercial point of view on a great philanthropic movement, but is perfectly justifiable, for nothing is more needed in the work of the Near East Relief, according to statements made here by authorized representatives, than American milk products. The success of the Christmas drive is a matter of national concern in many ways.

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Hearings were begun last Monday on the requests of the Department of Agriculture for appropriations for the year 1921-22. The sub-committee of the appropriations committee which will handle this bill consists of Hon. Sidney Anderson of Minnesota, chairman, Magee of New York, Byrnes of South Carolina, Wasson of New Hampshire, and Hawley of Oregon.

Roy Potts, dairy specialist in the Bureau of Markets, is recently home from a three-day stay with the Wisconsin cheesemakers in conference with the State Department of Agriculture working on the tentative cheese grading plans of the state. He reports a successful start in this difficult task, and that it will be reported later to the interested organizations for suggestions and criticisms, before being put into effect as perfected some time next year.

⚜

Consular reports recently made public show that the trade of the Argentine in butter with the United States is second only to its exports to England. The figures for the first six months of 1920 show the imports into the United States 44,800 cases as compared with 195,100 cases sent to England. No Argentine butter came to the United States in the same period in either 1919 or 1918.

⚜

Two new reports have been printed here recently that the long threatened suit to compel Dr. Fowler, district health officer, to accept New York State milk for sale here, will soon be started. In the meantime the announcement is made officially that there will be a four cents per gallon reduction in wholesale prices of milk from the Maryland-Virginia Association, effective Jan. 1. This reduction, it is stated, is necessary because of price reductions in Baltimore and Philadelphia.

So Easy to Clean

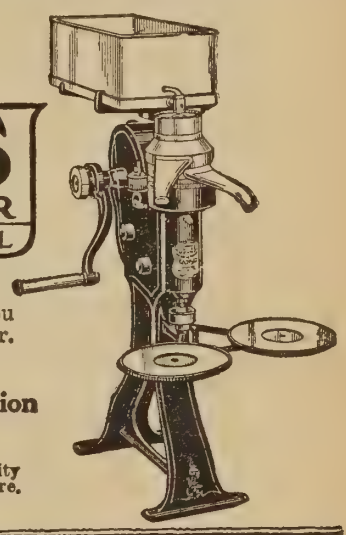
Ask the women

—Ask them what special features they consider first when choosing a cream separator. Nine out of ten will say "easy cleaning."

Just so. They know what it means to scrub and clean and assemble—twice a day. The United States Cream Separator has made the clean-up a matter of moments by giving you the first perfected bowl with INTERCHANGEABLE discs. Having no set order of disc arrangement to bother with, washing and rinsing is made quick and easy.

AND—the precise fit and smooth action that makes possible the interchangeable discs is also the secret of United States easy running.

UNITED STATES CREAM SEPARATOR
WITH PERFECTED DISC BOWL



You'll thank yourself twice a day if you choose a United States Separator. Write for catalog.

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Chicago, Ill. 58 W. Jackson Blvd.
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Feed Market Still Inactive

[Report by U. S. Bureau of Markets.]

There was very little demand for feed during the week ending December 11. Wheat feeds were quoted from $2 to $5 lower at some markets than a week ago. Quotations on bran were $26 at Minneapolis, $30 at Chicago, $28 at St. Louis, and $36 to $37 in eastern markets. Middlings were quoted at an average of $3 under these prices.

Sales of 43% cottonseed meal were made as low as $37 in Chicago and the statement that Texas mills were holding back large supplies tended to lower prices. Quotations on 41% meal were $32 in Memphis, $35 in Omaha and Kansas City, $38 in Minneapolis, $40 in Chicago, and $42 in Boston.

Buffalo and Minneapolis mills report a slight improvement in the demand for linseed meal at the recently reduced price of $41 f. o. b. mill. Quotations range from this to $45 in eastern markets. Gluten feed is quoted at from $48 to $52, hominy at $32 to $44, and beet pulp at $40 to $49.

Timothy is down to last year levels, No. 1 being quoted at $23 in Minneapolis to as high as $40 in New York. Clover hay and mixed hay is quoted $2 to $4 under these. Alfalfa is $27 in Minneapolis, $24 in Kansas City, $30 in Chicago, and $23.50 in San Francisco.

A woodlot is just as deserving of care and good treatment as is the garden, the orchard, or the pet horse,



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Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

It's all in the package

EVERYTHING else equal, people buy what looks best to them. People have been educated up to the parchment wrapper idea. It looks clean—and it *is*. It looks as though it keeps butter better, fresher, sweeter, more wholesome—and it *does*.

Where people have the choice they *buy* the better wrapped butter naturally, where they'd have to *be sold* the same butter, unattractively wrapped.

Buy Paterson Vegetable Parchment Wrappers in lots of 5000 or more, and we'll print advertisements on them displaying your brand and trade mark to the very best advantage and guaranteed not to stain the butter.

And then watch your butter sales grow.

PATERSON PARCHMENT PAPER CO.
PASSAIC, N. J.

Paterson vegetable parchment wrappers





Empire Oil-Burning Tank Heater

Greatest improvement ever made in tank heaters. Fits any tank. Burns from 14 to 16 hours on one gallon of kerosene. Any child can operate it with safety; no sparks, ashes or smoke. The heating chamber is entirely under water; no heat wasted. Guaranteed. Saves feed—pays for itself repeatedly.

Empire Non-FreezableHogWaterer

Made of heavy galvanized iron — large capacity (70 gal.); drinking trough on outside where hogs can reach it; oil burner directly under trough—guaranteed not to freeze. Keeps water warm at a small cost. An abundance of fresh, clean water at right temperature. Keeps hogs healthy—fatten faster on the same feed.



FARMER AGENTS

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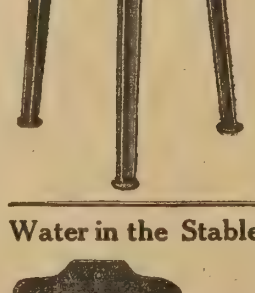


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ANTI-COW-KICKER

Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.

LADD'S ALUMINUM MILK STOOL



Light, Comfortable and Durable. Easy to Clean and Sterilize. Demountable Legs.

Ladd's Aluminum Milk Stool will last a life time if properly used and will relieve the milker of the back-breaking position of milking.

Packed in individual cartons.

Price, postpaid, anywhere in the United States, each, plain, $3.25, polished, $3.75.

John W. Ladd Company
"Complete Outfitters to the Dairy Industry"
Detroit, Mich., Cleveland, O.

Phosphoric Acid

Finely Ground Raw Rock Phosphate is the cheapest source. Your inquiries solicited.

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Water in the Stable a Necessity



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POUGHKEEPSIE, N. Y.

Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ky.	Oldham Co.	W. E. Brohaugh	Nov.	271	16	65.7	Fred Von Allman
Minn.	Pioneer	H. C. McMurray	"	1040	106	89.0	F. Ruble & Sons
Ia.	Monona—Farmersburg	Ernest Linn	"	313	38	70.6	W. J. Allest
"	McGregor	E. A. Stacy	"	293	17	68.1	John Geroghty
"	Winneshiek Co.	Carl L. Wennes	"	184	2	43.7	H. O. Larson
Ill.	First Kane Co.	Ralph J. Young	"	520	19	69.0	Albert Krahn
"	Jo Davies Co. No. 2	James E. Wiley	"	224	1	40.5	John E. Bonnet
Wash.	Skagit Valley	C. O. Riese	Oct.	502	72	76.7	Ralph McKibbon
"	Skagit Valley	C. O. Riese	Nov.	506	75	81.1	Thos. Lookhart & Sons
Wis.	Monticello	H. T. Albrecht	Oct.	520	20	88.2	Fred C. Marty
"	Elkhorn	E. D. Burr	Nov.	365	65	72.6	Wm. O'Leary
"	Amherst—Nelsonville	Geo. W. Baumel	"	376	44	61.2	Matt Domaszek
"	Racine & Kenosha	T. N. Boyer	"	451	20	66.1	H. A. Nelson
Ill.	Jo Davies Co. No. 1	John Haynes	"	376	7	61.4	S. Davenport
"	Madison Co. No. 1	L. Rasmussen	"	259	25	60.6	J. R. Hollard
"	Kane Co. No. 2	Frank M. Barber	"			81.8	John Oleson
Wash.	Wahkiakum Co.	W. J. Carter	"	373	34	69.6	C. W. Laughlin
Ky.	McCracken Co.	Ben G. Marsh	"	325	4	42.7	H. C. Hines
Pa.	Canton	B. E. Whitney	"	366	39	89.1	H. C. Gates
"	Laurel Hill	Wm. H. Cole	"	382	33	60.3	C. S. Chaffee
"	North Branch	F. J. Holt	"	349	14	59.6	F. Korstetter
"	Juniata Co.	Karl A. Fettig	Oct.	299	7	53.3	W. W. Gray
Tenn.	Wilson Co.	H. L. Brown	Nov.	290	9	63.4	C. P. Moser
Mich.	Kent Co. Co-op.	M. J. Farmer	"	231	22	84.0	Spangenburg Bros.

Association Notes

Oldham County, Kentucky:—Three unprofitable cows have been sold. All the cream separators in the association were tested during November. Most of them did good work, the skimmilk testing from .03% to .05%. Four per cent market milk sold for $3.49 per cwt. The creamery paid 60—64c per lb. for fat. Milk retails for 14c per quart, butter for 70c per lb., and cheese for 36c per lb. Feed prices are as follows: Corn, 65—75c per bushel; oats, 70—75c; bran, $42—$54 per ton; cottonseed meal, $46—$50; oil meal, $67; hominy, $45.

Pioneer, Minnesota:—The creamery paid 70c per lb. for fat during November. Market milk testing 5% sold for $4.75 per cwt. Milk retails for 14c per quart and butter for 70c per lb. Local feed prices are: Silage, $4—$5 per ton; hay, $10—$14; beets, $6—$8; corn, $20; oats, $20; bran, $34—$40; oil meal, $54—$70; molasses, $65.

Monona—Farmersburg, Iowa:—One registered bull replaced a grade Shorthorn, one registered heifer was bought for foundation; fifteen cows were sold, and eight cows purchased during the month of November. The average production for the association was 606 lbs. milk, 25.86 lbs. fat. Two herds averaged over 40 lbs. fat, six others over 30 lbs. fat, and six herds were below 20 lbs. Failure to heat water held the average down. The two 40-lb. herds were the only ones to use the tank heaters on testing days. The association received 33 tons of 43% cottonseed meal for $53 per ton. Dairymen received 70c per lb. for fat at the creamery. Feed prices are: Silage, $4 per ton; alfalfa hay, $36; clover and mixed hay, $20; corn stover, $5; oats, $30; corn and cob meal, $30; bran, $40; cottonseed meal, $70; oil meal, $80.

McGregor, Iowa:—The herd of John Geroghty has proven the value of feeding. One of his cows, Ret, made a net profit of $74.73 in 1919 and a profit of $164.62 in 1920 by feeding her a balanced and more profitable ration. This year his herd is going to do still better because it is receiving a well balanced ration, better than the one of 1920. During November the creamery paid 70c per lb. for fat. Milk retails for 12c per quart and butter for 58c per lb. Cottonseed meal is sold for $63 per ton; linseed meal, $72; silage, $4; timothy hay, $15; alfalfa, $30; oats, 42c per bushel; barley, 70c; corn, 60c.

First Kane County, Illinois:—A recent campaign for membership proved very satisfactory, as the number of cows for December will reach the 800-lb. mark. All members are interested in better feeding and are feeding balanced rations carefully and efficiently. A majority of the members own shares in or buy grains through a co-operative elevator. November's average production surpassed that of October. Market milk testing 3.5% sold for $3.05. Feed prices are: Bran, $38 per ton; shorts, $40; oil meal, $65; 36% cottonseed meal, $60; corn meal, $40; oats, $38; 18% sugar feed, $44; alfalfa, $30; clover, mixed, $25; timothy, $20; straw, $8; silage, $10.

Jo Davies County No. 2, Illinois:—This association started its work in April, 1920. The members are doing very well in the way of culling out the unprofitable cows and becoming interested in pure-bred cattle. They are doing away with their cow pens and are equipping their barns with stanchions and silos. During the eight months, four pure-bred Holstein-Friesian bulls, one pure-bred Guernsey bull, and eight pure-bred Holstein-Friesian females were purchased. Feed prices for November were: Silage, $8 per ton; bran, $2 per cwt.; mixed hay, $1.25 per cwt.; corn, $1; oats, 96c; oil meal, $3.50.

Skagit County, Washington:—On October 1st this association was organized and started testing with 31 members and 620 cows. Already several cows have been disposed of. The low price of milk, $2 per cwt., and the high price of feed keeps down the 40-lb. list. Two concrete silos are in use and another has just been completed. A new modern dairy barn is also nearing completion. All of the herds except one are headed by pure-bred sires and quite a number of the herds have pure-bred cows. Some official work has been done and one member intends to start again next month.

Monticello, Wisconsin:—The price of milk has dropped. Condenseries started skimming and paid from 45c to 55c per lb. for fat. Cheese factories paid from $1.50 to $2 per cwt. for milk. October feed prices are: Silage, $8; mixed hay, $30; bran, $36; oil meal, $66—$70; oats, 62c per bushel; barley, $90c.

Elkhorn, Wisconsin:—This is the first month of a new testing year. The association is starting out 100 per cent free from the scrub bull. About 80 tons of bran have been ordered at $35 per ton. Two members have put in milking machines and one has installed an electric lighting plant. Several are finding cows in their herds

which must be sent to the butcher. Members who have never been in association work before are becoming quite interested. In October, the condensery paid 75c per lb. for fat, and in addition 25c per cwt. for milk. Milk retails for 13—15c per quart, butter for 62c per lb., and cheese for 48c per lb. Local prices for feed are: Bran, $33 per ton; oil meal, $55; brewers grains, $55; ground oats, $30; ground corn, $38—$40; silage, $6.50; mixed hay, $26; alfalfa, $28; cottonseed meal, $58; Unicorn, $68.

Amherst—Nelsonville, Wisconsin:—Members are feeding good rations. During November, three cows were sent to the butcher. Two registered bulls and four cows were sold for dairy purposes and one registered bull and two cows were purchased. During the past year five members tested their herds for tuberculosis. Three members installed steel equipment with drinking cups and one installed a milking machine this month. The creamery paid 70c per lb. for fat. Milk retails for 12c per quart and butter for 60c per lb. Unicorn is rated at $62 per ton; bran, $38; oil meal, $62.

Shawano, Wisconsin:—This association finished its year November 30th. During the year 424 cows were tested, 310 finishing the year. Of these, 90 cows gave over 300 lbs. of fat, 28 of them qualifying for Register of Production. For the twenty-five herds the association average is 305.2 lbs. of butterfat. The high cow is a registered Holstein owned by A. H. Klebesadel; she produced 15,325.6 lbs. of milk, 571.1 lbs. fat. Her product was valued at $449.49, and with a total feed cost of $122.64 she gave her owner a profit above cost of feed of $326.85. The members having the three highest herd averages for fat were: A. H. Klebesadel, 356.8 lbs.; O. J. Berglin, 340.3 lbs.; and John Zingler, 313.1 lbs.

Racine and Kenosha, Wisconsin:—Two members, Clinton Skewer and Harvey Nelson, have bought a pure-bred bull ten months old for $6,200. This bull is a son of Carnation King Sylva. The farmers are not satisfied with the price they are getting for milk. Many bought high priced feed two months ago and cannot make a profit. During November, six cows were sold for beef. One member installed drinking cups. Three per cent market milk sold for $3.05 per cwt. and 4c per point above. Feed prices are: Bran, $38 per ton; ground oats, $37; ground corn, $36; ground barley, $38; oil meal, $61; cottonseed meal, $60; Unicorn, $68; clover, mixed, $28; alfalfa, $30; silage, $8; corn stover, $14.

Jo Davies County No. 1, Illinois:—Cows are mostly going on the root-hog or die-plan and the dairymen have their minds bent on cutting down expenses, which they certainly are doing in regard to getting their milk to the market or factory. Market milk testing 3.6% sold for $2.40 per cwt. in November. The creamery paid 64c per lb. for fat. Milk retails for 10c per quart.

Madison County No. 1, Illinois:—The milk business is still dull on account of the strike. In November 12 cows were sold. Two members installed stanchions and watercups. For 3.5% market milk, $3.10 per cwt. was paid, and 4c per point above. Creameries paid 56c per lb. for fat. Milk retails for 14c per quart and butter for 65c per lb. Feed prices are: Alfalfa, $30 per ton; clover, $24; cow-pea hay, $24; silage, $8; cottonseed meal, $3.25 per cwt.; peanut meal, $3.25; oil meal, $3.25; hominy, $2.35; crushed corn, $2.40; crushed oats, $2.40; bran, $1.90.

Kane County No. 2, Illinois:—There are some splendid cows in this association, most of the herds being good grade or pure-bred Holsteins, with one pure-bred Ayrshire herd. Most of the members buy feeds co-operatively. Members are all interested in everything that improves dairying. Calves are now being located for the Third Pure-bred Holstein Calf Club.

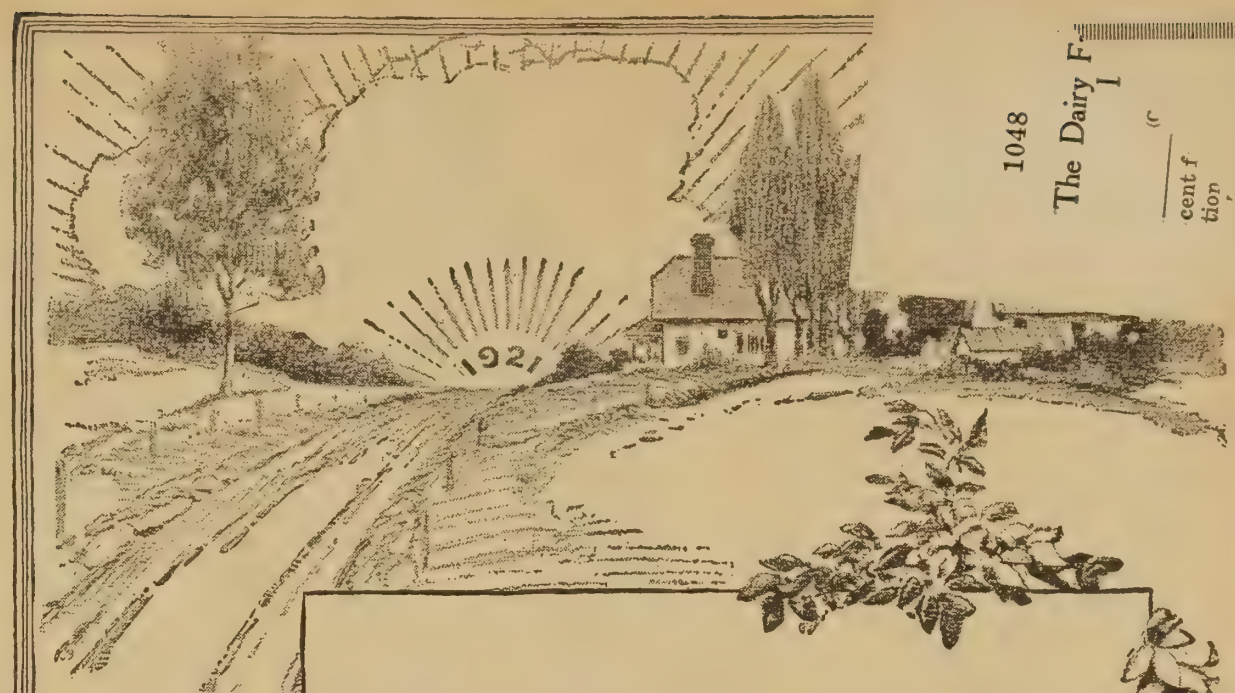
McCracken County, Kentucky:—Many of the dairymen in the association are having corn ground and are feeding a ration of 4 parts corn, 2 parts bran, and 1 part cottonseed meal. The owners of silos have opened them and are feeding regularly. A carload of bran and one of shorts have been bought co-operatively during November. Two unprofitable cows have been sold and three others have been turned dry and are being fed cheap corn until price goes up. Market milk testing 3.6% sold for $4.50 per cwt. and 6c per point above. The creamery paid 59c per lb. for fat. Milk retails for 18c per quart and butter for 65c per lb. Feed prices are: Cottonseed meal, $44—$50 per ton; bran, $38; shorts, $44; crushed corn, $20; sorghum and pea hay, $20; pea hay, $25; cottonseed hulls, $12; silage, $6—$8.

Canton, Pennsylvania:—Seven unprofitable cows were sold during November. Three per cent market milk sold for $3.56 per cwt. and 4c per point above this test. The creamery paid 67c per lb. for fat. Milk retails for 14c per quart and butter for 65c per lb. Local feed prices are: Cottonseed meal, $60 per ton; oil meal, $65; buckwheat middlings, $60; gluten feed, $58; Unicorn Dairy Feed, $72; Curtiss Dairy Feed, $70; wheat bran, $48; cow meal, $50; hominy feed, $50.

North Branch, Pennsylvania:—Balanced rations comprised largely of home grown feeds supplemented with protein feeds and fed according to production has been the slogan for the last two months and results are beginning to show. It will be only a matter of time until nearly every member will be mixing his own ration. Encouragement is also given in the feeding of dry cows and calves. Three per cent market milk sold for $3.85 per cwt. in November and 4c per point above this test. Milk retails for 13c per quart, butter for 72½c per lb., and cheese for 30c per lb. Mixed hay sold for $20 per ton; corn and cob meal, $26; ground oats, $34; wheat bran, $50; cottonseed meal, 36%, $70; linseed meal, $70; corn silage, $8 root crops, $8.

Juniata County, Pennsylvania:—The association bought a carload of bran recently at a saving of $9 per

(Continued on page 1054)



Over Another Threshold

SOON you will put the calendars of a new year up on your walls. You have weathered the labors of the past four seasons—with what benefits and damages you recall full well. Now the cycle of a new year looms ahead, and we must prepare to gather the fruits of 1921.

It is a time when conservative manufacturing enterprises and business houses are reviewing the past, taking stock of resources, and building future campaigns. Leaks are stopped, needs are reckoned with, and plans are made with extreme care.

Winter is the best time in most sections for complete farm inventory, for overhauling machines and making repairs, for accurate reckoning of profit and loss, for planning crop changes, for discarding old habits and considering new methods.

Every farmer knows this. It is good to see that there is more and more definite planning of full year's work at the close of every December, on the farms of America. It is so easy a matter to slide through the comparative resting period of Winter, and then Spring with its hundred duties bursts forth and finds many important matters and details unattended to.

We are glad to note this trend toward business-farming because we hope to be allied with Agriculture many more years and because our interests are so closely mingled with the interests of the farming world. So then, while we are setting our own house in order for 1921, we pause to publish the hope that you, the reader, may set forth into a new year of farming enterprise with all plans laid for a most profitable twelve-month.



INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)
CHICAGO USA

Farmer and the Farm Loan Act

(Continued from page 1041)

for a month or so on a small portion of what he borrows.

The whole point is this: If the farmer will learn to use the farm loan system and come to realize that the banks of that system are created for his especial needs and that they are organized to take care of his long-term loans in such a manner that he is to be comfortably financed, he can have better success in financing his short-time needs, whether he uses a part of the money he borrows as working capital, or uses all of it to carry his land indebtedness and applies to the local bank for capital for temporary use.

If the dairy farmers will make large use of the federal farm loan system, they will discover many ways in which the joint stock land banks and federal land banks can be of service to the dairy industry.

Thinking Through

W. J. HAGAR, NEW YORK

A winning wager could be made that ninety-five out of a hundred thoughts are sterile. We neglect thinking through. We get an idea, turn it over in our minds, perhaps express it to some neighbor, wonder why someone does not drive it to an issue and then discard it with a "what's the use," or some stronger statement of similar sense.

We farmers are noted for this kind of thinking. We really do get some good ideas, but what do we do with them after we get them? We get some few of them across through our farm bureaus; that is, if our leaders can see their way clear to do their own share of the work plus about all the shares of a majority of men who never think through to say nothing about sticking through.

⚜

We almost thought through on the daylight tomfoolery, here in New York this year, but we had it put over on us again as usual. Possibilities are that we will ball our clocks all up again in 1921! ! ! Want to? We will if we do not THINK THROUGH this time.

⚜

Certain seasons, for our thinking is as seasonal as our cropping, stimulate certain lines of thought. For example, our farm products in New York State have to be moved, quite largely, when it is nearly impossible to move them. How we do think when we are bumping or slushing through our mud roads with car, truck, or team! Down goes one side! Out swerves the car! Out in the mud to put on the chains!! Under has to go the jack to get a wheel of the truck loaded with three or more tons of produce out of a hole! Crack! goes one of the bridges made strong enough to bear a cow or perhaps a ton of feed on a wagon! "Why don't they fix this road." "Why don't they fix this bridge!" "A h— of a town superintendent we have!" "Some civilized place this is!" This is as far as we think. And we keep on paying high tolls for this type of road ! ! ! We do not think through.

⚜

Country life betterment is said to have received its initial stimulus from George Washington. Too many are apparently waiting for him to complete the job.

⚜

Oh yes! Milk is down a cent a quart. Went down in Amsterdam, New York, just like it did, probably, almost everywhere else. Went down a cent or more to the producer. Went down a cent or less to the consumer. Went down not a cent or part of a cent to the distributor. He is always working on just a cost basis. He can not have it changed. He must be guaranteed the same income, or more. It may go up with him but he knows no downward trend. He THINKS THROUGH.

Clothes are imported under tariff protection. Wool comes in free. American wool growers will be giving it away ere long to get rid of it. Butter, beans, beef, hay, wheat, corn, oats, rice, grow costless here. A local hide is worth a few cents a pound while a pair of shoes (manufactured hide) costs nearly as much as the live animal sold for! We have not thought through on this tariff matter yet.

⚜

Our social, economic, and political development is like unto a boil; the bad stuff has got to work out from the inside. Pressure may be applied to the exterior but purification comes only with the removal of the interior rottenness.

⚜

We have some co-operative associations started. Some are for selling our produce and some are for buying our supplies. Some are for improving our stock and some are for improving ourselves. Other interests, so called, can not "do us" fast enough to satisfy us so we are trying to "do" ourselves in a good many cases. If we are members of a co-operative association some of us think ourselves smart when we "do" it. Good! Keep it up. We've forgotten what it was like before. We want to experience old conditions again! We very largely make our own conditions. We foster factors of our own economic destruction by baiting along our destroyers. The farm bureau is experiencing this test in some places. The Dairymen's League is undergoing the same.

⚜

Nearly every farmer made organization or attempt at economic betterment is tried in the fires of personal selfishness, petty jealousy, and common contempt. We do not think through.

⚜

Is it not time for us to think through some of these problems? Economic pressure justifies our endeavor. Political prestige and opportunity demands and affords it. Seasonal advantages induce and nurture it. To our mind our big job and our opportunity is to THINK THROUGH and do it thoroughly.

Price of Alfalfa and Dairy Cows

HOARD'S DAIRYMAN:—The peculiar situation as to the price of alfalfa hay in Idaho commented on in your recent issue seems to deserve a little explanation. Most western states have established a quarantine against alfalfa from Idaho and Utah on account of the prevalence of the weevil in these sections. The Spokane market is thus not open to our $9 hay although even if it were the difference in price would not be so remarkable as might appear. The $9 price means in the stack. Baling and hauling will cost from $5 to $8 depending on distance from the railroad after which must be added the cost of freight. Spokane is about as far from most Idaho hay shipping points as Pittsburg is from Chicago and by rail almost as far as from Chicago to New York, so that even though Northern Idaho and Washington adjoin that market is difficult of access.

It might be mentioned incidentally that the establishment of quarantines is not expected to prevent the spread of the weevil but it does seem to delay it enough to be worth while. Curiously enough eastern states, probably on account of lack of appreciation of the situation, do not seem inclined to establish quarantines. The prohibition as to hay does not apply to ground alfalfa and some attempt is being made to market it in this form. However, it does not seem probable that the demand for this product will relieve the surplus to any appreciable extent.

The present status of the Idaho alfalfa market is not essentially due to lack of dairy cows. In normal times most of this hay is fed to range cattle and sheep which are grazed in the mountain in the summer and fed hay in the valleys in the winter. The disastrous condition of these industries, however, has prevented stockmen from buying the usual amounts so that combined with the effect of the quarantines a surplus has resulted. We have a considerable start in dairying and the industry will no doubt grow but it should not be inferred that the dairy cow is the solution to this problem. Most eastern people rather assume that the old time range has been broken up into farms. But the irrigated sections occupy but a small fraction of the total area and though there has been much optimism about "dry farming" it has been a demonstrated success in only occasional places of relatively small extent even where the topography permitted. Most of the country west of the 100th meridian is and no doubt will remain a range and forest country and as it is not practicable to graze large areas of scanty feed with dairy stock we must continue to market our range grass in the form of beef, mutton, and wool. Range stock must generally be fed in the winters and this furnishes a market for much produce of the irrigated valleys. Though this interferes with the progress of dairying it is sound public economy and we would not be justified in urging that range stock handled under such conditions be replaced by dairy stock.

A corrollary to this conclusion is that there probably always will be an American beef industry and those who predict that beef will eventually be only a by-product of dairying will probably be found in error.

Idaho. J. F. BRUINS.

Purdue Short Course

At Purdue University, LaFayette Ind., a short course in dairy manufacturing will be given in the eight weeks from January 17 to March 11, 1921. Buttermaking, in factory and on the farm; ice cream making; testing milk and its products; market milk and cheese; and dairy bacteriology are among the subjects included.

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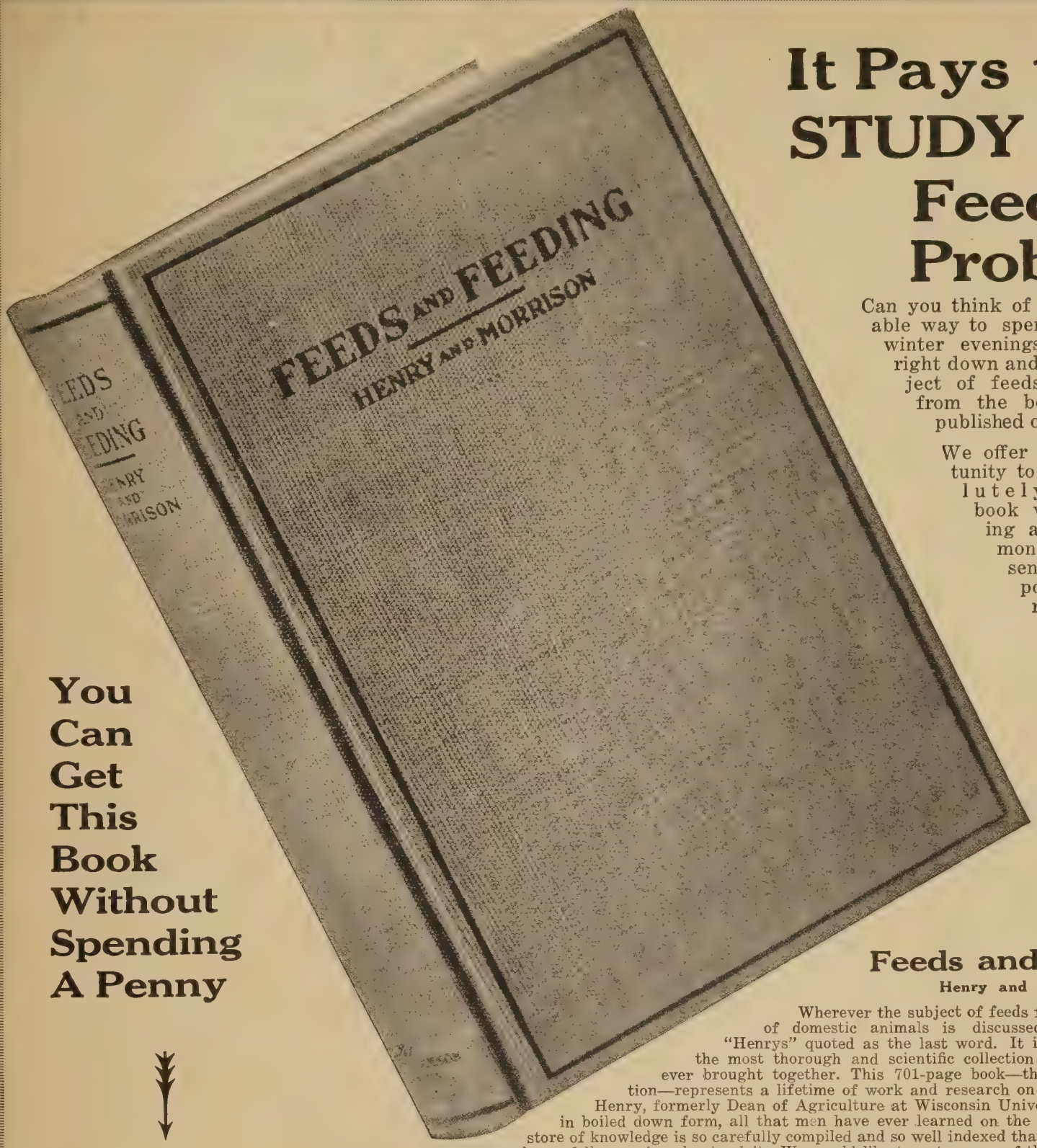
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HOARDS DAIRYMAN JUNIORS



A DEPARTMENT FOR THE DAIRY FARM BOY

Jerry Greene, Yer Honor

"That's it, that's it," repeated Jerry half aloud as he sat in the dimly lighted corner of the kitchen, glancing through the one farm paper that found its weekly entrance into the Greene household. "That hits the nail right on the head, the place where it ought to be hit, and believe me I'm mightly sick of it all," as he dropped the paper at his side, and rested his head wearily on the back of the old kitchen rocker.

"Pat," called his mother to her husband, "come quick, Jerry has fainted away," and she rushed over to where Jerry was resting. "I heard him say something about being sick and then he sank back in his chair, just like he is now," she whispered.

"What's the matter?" Jerry inquired as the parental duet approached him, much to their surprise.

"Why, you surely gave me a scare, Jerry," answered his mother. "I heard you say something about being sick and then all of a sudden you sank back in your chair just as if you had fainted. Are you sick, Jerry?" she hurriedly asked to make sure that she had not made a mistake.

"Well, I guess it wouldn't be telling a lie if I claimed to be," he replied with a fatigued smile lighting his tired face. "I didn't mean that I had a headache, stomachache, or any other disagreeable ache, but I've got an ache that's worse than all of those combined, and I mean exactly what you heard me say when you thought I had fainted away," he added defiantly as he straightened himself in his chair and stared into the bewildered faces of his parents. "I'm sick and tired of it all and, unless there is a change, I'm going to be a minus quantity 'round this place. It's Jerry this and Jerry that, day after day and week after week, without ever any consideration that I'm a human being and only a fifteen-year-old boy at that. But as long as I have waited, thinking that a change would come, things only grow worse, and I'm nothing but a slave 'round here. I never get a chance to play with the other boys, never had a calf or a pig of my own, and no matter how much I begged to be allowed to belong to one of the clubs, the answer was always the same: 'No'. I'm not getting half the chance that Jimmy has had, and the Lord knows what a time he had. But he was a better fighter for himself than I am and so I have had to stand for some of the things that he should have shared. It's all wrong, by gum, and there's going to be a change."

"Who put this fool idea into your head?" demanded his father gruffly. "Sounds like some of Jimmy's nonsense! Let me see that letter you received from him yesterday. I'll have to teach that boy a lesson," he added as he sank into the nearest chair.

"You won't get that letter, dad," replied Jerry, "and, furthermore, Jimmy never mentioned or even hinted anything like this. I just made up my mind that this is all wrong and there is no good reason for it either. In fact, I have been thinking a good deal about my lot on this farm and I guess I could preach you and ma a regular sermon upon the subject if I had to, and maybe I'll have to in order to carry my point," he slyly added. "My mind's made up and you ought to know what that means with a Greene."

Having thus concluded, he turned to gaze upon the moonlit slopes of the fields, now fast losing their blankets of snow and what he was thinking about we will leave to the judgment of any farm boy of Jerry's age.

"Well, if you're not satisfied, young man," spoke his angered father, "you can clear out of here. You don't work any harder than I do and don't forget that you're not of age yet, either. And, besides, when Jim's through college, we have promised that you can go. What more do you want than that? You ought to be willing to work and hard, too."

"Guess I have been and you'd find out too if I quit," he answered. "I'm not complaining about the work, dad, but I do think that I should be given a little recognition along the lines of things that boys like. It would make work so much more enjoyable and you would probably get more out of my hide than you do now. Just because I'm not twenty-one yet has nothing to do with the matter in my opinion. This is a free country, yes, and a democratic country, too, and if I'm any judge the type of people we want are those who do their own thinking instead of following a fixed pattern worked out by some one else. If a boy can think a man's thoughts, then let him think them and if he would like to try his hand at some of the things he sees older people doing then he should be given that privilege, too. A young man ought to be taught to grow up and not just allowed to grow up like the weeds we have to fight every summer."

Then noting a droll grin spreading over his father's face, he added, "read this", as he handed him the paper he had been reading when he had announced that he was sick of it all. "This is what set me off, dad", as he directed his father's attention to the following poem. "It's a hummer and it expresses my sentiments exactly, and you'll know what I mean and why I am dissatisfied when you have read it through. I wish Bob Ramsay was here to talk to you and ma."

"Read it out loud, Pat," spoke his wife. "If it is such good evidence we ought to listen to it. It is possible there is something to what Jerry is complaining about. You know times are changed, Pat, from what they were when you and I were children, and Jerry has certainly been a good, faithful boy and I don't know what you would do without him now that our oldest is away at college." But all she received in return was a discontented frown from her husband, saying as he looked at Jerry, "you read it if it is so good; maybe you can bring out the meaning better than I can anyway."

"Guess I can do that and then some," he answered, taking the paper from his father's hand. "But before I begin, I do want to say that I don't think you mean to be this way, dad. You just got the habit and because I never said anything you thought everything was all right and that I was satisfied. Maybe I'm to blame for not having kicked harder long ago. Just you listen to this though and I think you will be convinced of my point." And so he read:

"Why did you leave the farm, my lad?
Why did you bolt and leave your dad?
Why did you beat it off to town
And turn your poor old father down?
Thinkers of platform, pulpit, press,
Are wallowing in deep distress;
They seek to know the hidden cause
Why farmer boys desert their pas.
Some say they long to get a taste
Of faster life and social waste,
And some will say the silly chumps
Mistake the suit cards for their trumps
In waging fresh and germless air
Against the smoky thoroughfare.
We're all agreed the farm's the place,
So free your mind and state your case."
"Well, stranger, since you've been so frank,
I'll roll aside my hazy bank,
The misty cloud of theories,
And tell you where the trouble lies;
I left my dad, his farm, his plow
Because my calf became his cow;
I left my dad—'twas wrong, of course—
Because my colt became his horse;
I left my dad to sow and reap
Because my lamb became his sheep;
I dropped my hoe and stuck my fork
Because my pig became his pork;
The garden truck that I made grow
Was his to sell, but mine to hoe;
It's not the smoke in the atmosphere
Nor the taste for life that brought me here;
Please tell the platform, pulpit, press,
No fear of toil or love of dress
Is driving off the farmer lads,
But just the methods of their dads."

"How did you like it?" he asked, looking from one to the other. "I can't see how farmers figure," he added. "What difference does it make to them in the course of a lifetime if their boys have a little interest in some of the stock? It doesn't mean anything to their success one way or the other, but what a lot it would mean to some of the boys and I happen to be one of them. Every boy likes to have something for his own keeping; it's just a natural kind of desire that is born with him and I can't see why that desire shouldn't be satisfied and there's no place like the farm to carry out that idea. I'm that very boy spoken of in that poem, dad. You let me call all the calves mine, but never yet have I received one cent of income when they are sold. All I have at this time is just a fond memory of some of those innocent little things greedily bunting the pails over as I tried to feed all of them at one time. No, sir, it isn't right not to teach a boy to grow up. Working all the time without being given a little interest in the things we are expected to do! And it may be the difference between a successful and an unsuccessful man finally. Boys ought to think men's thoughts and do men's things when they get to be as old as I am. All I ever asked was to be allowed to be a member of the club that the other boys belong to. But for some reason you got it into your head that Jimmy was spoiled by the club and so I have to suffer, when as a matter of fact it was the club that gave him the inspiration to go to college and now you'll have to admit that you and ma are so proud of him since he has made good down there and been elected captain of the football team that nothing's too good for him in your eyes."

"That's enough, son," broke in his father with trembling voice. "I remember about a year ago that I wrote Jimmy how different things would be from that time on. I think I made good, too, at least in a part of my promises. We have a new house and automobile and I think we all take life easier than we used too. But about you, my son, I guess you have the right to make this complaint. I haven't given very much attention to you but to get all the work out of you I could. I see it now and I am sure you are right about it all. A calf or two won't break me and if it will make you a lot happier to have one, you can pick any one of the four we are raising this year, and you can join the club too."

"But I'm too old to join the club now, dad, at least I feel that way and it isn't a calf I want either. I've taken a liking for pigs and I'd awfully like to have old Goldie and the litter of pigs she is going to have in a couple of weeks. You can reserve the right to buy one of the litter if you wish, but other than that I want the right to do with them as I see fit. Goldie is a good sow and a pure-bred and I've just got an idea that if I go at it right I can make some money and start a bank account of my own so that, by the time I'm twenty, I'll have something to show for my work on the farm."

"It's quite a little you've asked, Jerry, but since you never owned anything of your own, I guess I'll have to say you can have her. But I shall expect you to give a good account at the end of the year."

"He'll do that, father," interrupted his mother quite as elated as was Jerry. "Greenes never fail when once they set out to do a thing. This will please Jimmy, too, for he always said that Jerry wasn't getting a square deal."

True to Jerry's prediction, Goldie presented him with a litter of eight within the next two weeks, and Jerry was just as proud of them as was Goldie. He looked after their every need, watching them closely for the first two weeks, with the result that not one of them was lost.

When seeding time came, he plowed up the old worn hog pastures and seeded them down to a mixture of oats, peas, and rape. He repaired all of the fences in addition, doing this in the spare time he had left after the chores were finished. By the middle



GOLDIE

of June he had a splendid pasture, and in it were feeding eight healthy Durocs. Never had he been as proud as when a passerby stopped to inquire about the price he was holding for them.

"Mighty fine pasture you have there, boy," he remarked. "What did you seed down with?"

"A bushel and a half of oats and peas each and about four pounds of rape," he answered.

"Where did you get the idea?" asked the stranger.

"From the agricultural college. You see I have a brother down there and he told me that this mixture is used there and that it makes one of the finest hog pastures one can get. The hogs feed off the oats and peas first and then the rape is ready after that and so that makes a pasture for all summer. Looks pretty good, doesn't it?"

"What price have you got on them?" he asked. "I'd like to buy a pure-bred sow of that breed and yours look mighty good to me."

"They are not for sale yet," he answered proudly. "I'm going to keep the entire litter until fall and then I am going to advertise them for sale as breeding stock. I'll have plenty of feed this summer and I think I can afford to do that."

"What do you expect to get for them then?" he further inquired.

"Oh, anywhere from $50 to $100 apiece if I work my cards right. They are worth that, I think, the way breeding stock sells. Both the sire and the dam have splendid records and if I do a little advertising I believe I can dispose of all of them. Dad would never advertise and so of course all of his pigs have gone on to the market as pork, but these are mine and I am sure that I can make some money off of them if I work it right."

"Tell you what I'll do, sonny. I want one of those young sows and I'll give you $50 cash right now and I'll take her along in this empty barrel. That's a good price and you better consider before you turn it down. What do you say?"

"No," came the answer. "If you are willing to pay that now I'll get more than that this fall. If feed was scarce I'd do it, but I have plenty for the summer and so I shall hold them."

"Give me first chance this fall then," he insisted.

"Sure! First come, first served, will be my motto, and you have the advantage, too, for you have seen them."

"I'll probably be around then, but if I'm not I wish you would drop me a line when you are ready to sell."

"That I'll do; but what's your name and where do you live?" he inquired.

"Well, sir, my name is Logan Reed and I live in the town of Dexter. That's where I get all my mail," and he waved Jerry a hearty good bye as he gave his team the word to move on.

"Looks pretty good," said Jerry to himself. "Business starting in already and I'm not ready to sell. Maybe he'll be back this fall and ask for all of them," as he climbed over the fence to get a closer view of the pigs.

"Sure I can make you weigh 200 pounds apiece by November at the rate you are going," he said as he stroked the sleek back of the young boar nearest him. "Four hundred dollars is the least the eight of you should bring. Yes, I've got my eye on you," he said, as the largest of the litter sniffed friendly about his feet. "Dad will probably want you, and, believe me, if he does, he'll pay for you. One hundred dollars is on your scalp right now and as much more as you will bring. You're a beauty, and you know it, don't you.

The summer passed swiftly along. The pigs were fast growing into hogs under Jerry's good management. He began to think of running an advertisement in some of the leading farm journals.

"'Twon't do any good,' remarked his father. "It will only cost you a lot of money and it won't bring you any more buyers."

"How do you know, dad? You never did a bit of advertising to sell anything in all the years you have farmed. So how do you know so much? You are only taking a chance on guessing, but I'm not playing a guess game. If you have anything to sell, you've got to find buyers or else you can't do business. People don't even know this place, to say nothing about there being breeding stock for sale here. There's got to be a beginning to everything and this is where we make this farm known. It won't cost you anything, that you know. But, by the way, dad, I promised you that you could have your choice out of that litter. There is one boar there that I think is a whale. You ought to keep him."

"Yes, but for how much?"

"One hundred bucks takes him, dad. There never was anything like him on this place before. Look all through yours and you won't find one like him. He'll sell like hot cakes when people see him. Might hold him for a couple of hundred, but seeing that it's you, $100 will take him."



WATERLOO, WIS., CORN JUDGING TEAM—1920 STATE CHAMPIONS
From left to right: N. O. Eckley (coach), E. Beyer, H. Higgins, D. Skalitzky.

"Whoever heard of paying such a price for a hog six months old," scorned his father.

"You have, right here, dad, I'm telling you."

"Well, I don't want him at that price, and I guess you'll find that no one else does either."

"All right, dad, you are counted out of the prospective buyers. But don't you ever come back at me and say that I didn't give you a square deal," he laughed. "Next week at this time Goldie will be the only one left and I'll have between four and six hundred dollars in the bank to my credit."

This brought forth a hearty laugh from his father. "There never yet was a Greene who made money that fast, son, and I've farmed now for twenty-five years. You're building air castles."

"All right, wait and see for yourself, and next week you watch for my ad in the farm papers." That night Jerry spent a good hour's work upon framing up an ad for his stock. He was very proud of it as he reviewed its contents, saying to himself, "That'll fetch the buyers." In this he was correct, too, for by the end of the next week he received no less than half a dozen letters from men who were strangers to him stating that they would be over to look at his stock. And this is what happened.

The Mr. Reed already referred to was on the job by special appointment. "I'll give you $225 for the three sows," he said, "that is at the rate of $75 apiece."

"Better than I had really expected," Jerry answered, "but seeing that you set your own price, I'll hold you to it and you can have them for that."

"Don't let him have that boar, Jerry," called his father from the barn.

"He can have him unless you want him, dad. What do you say? Shall I save him for you? Not less than a hundred you know."

"Yes, I know, and I want him too; so hold him."

"Clever bit of work you got in there, son," commented Mr Reed. "But, by the old cracky, he is a bird, isn't he? Cheap at that price, I would say."

"Glad you think I'm not slipping anything over on dad," Jerry laughed.

"Well, that's $325 for four of them and I have four boars left. They ought to easy make up enough to total $500," and he chuckled to himself as he stepped up to his father and shook the $225 in his face, saying as he did so, "Come across, dad, with your $100 and then I'll have $325 for half of the litter."

"Do you mean to say that you asked Reed that much for those sows?" remarked the astonished father.

"Didn't ask him a cent for them. He made his own price and I took him up. He saw the quality in those pigs. See what you've missed, dad, all of these years by being so conservative. Besides you are paying a good price for that boar too, don't forget that."

And just at that point in the conversation, another wagon drove up carrying two hog crates. Jerry was on the job again in a hurry. "Only got four left and they are all boars," he apologized.

"Don't want any sows," remarked the buyer, "nor boars either unless they are very superior."

"The only kind I deal in," came the quick reply. "The big fellow is sold," he remarked, "but you can have your choice of any of the others."

"What are you holding them at?" he inquired as he carefully looked them over.

"Seventy-five dollars apiece," answered Jerry boldly. "They are worth it too, Their breeding is all that is described in the ad you read in the papers. I'll stand back of that."

"Little small for that price and this time of the year, son. The big one is worth that. He's got the type I like."

"Yes, and he brought $100, too," Jerry answered, "so I don't think that $75 is too much for the others. All out of the same litter."

"Give you $130 for two of them. What do you say?"

"Hate to do it, but seeing that they are possibly a little undersized, I'll take you up." The two were quickly captured, loaded and driven away. On his return to the barn, Jerry encountered Mr. Ramsey.

"Came over to buy one of your young boars, Jed," he smiled. "Have been watching them all summer and they are a mighty fine litter. Bob saw your ad in one of the papers and he wrote home and asked me to buy one for him You see he has to furnish one-half of the stock now that he is in business with me. What are you getting for them?"

"Just got $65 apiece for the two that he took," as he pointed to the wagon leaving the yard. "Dad paid me $100 for what he thought was the best one and the three sows brought $225. Seeing it's you, Mr. Ramsey, and we are good neighbors, I'll sell either or both of them to you for $50 apiece."

"The fact that we are good friends has nothing to do with it, my boy," advised Mr. Ramsey. "If they are worth that price, you ought to get it. Business is one thing and friendship is quite another. And the former should not be influenced by the latter," he added as the two climbed into the hog pasture.

"They are worth it, Jerry. I've bought a good many hogs in my day. I'll take both of them. Bob will want one at home and the other he'll place on the farm that he does not yet know is his."

That afternoon he came with the wagon and took the two, leaving only one which was to be his father's as soon as the money was paid over. "Didn't I tell you it could be done, dad?" Jerry joyfully exploded as his father paid him the one hundred that evening.

"Well, I didn't believe it," he sheepishly answered, "but I guess I'll have to admit now. I thought Jimmy was pretty smart, but he'll have to take his hat off to you, son, and, by the way, you had better bank that money to-morrow."

And as Jerry stepped up to the cashier's window the next day with his deposit slip, the cashier remarked, "Want this to go on your father's account?"

"Indeed not, can't you see my name at the top of that deposit slip? I'm Jerry Greene, yer Honor, and this money is all mine. Made it all on one litter of fine pigs and I have the old sow left for another start next spring."

Junior Letters

Hoard's Dairyman Juniors:—I am thirteen years old and in the 7th grade at school. I have one white and black calf which is nearly a full blood. I have four white rabbits but intend to sell them. My brother has a black and white calf which is also a good grade.

We have a 120-acre farm. Have a good team of horses, 5 and 6 years old, and I have also a pony and a dog. The dog's name is Buster. The pony's name is Flora and I have many a happy ride on her back. My calf's name is Bidy. We have 20 pigs now but intend to sell most of them. We have four milk cows, 1 yearling heifer, and two calves, one of which is mine.

I wish some of the juniors would write to me. My address is Box 100, R. F. D. No. 1, Marinette, Wis. Shelby Keill.

Hoard's Dairyman Juniors:—I am 10 years old and I am in the 4th grade. I go to a Catholic parochial school.

I have two dogs, one's name is Rexe and the other Sheppy. My father has put up a stave silo and we had it filled. We also built 13 ft. on the barn this summer. We have five little pigs. They are growing fine and I have got the mother of them. She is growing fine, too. We have 100 acres of land. We got 128 bus. of oats and 47 bus. of barley.

Wisconsin. Edmond Brandt.

Hoard's Dairyman Juniors:—We have about eighteen pure-bred Holstein cows. We have twenty-two shoats and twenty-two little ones. We have thirteen horses. I have a Shetland pony. His name is Toby. I took him to the fair one year, but did not get any prize. My father rented the farm this year. I am twelve years old and in the 7th grade at school. We live right near a lake. I go swimming every day.

Wisconsin. Leslie Gilbert.



The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows, fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey calves, $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Plebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Serviceable Holstein bulls—30-lb. son of 37th heads the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

If you want the very best, heavy producing Holstein cows or heifers at a very low price now is the time to get in touch with me. Also some very fine Holstein heifer calves. $25.00 each, I pay express, will ship C. O. D. E. F. THOMAS, Oconomowoc, Wisconsin. 21-4

For Sale—22 high grade Holstein cows, springing and fresh, well marked, young and good size. CRAWFORD STOCK FARM, Mukwonago, Wis. 24-2

Registered Holstein bulls, old enough for service. Fine individuals. Best of breeding, $100. Yearling heifers, $100. Older heifers bred to 36-lb. bull at low prices. My 36-lb. herd sire at a bargain. DR. BLACKBURN, Cuba, Ohio. 21-5

12 high grade Holstein heifer calves, 60-lb. dams, yearly record sire. $27 crated. Shipped C. O. D. ERNEST FERO, Route 5, Whitewater, Wis. 23-4

Outstanding individual. Grandson of Pontiac Korndyke with 44-lb. breeding. Ready for service. Price $300. NELSON PAUL, No. Manchester, Indiana. 23-2

Do you want the very best? I offer beautifully marked, high grade Holstein heifer calves at only $20. Registered bull calves, $40. Will ship C. O. D. and if calves don't satisfy don't take them. J. M. McFARLAND, Watertown, Wisconsin. 23-3

For Sale—30 high grade Holstein milkers and springers. Will sell one or all. FRED JOHNSON, Waupaca, Wisconsin. 23*

If you want to buy high grade or pure-bred Holsteins, write BOX 528, care Hoard's Dairyman. 24-2

A 30-lb. 4-year-old bull by 33-lb. sire, ¾ white. Very good individual. Good condition, absolutely gentle. Guaranteed. $600. Also 12 heifers, four to 18 months, nine from A. R. O. dams up to 25 lbs., all sired by 32-lb. bull. Price $2,400. Address BOX 527, care Hoard's Dairyman. 24-2

Registered Holstein bull, 13 months old, show type, well grown. Dam, 23-lb. junior four. Sire, 29.50 lbs. Write price, pedigree. W. GANZ, Lyons, Wis. 24-2

Closing out herd of grade Holsteins, $100.00 each. H. A. KUHTZ, Waukesha, Wisconsin. 24*

Registered Holstein bull calves, three to six weeks old, $35.00 each while they last, registered and transferred to you. PHILLIP KEISECOMB, (Herdsman), Assumption, Illinois. 24-3

Pure-bred Holstein bulls. Sire's 22 nearest dams average 31.10. H. GARSIDE, Oostburg, Wis. 24-3

Holstein bull calf for sale, 3 months old, nearly all white. From a 26-lb. sire and A. R. O. dam. Price $100 L. A. GRADE, Granton, Clark County, Wis.

Good Stock—Registered Holstein sire, thoroughbred—unregistered and grade Holstein dams. Calves, both sexes, well marked, two to six weeks old, $25.00 each. F. O. B. Twinsburg, Ohio. FRANK T. BOUMAN. 24-2

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN. Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

STOCK FOR SALE

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd. so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS. Mankato, Minnesota. 19*

Guernseys for Sale—From Federally Accredited herd. Bull calves, two bulls ready for service, sired by Clara's Sequel and out of high testing dams. Also ten pure-bred females. LLOYD RUNDELL, Roberts, St. Croix County, Wisconsin. 22-3

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

A son of Ne Plus Ultra, good show bull. Also a son one year old by bull offered out of cow that made 40 lbs. milk a day and 50 lbs. fat in 30 days. H. C. HURLEY, Rockville, Md. 20-5

For bargains on May Rose bulls with type and production, write KUHTZ BROS., Waukesha, Wis. 21*

Registered Guernsey bull calves from 1 month to 1 year. Some from A. R. dams. OTIS A. MARKEN, Valders, Wisconsin. 22-5

Registered Guernsey heifer calves for $150.00, delivered. Sire's 5 nearest dams average 725 lbs. fat. PINE HILL FARM, Howard City, Mich. 22-3

100 head of pure-bred and grade Guernseys. A great bargain for someone who can handle that number. Address BOX 518, care Hoard's Dairyman. 23*

Guernsey bull calves from seven to ten months old of good breeding. ANTON O. BERGE, Valders, Wisconsin. 23-2

For Sale—Daniel Rilma 49395, a junior 4-year-old Guernsey bull of merit. Price $150. HARRY W. DOTY, Savanna, Illinois. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Two serviceable Guernsey bulls for sale. Dams Advance Registry records average over 600 lbs. fat. HOMER RUNDELL, Livingston, Wis. 24*

Bulls—Guernsey bulls, bull calves, bulls of breeding age. Sons of Florham Victor, sons of Norwood of Pencoyd and sons of Daisy Pearl's Governor for sale. Come and see our "Bullavard." If you are short of cash we will take your note, if it is good. Also offer a few young females. W. W. CLARK , Vesper, Wis.

For Sale—Four Guernsey cows, registered. LLOYD DICKSON, Dallas City, Ill. 24-2

Pure-bred Guernsey bull age 2 months, light fawn and white, white switch, Advanced Registry breeding. Large for age, $75. CHARLES BONSON, Kenosha, Wisconsin.

For Sale—Registered Guernsey bull calves, good producing dams at farmers' price. OTTO KRUEGER, 427 East Broadway, Toledo, Ohio. 24*

Jerseys—Cows, heifers and young bulls, Association records. H. F. ROCKWELL, Mondovi, Wisconsin. 24-4

For Sale—Jersey bulls, two, best breeding, fine individuals, eleven and thirteen months old. Kodak pictures. THE MAPLES FARM, Route 5, Box 169, Independence, Missouri. 23-2

Jersey bulls—Bonnie Lass' Master Raleigh H. R. No. 179733, also You'll Love's Fern Lad H. R. No. 178695. Am giving up the farm and will sell very cheap. J. C. ROY, Fitchburg, Massachusetts.

Three pure-bred Jersey bulls under year, Sophie's Tormentor breeding. F. W. AXLEY, Seymour, Wis.

Valley Farm is offering several bulls, 6 to 12 months old, from R. M. cows. Sired by Golden Maid's Viscount and Kilda's Royal Majesty, two of the best Island bred bulls living. At prices to sell. Write FRED STUBLEY, Black Earth, Wisconsin.

STOCK WANTED

I want to buy about ten head of grade Guernsey calves each month till I get one hundred head, expressed to my ranch in Colorado. Quote prices delivered to Trinidad. Address me at Gulnare, Colorado. H. C. CAYLOR.

Wanted—Holstein bull, ready for service, individually good, healthy, well-grown, good yearly record, deflated price. Full particulars. LOCK BOX 2, New Douglas, Illinois.

Wanted—Best Holstein herd sire, eight months old, $200 will buy. Must be show bull with production. Send picture. J. F. BOST, Mesquite, Texas. 24-2

Wanted—Ayrshire bull old enough for service. Have aged bull either for sale or trade. JOHN PEARSON, Route 2, Braham, Minn.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

SWINE

Tamworths for sale. Champion stock, young bred sows and three-month pigs. WALN, Westtown, Pa. 21-4

SHEEP

Shropshire sheep, bronze turkeys, Toulouse geese. McCRADIE BROS., Hendrum, Minn. 22-3

DOGS

Airedales—Puppies from registered parents for sale. FRED SCHROETER, Grafton, Wisconsin. 20-4

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

POULTRY

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 24*

EXCHANGE

For Sale or exchange for farm or hotel, grain elevator main line Grand Trunk R. R. F. CHILSON, Edmeston, N. Y.

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.-00, 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Empire milking machine outfit, consisting of one gas engine, one No. 4 pump and tank, four 70-lb. silver double units or pails. A bargain at $700.00. Address BOX 822, Chicago, Illinois. 22-4

For Sale—Colt Lighting Plant, never used, in original crates, $175. Empire double unit milker, slightly used pump, tank, unit, complete, $175. M. F. GOULD, Cassadaga, N. Y. 23-3

For Sale—Eddie two-way sulky plow in good condition, $45.00. M. F. GOULD, Cassadaga, N. Y. 24-2

For Sale—Burton Page hand power milker used two weeks. First check $80.00 gets it. MELLORS RAYS, Arlington, Iowa.

For Sale—Empire milking machine used about a year. Double unit outfit complete for 20 cows. GEORGE W. BROWN, Summitville, Ind.

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 20-10

Alfalfa Hay Wanted—Would like to exchange four registered Holstein cows ($250.00 each) for alfalfa hay. M. F. GOULD, Cassadaga, N. Y. 23-2

Alfalfa hay direct from producer, Nebraska dry land grown. For quick shipment wire ROSENBERG BROS., Lexington, Nebr. 24-4

SEEDS

No. 1 Alfalfa Seed—$10.00 bushel, sack lots, F. O. B. Jerome. WILLIAM VEAZIE, Jerome County Farm Bureau, Jerome, Idaho. 22-3

Want to Buy—Medium red clover, alsike, and timothy seed. DADMUN BROS., Whitewater, Wis. 23*

Pure Grass Seeds at ½ of last year's prices, also seed corn, soy beans, seed grains, etc. Bargain list free. BECKMAN'S SEED FARM, Cokato, Minn. 24-6

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, "The Tobacco of Real He-men," 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 23-4

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, 5 pounds, $2.00; 12 pounds, $4.50. Postpaid. DALTON DORON, Mayfield, Ky. 23-2

MILK PLANTS

Opportunity to purchase or become interested in new milk plant with $100,000 business developed. Sells pasteurized milk, cream, butter, ice cream, etc. Only plant in Central Missouri town of 25,000. Dairy farming fast becoming leading industry of county and milk production large, with Holstein herds showing highest butterfat record in state. Address BOX 519, care Hoard's Dairyman. 23-4

DAIRIES

For Sale—A fully equipped, old, established dairy, together with stock and all equipment, and will rent or sell farm. The winters are mild; feed is cheap; milk retailing at 25c per quart with customers for all we have to offer and eighty-two customers on our waiting list. If you are interested and in the market for a real business proposition, write to me for particulars and details and if you are not,do not waste my time nor yours, by writing to satisfy curiosity. J. M. SPRINGER, Box 11, Tulsa, Oklahoma. 23-4

TANKS

For Sale—Two cypress tanks; capacity 16,000 gallons each; on 27-ft. column steel towers; in excellent condition. Present factory price, $1,350.00 each; our price, $500.00 each. Suitable for dairy purposes, furnishing about 40 lbs. pressure for hose. Also good fire protection. HAWKEYE LAUNDRY COMPANY, Boone, Iowa. 24-3

FARMS FOR RENT

Wanted—An experienced hog and dairyman to lease my 300-acre farm on a fifty-fifty share plan. Man must have capital to invest in equipment and half of stock. Farm in good state of cultivation, well-watered, and well-fenced; has good improvements, electric light plant, milking machine, silo, hollow tile hog house with sale pavilion. Located on Lincoln Highway, ½ mile west of Tama with 3 railroads—the only town in the state with 2 double track main lines. State experience and reference. STEVE CARMICHAEL, Route 2, Tama, Iowa.

For Rent—Dairy farm stocked with registered Holsteins. Splendid chance. F. KREMER, Phillips, Wis.

FARMS WANTED

Have buyers for farm. Your farm may suit some of these people. State size, building, stock, price and mortgage. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

WANTED TO RENT

Dairyman and six sons want large modern dairy farm on shares. Address BOX 532, care Hoard's Dairyman.

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

STANCHIONS

Wanted—Steel stalls, stanchions, litter carrier, water bowls. ERNEST SEDGWICK, Greenup, Illinois.

FARMS FOR SALE

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadiphia, Pennsylvania. 8*

Grain or Dairy Farm—167 acres of best soil. Land easily tilled with tractor. Three miles from two markets. Small house, large barn with basement, three hay barns and horse barn. Buildings in fair condition, but land is high producer. Must be sold to settle Estate. Deal direct and save commissions. J. L. WHITE ESTATE, Cayuga County, Locke, N. Y. 24-3

Where dairy farming is profitable—There are localities in the South where, on account of the rapid development of industrial cities and towns, supplies of dairy products are short and prices are high. In these same localities long grazing seasons and winter cover crops cut down feeding costs and all conditions are exceptionally favorable for profitable dairy farming. Good improved farms can be bought at prices much lower than are asked for similar lands in other parts of the United States. Buy a Southern dairy farm now while prices are still low, make money and build up a valuable property. Forr full information write to J. C. WILLIAMS, Manager, Southern Railway Development Service, 1302 Pennsylvania Avenue, Washington, D. C. 14-spl.

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin. 13-13

New York state dairy farms for sale. Catalogue free. HILLIS FARM AGENCY, Hobart, Delaware County, N. Y. 19-6

For Sale—Stock farm, 220 acres, splendid condition. JAMES W. GRAVES, Owner, American National Bank, Richmond, Virginia. 21-4

For Sale—Choice Ohio farms. All sizes and prices, some great bargains. Write for list. I. J. MILLER, JR., Conneaut, Ashtabula Co., Ohio. 22*

For Sale or Rent—A modern up-to-date dairy farm, ½-mile from the town of Traer in Tama County. Best equipped dairy barn in the state. For particulars write ADAM H. HOTZEL, Box 129, Traer, Tama County, Iowa. 23-3

For Sale or Rent—335-acre stock farm, north central Otter Tail Co., Minn., together with herd of Guernsey cattle and all machinery necessary for farming the place. Good soil and buildings. New barn just completed at a cost of $11,600. Located on shores of a beautiful lake four miles from Dent and 12 miles from Perham, Minn. If you want to rent, do not write unless you have plenty of help to handle a large farm and can furnish first-class references. Can give possession at any time. A. MARCKEL, Perham, Minn. 23-3

Come to New Jersey for dairy farming. Markets sure. Land prices low. Ideal living and working conditions. Write LAND REGISTRY, State House, Trenton, N. J. 23-2

For Sale—120-acre farm. House, barn, buildings complete. School house, stores, churches, on farm. $60.00 per acre. Write for description. C. B. BOICE, Owner, Newfield, New York. 23-2

Alfalfa, corn, grain and live stock farms. Best in famous prarie belt for the money. Write me what you want. H. H. HANSEN, Macon, Miss. 21-spl

Westerners are here, more coming! There's a reason. Investigate! NEW YORK FARM AGENCY, Westfield, N. Y. 20-spl

Farm Bargains—60 miles Twin Cities. Free list. man. BAKER O 76, St. Croix Falls, Wisconsin. 8-spl

Oklahoma farms. Write for free agricultural booklet. BOARD OF COMMERCE, Shawnee, Okla.

112-acre equipped farm near big R. R. town. 12 cattle, 20 tons hay, 100 bushels oats, 50 bushels potatoes, 20 cords stove wood, quantity corn, full implements, etc., included if taken now; loamy tillage, spring-watered pasture, abundance wood, variety fruit, sugar grove; good 8-room house, basement barn, poultry house, etc.; $3,800 takes all, easy terms. Details this and 102-acre equipped farm, only $1,000 down, page 21 Strout's Illustrated Catalog Bargains, 33 States. Free. STROUT FARM AGENCY, 150 D L Nassau St., New York City.

286 acres, excellent dairy farm with all necessary barns, tenant houses to care for 50 cows. Splendid over-flowing well. Divided into five separate pastures, fenced with net wire, grazing practically year round. About half this land is black prairie lime land that grows clover in abundance, balance is very fertile land. Clay subsoil grows any crop with good yield without fertilizer. Located on hard road 6 miles from Selma, Ala. City 20,000. Two large creameries. I have other business that requires all my time. Price Fifteen thousand, ⅓ cash. Balance five years 7%. H. M. MCFADDIN, Box 428, Selma, Ala.

Dairy Farm for Sale—170 acres on state road, one mile from town and milk station. Running water at house and barn. Barn 36x80. with fine basement. Ten-room house, and nice condition. Hen and hog house. Ideal dairy farm with land in good state of cultivation having been a stock farm for years. Must be sold to settle estate. Deal direct. J. L. WHITE EST., Cayuga County, Locke, N. Y. 24-3

For Sale—Large dairy farm, 7 miles north of Syracuse, N. Y. 222½ acres, 150 tillable, balance pasture, at $100 per acre. Or will sell 130 acres, 100 tillable, at $150 per acre. Full set of buildings. With or without personal property. For full particulars write H. SINGLE, N. Syracuse, N. Y.

If you want a farm any size in the best dairy section of New York State, write M. C. AIKEN, Green, New York.

For Sale or Money Rent—186 acres at $225 per acre. 150 acres under cultivation. 30-cow dairy, gross sales $20,000. Will furnish statement showing net $10,000. Correspondence solicited. BOX 124, South Erie Station, Erie, Pa. 24-3

Best 280-acre farm in southern Michigan. Six miles from Battle Creek, a city of 50,000. Good buildings, good fencing. Buy direct from owner. JAMES W. BLANCK, Route 2, Battle Creek, Michigan.

For Immediate Sale—294-acre dairy farm, in eastern New York, high state of cultivation, nearly all tillable, raises all crops; one mile to village on Boston and Main railroad; 20 miles by state road to Troy. Large colonial brick house, modern conveniences, never failing water to house and barns, ample buildings. Will sell with or without stock and tools. ROBERT A. HASWELL, Hoosick Falls, N. Y. 24-spl

100 acres, 1½ miles to station with 11 head cattle, 3 horses, machinery, crops, $6,500. Part cash. BOX 54, Erieville, N. Y

Farms, ask French if he has what you want. Write him and state your wants. Reference any bank here. J. R. FRENCH, Cortland, N. Y. 24-13

90 acre-farm for sale. 8-room stone house, hot water heat and all conveniences. Barn stone, stable high, 15 stanchions, water bowls, concrete floor, silo filled, 2 corn cribs, complete set of buildings, on stone road, convenient to R. R., schools and churches. Milk 8 cents quart at the farm gate. Choice location and the best of prices for everything you can produce. On P. & R. R. R., WM. H. ELLIOTT, Owner, Box 19, Wycombe, Bucks Co., Pennsylvania.

Good Dairy Ranch—Bargain. 1,420 acres, Iosco Co., Michigan. Divided into 12 parts; has railroad siding; has two hollow tile silos, one 16x30, one 18x40; one cellar barn 100x50, one 70x45; 8-room house; 3 good wells; over two hundred acres under cultivation, balance pasture of the very best; two miles from Hale. Price, $45.00 per acre. A stone road expected to be built this year by ranch. Address C. L. FANCHER, No. 813 Ulmer Building, Cleveland, Ohio. 24-2

HONEY AND CHEESE

Honey and cheese of superior quality in family size packages. Price list free. I. B. ROSA, Monroe, Wis. 21*



Advertising in this department is 7c per word. Remit in advance.

POSITIONS WANTED

Farm manager with energy, push and proven ability, desires position on large, modern farm where results will be appreciated. Experienced in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm. Married, no family. Excellent references. Address BOX 333, care Hoard's Dairyman. 9*

Young man, clean, wishes permanent position on a farm in Iowa or Wisconsin. Knows how to milk, and handle horses, references if required. State wages and particulars. Address C. H. SCHLIEPER, Route 1, Campbell, N. Y. 22-3

Position wanted as farm manager. Single, agricultural college training, life time experience with live stock and crop production, up-to-date with farm implement and tractors, 10 years in managerial capacity, best of references. Address BOX 509, care Hoard's Dairyman. 22-8

Situation wanted as manager on stock or general farm or cattle ranch by a married man, thoroughly experienced in all lines. Able to produce results. Address BOX 517, care Hoard's Dairyman, Fort Atkinson, Wisconsin. 23-2

Wanted—Position as manager on dairy farm. Full knowledge of modern dairy methods and breeding. Southeastern states preferred. Write at once. Address BOX 523, care Hoard's Dairyman. 23-2

Wanted—Position caring for small herd of cattle and making butter. For further particulars, address LYNN BARKER, Route 8, Box 10, Bowling Green, Missouri.

Young man, aged 19, single, desires good steady position on dairy farm. Have had experience. Can give good references. State wages first letter. WILLIAM C. EBERT, 3638 N. Hamilton Ave., Chicago, Illinois.

Farm manager and graduate veterinarian with energy, push and proven ability, desires position on large, modern, certified milk or stock farm, where results will be appreciated. Fifteen years' experience with pure-bred stock and everything pertaining to the management of an up-to-date farm and dairy. Breeding for results a specialty. No proposition too large. Married, age 36 years. Best of reference. Address BOX 537, care Hoard's Dairyman. 24-2

Position wanted by practical farmer. Life experience in breeding pure-bred cattle, sheep and swine. Honest, energetic, have proven ability. Married, no children. Scotch descent. Address BOX 529, care Hoard's Dairyman.

Wanted Positions—By two single men, experienced, on modern dairy in central or southwestern states. Write wages and particulars. CHARLES THOMAS, R. D., New Madison, Ohio.

Position as herdsman wanted by a short course graduate. Experienced A. R. O., showing, calf raising and dairying. Holstein or Guernsey cattle. Want a place with good accommodations and good feeds to make good. State proposition and wages in first letter. Best of references furnished on request. Address BOX 536, care Hoard's Dairyman.

Farm manager, scientific and practical in general farming, soil improvements, dairying, calf raising, swine, poultry, orcharding, desires situation. Address BOX 534, care Hoard's Dairyman.

Young man thoroughly experienced in farming and dairying wants position. State salary and particulars in first letter. JOSEPH ZIMMER, 85 Lee St., Milwaukee, Wisconsin.

HELP WANTED

Firemen, brakemen, for railroads nearest their homes, everywhere. Beginners $200, later $300 monthly (which position?). RAILWAY ASSOCIATION, Desk, W5, Brooklyn, New York. 21-4

Wanted by March first. Single man to work with herd of A. R. O. Holsteins. Must be willing to help take care of cows on test as well as all other work in barn. Prefer young man with clean habits who is a hustler. Give references and salary expected in first letter. KILPATRICK BROS. CO., Beatrice, Nebr. 19*

Railway Mail Clerks Wanted. $135 month. Sample examination questions free. FRANKLIN INSTITUTE, Dept. F 118, Rochester, New York. 20-5

Wanted—Man and wife for work on dairy farm near Chicago. All modern farm improvements; farm buildings and grounds in first-class condition. Either salary or shares for right party. Address BOX 505, care Hoard's Dairyman. 22-3

Wanted at once—Good, handy man to work on 100-acre farm and dairy. Must be reliable and not afraid of work. CRYSTAL SPRING STOCK FARM, Littlestown, Pennsylvania. 22-3

Wanted—Good, steady, single and all round farm hand for the whole year. State experience and wages wanted. BUREAU COUNTY HOME, Princeton, Ill. 24-2

Wanted—Experienced, reliable, married man for steady work on large stock farm. Salary $100.00 per month with free house rent, garden spot, wood, potatoes. Will be expected to board help at $35.00 per month. Also want good single man for steady work. Salary $60.00 per month with board and room. Prefer man with dairy experience. Address BOX 503, care Hoard's Dairyman. 22-3

Wanted—Single man to milk Holstein cows on test. Small high grade herd. Good living conditions. Good opportunity for right man. Fourteen miles from city. Give experience, references and salary desired first letter. FREDMAR FARMS, (City Office 3550 Lindell Ave.,) Saint Louis, Missouri. 23-2

Wanted—Single man for general work on Holstein farm. Year round position. W. J. PESTER, Whitewater, Wisconsin. 23-2

Wanted—Qualified men to act as A. R. supervisors in Connecticut, either full or part time. DAIRY DEPT., Connecticut Agricultural College, Storrs, Connecticut. 23-2

Wanted—Experienced man as foreman of milk plant in central Illinois. Must have money to invest. Address BOX 531, care Hoard's Dairyman.

Wanted—An experienced ice cream maker at once. State age, nationality, married or single, and experience, also salary expected in first letter. UNION ICE & STORAGE CO., Lamar, Colorado.

Wanted—Good, steady woman to take care of old ladies and do general housework. No cooking. BUREAU COUNTY HOME, Princeton, Illinois. 24-2

Wanted—Single man experienced in general farm work. Must be hustler and good cow man. Milking machine used. State wages wanted. J. MINIX, Barneveld, Wisconsin.

Wanted at once—Single man on dairy farm. $40.00 per month and board. ARTHUR KRUEGER, Cylon, Wisconsin.

Position Wanted—By a single, reliable, energetic young man as herdsman. Life time experience, familiar with A. R. work, good calf raiser, best of references. Write JAMES SHORTLE, 5907 Francis Ave., Cleveland, Ohio. 24-2

Wanted—Middle-aged single man to operate and work Guernsey dairy. Man who understands gasoline engine preferred. Wanted now. State wages expected and reference. W. S. WHEELER, St. Charles, South Carolina.

Wanted—Married man on Holstein dairy farm, starting time between now and March first. Good house, light, water and telephone; milk, large garden spot. Must be good all round man. State experience and wages expected in first letter. Address BOX 535, care Hoard's Dairyman.

Female help wanted—A housekeeper, by a single young man on a farm. State age and reference in first letter. Address BOX 533, care Hoard's Dairyman. 24-2

Wanted—Herdsman for herd of mixed pure-bred and grade Holsteins. Herdsman must be able to keep herd records, must be experienced in feeding, both for production and for short and long time tests, also a successful calf raiser. Answer stating experience, with references and salary desired. Address WARWOOD FARM, Lisle, Illinois. 24-2

The Right Dairy Sire

HOARD'S DAIRYMAN:—The most important factor in the improving of our dairy herd is the use of the proper sire. We can improve the stock we have by better feeding, better general care, and by the keeping of records so as to eliminate unprofitable animals, but the only method to really improve the breeding is by the introduction of new and better blood through the pure-bred sire.

The old saying that "the sire is half the herd" is certainly true. If he is the proper sire and a good one, he is more than half the herd. If he is a poor sire, he is all the herd.

The first and most important thing in the selection of the right sire for our dairy herds is that he should be of dairy breeding. It is useless to try to build up a good dairy herd by using sires from beef producing strains. To use such a sire is to insure failure at the outset.

The dairy sire should be not only of dairy breeding but he should be pure-bred. The fact that a man has a grade herd would indicate that he recognizes the value of better blood in his stock. If a grade sire is better than a scrub, then certainly a pure-bred is better than a grade. There is so little difference in price between the very best grade that can be bought and a pure-bred that is better, that it is not worth while to waste time in using a grade.

Because an animal is a pure-bred and of dairy breeding does not necessarily mean that he is a good animal to head a dairy herd. We have many pure-bred bulls that are not improving the herds they head. Any bull that does not improve the herd is a scrub for that particular herd. The good dairy sire should be not only pure-bred but he should be "bred-for-production".

By "bred-for-production" we mean that he has in his ancestry a number of high producing dams. This quality can only be determined by knowing the pedigree; it is the basis for determining the productive qualities of a young dairy sire.

A good pedigree, besides giving the exact ancestry of the animal, should show four things:

1. The milk and butterfat records of the cows in the pedigree.

2. The records of any sons or daughters of animals which appear in the pedigree.

3. Any show ring records that the animals have made.

4. It may show any remarkable sales made by animals whose names appear in the pedigree. A good pedigree should show good milk and butterfat records by the immediate ancestry of the bull whose pedigree we have.

Occasionally we find good animals whose immediate dams may not have any advanced registry records. This does not necessarily mean that the animal has a poor pedigree and we should not condemn him on these grounds because in all probability the reason his dams have no advanced registry records is because their owners did not do advanced registry work. Neither the sire nor dam of the world's champion Guernsey cow has advanced registry records. Pedigree is not everything. Many an animal with an excellent pedigree is a very poor individual. We want not only a good pedigree but also a good individual.

The pure-bred dairy sire should be good size for his age. Size is an important consideration in the building up of a good dairy herd. The large cows of any breed are generally the better producers in the breed. The demand now is for dairy cattle that are good size and in buying a dairy bull size should be given consideration.

Just how good a bull or how good records that bull should have for any particular herd will depend on the quality of that herd. As a general rule, the bull should have better records than any cow in the herd. The value of this can be understood when we realize that the blood strain carried by the bull represents fifty per cent of the blood that will be carried by his offspring in that herd. The better the blood the greater the improvement we can expect from his use in the herd. We can not get too good a bull for our dairy herd.

The real test as to the value of a dairy sire in our herd depends on his power to improve the production of that herd. The only way we can tell whether he is improving the production of the herd is to keep him until his daughters have freshened and we know whether they are better or poorer than their dams. If they are better than their dams were at the same age, then we can safely say that this improvement is due to the sire. If, however, they are poorer, then we must conclude that our sire is not improving the herd and we should endeavor to get a better one.

Do not sell your dairy sire for beef just because you have used him in your herd two years. Many a good dairy sire that was making great improvement in the herd has been sent to the block because the owner did not know his value. Fort Hill Farm Chief, the sire of Sophie 19th of Hood Farm, the former world's champion Jersey cow, only had three tested daughters and was slaughtered before it was known that his daughters were such remarkable producers.

In getting a new sire to head your herd one thing should always be kept in mind and that is that he should be better than the last one you had. If your last sire has improved your herd and you expect to continue that improvement, it is absolutely essential that the new sire brought in should be better than his predecessors. In this way constant improvement in the building up of your dairy herd is assured.

Washington, D. C. D. S. BULLOCK.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Cost of Production

HOARD'S DAIRYMAN:—I read with great interest the article in a recent Dairyman, "Farmers Control the Price of their Products", especially the section on the "Cost Plus Idea Discarded". Particularly so, because my own position as printed in the issue of Feb. 13, 1920, called forth some unfavorable criticism by farmers. Indeed, some of my associates were rather skeptical at the time as to the soundness of the position and still more so as to whether the Dairyman or any other farm paper would print it.

It is encouraging, however, to know that a group of farmers who were really thinking about *facts* worked out the proposition for themselves "ten years ago" as the article says. It gives me cause to hope that my campaign for farm accounts will ultimately be successful. Farm accounts I consider *only a means to an end*, but the end is worth going after, and the means is worthy of the end. These California fellows demonstrate that farmers in possession of the facts know what to do to promote their best interests, and how to do it, too. "Accounts on every farm" means, if it means anything, putting farmers in possession of the facts they need so sorely in the management of their farm business and at the same time to make their organizations possible and their organized work effective. S. W. MENDUM.

Wisconsin College of Agriculture.

Only $2 DOWN ONE YEAR TO PAY



$44 Buys the New Butterfly Jr. No. 2½ Light running, easy cleaning, close skimming, durable.

NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 6 shown here; sold on

EASY TO CLEAN

30 DAYS' FREE TRIAL

and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (1)

ALBAUGH-DOVER CO., 2161 Marshall Bl. Chicago

SWINE

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

Cedar Crest Farms

have never possessed a finer lot of BERKSHIRES than at present. Let us name you prices on fall and spring boars and young gilts.

J. K. Dering, Owner, Lake Villa, Ill.

DISPERSAL SALE

January 14th, 1921

IOWANA FARMS BERKSHIRES

50 Bred Sows and Gilts
Several Herd Sires

All strong in the blood of our Great Foundation boar, RIVAL'S CHAMPION 112500. IOWANA BERKSHIRES are famous for their Uniformity of Type, and their Quality combined with Size.

The entire herd is being dispersed to provide room for further development of our Holsteins. This is your opportunity to select what you want at your own price from the best of Berkshire herds. Don't neglect it.

Write for private sale catalog of selected yearling and spring boars; also for catalog of our January dispersion of females announced above.

Iowana Farms Davenport, Iowa

Before making up anything for Dessert

Consider the advantages of using

JELL-O

for making such desserts as are described in every recipe book.



Compare the old style recipes in those books with the new ones for making the same desserts in the easy Jell-O way by using Jell-O.

See how much easier and better these are made by using Jell-O—and how much cheaper, too.

Remember, always, that Jell-O is already sweetened and flavored and that it does not have to be cooked.

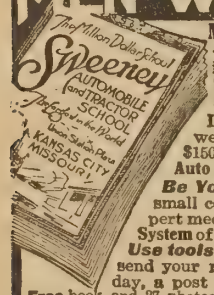
Jell-O is put up in six pure fruit flavors: Strawberry, Raspberry, Lemon, Orange, Cherry, Chocolate.

At all grocers' and general stores, 2 packages for 25 cents.

We will send you a copy of the Jell-O Recipe Book, free, if you will send us your name and address.

THE GENESEE PURE FOOD COMPANY
Le Roy, N. Y., and Bridgeburg, Ont.

MEN WANTED



Mechanically Inclined—to send for my big illustrated 72-PAGE BOOK—FREE!

It tells how in a few weeks you can earn from $150 to $400 a month in the Auto and Tractor business.

Be Your Own Boss. At small cost learn to be an expert mechanic by the Sweeney System of working on real cars.

Use tools not books. Simply send your name and address today, a post card will do, for our Free book and 27 photographic reproductions of machine shop work, etc. Let's Go---Write Now!

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Association Notes

(Continued from page 1047)

ton. It also purchased a mixed carload of cottonseed and oil meal at a considerable saving. The herds are practically all on well balanced winter rations now and production is good. The price of milk dropped on November 1st to $3.02 per cwt. for 4% milk, making an average of $3.46 from October 15th to November 15th. The creamery paid 70c per lb. for fat. Milk retails for 12c per quart and butter for 75c per lb. Feed prices are: Silage, $6 per ton; hay, $20; corn stover, $8; corn and cob meal, $38.20; ground oats, $35.20; bran, $41; cottonseed meal, $75.30; oil meal, $65; Union Grains, $71; International Dairy Feed, $73; Feerless, $70.

Wilson County, Tennessee:—Cows were very low in milk flow in November, due to change of season and insufficient amount of grain feed. Several members are planning to feed a balanced ration of corn, oats, bran, and cottonseed meal, Practically all of the members are beginning to feed silage. The highest herd was fed 2 parts bran and 1 part cottonseed meal to supplement a corn stalk field as pasture. Feed prices are: Silage, $5 per ton; Schumacher, $60; cottonseed meal, $50; Dairy Feed, $50; bran, $45; cottonseed hulls, $11; oats, 65c per bushel; corn, $1. The creamery paid 50c per lb. for fat during November.

Kent County Co-operative, Michigan:—Several members are trying to make better production records by feeding balanced rations, with a view of getting the greatest production per 100 feed units. November milk testing 3% sold for $3.60 per cwt. The condensery paid 60c per lb. for fat and the creamery paid 61—63—64c per lb. for fat. Milk retails for 17c per quart. Feed prices are: Bran, $40 per ton; ground oats, $40; Unicorn, $68; oil meal, $70; cottonseed meal, $56—$65; barley, $56; corn meal, $52; gluten feed, $56; silage, $8; clover hay, $22; timothy, $26; corn stover, $10.

Emmet County, Michigan:—For the year just ended, the 237 cows of this association averaged 5,450 lbs. milk containing 232.9 lbs. fat. The average test was 4.2 per cent; average cost of feed, $90.05; income over cost of feed, $59; return from $1 of feed, $1.65; cost of one pound of fat, 36c; cost of 100 pounds of milk, $1.65. The highest milk production record for the association was made by a grade Holstein owned by Charles Lempke with a record of 11,943 lbs. milk and 354.1 lbs. fat. The highest fat production record was that of a grade Guernsey owned by Paul Schnelle, 6,700 lbs. milk containing 445.6 lbs. fat. The best herd record for both milk and butterfat was made by the grade Holstein herd of Charles Lempke, ten in number, that produced an average of 9,538 lbs. milk and 317.1 lbs. fat. The second highest butterfat record was made by a herd of 12 grade Holsteins and Guernseys owned by Paul Schnelle. They averaged 6,700 lbs. milk and 315.1 lbs. fat. Among the 237 cows, 80 produced over 250 lbs. of fat, 32 produced over 300 lbs., 11 produced over 350 lbs., and 4 over 400 lbs.



Ayrshires Lead Ohio Association

The Penfield Cow Testing Association of Ohio is made up of twenty Holstein herds and one Ayrshire. In the last year's work the Ayrshire herd of B. G. Betts and Sons easily proved its superiority, leading in fat production by a considerable margin, the herd averaging 11,174 lbs. milk, 443 lbs. fat, and the nearest Holstein competitor 12,839 lbs. milk, 398 lbs. fat. The average of the entire association was 9,136 lbs. milk, 312.1 lbs. fat. Messrs. Betts' herd returned $3.15 for $1 expended for feed. The feed cost per cwt. milk was $1.21 and the feed cost per pound fat 31c. The averages for the entire association were as follows: Returns for $1 expended for feed, $2.14; feed cost per cwt. milk, $1.69; feed cost per pound fat, 49c.

Vermont. J. G. WATSON.

Survival of Fittest in New Hampshire

HOARD'S DAIRYMAN:—The law of the survival of the fittest as operative in a cow testing association—where the low producing animal is discarded and the profitable cow retained—has made a wide swath in New Hampshire. During the past 12 months 216 animals, representing membership in 7 cow testing associations, were consigned to the shambles for beef purposes and their stalls replenished by more prolific milk producers.

The cow testing associations of New Hampshire have justified their existence by results to the farmers and dairymen in dollars and cents. Nineteen herds, belonging to six associations, for the past two years have evidenced an increase of 763 lbs. of milk to the cow, and an increase of $49.30 in the income over the cost of feed. Six herds in an equal number of cow testing associations, in operation for three years, have shown an enhancement in the contribution to the pail of 866 lbs. to the cow, and an income over cost of feed of $98.31 more than the herds formerly averaged. The unprofitable dairy cows that are being marketed for beef no longer injure the dairy industry, unless their surviving progeny have been sired by inferior bulls.

"In general, cow testing association work in New Hampshire is on a sound basis," says the Dairy Division of the United States Department of Agriculture. "Association members are studying individual cow records, the ability of pure-bred bulls to increase production, wise feeding practices, and the proper training of young stock. The influence of these studies is affecting even dairymen who are not members of the associations."

Washington, D. C. S. R. WINTERS.

Holstein Breeders' Sale

The Holstein Breeders' Sale Co's. recent sale held at Fond du Lac, Wis., December 3—4 was but fairly successful. The buyers were fewer and the cattle were not of as good quality as at some of the earlier sales.

The entire 113 head sold for $22,370 with $725 the top figure. T. C. Wilsie paid this for Master Ormsby, a 29.48-lb. grandson of Sir Ormsby Johanna De Kol consigned by Baltz Hoesly.

Mack, Pohlman, and Laux did the selling with F. H. Everson in the box.

The following list includes those animals selling for $250 or more and buyers.

J. A. Warher, Wisconsin	
Oak Fobes Mutual	$350
S. E. Jones, Wisconsin	
Johanna Canary Polkadot	$280
Idyl Grace De Kol Boon	250
Johanna Fayne Posch	305
B. E. Sampson, Wisconsin	
Dame Lyons Wellington	$300
A. A. Backhaus, Wisconsin	
Mamie Felecia Homestead	$290
Lucy Fayne Korndyke De Kol	365
F. H. Scovel, Wisconsin	
Violet Portia Homestead	$255
Buttercup Juliana	255
Wisconsin Canning Co., Wisconsin	
Bluebell Felecia De Kol	$270
T. C. Wilsie, Wisconsin	
Ethel Colantha Johanna	$400
Cecil Pietertje Oak	335
Master Ormsby	725
K. P. Canary De Kol Susie	415
Truttschel Bros., Wisconsin	
Goldie De Kol Jewel	$250
Colantha Pontiac Piebe 3d	350
Reuben J. Klein, Wisconsin	
Maid Sarcastic	$280
Mrs. Maggie Braun, Wisconsin	
Mamsell Daisy Segis	$270
E. H. Korrer, Wisconsin	
Princess Winnetonika Colantha	$300
L. Perrigo, Wisconsin	
Esther Netherland Clothilde	$360
H. E. Barley, Wisconsin	
Rex Ramola Korndyke 2d	$410
H. L. Piper, Wisconsin	
Bessie Gewina Champion	$425
Robt. Byrnes, Wisconsin	
Helen Johanna Champion	$400
James Finnegan, Wisconsin	
Unnamed Male	$250
Alfred Titel, Wisconsin	
Soldene Aaggie Korndyke 2d	$250
N. E. Morgan, Wisconsin	
Monarch Queen 2d	$250
Geo. Lindsay & Sons, Wisconsin	
Esther Mercedes Grilla De Kol	$325

Uncle Ab says: If some folks worked as hard to keep from being poor as they do to keep from being thought poor, they'd be rich.

The costly stable for the cow is the one that makes her uncomfortable.

"You may be Sure"

says the Good Judge



That you are getting full value for your money when you use this class of tobacco.

The good, rich, real tobacco taste lasts so long, you don't need a fresh chew nearly as often—nor do you need so big a chew as you did with the ordinary kind.

Any man who has used the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

Sale Announcements

Jan. 4-5-6. Holsteins. The Moyer Sale, Syracuse, N. Y. H. A. Moyer, Director.
Jan. 12—Holsteins. Waukesha Co. Holstein Bull Sale at Waukesha, Wis. W. L. Baird, Sec'y.
Jan. 12-13—Holsteins. New York State Breeders' Sale, Syracuse, N. Y. New York Holstein-Friesian Association, E. R. Zimmer, Sec'y.
Jan. 28—Holsteins. Pennsylvania State Sale at Harrisburg, Pa. S. F. Zook, Mgr.
Jan. 29—Holsteins. Northern Illinois Live Stock Breeders' Ass'n. Sale at Rockford, Ill.
Feb. 1, 1921—Holsteins. Watertown Holstein Bull Sale at Watertown, Wis. Francis Darcey, Sale Manager.
Feb. 26—Holsteins. John Wuethrich's Holstein Sale at Greenwood, Wis.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
May 3—Holsteins. Clark County Quality Sale at Owen, Wis. J. Wuethrich, Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.

Waukesha County Winter Holstein Sale

Waukesha County Holstein breeders held a winter sale at Waukesha, Wis., Dec. 13, selling 70 animals for $20,390, just short of a $300 average. This figure does not apparently compare favorably with the average obtained at the annual fall sale held a month earlier but it does indicate a good sale if one considers the large number of young bulls included.

It was a yearling bull from the herd of Fred Wieffenbach that topped the sale going to Frank Boller, Wis., for $1,275. He is a grandson of King of the Pontiacs and of Piebe Champion as well as a show calf, having won first at the 1920 Wisconsin State Fair and fourth at the National as a senior calf.

Baird Bros. consigned the second highest priced animal, a yearling son of King Superba from a 856-lb. daughter of Bairdland Segis Sir Prize. He was purchased by J. C. Wilton for $1,000.

The following list includes all animals selling for $300 or more and buyers:

O. A. Lukken & Sons, Wisconsin	
Sir Bess Fobes Ormsby 2d	$375
C. G. Quinn & Son, Wisconsin	
Gerben Clothilde Lyons 2d	$515
F. J. Woefel, Wisconsin	
Madam Jewel Johanna Paul 2d	$400
Henry Nolte, Indiana	
Tiny Korndyke Wayne De Kol 4th	$325
Krumenacher Bros., Wisconsin	
Tiny Mercedes Canary Ormsby	$360
Lady Mary of Rock	440
Julius Rhodee, Wisconsin	
Antje Ormsby Netherland	$305
Piebe Melchior Clothilde 2d	400
M. Kellener & Sons, Wisconsin	
Summit Mechthilde King	$300
E. L. Dreger, Wisconsin	
Bonair Pabst Champion Albert	$320
J. C. Wilton, Wisconsin	
Nockdair Superba King	$1,000
Earl Pierce, Wisconsin	
De Freule Pietertje De Kol	$395
Hillside Farm, Wisconsin	
Onida Pontiac Dot	$375
Milwaukee Co. Agr'l. School, Wisconsin	
De ol Pontiac Hengerveld	$590
Fanny Homestead Johanna	405
Frank Baller, Wisconsin	
Nutricia Countess Hengerveld	$300
King Pontiac Parthenea Champion	1,275
A. T. Rundell & Son, Wisconsin	
Duchess Aaggie 2d	$325
Korndyke Homestead De Kol	350
Downing & Lothe, Wisconsin	
Howard Violet	$760
D. J. Howell, Wisconsin	
Brookvale Ormsby Melva	$350
Wm. Brimmer, Wisconsin	
Lady Homestead Korndyke De Kol	$300
Gramling Bros., Wisconsin	
Candolle Masonic Homestead	$400
Jno. Baumgartner, Wisconsin	
Buttercup Pietertje Ormsby	$315
Dr. M. L. Henderson, Wisconsin	
Berty Netherland Uneeda Korndyke	$340
H. E. Ellsworth, Wisconsin	
Aaltje Salo Susie Rue	$305
Colrue Bros., Wisconsin	
Nockdair Segis Plymouth	$725
Walter Vyoyan, Wisconsin	
Highland Homestead Polkadot	$370
A. F. Schoppe & Son, Wisconsin	
Pleasant Gem Johanna Ormsby	$320
W. J. Mann, Wisconsin	
Pleasant Lyons Star	$340



How many cows in your dairy are in A-1 health?

PREVENTION of disease is the first chapter in the gospel of profitable dairying.

Not every cow in your dairy can make a conspicuous production record, but not one of them should be allowed to limp along as "poor milkers" when their yearly yield could be decidedly raised by keeping the organs of production in a top-notch health condition.

This health program does not mean an expensive veterinary service; in most cases an adequate home treatment is simple and easy. The most prevalent cow diseases, such as Retained Afterbirth, Abortion, Barrenness, Scouring, Bunches and Milk Fever, are directly due to a weakening of the digestive or genital organs. Proper treatment will make them function normally.

KOW-KARE is distinctly a cow medicine; it acts directly on these organs, with prompt and noticeable results. The KOW-KARE treatment is so simple and inexpensive, no wonder it is so widely used.

Feed dealers, general stores and druggists sell KOW-KARE; 70c and $1.40 packages. Let us send you our free book, "The Home Cow Doctor."

DAIRY ASSOCIATION CO., Lyndonville, Vt.

Manufacturers of KOW-KARE and BAG BALM

Her Milk Record Is 13,227 Pounds

LAST YEAR this splendid 5-year-old GUERNSEY, besides this notable mark in milk production, had a butterfat total of 653.4 lbs.

Such profitable producers are only found in the dairies where cow health is carefully guarded.

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of both the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.



Are Rural Women Dissatisfied?

HOARD'S DAIRYMAN:—In the August sixth issue of Hoard's Dairyman there appeared quite an interesting article entitled "The Waste of Woman Power". While I have no desire to dispute the writer's statement, I think it sounded a bit pessimistic. Judging from the many glowing articles I have read about the big, breezy West and the great hustling North, I was shocked to learn so many farm homes are minus so many necessary conveniences. Here in Virginia, I have travelled over the greater part of it, I am thankful to say our farm homes are improving wonderfully. In this section it would be rare to find one minus a bath room and running water in the kitchen. True, there are different classes of farmers and farmers' wives, just as in the city we have the poor, those fairly well off, and the very wealthy.

Some rural women are ambitious to have modern homes and they get in harness with their husbands until their dreams are realized; others possess the knack of getting along without many conveniences and evidently they have cultivated the spirit of contentment; while a great many farm women are eager to make money for themselves and add some comforts gradually. As a rule, farm women receive a great deal of unnecessary sympathy, usually from people living in towns and cities. They imagine we are isolated, but I think the majority of rural women are the most contented people we can come in contact with. Usually they live on farms from choice, as in these days many fields are open to men and women in cities if they choose to sell their farms and migrate there. Usually we have so many interests on the farm that they keep the mind and the hands occupied.

Help is more difficult to obtain than formerly, but we must remember that the farmer has more modern machinery to till his crops with; hence there are fewer hired men to feed than formerly and this is a great relief to the housewife. Farm families are decreasing in size and when we hear of a large family living on a farm, they soon cultivate the help-one-another habit, hence many hands make light work. Divorces are rare in rural districts in the South, but take a peep at the big cities where the wives have practically every convenience imaginable. They have more time for the movies and the resorts and a restless habit is soon formed. They are not nearly as happy as the rural woman, for the latter's home life is full of interests. The yard, the trees, the flowers, the garden, and the orchards have "their history" or perhaps the home is a quaint, old fashioned one and it has been in the family for generations, or probably it is one father and mother had been planning to build for years. Even the various fields on the farm are interesting to the family, probably one is where father grew his prize wheat and the other has been tile drained lately, hence the growing crop of corn is watched with interest. Then there are the horses and cattle, these not only help to fill the grain bins but they depend on the family for a living.

Farm life has many attractions for those who have been reared in the country. There is the very necessary automobile that takes us into the village and into town to see a good "movie" after our day's work has been finished. The automobile has done more to make our farm women contented than many home conveniences. Then there is the travelling library and a musical instrument of some description in practically every farm home. While we have to work, probably more arduously than ever, we have our compensations also. Many of us visit the village store and the post office daily. Then there are picnics, festivals, farmers' institutes, and fairs galore; yet the average farm woman does not take a yearly vacation! Why, many of us have a daily outing and a trip off to some large city every spring and fall to study the styles and to hunt for bargains, etc. When permanent macadam roads are built in every rural district our farm folks will be a happy and a prosperous class of people.

Virginia. MARGARET T. MERTON.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Hood Farm Abortion Remedy
and
Hood Farm Breeding Powder
Will Check and Prevent
ABORTION

If you are having trouble from abortion, order these two Remedies at once, give them a thorough trial and we are sure that you will be pleased with the result.

Chemung, N. Y.

Gentlemen:—For the enclosed five dollars please send me the Abortion Remedy and Breeding Powder. Have had splendid success with your Remedies. No more abortion.

PHIL WYNKOOP.

PRICES: Abortion Remedy, prepaid, $1.25, $2.75 and $9. Breeding Powder, prepaid, $1.15, $2.75 and $5. Injection Tube, by mail, 90 cents. One medium Breeding Powder, one medium Abortion Remedy, one Tube, prepaid, $5.75. Please mention this paper.

C. I. HOOD CO., Lowell, Mass.

DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

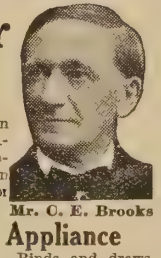
Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.

Write for free booklet with guarantee and letters from farmers and dairymen



ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

Don't Wear a Truss



Brooks' Appliance, the modern scientific invention, the wonderful new discovery that relieves rupture, will be sent on trial. No obnoxious springs or pads.

Mr. C. E. Brooks

Brooks' Rupture Appliance

Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. Sent on trial to prove it. Protected by U. S. patents. Catalog and measure blanks mailed free. Send name and address today.

Brooks Appliance Co., 467 B State St., Marshall, Mich.

Finely Ground
Raw Rock Phosphate
increases the fertilizing value of manure 60%.

Dairy Farmers
get particularly good returns from money invested in **rock phosphate.**

The car supply is much improved and we can now make immediate shipment. Write for our prices and free booklets.

ROBIN JONES PHOSPHATE COMPANY,
212 Steger Building, Nashville, Tennessee.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Oil Meal to Cows Near Parturition

Joseph C. Sibley, veteran breeder of Jerseys in Pennsylvania, contributes the following suggestion in a recent issue of the Jersey Bulletin, from his store of practical information on cattle management.

"A few years ago a Pennsylvania farmer, Mr. L. A. Tucker, visited my farm. A cow in our herd had failed to clean. Our veterinarian had frequently been called upon to remove the placenta from cows in our herd, a somewhat disagreeable and trying operation for both man and animal. Mr. Tucker had never had the advantage of a technical education, but had been graduated from the "University of Hard Knocks". He inquired of me if we were frequently troubled in this manner. I stated that we were troubled with such frequency as to make it extremely annoying. He said he never had any of it in his herd and the reason was that some weeks before the cow was due to calve he commenced feeding a pound of linseed meal daily, until at the time of calving (the quantity of meal having been gradually increased for five or six weeks) the cow was eating three or four pounds of linseed meal daily. This struck me favorably because it was not difficult to recognize that the linseed meal was not being wasted, and at a later period we would get it again in stored-up butterfat, more valuable than the meal. Many years have come and gone, but never from that day to this has a cow of ours failed to have easy parturition or to deliver the afterbirth promptly."

Teat Troubles

What can be done for cowpox, leakers, hard milkers and wart-like scabs on the opening of teats?

Poular, Wis. L. J.

Cowpox has to run its course. Isolate any affected cow and milk her last. If necessary use a sterilized milking tube to draw off the milk. Boil the tube for 15 minutes each time before use. Keep the teats, udder, and stall perfectly clean and milk with clean hands. Filth complicates matters and causes obstinate sores, or induces ruinous garget (mammitis). Bathe inflammed udder and teats twice daily with a saturated solution of boric acid and apply balsam of Peru to sores when scabs come off. If any sore is obstinate apply strong iodin ointment daily. Coat ends of leaking teats with melted wax or paraffin after milking and if that does not suffice apply flexible collodion. Dilators should be used to increase caliber of teat openings and if that fails a teat bistoury should be used, by a veterinarian, to slit down through the obstruction or stricture in four different directions. Growths should be removed with a small scalpel, a special sharp-edged, inverted, cone-shaped instrument or with caustic.

The syringing advised only applied to the vagina. Douching of the womb requires special instruments and skill.

Abortion

We have about 12 cows, mostly grade Durham. Several of them seem to have rheumatism. Those that are so affected sometimes abort at about 7 months. I have a bunch of heifers from those cows. Should I keep them? Cows are never sick, just lame.

Sears, Mich. C. S. C.

It is quite possible that the cows in question are tuberculous and to determine that you should at once have the tuberculin test applied, if that has not been done. The disease often causes just such forms of lameness. The abortions, however, more probably are due to the contagious abortion disease. To determine if the infection is present your veterinarian might arrange to have a sample of blood from each cow tested for abortion at the state agricultural experiment station. That is the only reliable means of determining presence of the infection. If the cows are tuberculous they should be disposed of in accordance with state law. If that disease is not present a combination of chronic rheumatism and contagious abortion disease also would be good grounds for disposal of the animals to the butcher. Rheumatism seldom affects cattle that are not kept in a damp stable, such as a basement barn without good ventilation.

Treatment After Dehorning

Please tell me where I can get medicated pads for the heads of cattle after dehorning them, to stop the bleeding and keep out the cold air.

Walnut, Miss. J. N. Q.

We do not know of such pads, but they are unnecessary. Simply apply pine tar and oakum held in place with a bandage in ordinary cases. If bleeding in any case is severe bathe constantly with very hot water containing coal tar disinfectant and when the bleeding practically subsides apply the tar and oakum. In 24 hours remove the bandage and allow the oakum to come off without pulling.

Abortion

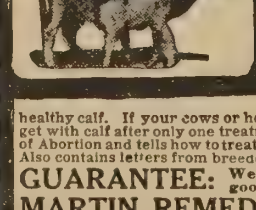
Is there any serum that is on the market now that is cure for abortion? If so, where can it be purchased? If there is and it is given the cow which lost her calf, how long before she should be bred in order for her to carry her next calf?

Ohio, Ill. C. A. B.

There are many different biologics on the market for use by veterinarians in the preventive treatment of contagious abortion disease, but it cannot be said that any one of them is a practical success. Neither does any one of them render a cow noninfective so that she may safely associate with clean cows or be bred by the herd bull. Thus far disinfection is the better means of dealing with the disease and methods for its application have often been published here. Apply to the veterinary department of the agricultural experiment station for a bulletin on the subject, or obtain one from the Department of Agriculture, Washington, D. C.

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT. REGULAR BREEDERS BY



STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: **We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00. Mailed Postpaid, in plain wrapper.**

MARTIN REMEDY COMPANY, Dept. A, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

BROWN SWISS

Brown Swiss Cattle For Sale

Male and Female

We solicit correspondence.

Dahlem & Schmidt, Box 85, El Dorado, Kans.



Buy a Brown Swiss Bull

Breed strong, vigorous calves of size, whi mature to hardy, heavy milking, long-liv dairy cows—profitable in your herd a readily salable at high prices.

IRA INMAN, Sec'y Brown Swiss Breeder Association, Beloit, Wis.
William B. Hale, Pres., Acqueduct Bldg., Rochester, N. Y.

JUBILEE FARM
Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

GUERNSEYS

Falcon's Grenadier (65834)
Dropped Feb. 12, 1920

Sire: *Falcon's Proud Warrior* (*47559*). P nounced by many experts as "the great son of Langwater Warrior".

Dam: *Stockbridge Olive* (*30883*), from a no family of high producers. Olive has an R. record of 11,503.2 lbs. milk, 617.36 l fat and dropped two calves during the yea

Grenadier is a high class, well grown bu priced very conservatively at $600 f. o. Litchfield.

Write about him today.

Falcon's Flight Farms, Litchfield, Co

GRASSLAND FARM GUERNSEYS

Choicely bred males and females for sa (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R.

Barry Farm

Offers for sale a bull calf born Ju 2, 1920, by Langwater Raider a out of a cow on A. R. test. Also few heifer calves.

Herd under Federal Supervision.

Far Hills, Somerset Co., N.

Do You Want A Guernsey Bu

Closely related to Pergue's Crescent A. with a record of 13,316.9 lbs. milk and over lbs. fat in Class EE and dropping two cal within the year, entitling her to second pl in her class? Some excellent young bulls clos related to Pergue's Crescent ready to head yo herd. Write for descriptive circular, or co and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illin

Guernsey Bull

Our last 9 official records average over lbs. fat, including all ages. Our herd sire 8 A. R. daughters, including one with 572 fat in Class GG. His three nearest dams erage 822 lbs. fat. Send for pedigrees a prices on young bulls with this backing.

Folly Farm, Box 587, Libertyville,

Guernsey Cows

I am offering for sale several head of R istered Guernsey cows of excellent breedi They are the natural increase of my herd. so have young bulls sired by Pencoyd's Sec Premier No. 49474. These bulls are splen individuals, showing type and production.

Herd under Federal Inspection

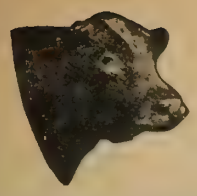
OTTO W. POST, ENSENOR, N.
R. R. Station, Owasco Lake

Harbor Hill Guernsey

Masher's Galore 8572 A. R.

Increased the Average Production Credit 12 A. R. daughters out of A. R. dams by 1 lbs. We offer his double grandson out of a other daughter also making a better reco than her dam.

C. H. Hechler, Superintendent
Box 30, Roslyn New Yo

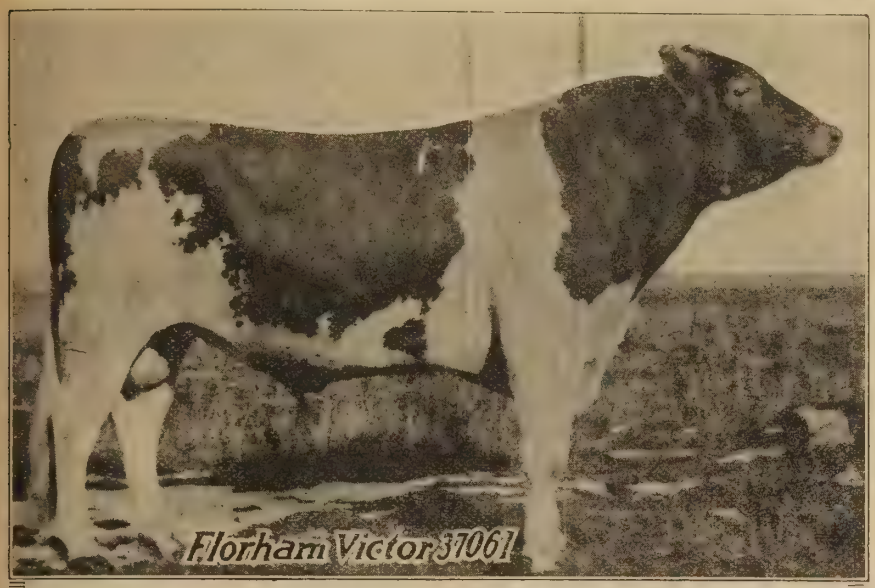


Economy in Production ← **GUERNSEYS** → Quality of Products



Quality of product is a distinctive Guernsey asset. Guernsey milk contains 60% more fat than is required on the government score card, and 30% more food value than ordinary milk. Quality has a commercial value. Consider the insatiable demand for the pure product of the Guernsey cow, and the premiums consumers gladly pay for it. Our free booklets contain valuable information.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H12, Peterboro, N. H.



SON OF NE PLUS ULTRA

We are offering several of his sons and daughters. Also sons and daughters of our other herd bull, who is a son of Golden Secret of Lilyvale and a half brother of Nellie Joy IV, 1,019 lbs. fat. Eighteen of his half sisters average over 600 lbs. fat. Write or come and see them.

W. W. Clark, Vesper, Wisconsin

A YEAR OLD



ANTON'S PASHA OF PROSPECT (61884)
Dropped October 31, 1919
SIRE — Anton's King Confidence (43517). DAM — Buttermaker of Prospect (68769)

Anton's Pasha is one of the "big type" bulls. His picture gives a good idea of his length and the rest of his body is in good proportion.
He is sired by Anton's King Confidence, who has six May Rose crosses. The dam of A. K. C. made 764.65 lbs. fat as a junior 4-year-old.
The dam of Anton's Pasha is now on test and has made 295.87 lbs. of fat in 243 days, while running with the herd, receiving the regular herd rations and being milked but twice a day.
This bull will go mighty soon so if you want him write immediately.

Hoard's Dairyman Farm, Fort Atkinson, Wis.

We Offer For Sale

Simplicity's Winner of Iowanola (54404)

Born August 25, 1918. A show bull. First prize in class and member 2nd prize get of sire, Waterloo Dairy Congress, 1920.
Sire, Cherub's Winner (34180). The sire of all the animals that won all of the cups and trophies awarded at the N. D. S., 1920.
Dam, Simplicity of Haddon (47876), A. R. 7607. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. A big, strong, typy cow, a very easy milker and a good breeder.
Write for further information. We have a few younger bulls.

Mountain Bros., Carrier 403, Des Moines, Ia.

ISLAND FARMS

May King No. 59478. Dropped May 20, '19

Sire—Beda's May King 11893. The greatest living proven May Rose sire today.
Dam—Imp. Garenne's Dairy VI No. 79814, a half sister to Imp. Princess Bergere and Imp. Bella 2nd du Grand Fort.
This is a show bull and guaranteed right in every way.
Price $500.00 f. o. b. Island.

Address
ISLAND FARM,
Floodwood, Minnesota

Shorewood Farm Offers

Sons of Ladysmith's Cherub, three times National grand champion. One of his first daughters to finish made 591 lbs. fat in Class G. Others equally as promising now on test.
These bull calves are from 3 months to serviceable age out of dams with records up to 777 lbs. fat. They combine size, and type with persistent production.

SHOREWOOD FARM, Crystal Bay, Minn.

Guernseys

Best May Rose breeding. Both sexes and all ages from an Accredited Herd. Write your wants and send for lists.

E. S. Person, Minot, N. D.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. **W. A. Cloues, Mgr.**

Young Bulls For Sale From A. R. Dams

I am offering several young sons of Golden Noble of Craigmoor A. R. He is a son of Langwater Raritan A. R. and from Imp. Daisy Moon 4th (639 lbs. fat).
These bulls are from A. R. dams with records up to 648 lbs. fat.
They are from 3 months to a year old. For prices and pedigrees call or write

Maple Heights Guernsey Farm
Frank E. Swan, Wauwatosa, Wis.
Federal Accredited Herd.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

Here's Your Opportunity!

Good Grade Cows in car lots. Pure-bred Males, Females with type and good producing ability. Investigate.

Fox River Valley Guernsey Breeders' Association
Harry Leppla, Sec'y, Appleton, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by
RADISSON FARM, ANOKA, MINN.

Forestdale Farm

3 Bully Baby Bulls 8 Handsome Healthy Heifers — 2 to 18 months

from Superior Standard Sires, also a few A. R. matrons. May Rose Breeding. Tuberculin tested. $250 lowest price.

R. D. DeForest, Amsterdam, N. Y.

Meadowland Guernseys

Sixty-five females, priced conservatively, are offered from which to make selections.

MEADOWLAND FARM, Litchfield, Conn.

Just What You Want!

An 8 months old bull calf. Partly white, light fawn, very fine individual.
SIRE—Cream Cup's King Regent of Allenwood 33889, by Allenwood King Regent 23641 and Allenwood Cream Cup 41291 who has a record of 436.89 lbs. fat Class G.
DAM—King Regent's Fanny of Allenwood 2d 73637, now on test in Class FF and will finish between 500 and 600 lbs. fat and has milked as high as 49 lbs. in one day. She is a daughter of Noble Regent 31691 and King Regent's Fanny of Allenwood 58290 who has a record of 347.64 lbs. fat at 2 years.

CORIUM FARM, F. J. Rueping, Owner, Fond Du Lac. Wisconsin.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.
Bull calves for sale by him out of cows with good A. R. records.
Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

For Sale

Craigamoor Raritan 24912 (A. R.), whose daughter now on test will make over 600 lbs. fat in AA. Also 4 sons 2 to 10 months old out of A. R. dams. Write for full description.

E. F. JONES, Barron, Wis.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS
James H. Murphy, Mgr. Delavan, Wisconsin

CITY HOME FARM GUERNSEYS

Fine registered Guernsey bulls of serviceable age and younger of most fashionable breeding. Priced right. Can also spare a few fine females.

F. W. MEYER BARRON, WIS.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

Unusual Bargain

A 4-year-old bull presenting a most desirable combination of May Rose—Masher Blood Lines. Half brother to 16 A. R. cows. Splendid individual, whose breeding value is proven by his outstanding calves in our herd.
First check for $200.00 takes him.

Tristram Farm Co., Eau Claire, Wis.

GORDONDALE

Guernsey bulls of serviceable age offered for sale, also younger ones. They carry May Rose breeding, are from A. R. dams and have splendid A. R. backing Ask us about them.
Herd under Federal Supervision.

L. E. GORDON, JR.,
Nelsonville, Portage Co., Wisconsin.

JERSEYS

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. **R. C. Green & Son, Albion, Wis.**

JERSEY BULLS

Valley Farm is offering young bulls from 2 mos. to 18 mos. old, sired by Noble of Ayrshire 92571 and Golden Maid's Viscount 113344, both Imported sires. Will sell cheap to make room. Write
FRED STUBLEY, BLACK EARTH, WIS.

Dunn and St. Croix Counties Jersey Breeders' Ass'n

have a few choice bulls and several pure-bred and grade cows and heifers for sale.
S. A. B. AUSMAN, Secy. Elk Mound, Wis.

Serviceable Bulls From R. M. Dams

We have a few very good individuals 6 to 13 months of Majesty and Raleigh breeding. A tuberculosis free herd. Every animal guaranteed right.
Your inquiry promptly answered.
E. E. HILL & SONS, Tomah, Wis.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S. HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

Six Splendid Jersey Bulls

FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON. - Edgerton, Wisconsin

Raleigh Bulls For Sale

2 are ready for heavy service, others younger, all from Register of Merit cows with one exception. Also a 2-year-old heifer just fresh and some Register of Merit cows with records from 400 to 500 lbs. butterfat.
P. G. Warmington, Honey Creek, Wis.

Bulls—JERSEY—Bulls

A splendid lot of Majesty bulls out of Register of Merit dams for sale at very low prices. We must sell to make room for our winter and spring calves. These bulls are from three months to two years old and sell with full guarantee to be breeders. We have a Federal Accredited Herd. For pedigrees, descriptions and prices, write Thos. T. Bacheller, Jr., Mgr.
ELMS JERSEY FARM
M. D. Munn Forest Lake, Minnesota

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

World's Champion

For Production and Progeny

Successful Queen

four years' R. O. M. Class AA records 59,907 lbs. milk, 3,072.2 lbs. fat.
We offer Bull calf No. 286, dropped April 5, 1920.
Sire, a Son of Pogis 99th of Hood Farm, Champion A. J. C. C. Gold Medal Bull, Champion sire, sire of 82 in R. O. M.
Dam, Trudie's Queen of Hood Farm (full sister of Successful Queen) R. O. M. record in seven and one-half months, 8,749 lbs. milk, 502 lbs. fat.
The calf is a very fine individual.

Price $350.00

HOOD FARMS, Inc.
Lowell - - Mass.

Bull Clubs

We are in excellent shape to furnish several very high class Jersey bulls ready for service.
These bulls are out of Register of Merit dams with excellent records, sired by bulls backed with the largest production of the breed.
The World's Champion producing blood in these bulls insures their siring large cows of correct type and big profitable producers.
If you are in need of one bull or several bulls, we would appreciate your writing us about the quality and priced animal you need, and this will save time, money and correspondence.
AYREDALE STOCK FARM
F. W. Ayer, Prop., Bangor, Maine

I Am Offering

my undefeated show bull, Rose's Elmhurst Jolly, No. 142213, and one of his sons of serviceable age for sale to the highest bidder.

Address all inquiries to

Hazeltine Lake Jersey Farm
H. C. Wagner, Excelsior, Minn.

AYRSHIRES

Aldebaran Farms

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AYRSHIRES

Orchard Lodge AYRSHIRES

Stock for sale, all ages.
Both sexes, prices reasonable.
G. W. STOLLER, Johnstown, New York

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.

Write for prices to Hope, R. I.

DON'T PUT OFF
Seeing your friends and having them join in for a club of subscribers.



The THREE WISE MEN FOLLOWED A STAR

BE A WISE MAN

AYRSHIRE BREEDERS ASSOCIATION
BRANDON VERMONT

Weymouth Farms

"Ayrshires of Quality"

All cows on Advanced Registry Test. Herd Tuberculin Tested.

We can supply you a herd sire of choicest breeding.

MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

BLACKBURN FARM

HOME OF
Addington's Champion

Grandfathers—Nox'emall and Finlayston
Father—Rena's Champion, 17 A. R. Daughters
Mother—Addington Queen 3d, two Mature Records each over 19,000 lbs.

For Sale —
4-year-old cow—Fresh Dec. 12, 1920
2-year-old heifer—Fresh Jan. 16, 1921
Also Young Stock
Tuberculin Free Herd
Sewickley, Pennsylvania

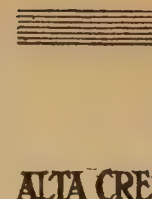
Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis

When writing advertisers please mention Hoard's Dairyman.



ALTA CREST AYRSHIRES

Special Offering of

Ayrshire Bull Calves

Imported — Home Bred

which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.

Write for Sale List

Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.

ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

World's Champion Ayrshires

Fully Accredited Tuberculosis Free — 200 Head in Herd



AUCHENBRAIN WHITE BEAUTY 2ND
A. R. 14,721 lbs. milk, 4.33%
In 13 years, 112,486 lbs. milk and 13 calves

110 animals in herd are descended from this cow. 4 of our cows hold the 1st, 2nd, 6th and 7th highest Ayrshire records. They average 22,823 lbs. milk, 1,046 lbs. butter in one year. 20 cows in herd average 17,074 lbs. milk, 803 lbs. butter. 100 Advanced Registry records made here average 13,246 lbs. milk. 30 head, choice animals for sale at reasonable prices.

Write us your needs.
PENSHURST FARM, Narberth, Pa.

Delchester Farms Ayrshires

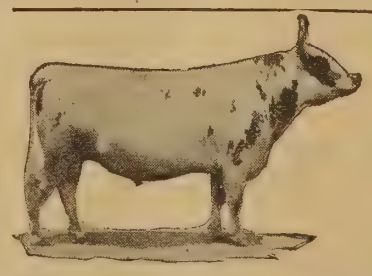
Tell us your wants and we can supply them at prices you can afford to pay.
Aged cows, bred to Glenury, an A. R. son of Finlayston.
Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.
Heifers, bred to these two great sires.
Young heifers.
Bull calves.
All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.

Herd free from tuberculosis

DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Ayrshire Stock

of all ages for sale. Satisfaction guaranteed
L. W. McCONNELL, Wellington, Ohio



We Have For Sale

the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.

Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.

BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANIA



For Sale—Eight New Milk Cows

These cows have type, breeding and are real producers. Guaranteed right in every way. If you are looking for good cows, come and see them or write for particulars.

W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

Middlesex Meadows Ayrshires

NANCY WHITEHALL, World's Jr. 4-yr.-old Champion Ayrshire, has just completed another record of 22,075 lbs. milk, 858 lbs. butterfat. Her bull calf, *NANCY'S CHANCELLOR OF MIDDLESEX*, born September, 1919, by a show ring champion with great milk production behind him, is a winner in the show ring this year, and is now being used on all the Middlesex Meadows Farm heifers. He is offered for sale for immediate delivery. Guaranteed a breeder and right in every way. Price $2,000.

A. Henry Higginson

South Lincoln, Mass.

Sudan Grass Pasture in Kansas

The county agent recently visited the farm of Fred Crittenden near South Haven. Sudan grass had been used on this farm with gratifying results. A small tract of land consisting of about one and one-fourth acres had been drilled to Sudan grass last spring. Twenty-nine head of hogs were turned on this grass about June first. These hogs were unable to keep the Sudan grass down, so that for one period of ten days, ten head of cattle were turned in to eat down the tallest grass. At two other times it was necessary to turn ten head of horses on this tract of ground for a period of five days each. The Sudan grass was mowed once during the season.

Mr. Crittenden made very efficient use of this pasture by turning in cattle and horses when the grass was becoming too large for the hogs, before it became too old and tough so that none of the stock would eat it readily. It was pastured sufficiently so that it was eaten to the ground by the the time of the first freeze. This avoided any loss of feed which would have occurred had he allowed the grass to grow tall and be killed by the first freeze. Mr. Crittenden is well pleased with the results from pasturing Sudan grass this year and he expects to seed a larger acreage next year for pasture purpose.—Sumner County, Kansas, Farm Bureau News.

Value of Organization

"Organization" is the "way and the how" of success, be it a bank, a church, a farm club, or chamber of commerce—nothing except a tattling tongue runs itself without careful control.

When writing advertisers please mention Hoard's Dairyman.

HOLSTEINS

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ollie, sire of world's youngest 1,000-lb. 2-year-old, good individuals from tested dams, some with yearly records. These calves grow into profitable sires. Write

WALCOWIS FARMS
Lake Geneva, Wisconsin

Cows and Heifers
A Few Good Bulls

Because I am overstocked, I am offering some very good registered females for sale. They either have A. R. O. records or are from A. R. O. dams.

Can also offer some excellent young bulls by a 33-lb. sire and from A. R. O. dams with records up to 28 lbs.

Every animal sold is guaranteed to be as represented.

Write or come and see for yourself.

J. D. McDonald West Salem, Wis.

Three Holstein Bulls

fit for service, sired by sons of King Segis Pontiac. Pure-bred and grade females, any age, in carload lots for sale.
W. R. GATES, Fort Atkinson, Wis.

Mr. Holstein Breeder—
You are Invited to
Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms
Headed by
General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.
C. A. Schroeder & Son, West Bend, Wis.

Wayside Stock Farm
OFFERS
4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.
TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac
THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.
FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.
Be quick if you want one.
A. L. Williams Estate, Fond du Lac, Wis.

5-10 WELL BRED HEIFERS
SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.
ANDREW FRANK, FOX LAKE, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.
John Alexander, Baraboo, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.
Halsey J. Sedgwick, Limeridge, Wis.

A 20-Mo.-Old Service Sire

out of a 26-lb. daughter of King Korndyke Veeman Wayne and sired by a 26-lb. son of King Segis Pontiac. A fine individual—Well grown—Well marked—Well bred. A few younger bulls out of record dams and priced right. Herd tuberculin tested. Come and see these at any time.

RIDGEHURST STOCK FARM,
Glen C. Ramsey. Ft. Atkinson, Wis.

ORMSBY BULL • Born Feb. 28, 1919
Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.
Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.
Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Let This Young Bull
Head Your Herd



HIS SIRE—King Pontiac Artis Sadie Vale, a 34-lb. son of the great King Korndyke Sadie Vale.

HIS DAM—Mary Segis Beets, 32-lb. cow that has twice made over 31 lbs. and is now going at a 1,000-lb. rate on yearly test.

This calf is fit to head any good herd of Holsteins. We are very sure he will suit you. We have several other sons of "King" for sale.

Gustave Pabst's Hollyhock Farms
Fred J. Southcott, Manager Dousman, Wisconsin

4 Serviceable Bulls
ALL SONS OF THE 1235-LB. YEARLY SIRE
Sir Korndyke Bess
The Dams' yearly records all over 800 lbs.
R. E. Benson - - Dousman, Wisconsin



Yearly Records
Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.
JOHN PULS, • HARTFORD, WISCONSIN

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to
WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

Wayside Lawn Farms
offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.
Walter Sorge, Reedsburg, Wis.

1000---HERD---1000
Quality Holsteins
GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.
Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

WAUPACA COUNTY HOLSTEINS
The Home of Healthy Holsteins
More Federal Accredited Herds than any other County in Wisconsin
200 Grades and Pure-breds ready for immediate shipment
WAUPACA COUNTY HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, A. B. Rowe, Secretary, Waupaca, Wis.

First State Sale

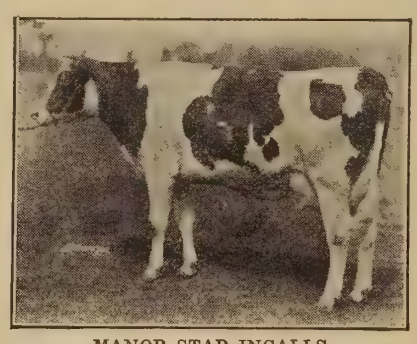
ROCHESTER, N.Y.
JAN. 12-13
1921

A Sale of the Best Individual Holsteins New York State Affords. Every One Individually Selected for this Event

150 HEAD — 63 CONSIGNORS



JOHANNA ORMSBY COUNTESS
First Prize, Senior and Grand Champion at N. Y. State Fair.
Consigned with her young daughter.



MANOR STAR INGALLS
A handsome 26-lb. 2-year-old granddaughter of a 36-lb. cow.
Consigned to this sale.

A Competent Judge has spent more than six weeks in covering the state of New York for the selecting of these 150 head — all chosen with the one thought of maintaining the high ideals of the committee adopted at the start.

In a collection of this class, chosen from so many different herds it is simply impossible to go into detail regarding the breeding of any of the animals — other than to make brief mention. But with a large number of 30-lb. cows, two in particular being above 35 lbs. butter and 700 lbs. milk and scores of young heifers up to over 26 lbs., the discriminating buyer will be able to purchase as good animals as the breed affords. Not only are the animals desirable from their individual and production records, but their calves are also extremely valuable. A special feature of this sale is the unusually large number due right at sale time or very soon thereafter. Every animal of breeding age, not recently fresh handles a calf. There are no blanks so far as has been possible to determine.

Some of the Record Cows Include:

Glycola Korndyke 36.01 — **Edith Segis Korndyke 35.71**
Bonalevo Quality Parthenea 36.00 — **Beaver Dam Mercedes Segis 34.00**

More than a Half Dozen Other 30-lb. Cows
More than a Quarter of a Hundred From 30-lb. Dams

THE HEALTH OF THE ANIMALS in this sale is all that could be wished. Extreme care was exercised in the selections and while it had been planned to give all animals the three tests, it has been found impossible to complete more than the Intradermal and Subcutaneous tests before sale time but in addition to these two tests all animals are guaranteed under a 60-day retest.

Here is a sale in which breeders will be able to find whatever might be needed to strengthen their herds, no matter how good the quality might be now.

The Directors and Secretary of the New York Holstein-Friesian Association unqualifiedly endorse this sale. They are sure it is worthy of the support of every Holstein breeder in the country. Every animal offered has passed a rigid health test by Federal and State officials and every consignor fully guarantees his consignment for sixty days. Every animal has been carefully inspected for type by a judge in whose ability they place absolute confidence. They pledge their reputations as Holstein men that this is a sale of the very highest quality not only with respect to the health of the animals offered, but with respect to the type and conformation, the breeding, the records, and the standing of the men selling the animals. They personally recommend this sale to the attention and patronage of all Holstein men throughout the country who may be seeking good Holsteins for foundation stock or to replenish their herds. As an Association it will undertake to see that every buyer gets a square deal and good value for his money.

New York Holstein-Friesian Association
Syracuse, New York

CARRY ON



OLATHE SIR BESS ORMSBY MERCEDES
BORN JUNE 29, 1920

Here's one that will "Carry On" for You

By Sir Bess Ormsby Mercedes No. 184275 and from Olathe Lady De Kol No. 223983 A. R. O. 16.8 lbs. butter from 453.8 lbs. milk. He combines the blood of two of Erickson's best bulls, the 37th and Sir Daisy Queen De Kol.

Price $150.00.

W. S. Comings, Eau Claire, Wis.
Other calves of similar breeding.

Waukesha County

Contains more tuberculin tested cattle than any other county in the world. There is more attention paid to official records than in any other county in the world.

When in the market for foundation stock, grades or pure-breds of all ages, write or wire for information to

Waukesha County Holstein-Friesian Breeders' Association
Office—254 Broadway, Waukesha, Wis.

A Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 lbs. as a heifer; second dam 24.79 lbs.; third dam 28.88 lbs. Bull mostly white, very good individual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record 19.75 lbs.; second dam 18.75 lbs.; third dam 21.45 lbs. Half white. A show bull. Price $200.

For complete information and pedigree write
A. M. Anderson, Whitewater, Wis.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.



Mr. Dairyman —

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
D. W. Norris, Owner, E. Loehndorf, Herdsman

$100 to $200

buys a good bull. Sired by very typy, 26-lb. bull and from tested dams up to 25.46 lbs. butter in seven days.

Tuberculin Tested

H. W. Crawford, R. 5, Campbellsport, Wis.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Yearling Bull
Ready For Service

Here is a show bull whose dam has a 3-year-old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.

The first check of $150.00 takes him.

G. G. Burlingame, Cazenovia, N. Y.

HOLSTEINS AT AUCTION

Send for information about the sales of healthy, reliable, registered cattle, held at Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 2nd, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to

KAY BROS. - - CADDOA, COL.

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.

O. E. STEVENSON, Scranton, Penna.

Holstein Bull

Old enough for service. Three-fifths white. Combines good individuality and high production. Sire: Son of Korndyke Segis Johanna and high record cow. Dam: A 21-lb. 3-year-old, now on yearly test.

Dairy Dept., N. D. Agr'l. College, Fargo, N. D.

EVENTUALLY, WHY NOT NOW—

Buy A Son of a 30-lb. Cow

Born October 2, 1919

A fine individual, straight and well built, about ⅞ white. Sire, son of Colantha Johanna Champion, 57 A. R. O. daughters, and Duchess De Kol Korndyke, 21.65 lbs. at 9½ yrs., having a world champion daughter. Dam, a 30.48-lb. daughter of Johan Hengerveld Lad, 65 A. R. O. daughters, full sister to a twice 30-lb. cow. Have two more of similar breeding. Pedigrees and prices on request.

Ontonagon Co. Farm - Ontonagon, Mich.

T. G. Roberts, Herdsman. J. S. Netterauer, Sec.

THE TRAVERSE HERD

We have what you want in

BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

Traverse City State Hospital, - Traverse City, Michigan

The Pontiac Herd

"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*

Do you want a Pontiac in your herd?

PONTIAC STATE HOSPITAL, Pontiac, Mich

MR. CATTLE BUYER

We can supply you with good, healthy registered Holstein cows and heifers, singly or in car lots.

We always have some very desirable young bulls for sale.

It will pay you to look into our high class listings.

LENAWEE CO. HOLSTEIN BREEDERS' ASS'N, ADRIAN, MICH.

L. W. Harwood, Sales Mgr. R. C. Curtis, Sec.

$225 Buys a Registered Holstein Bull — 14 Months Old

A good individual, large sized, perfect top line and about ⅞ white. His dam is one of my largest and best cows, with a large square udder and exceptionally straight top line.

She has just completed a 7-day Official test, making 24.2 lbs. butter and 505.3 lbs. milk.

His sire is a 29-lb. bull of good breeding and individuality.

A Bargain for Someone

I have also some very choice bull calves of excellent breeding from dams with A. R. O. records of 20, 23, 24 and 26 lbs. of butter in 7 days.

I. M. SHORMAN, Route 4, Fowlerville, Michigan

Marketability BANKER Quality FARMER of Wisconsin Bankers' Association EXCHANGE

Holsteins For Sale

PURE-BREDS	78 Cows 88 Heifers 18 Heifer Calves 250 Young Bulls	GRADES	67 Heifer Calves 112 Heifers 245 Cows

Other Live Stock: Breeders are listing with us other dairy cattle, beef cattle, horses, sheep, and swine. Write us if you want stock. We will answer promptly.

BANKER FARMER EXCHANGE

D. H. Otis. Director, 1822 Chadbourne, Ave., Madison, Wis.

Have You A Good Bull For Sale?

We can use a few more good bulls in our Feb. 1st bull sale. Bulls must be 10 months old or older.

Watertown Holstein Sales Co.

Francis Darcey, Secretary, Watertown, Wisconsin

MISSISSIPPI

The State for the Dairy Business

The following can be had for rent or purchase by prompt application:

200 acres of land that will produce alfalfa, red clover, melilotus, or any of the clovers.

100 acres in pasture with the south's greatest pasture grass (Bermuda). Will yield 40 to 50 bushels of corn per acre; will yield 60 to 80 bushels of oats per acre; will yield 10 to 20 tons of sorghum per acre; will yield 3 to 6 tons of Johnson grass per acre.

Oats can be sown in the fall, cut in the spring and the land will yield without further cultivation, the same season, 2 to 4 tons of alfalfa, lespedeza or Johnson hay grass.

In the land where green crops for pasture can be grown the year round.

Good barn, concrete floor, steel stanchions, 200-ton silo in the middle of the barn, 16 h. p. engine, silo cutter, Letz No. 2 corn crusher and hay meal grinder, two cream separators, 3 h. p. boiler, steam washer, large steam sterilizer. In fact, everything that goes to make up a modern dairy farm equipment.

High grade Jersey cows can be had from $40.00 to $50.00; grade Holsteins from $50.00 to $75.00.

Two miles from the best city in Northeast Mississippi on the Burlington Highway, a concrete road. Tupelo is an excellent market for whole milk, prices ranging from 60 to 80 cents per gallon. Big creamery, large ice plant, large ice cream plant in the city that use cream and whole milk. Butter from this dairy has twice been awarded gold medals by the Butter Exchange in Chicago for being the best butter made in the United States.

Write or see

B. T. CLARK Tupelo, Mississippi

HOLSTEIN CATTLE

N. P. Hanson, Westbury, Minnesota, writes:

"Nine years ago I purchased my first purebred Holsteins, three young heifers and a bull. One of those heifers cost $175 and now has five daughters, four granddaughters, and four great granddaughters. For the whole family a conservative estimate of their value is $15,000—not so bad for a $175 investment nine years ago."

Send for Free Booklets

The Holstein-Friesian Association of America

101 American Building Brattleboro, Vermont

$600

Will Buy A Bull

Whose—

3 nearest dams are yearly record cows averaging 964.5 lbs. butter and 19,435 lbs. milk.

5 nearest dams average 948 lbs. butter and 20,000 lbs. milk.

7 nearest dams average 30 lbs. butter and 546 lbs. milk in 7 days.

The calf, himself, is a high-class individual; being straight, deep bodied and well grown for his age. He was born June 15th, 1920. He is just a trifle more black than white and is nicely marked.

Write for pedigree and photograph

WINTERTHUR FARMS

Winterthur Delaware

Federal Accredited Herd— 325 Females

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.

KITTLE BROS., Holland, Ohio.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. **Wm. N. Osborn, Wanatah, Ind**

Woodell Farm

Offers a Few Serviceable Bulls

Sired by a son of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.

Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

Buffalo Creek Farm Holsteins

This yearly record bull calf for sale, born Nov. 28, 1919.

Name, King Lavera Ormsby No. 297926. Sire: King Pietertje Homestead Ormsby No. 221488. Dam: Lavera Hortensia Bawn 2d, No. 124734, with a record of 26,010.2 lbs. of milk and 1,050.55 lbs. of butter in a year. Write for price and pedigree. This calf won 5th premium at the Dairy Show.

Herd under Federal Supervision.

H. L. BINGHAM, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.

WOODLAWN FARM, STERLING, ILL.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅔ white.

Long Distance Phone 389.

DUETT ROBINSON, R. 3, Capron Ill.

Major Oliver S. Johnson



The Dairy Auctioneer

—

Tipton, Ia.

A Son of King Pietertje Ormsby Piebe

whose dam is the world champion butter producer as a Jr. 4-yr.-old, enough said. The dam is on yearly test and is a daughter of the great sire, *Sir Gerben Pauline.* Ready for heavy service. Information:

G. Zwaagstra, Granger, Iowa.

Whitehurst Farm

Offers for sale Holstein bull one year old. Sire has four A. R. O. daughters and is a son of Canary Homestead Oak De Kol. Dam has 18,000 lbs. of milk in 365 days at four years of age. Grandam has 19,600 at five years and great grandam has 19,800 at five years old. Grandam has two A. R. O. daughters, one with 16,000 at 2 years and the other with 18,000 at four years. Dam has one daughter with 12,000 at two years. These records were all made under ordinary dairy conditions.

A. F. Randolph, Proprietor
Canton Illinois

Business, Like A Pendulum, Swings From One Extreme to the Other

We cannot expect our Holstein-Friesian business to be any exception in this period of re-adjustment — all lines are feeling it, but ours has weathered the storm better than any other.

We have reached the end of the downward swing and within the next few months prices will certainly increase and perhaps exceed what they have been in the past.

The shrewd man takes advantage of this "buyer's market" to fill his barns. He buys now at a low price that he may later, when the other fellow wants to buy, sell at a very considerable profit. What are you doing?

Do you know of any commodity that you could keep that would pay you as well as the Holstein cow that fills the pail to overflowing at every milking, and gives you a beautiful calf every year?

The average cow in Minnesota produces 150 lbs. of butter in a year. No doubt the same average would apply in almost every other state.

You know that many Holsteins produce 1,000 lbs. and over.

Why keep scrubs? They cost just as much to take care of — they produce nothing in comparison with the pure-breds — and what do you get for their calves?

Are You A Holstein Booster? I Am.

J. M. HACKNEY

WILSONDALE FARMS

Young Holstein Bulls Backed by Yearly and Seven-Day Records

Herd under Federal Supervision

We have several young bulls up to 17 months of age, sired by Maplecrest Sir De Kol, whose dam made 31.07 lbs. of butter and is a daughter of Daisy Grace De Kol, former World record Junior 4-year-old in the yearly production division.

These bulls are all well grown, and are of show type individuality. They are from dams with records up to 31.70 lbs. of butter in seven days, and 640 lbs. of milk.

Included in the above are a few young calves from 2 to 4 months of age from untested dams, which I will price very reasonable for immediate acceptance.

Prices and full description, with photographs will be furnished upon application.

These calves should be seen to be appreciated.

C. A. WILSON, Prop., Decatur, Illinois

Grandsons of "Count" and "Piebe"

I have just purchased from the University of Nebraska, which owns the highest record son of PIEBE from BEAUTY GIRL PONTIAC SEGIS, the World's Record Daughter of COUNT,

Eight Young Bulls

from six to eighteen months old, all from good A. R. O. dams. Individuality faultless. Beautifully marked.

Most Popular Combination of Breeding of the Day
They Won't Last Long Write Me At Once For Prices

J. M. HACKNEY

ARDEN FARMS, 602 Merchants Bank Bldg., St. Paul, Minn

"SPOT"



Elf Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

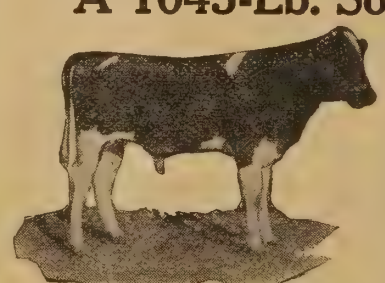
2 WORLD } RECORD COWS IN OUR HERD
4 STATE }

Holstein Bull Calves For Sale

A Few Exceptional Individuals Ready for Service

Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

A 1045-Lb. Son of K. P. O. P.



KING PIETERTJE ORMSBY PIEBE 22ND

For Your Herd Sire

He is 7 months old and a dandy,—fit to go into the show ring any day.

His sire is King Pietertje Ormsby Piebe—you know him.

His dam, Rose King of Cornella, made 25 lbs. butter in 7 days and 1,045 lbs. in a year as a 4-year-old.

His 2 nearest dams average over 1,217 lbs. for a year as 4-year-olds.

He's priced right and we offer easy terms of payment.

Do you want him?

Hargrove & Arnold Norwalk, Iowa

Herd UnderFederal Supervision

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.

LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

A Few Bulls at Bargain Prices

Old enough for service. Sired by Sir Rag Apple Korndyke Hengerveld and from good A. R. O. dams. These bulls are well grown and right in every way. Photo and extended pedigree upon application.

Patterson & Dickinson, Bellefontaine, Ohio

ROME FARM HOLSTEIN FRIESIANS

Son of Woodcrest Sir Clyde

Born Dec. 1919—light in color. *Dam*:—A yearling with 14.7 lbs. Butte days, and a 10-month record of 451 lbs.; she by K. K. S. V. 24th and fro 30-lb. cow. *Sire's dam*:—33 lbs. 7 days and 970 lbs. a year. He is perfe straight—a splendid individual. He is priced to sell. Write about him to

W. B. BARNEY & SONS - - CHAPIN, IO

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.

Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Son of a 37-Lb. Ormsby B

Dam: three-fourths sister to an 870-lb. junio year-old. Mostly white, $150. Herd under Fe Supervision.

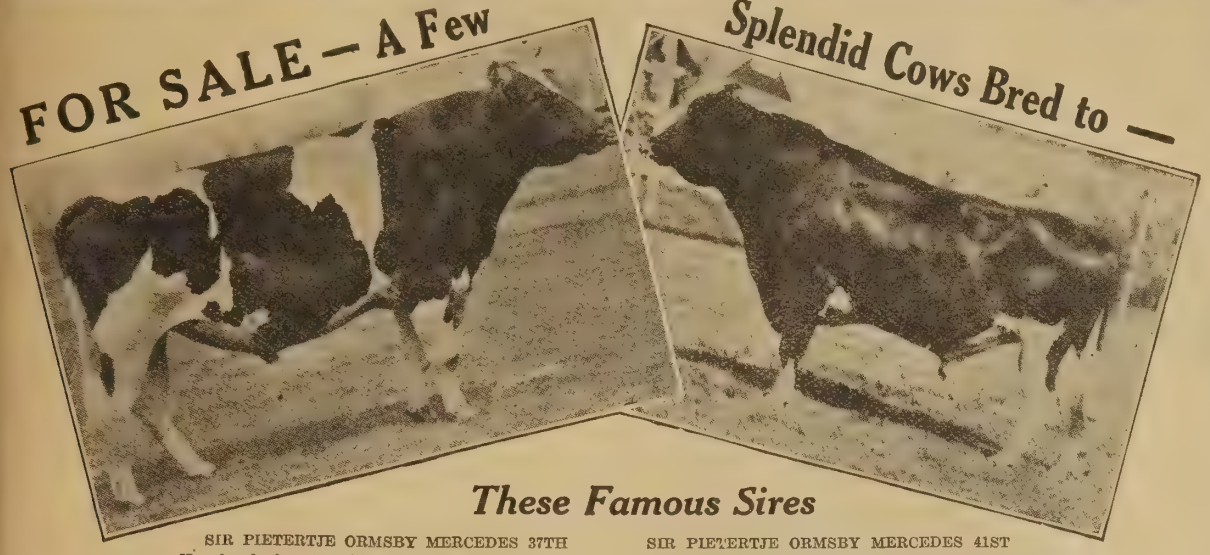
BLUEBELL FARM, RICEVILLE, IO

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

FOR SALE — A Few Splendid Cows Bred to —



These Famous Sires

SIR PIETERTJE ORMSBY MERCEDES 37TH

He already has two 1,000-lb. three-year-olds and a 900-lb. junior two.
A full sister has twice made over 1,000 lbs. in 305 days.
Dam:—Spring Brook Bess Burke 2d. 1,290.91. Two other records above 1,000 lbs.

SIR PIETERTJE ORMSBY MERCEDES 41ST

His daughters are real producers and show ring winners. One of his daughters was grand champion at the Dairy Cattle Congress, defeating the National Champion.
Dam:—Spring Brook Bess Burke 1,094.16, "Greatest Mother of the Breed".

And You Know Their Sire —

SIR PIETERTJE ORMSBY MERCEDES, the world's greatest sire of show ring winners and yearly producers. Thirteen of his daughters have made above 1,000 lbs. Twenty have made over 20,000 lbs. milk in a year.

We are offering a few splendid cows—not culls—bred to these bulls at prices that will move them quickly. Come and look them over.

E. C. SCHROEDER FARMS *(Fully Accredited Herd)* **Moorhead, Minnesota**

Mankato Holstein Farms

Offer a Son of

King Colantha Ormsby Bess, A Sir Pietertje Bess Burke combination. Nine dams average over 1,000 lbs.

Dam is going at better than 800 lbs. butter for the year. Has over 25 lbs. butter in 7 days.

This calf was Grand Champion over all bulls at a Southern Minnesota district fair.

Several bulls at prices warranting their use in grade herds.

Write or better still come and see them

(A Federal Accredited Herd)

Marlow & Randall, Mankato, Minn.

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home o the Ormsbys."

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d, a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.
For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.
Herd under state and federal supervision. Write for complete information to

V. R. HOLMES, - ANOKA, MINN

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., BISCAY, MINN.

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, Forest Lake, Minn.

RICHLY BRED HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes,** a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby,** a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.
Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

Sir Ormsby Segis Korndyke

grandson of Pietertje Maid Ormsby on sire's side and from a good daughter of King Segis Pontiac Count, heads our herd. Our bulls are all sold but we will book orders for future delivery. We have a few good high grade cows and heifers for sale for cash or on time.

ISLAND PARK STOCK FARM,
Hanscom & Anderson, Props.,
R. F. D. No. 1, St. Cloud, Minn.

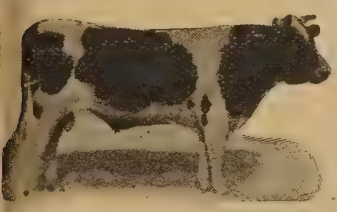
Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

Just About Ready for Service — $500



(Federal Accredited Herd)

is this bull we offer, and individually as good as his sire, Sir Walker Segis Homestead, first prize yearling bull at Chicago and Waterloo, 1919.

His dam just finished 305-day test with over 12,000 lbs. milk and 500 lbs. butter (2 milkings daily) as junior two-year-old and is a show heifer, first prize two-year-old and champion female at Minnesota's largest county fair and Holstein show (175 head).

Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.

Lola Segis Pontiac Homestead



the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

MONEY

s Hard to Get. So Are the Right Kind of Bulls!

We have both. Don't go without the bull you need just because money is tight. LET US HELP YOU. We also have a few females. WRITE FOR OUR BARGAIN LIST AND PAYMENT PLAN. Every milking animal in our herd has an official record. We need the barn room. Take advantage of this opportunity. SATISFACTION GUARANTEED.

GRAHAMHOLM FARMS, Holstein-Friesians
Federally Accredited.
H. R. Searles, Mgr., Rochester, Minn.

For Sale
A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, Maple Lake, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - Minneapolis, Minn.

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell.
Write or come and see them.

E. J. Brosious, - Stillwater, Minn.

Where is the Best Son

of King Segis Pontiac Count? King Segis Pontiac Fayne Star is "The best individual King Segis Pontiac Count ever sired." His dam is Johanna Fayne Star, 32 lbs. in 7 days, 941 in 365 days. She, the highest record daughter of Sir Johanna Fayne. We like this cross. Send for the bull circular.

Flecks Farms, Faribault, Minn.

For Sale — A Son of "Piebe"

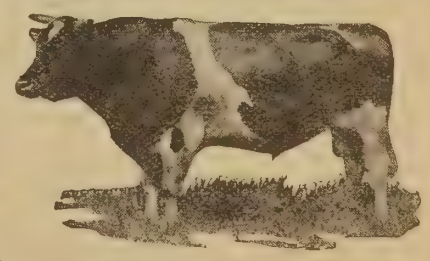
He is King Alice Homestead, a very toppy calf born March 2, 1920.

His dam, Far Oakes Alice Ormbsy, is a 14-lb. daughter of a 25-lb. cow with a 650-lb. 305-day record.

His full sister at just 2 years of age made 18.72 lbs. butter in 7 days and is going at a 750-lb. gait for the year.

His sire is Piebe Laura Ollie Homestead King. YOU KNOW HIM.

Better write or wire today.



He's a bargain at $500 f. o. b. Austin

Minnesota Holstein Co., V. S. Culver, Sec. and Mgr., Austin, Minn.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA

Stuart—McIntyre—Hansen, Owners.

Address correspondence to Axel Hansen, formerly with John B. Irwin.

Results



More Milk
Better Milk
Healthier Cows

That's what you get with

Pillsbury's Dairy Ration

These results have been proved by actual feeding tests on practical dairy farms.

Send for our booklet "Results"

Mail this coupon today.

Pillsbury Flour Mills Company
MINNEAPOLIS, MINNESOTA

Pillsbury Flour Mills Company
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COMMERCIAL FEED DEPT. -H-

Gentlemen:—

I would like to learn more about Pillsbury's Dairy Ration. Please send me your free booklet "Results".

Name_____

Town_____

State_____

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Fort Atkinson, Wisconsin Volume LX, No. 25 January 7, 1921



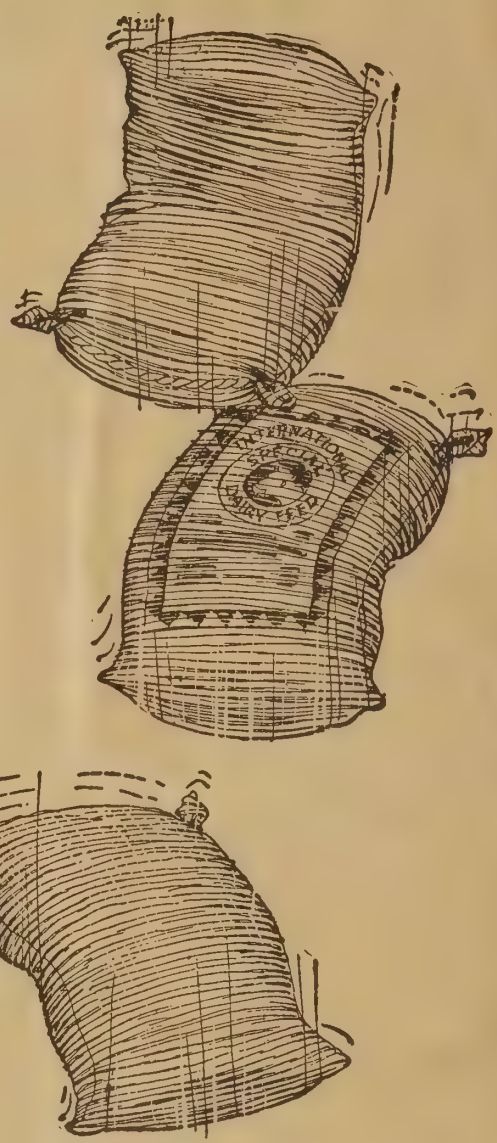
International Feed Prices Are Way Down!

Buy NOW for Continued Feeding Profits

THE things you have to *sell* have taken a decided drop in price. It is therefore fitting that whatever you have to *buy* should come to you at a price that gives you a decent profit.

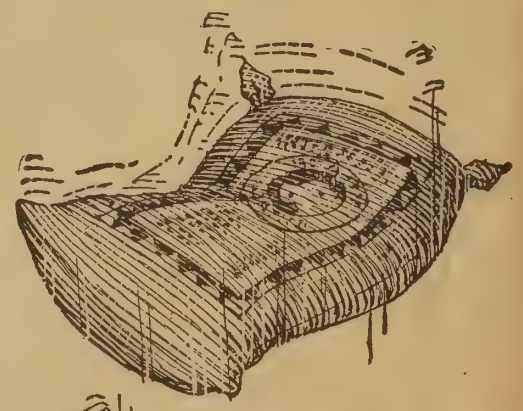
Prices on International Feeds have been lowered way down so that you may still feed these quality feeds at the same old margin of profit.

International Diamond Dairy, Special Dairy and Ready Ration are guaranteed feeds. They are well and favorably known to dairymen and stockmen everywhere. Any experienced feeder will tell you that International Feeds are a practical part of the feeding ration if greatest results are to be secured.



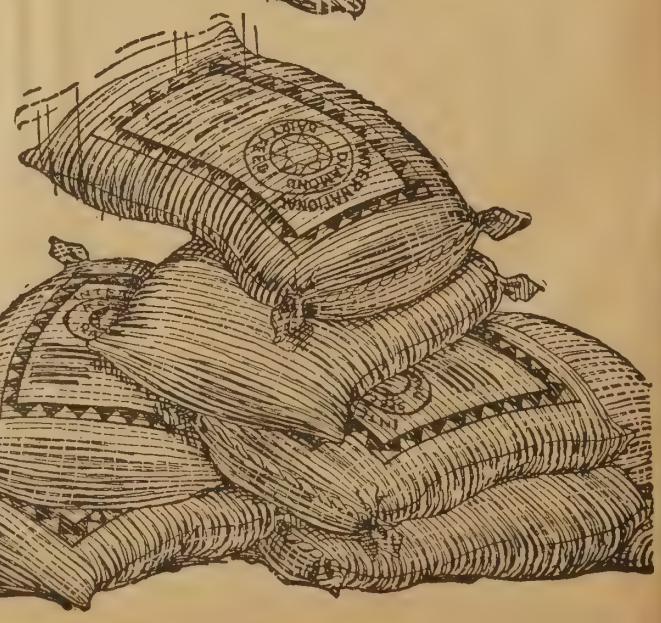
Get the New Low Prices

Ask your feed dealer to give you the new low prices on International Feeds. If you have no International dealer near you write us. We will arrange to supply your needs. *Now* is the time to buy.



Quick Sales for Live Agents

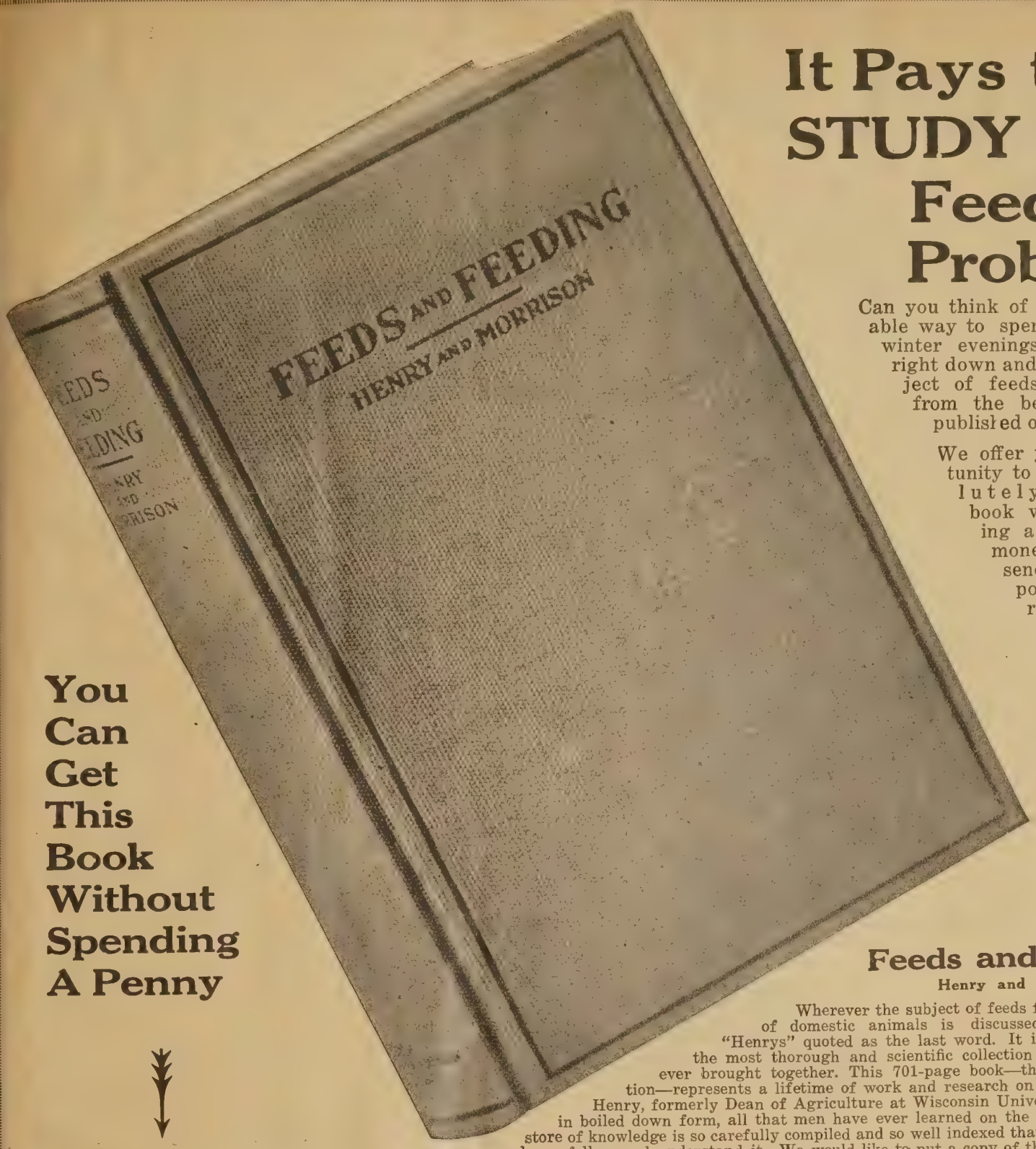
Feeders throughout the country will eagerly stock up on International Feeds at the present low price. Scarcely a community but can use a 25 ton minimum carload. If you are alive to business write us for the details of our special low price selling proposition.



INTERNATIONAL SUGAR FEED CO.

MINNEAPOLIS, MINNESOTA **Mills at Minneapolis and Memphis**





It Pays to STUDY the Feeding Problem

Can you think of a more profitable way to spend these long winter evenings than to get right down and **study** the subject of feeds and feeding from the best book ever published on this subject?

We offer you an opportunity to get this absolutely authoritative book without spending a cent of your money. We will send it to you, postage paid, in return for a favor you can easily confer on us.

You Can Get This Book Without Spending A Penny

See Offer Below

Feeds and Feeding

Henry and Morrison

Wherever the subject of feeds for and the feeding of domestic animals is discussed, you will find "Henrys" quoted as the last word. It is without question the most thorough and scientific collection of facts on feeds ever brought together. This 701-page book—the seventeenth edition—represents a lifetime of work and research on the part of W. A. Henry, formerly Dean of Agriculture at Wisconsin University. It contains, in boiled down form, all that men have ever learned on the subject. This vast store of knowledge is so carefully compiled and so well indexed that any man who can read can follow and understand it. We would like to put a copy of this book into the library of every HOARD'S DAIRYMAN reader. Price $3.85.

Here's the Offer:

WE WILL SEND a copy of this 701-page book, postage prepaid, to any reader who will send us a club of just five subscriptions. They may be either new or renewal and either one-year-for $1.00 or three-years-for-$2.00 each. YOUR OWN RENEWAL MAY BE INCLUDED IN THE CLUB.

USE THIS COUPON—TEAR OFF ALONG THIS LINE.

HOARD'S DAIRYMAN,
Fort Atkinson, Wisconsin.

As per your offer I enclose five subscriptions and remittance of $..... Send HOARD'S DAIRYMAN to the names below, and send me the book "Feeds and Feeding".

Your Name..... Post Office..... State.....

Subscriber's Name	R. D.	Post Office	State	Yearly or Three Yrs.
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They're starting right with a De Laval



There are more than 2,500,000 De Laval Separators in daily use throughout the world

DAIRYING with a De Laval Cream Separator has brought prosperity to many thousands of users. No branch of farming is so surely profitable as good dairying, with its steady cash income every month in the year and no waiting for crops to mature.

But the cream separator means everything in good dairying and either saves or wastes cream.

The De Laval saves cream twice a day, 365 days a year. It skims cleaner; produces smoother, better cream; lasts longer, and is easier to clean. It pays for itself the first year, and may be bought on such liberal terms as to save its first cost while being paid for. There is a size for every need.

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There is a De Laval Agent near you.
Ask him for a De Laval demonstration.

The De Laval Separator Company

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Sooner or later you will use a De Laval Cream Separator or Milker

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX — FORT ATKINSON, WIS., JANUARY 7, 1921 — Number 25

AN EIGHT-LETTER FORMULA FOR SUCCESS

FROM "HIRED MAN" TO FARM OWNER IN SIXTEEN YEARS



SUNKISTON, SENIOR SIRE AT BIRCHWOOD

Thirteen of the dams in the first 4 generations of his pedigree average 582 lbs. fat.

IT'S a long step from farm hand to farm ownership. The majority do not attempt it; many try but fail to span the distance and fall midway into land tenantry; a few courageous ones, giving no heed to what lies between, keep their eyes on the goal and succeed at last in gaining clear title to a farm home. These latter furnish the incentive which makes worthwhile men willing to begin on agriculture's bottom step; their example strengthens ten thousand in their determination to reach the top—to own a farm.

M. L. Welles of Wisconsin is known from his own town to the borders of the Badger State as a successful dairy farmer. He owns a productive, up-to-date farm. His home is thoroughly modern, his barns well equipped, and his herd of Guernseys pure-bred and of high quality. Yet he is one of those who but a few years ago worked by the month as a "hired hand". His success is no happenstance; it has been gained step by step through a certain, definite formula he has never failed to follow. There is nothing complicated about this formula. It is familiar to everyone, but many do not appreciate its close relationship to getting results on a dairy farm. It has only eight letters. None of the eight are in "neglect", only two are in "carelessness", five are in "liberal rations", and as many are in "farm grown feeds".

A Farm Hand in 1904

Sixteen years ago when Mr. Welles was employed by the month by Charles L. Hill, he made good. He gave full service. He didn't spend much time worrying about wages, but put in his time getting results. He was soon made a partner in the farm business, which he held for a year and a half before tackling the breeding of cattle for himself. A farm of 158 acres was purchased without making a payment, it seeming necessary to use his savings as working capital in the form of eight pure-bred Guernseys and a number of grades. That was in 1904. On his own farm, he continued the plan which had made his services valuable to others. When other men stopped their teams and leaned over the line fence to pass the time o' day, Welles worked. When neighbors were yet in bed, Welles was about his morning chores. Night found him reading, planning, that his efforts might be intelligently directed.

A Good Start by 1909

Hill's book, "The Guernsey Breed", records that by 1909, five years after the farm was bought, the herd, then half pure-bred and half grade, was on such a standard that, averaging 39½ cows during the year, its cream sales totalled $4,109.

From the beginning good sires were used, painstaking study determining each choice. The first was Penwyn 2nd, a bull with nine Advanced Register daughters. Sunkiston, the present senior sire, has thirteen dams in the first four generations of his pedigree with records which average 582 lbs. fat. The junior sire, Star of Destiny, is from a dam whose two-year-old production was 503 lbs. fat and whose mature record is 647 lbs. fat. From the first, too, Advanced Register testing was done. Mr. Welles says, "Testing—we must stick to it even if large records are not made. People want to know what they are buying." While consistent breeding records are given first importance, enough effort is put in testing that a double letter record of 649 lbs. fat has been completed. The quality of the herd has long since realized an ambition of the farm to sell a bull calf for $1,000. A sale of four animals for export to Japan through buyers who had seen many herds, testifies to the results of Mr. Welles' efforts in building a herd. At present there are fifty Guernseys on the farm, nearly all of them pure-bred.

In 1912 the owner of Birchwood was nearly enough "out of the woods" that a modern 128 by 36 foot barn was built with stanchions for 48 cows and box stalls for bulls, calves, and freshening cows. Monolithic silos, 14 by 39 feet, store succulence and alfalfa and clover fields supply legumes to fill the spacious mows. This strictly modern equipment evidences the standards which are set on Birchwood Farm. What is done, is done well. The barn is arranged for efficiency so that each minute's effort brings results. It was not enough that long hours should be spent with the herd; Mr. Welles wanted those hours to net accomplishment. Therefore, the new barn. Nor do the returns from this investment come altogether in the elimination of unnecessary steps. The cows are more comfortable and produce more liberally because of the improved care it is now possible to give them.

When the new barn was completed to make the care of the herd easier and furnish comfort to both the cows and their keepers, the homemaker of the farm was not neglected. The farm house at Birchwood has every convenience of any city dwelling and is equipped to lighten the tasks of one who is ever busy on a dairy farm.



OPPORTUNITY OF BIRCHWOOD, A DAUGHTER OF STAR OF DESTINY

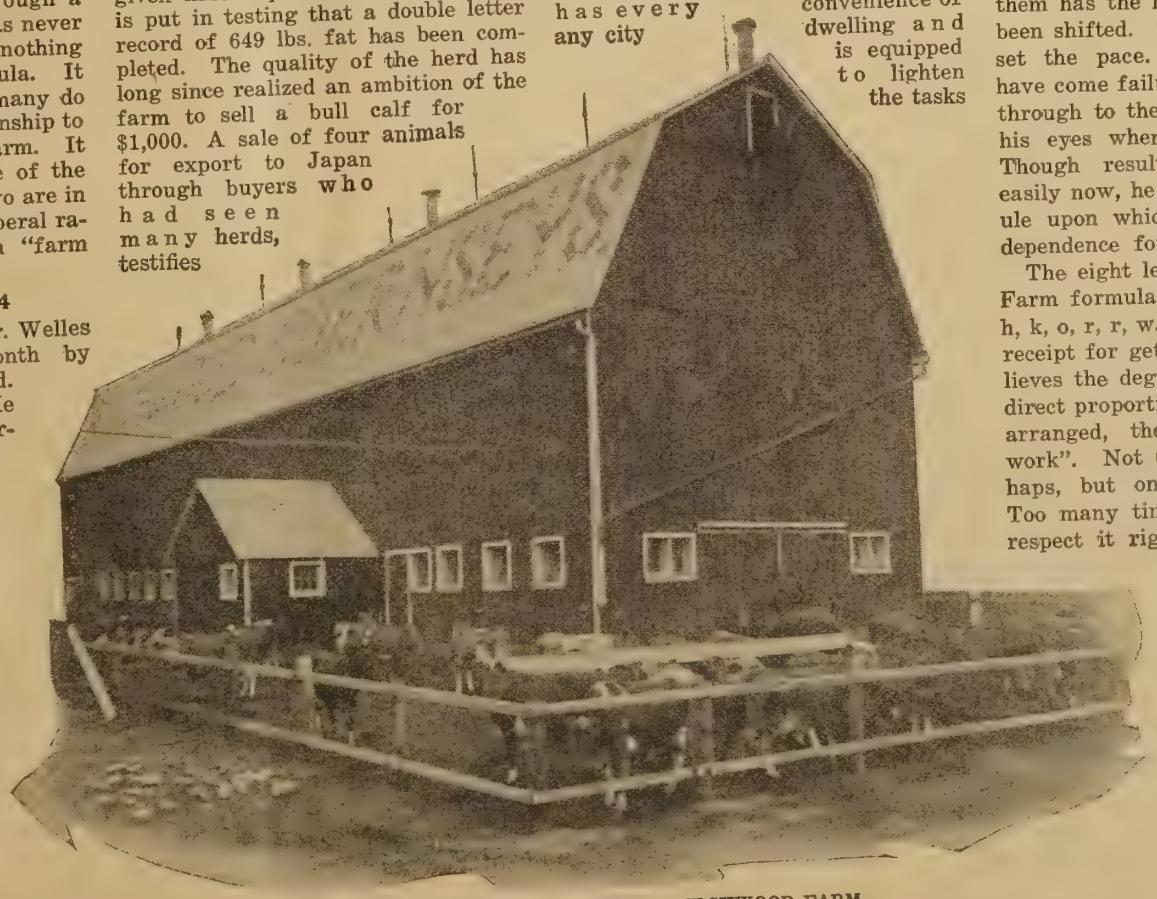
As a two-year-old she milked as much as 42.5 lbs. in a day.

There is a feeling on this farm that success may not be measured in dollars alone—that the years are not well spent unless there is provision for living the full life the country permits. The home is such as to make the strenuous activities of the day worth while. There is comfort there, too, and all those small conveniences which take the drudgery out of the life of the one who has equal share in the success of Birchwood with the master of the big, modern barn.

"Out of the Woods" in 1920

Today the farm, the new barn, and remodelled house, and the herd are paid for. In the sixteen years this has taken, Mr. Welles has been constantly on the job. He has been chore-boy, herdsman, and manager. The farm's two tenant houses have sheltered many helpers, but to none of them has the heavy end of the loads been shifted. The owner himself has set the pace. With the successes have come failures, yet he has fought through to the goal on which he set his eyes when yet a "hired man". Though results are secured more easily now, he still follows the schedule upon which he early placed his dependence for success.

The eight letters of the Birchwood Farm formula for success are: a, d, h, k, o, r, r, w. They are Mr. Welles' receipt for getting results and he believes the degree of attainment is in direct proportion to its use. Properly arranged, the letters spell "Hard work". Not a beautiful motto, perhaps, but one for accomplishment. Too many times it is not given the respect it rightfully claims, for the richest rewards of man come through his labors. Mr. Welles has made a pleasure of the stern demands of dairy farming. His is the satisfaction which comes to him alone who has made his own way unaided—from the bottom to the top.



THE BARN AND GUERNSEY HERD ON BIRCHWOOD FARM

FIRST COUNTY TUBERCULOSIS-FREE

Barron County, Wisconsin, Completes Area Test, Finding One-half of One Per Cent of Its 67,000 Cattle Diseased

DECEMBER 29, Barron County, Wisconsin, celebrated the first county-wide tuberculosis clean-up ever made. The work was completed December 23 when the last of 5,000 herds were tested. In a total of 67,000 animals, the number of reactors averaged slightly over one-half of one per cent—one in about two hundred.

This first all-county test was put on by the Wisconsin Department of Agriculture following the filing of a petition signed by over 50 per cent of the cattle owners of Barron County. The work, begun last spring, has been done by an average of six men and sets a new record for speed and efficiency in testing large number of cattle. It was conducted without direct expense to the farmers themselves and at a total cost to the state of about 35 cents for each animal tested. The per cent of diseased animals discovered is the lowest ever found in such an area and brings forth the declaration by Dr. J. P. West, in charge, that Barron County has less bovine tuberculosis than any other area its size in the United States.

"Tail Test" Used

The intradermal test made possible the quickness and cheapness of the Barron County clean-up. This consists simply in the injection of 4 or 5 drops of tuberculin between the two layers of the skin and observing whether or not a swelling results. The injection is usually made in the soft skin on the under side of the tail. Seventy-two to ninety-six hours afterward, examination is made. If a swelling is observed, the animal is adjudged diseased. The great advantage of this test is the rapidity it permits, one man being able to take care of four or five times as many animals in a given period as by the usual subcutaneous method in which reactions are detected by rising temperatures. As proved in Barron County one man can give the intradermal test to as many as 700 animals in a week. The maximum number with the subcutaneous test under like conditions would be 145 to 180 animals. In November six men tested a total of 9,707 cattle in 641 herds.

Every Check Made on Test

The low percentage of reactors found so amazed the men in charge that every possible check was made on the efficiency of the method used. Slaughter examination of reactors showed lesions in a satisfying percentage of cases. Some of the first herds tested have been injected again and serve as a check. The subcutaneous and ophthalmic or eye test methods were used in a number of cases as checks and only served to verify the findings by the "tail test". It is noteworthy, also, that in another Wisconsin county where 45,000 animals were examined for tuberculosis intradermally, the average number of reactors was 6.38 per cent.

Both Dr. J. P. West and Commissioner of Agriculture C. P. Norgord are convinced that a reaction to the intradermal injection in experienced hands is fully as indicative of the presence of the disease as any other test or any other combination of tests. It is strongly emphasized, however, that only experienced men can accurately "read the test"—and that the temperature curve of the subcutaneous method is more easily interpreted.

The Test of the Farmer

Barron County has an unquestioned lead in tuberculosis eradication. Her herds are as clean as one complete test can make them. No other such area now has proof that its cattle have as little of the disease. But the job is really only half done. The meeting held December 29 had the double purpose of celebrating what W. L. Hauser, President of the Wisconsin Live Stock Breeders' Association, termed a "singular and exceptional progressive movement" and also of laying plans for keeping the area clean. Herein lies the test of the farmer himself—whether he will maintain the great advantage this county-wide test has given him and see that the disease is kept out of his herd in the future. Commissioner Norgord drew the attention of Barron County farmers to the benefits from accredited herds and the fact that this county-wide test has carried them half way to the accredited list. He said: "I congratulate you on the progress already made and recommend that you cinch that progress by going ahead now and making your herds accredited." He pointed out the obligation of Barron County to the state to maintain the condition made possible by the use of the $18,000 state appropriation. Dr. West presented the regulations adopted by the Live Stock Sanitary Board for controlling transfers of cattle within the county and the introduction of new cattle into the county. The meeting approved these regulations, accepting them as laws to be enforced.

These provide that transfers and introductions of cattle must be reported within 48 hours. Cattle from accredited herds can be received without testing if proper certificate is furnished. Other cattle must be accompanied by a certificate of health issued by a recognized veterinarian and must be retested within ninety days. Calves purchased below testing age must be isolated until tested. Only animals which have passed the test within a year can be transferred within the county. An amendment offered by Mr. Hauser was unanimously approved. It provides that in cases where infection is found or strongly suspected in animals within the area the entire herd shall be retested to do away with the chance that the disease may gain headway in a herd which may not be tested at regular times.



BARRON COUNTY HOLSTEINS

Now Up to Barron County

While these regulations have the effect of laws and can therefore be enforced it is recognized that enforcement rests on the farmers of Barron County. A united public sentiment will keep the county clean by forcing each man to protect himself and his neighbors by keeping his own herd free from tuberculosis. The state has done its part; it is now up to the farmers of Barron County. The present general feeling of enthusiasm was indicated at the celebration meeting in the resolution passed expressing appreciation of the labors of R. L. Cuff, former county agent, who was largely responsible for securing the county-wide test, and pledging help to W. A. Duffy, present county agent, to "carry on the good work of keeping the county tuberculosis-free."

A Lesson for Buyers

A valuable lesson may be drawn from a study of the probable source of the disease among the reactors discovered. While the number of infected animals is extremely low, due probably to the fact that the cattle population of the county is relatively new and largely native, the reactors which were discovered were chiefly animals shipped in and those which were in close contact with them.

Demand for Other County Tests

Farmers owning nearly a quarter of a million cattle in other counties have signed petitions asking that the Department of Agriculture undertake further clean-up campaigns. Work is now under way in Lincoln County, where 424 herds containing 4,279 animals were tested in October and November. Out of this number slightly less than one-half of one per cent of reactors has been found. Bayfield and Ashland Counties have petitions in, with over fifty per cent of their cattle owners signed, and Burnett, Washington, Polk, and St. Croix have petitions in circulation. An appropriation of $75,000 is sought for the coming year by the Department of Agriculture for a continuance of this area test work.



REPRESENTATIVE GUERNSEYS IN THE FIRST COUNTY TO COMPLETE A COUNTY-WIDE TEST FOR TUBERCULOSIS

Buying a Proven Sire

HOARD'S DAIRYMAN:—The tendency now is to buy calves for our herd sires. I do not know why this is except we are afraid of old bulls. I have noticed lately quite a few buyers looking for the proven sires. I was on one farm where there were two bulls which had been bought when they were seven years of age and by a very prominent breeder, also.

Now, if our most prominent breeders see it this way, why not give it some thought? Consider a sire of about five years of age, clean and right, who has daughters which have proven their producing ability in A. R. work. Why is he not a better buy than a youngster who has not started to breed yet? Of course he is, and he can be bought probably cheaper than the youngster. The way to buy a bull is to see his dam and grandam, if possible, or buy a proven sire when you can see his daughters and know what you are buying. Proven sires can be had that will save you money. Look them up.

Washington. F. S. STIMSON.

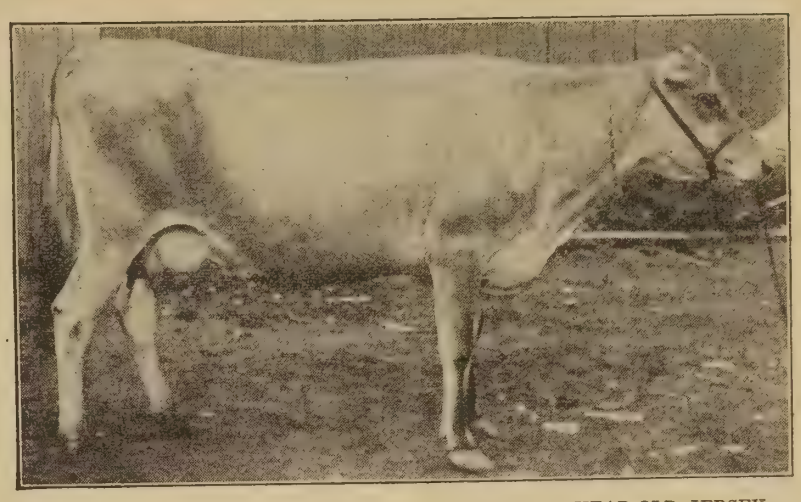
The farmer who has kept careful records knows at the end of the year how his business has gone; the man who hasn't kept records merely guesses.

HIGH PRODUCERS FROM SIX STATES



EMINENT'S FOXY BELLE, GOLD MEDAL JERSEY COW OWNED BY WAIKIKI FARM, WASHINGTON

She stands third among three-year-olds with a production of 14,920 lbs. milk, 816 lbs. fat. She is a daughter of Eminent's Pilot, the tenth Gold Medal bull, the sire of 14 R. of M. daughters, three of which are Gold Medal winners.



BLUE BELLE'S SOPHIE, CHAMPION SENIOR THREE-YEAR-OLD JERSEY OF TENNESSEE, OWNED BY C. S. BLANKENSHIP

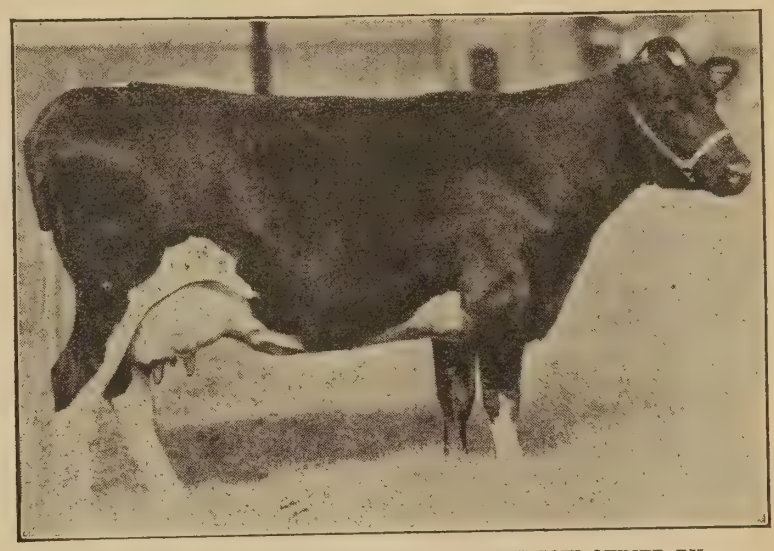
Her year's production was 8,075 lbs. milk, 471.53 lbs. fat, exceeding that of the former champion by 67 lbs. fat. During the period of the test she was shown, winning grand championship at the Rutherford County Fair.



MARSHIE D. V., CHAMPION FOUR-AND-A-HALF-YEAR-OLD GUERNSEY

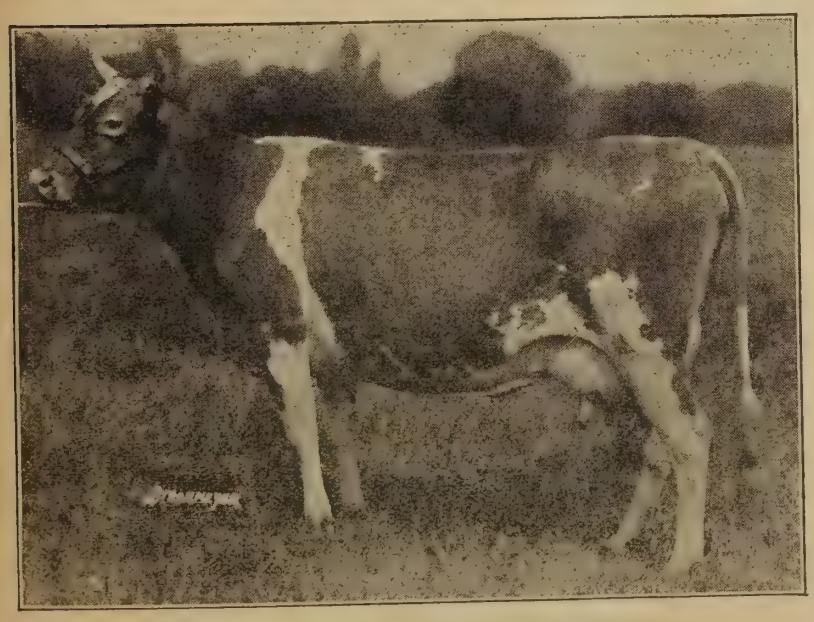
Marshie D. V., Guernsey cow bred and owned by William H. Rutherford, New York, now heads the list of four-and-one-half-year-old Guernseys with a record of 14,729.9 pounds of milk, 915.05 pounds butterfat. Her fat record is 4.38 lbs. above that of the former champion, Dairymaid of Pinehurst, the first to head class B.

As a three-year-old the new record holder produced 12,038.7 lbs. milk, 691.61 lbs. fat and held tenth place in class E. Her sire is May King of Maplehurst, a grandson of Imp. King of the May.



BESSIE LYONS HENGERVELD 2D, HOLSTEIN COW OWNED BY J. H. KETTLE OF TEXAS

In seven days she has produced 590.3 lbs. milk containing 22.33 lbs. fat. She gave 2,196 lbs. milk testing 3.7 per cent her first month. At present she is producing about 85 lbs. per day. The Kettle herd is as yet very small but a good beginning with high class individuals is already made. At least one other good short-time record has been completed.



PRINCESS ULTRA GRACE, A GUERNSEY COW OWNED BY W. H. GRATWICK, NEW YORK

She has qualified for eighth place in class E by producing 14,340.9 pounds milk, 713.41 pounds fat, in the three-year-old division. The new class leader was bred by Burnside Farm, Maryland, and purchased by Mr. Gratwick from George M. White, New York. She is a daughter of Ne Plus Ultra and out of King's Grace, an A. R. daughter of King Francis.



LADY DU CHENE, A GUERNSEY COW BRED, OWNED, AND DEVELOPED BY R. H. L. CHICHESTER, VIRGINIA

She has qualified for third place in class BB of the Advanced Register by completing a record of 13,712.0 pounds milk, 670.8 pounds fat, in the four-and-one-half-year-old division. This makes the fifth daughter of King of Chilmark to qualify for class leadership. She has a previous record of 12,768 pounds of milk, 640.98 pounds of butterfat, completed in the three-year-old division.

POT LUCK OR SILOS

JAS. COLLEY, ILLINOIS

THE use of sunflower fodder has been taken up earnestly in the Prairie Provinces of Canada. In no other country, it is safe to say, has this crop been grown over so wide an area and under such varying conditions. It has been grown on farms that are only just across the international boundary line, and on farms nearly four hundred miles north of this line; on the low lying plains surrounding the Red River Valley in Manitoba and at an altitude of 3,600 feet in the foothills of the Rockies. At all these scattered points, results surprisingly good to the growers have been harvested—results which promise to revolutionize the dairy industry and live stock business of the country.

As is to be expected in a matter of this kind, the experimental and demonstration farms of the country, whether operated by the Dominion, or the various Provincial Governments, or by such concerns as the Canadian Pacific Railway, have been to the fore. They are giving the crop a thorough trial on fair-sized areas, varying from five to forty acres. On many of these farms sunflowers have been planted this year for the first time, but on others this is the third or fourth year in which they have been grown. Hundreds of farmers in different parts of the three provinces have also planted ten to twenty acres each this year. They have all harvested good crops and all speak enthusiastically about the heavy yields of this new fodder.

The demonstration farms have, of course, kept more accurate records of their experiments than the average farmer could be expected to keep Advice from six of these farms in various parts of the provinces of Manitoba, Saskatchewan and Alberta shows that on each, from five to forty acres have been devoted to this crop and that the yields have varied from six and a half to nearly forty tons of ensilage to the acre. On the University Farm at Saskatoon, in Central Saskatchewan, they have grown sunflowers in each of the last four seasons, obtaining yields from eight to twelve tons to the acre. This year they planted forty acres to this crop and harvested about three hundred and twenty tons of fodder. It was exceedingly dry in this part of the Province during the summer, but the sunflowers stood up very well and gave, under the circumstances, a very satisfactory yield.

On the farm of the University of Alberta at Edmonton, which is more than three hundred miles north of the international boundary line, two fields were planted, one of which was cut about the end of August and yielded twelve tons of fodder; the other, cut about a week later yielding twenty tons to the acre. On the Dominion Government experimental farm at Rosthern, near which town Seager Wheeler, the famous wheat wizard, also has his farm, five acres yielded forty tons of fodder. Approximately the same yield was obtained at Scott, which lies a little farther to the South, while at Indian Head, situated on the main line of the Canadian Pacific Railway and about a hundred miles north of the boundary line, somewhat better yields were obtained during two years of trial.

Sunflowers have been an exceedingly good crop at the Manitoba Agricultural College at Winnipeg, the yield being from thirty to forty tons to the acre during each of the two years they have been planted there. These yields are similar to those obtained on the Canadian Pacific Railway's Supply Farm at Strathmore in Southern Alberta. Here, from between twenty and forty acres planted in each of the two last years, yields of about thirty-four tons to the acre were harvested last year and about twenty-eight tons this year.

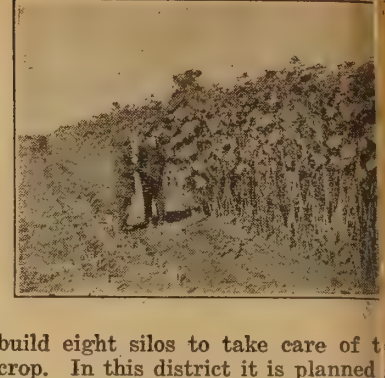
So much for the yields on the experimental farms. Even the smallest of them represent a good paying crop. The larger yields indicate very profitable returns. But, on the whole, farmers generally seem to have better luck than the experimental stations. Yields of from fifteen to twenty tons have been common with them.

As to the feeding value of the sunflowers it is again necessary to rely on the records of the experimental stations. Three years' trial at the Saskatchewan University farm has shown that sunflower silage compares favorably with corn silage, having at least an equal feeding value. At the Manitoba Agricultural College extensive feeding tests were made last winter by feeding dairy cows with sunflowers, corn, and other ensilage. It was found that the milk flow of these cows was slightly heavier after being fed on sunflower silage than any other ensilage. The increase did not amount to much, but it was there just the same. Moreover, during the sunflower feeding period the cows gained more weight than they did at any other period. Professor G. H. Hutton, on the Canadian Pacific Railway Farm at Strathmore, says that he had a similar experience with the cows of the pure-bred Holstein herd maintained there. Their milk flow slightly increased, and the cows gained slightly more weight when given sunflower ensilage than when fed on ensilage made from corn or on peas and oats.

Up to the present there has not been much experience recorded in Western Canada of the feeding of beef steers with sunflowers. At the Government Farm at Scott in Saskatchewan, however, they used their ensilage in this manner last year. A number of feeders were bought at one of the public stock yards and some were given an addition of twenty pounds of sun flower ensilage to a ration consisting of wheat straw, five pounds of turnips, and a meal mixture consisting of one part of each of oats and standard screenings. The sunflower fed steers made an average gain of 42 pounds each daily, more than the other steers, and the sunflower ensilage was determined to be worth $13.82 per ton.

The experience with sunflowers previous to this season has nearly all been gained on the demonstration farms, but so satisfactory did the farmers consider these results to be that this year areas of from ten to twenty acres were planted on numberless farms throughout the country. Many planted the crop just to see how it would grow and about the middle of the season they were faced with the prospect of a large quantity of valuable fodder on their hands and no means of utilizing it. This necessitated their getting busy and building silos. Many others, of course, made arrangements for the building of their silos simultaneously with the planting of the crop. As a result, this large country, over which one could previously travel for days and never see a silo, is becoming dotted with these towerlike structures, and it may not be long before a farm in Western Canada without a silo will be almost as much of a curiosity as a farm with a silo has been in this country.

In one dairy section in Southern Alberta a number of farmers planted about fifty acres of sunflowers between them last spring and had to



build eight silos to take care of t crop. In this district it is planned plant more than a thousand acres the crop, and build at least a hundr silos next year. In other dairy s tions of the country similar resul have been obtained and similar pla made for the coming season. Nor this movement confined to dai farmers. The owner of one of the lar est Hereford herds on the continer whose ranch is in the foothills of t Rockies, is now feeding his nurse co on sunflower silage, having erect two silos of one hundred and fif tons capacity each, which he has fill with sunflowers grown on twen acres of land. Next year he w more than double his acreage of th crop and will erect two or three silo and intends to use the silage t following winter for feeding some his pure-bred cattle. And at least o sheep breeder is going to supplemer the winter rations of his flock wit this silage, which he has put up in tw cement silos of about two hundre tons capacity each.

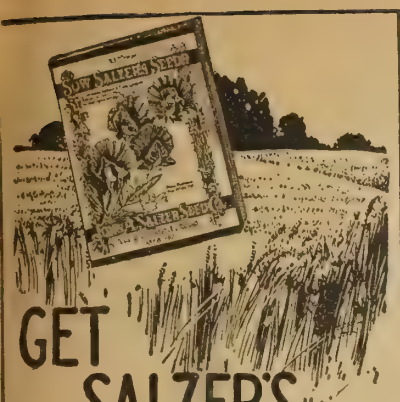
Sunflower silage promises to solv the question of winter feed in Wes ern Canada. The success or failur of all branches of the live stock in dustry hinges upon this questio With large areas of unoccupied lan available, on which large quantitie of hay could be cut for nothing bu the cost of cutting and on which cattl could rustle all the year round with out expense to their owner, the winte feed question did not bother the farm er and rancher very much in the past but with the steadily increasin settlement of the country, resultin in the land being fenced and culti vated for the production of grain an other crops, the question promises t become more acute every year. Bu if results as good as those already ex perienced can be looke forward to in the fu ture, sunflowers and si los will insure a larg supply of fodder ever winter, and stock wil not have to trust to th pot luck of the range It means a steady ad vance of Western Cana da's already importan live stock and dairy in dustry.



TEN ACRES OF SUNFLOWERS ON FARM OF THOMAS & SON, LLOYDMINSTER

"Shelter will doubl the life of farm ma chinery," says O. R Zeasman of the Agri cultural Engineerin Department of the Uni versity of Wisconsin "If farmers would onl keep the rain and rus away from their imple ments, they would b surprised to see hov much trouble would b saved.

"Rust can cause many troubles. For ex ample, an adjustmen may become so badl rusted that it cannot b used. It is often dam aged or broken in loos ening."



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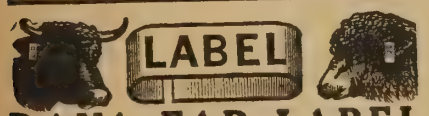
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Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

New York Breeders Meet

HOARD'S DAIRYMAN: — The New York State Breeders' Association opened with a statement by President Huson that there never was so favorable a time for the farmer to dispose of scrubs in all lines of live stock and put in their places a proportion of pure-breds. The prospect for pure-bred animal husbandry is now the best we have ever known.

A new sheep specialist, Professor Grams, has been engaged at the college. He spoke at the convention, mentioning the fact that since 1840 we have decreased the number of sheep in New York State from over five million, to a little over a half million. The cheaper lands of the west, first just West of the Alleghanies, then further west, took the sheep industry away from us. Now those lands have pretty well closed up and some increase in flocks is due in New York. Here it is likely to take the form of small flocks of 40 to 50 sheep on farms where some roughage would otherwise go to waste. He stressed the importance of keeping better sheep and taking better care, particularly during the first six months of their lives. The next important item according to our specialist is the better grading of the wool and better form of bundle when marketing.

E. L. Moody, president of the state federation of wool growers, spoke of the 34 county units that have entered the federation for the purpose of a state pool of the wool, much of which is already in storage in Syracuse. He also sees the importance of efficiency in grading.

The head of the veterinary college, Dr. Moore, perhaps our best authority on bovine tuberculosis, said he had spent years to get people to believe in tuberculin as a diagnostic agent. Now it will take him the remainder of his life to caution against its indiscriminate usage. Not all veterinarians are adapted to making proper conclusions from appearances following its use. The accredited herd plan is sound, but proper supervision is essential.

Mr. McLaury, head of the division of animal husbandry, is fully committed to the accredited herd plan. We have no more tuberculosis than other states but we have a bad reputation. To market our stock in the future we will have to make sure of freedom from tuberculosis. Our markets are mostly out of the state. Area work is now in order, and the farm bureau managers have agreed to work for the employment of county veterinarians.

At the state college we have as vice director of extension, Professor Burrett, who gave a very enthusiastic account of the farm bureaus. He called the farm bureau not just another "organization" but a really new service organization. It is a partnership affair of the federal government, the state, and county and the individual farmer. It is in charge of trained agents and it has a definite program. It is primarily educational, not commercial. Even the American Farm Bureau Federation is not a direct commercial agency, but to give service in formation of co-operatives and in investigation of economic problems.

The commissioner of foods and markets, Dr. Porter, gave a very sound address. What we want, he said, is a steady flow of commodities, and that means storage. We require better farming, better business, and better living. The first of these we already have to a considerable degree, although there is always a chance to improve in all lines. The second, so far as we are concerned, comes from co-operation, and the third will result from the others. In co-operation there must be a contract that binds

(Continued on page 1097)

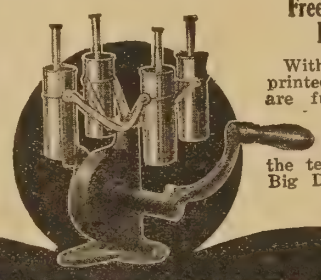
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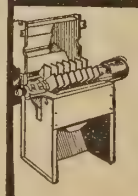


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Dairying Thirty Years Ago

Taken from the Issue of Hoard's Dairyman of January 2, 1891

There seems to be a "Call" to write among the literary dairymen of late. Result—we have more communications than we can handle this week. They will keep.

⚜

The 19th annual report of the New Hampshire State Board of Agriculture says there are 39 creameries in that little state, 17 of them having been added during the past year. They produced 2,250,000 pounds of butter and paid for milk and cream, $500,000. The Granite State Dairymen's Association, encouraged by a small appropriation, has been enabled to promote the dairy interests of the state effectively. Oleo has a hard time there, for it cannot be sold even under the United States License unless it is colored pink—and pink is nice in a posy but is not yet a fashionable tint for butter.

⚜

"There is nothing so valuable on the farm as a good milker, and probably nothing so rare," says E. P. Smith. "It is profitable to keep a good milker, but it is an annual loss to keep a poor one. This applies to the one or two cows found on all small farms, as well as to the flocks that the large dairy farms own. A good milker depends largely upon breed, but not exclusively on this. Individuality is also an important factor. One cow of a good breed will often give a much larger supply of milk than another one, although her surroundings and nourishing food is not any different from the rest of the herd. The breed and individuality of a cow thus really determine the amount of milk that she will produce. A good cow is one that will make the most of the food given to her. She will assimilate the food properly and convert a good proportion of it into milk and butter properties. Others of the same breed will convert it into fat or bone. Those cows evidently are not intended for the dairy and it would be unprofitable to keep them on a farm. No matter how much feed nor how well the ratio of nourishing and butter producing feed is maintained, the milk supply will not increase in sufficient proportion to the quantity and quality of feed given to make the high feeding experiment a success. The rule, then, may be laid down that while feed rich in butter making materials given to poor cows is a very unprofitable business, it is equally unprofitable to keep good dairy cows and not supply them with an abundance of material from which to produce milk."

⚜

Buttermilk is in much greater demand as a summer beverage than sweet milk. As a therapeutic agent it is given now to sick person when nothing else is a lowed. It is a powerful nerve toni Buttermilk is now considered bette than sweet milk for persons incline to dyspepsia because one of the diffi culties of milk—its slow digestiv qualities—is removed at once as but termilk has already gone through on process of digestion. Iced buttermill is a fashionable fad now. Ladies of fer a glass of buttermilk to thei friends in summer just as they do th "cup of tea" in the winter.—Field ani Farm.

⚜

Professor Hunter Nicholson praises the "cup of pure cream at breakfast every day" as a delicious prescription for weak digestion or delicate lungs; and deems it possible on this basis, and with business enterprise, especially among the owners of Jersey cows, to increase the cream-trade a hundredfold in all cities and large towns.

Dairy Markets

Elgin, Ill., Dec. 29—Butter steady; 28c. Sales large.

New York, Dec. 28—Butter—The usual dullness incident to the holiday season has been the conspicuous feature of the week's trade. Receipts of Pennsylvania creamery are light and prices are fairly sustained on the basis of 29@29½c for extras. Western receipts are still running very irregular in quality. For heavy bodied, high flavored Iowa, Wisconsin, etc., 29c. Elgin goods at 30c. State dairy has shown no change worthy of mention. The few sales extras were at 22c.

Cheese—The business with home trade has been light and entirely of a jobbing character. Recent sales are reported in the northern part of the state at 8¼@9c. Some really fine parcels can be had at 9¼c and prime factories at 9@9¼c. Chenango Co. part skims are held a shade firmer; sales of choice lots to home trade at 6½@7c.



CARNATION PIONEER SEGIS

THE Holstein-Friesian heifer, Carnation Pioneer Segis, owned by the Manikowske Farms, North Dakota, has broken the world's record for fat production in the junior two-year-old class of the seven-day division, producing in seven consecutive days 415.6 lbs. milk, 24.877 lbs. fat. She displaces as world champion two-year-old the Canadian heifer, Het-Loo Pietertje, whose production for seven days was 24.260 lbs. fat and the American champion, Fairview Korndyke Pietertje, whose production for seven days is credited as 24.146 lbs. fat.

This world record heifer is sired by Johanna McKinley Segis, a son of King Segis and Johann DeKol Van Beers, the second cow in the world to produce in excess of 32 lbs. fat in seven days. Her dam is a 30-lb. daughter of Sir Clyde, the sire of a number of high record cows.

Carnation Pioneer Segis was fitted for her record and fed and milked throughout her record breaking test by P. J. Schmit, herd manager at Manikowske Farms and who has developed many other high record cows.

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Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Cheese Markets Inactive

[Report by U. S. Bureau of Markets.]

Reports from all quarters indicate that trading during the week ending Dec. 18 was almost at a standstill. Aside from supplying regular trade, and this mostly in small lots, comparatively small amounts of goods changed hands. Even dealers who are hard pressed financially found little response when prices were lowered practically to cost. In fact, some reported receiving but few orders at prices quoted which represented actual losses to them.

The distributing trade is apparently well stocked, and many who would ordinarily be buyers at present prices are not interested because they are trying to move their own holdings of higher cost goods. However, unless business improves and support is given the market from some source it would not be surprising to see prices go still lower, as some pressure to sell is being felt.

Storage Reductions During November

The monthly cold storage report shows that holdings of American type cheese in the entire country on Dec. 1 were 40,096,106 lbs. This is some 22,000,000 lbs. less than the stocks of Dec. 1, 1919, although about 15,000,000 lbs. more than those of Dec. 1, 1918. The November, 1920, reduction was 8,500,000 lbs., and while this was about 1,500,000 lbs. less than the decrease during November, 1919, when holdings were excessive, it more than equals the change during November, 1918. There is no apparent concern regarding present stocks.

The average wholesale prices on American cheese (style Twins) for the week ending December 18, 1920, and for the corresponding week last year were as follows:

	Week ending Dec. 31	
	1920	1919
	Cents	Cents
New York	27.50	31.50
Chicago	22.63	30.32
Boston	24.50	31.50
San Francisco	25.29	30.31
Wisconsin Boards	21.25	30.21

The receipts of American cheese for the week at the four markets first mentioned and at Philadelphia totaled 2,770,336 lbs. as compared with 2,452,338 lbs. a year ago and 2,557,052 lbs. last week.

New York Jersey Breeders Endorse Pooling System

New York Jersey breeders at a meeting December 16 unanimously adopted the following:

"*Resolved* that the New York State Jersey Cattle Club in annual session at Syracuse hereby heartily endorses the co-operative plan and so-called pooling system now being organized by the Dairymen's League."

The following were elected officers of the club for the ensuing year: Harry S. Gail, president; R. L. Bielby, vice-president; and M. A. Clark, secretary-treasurer.

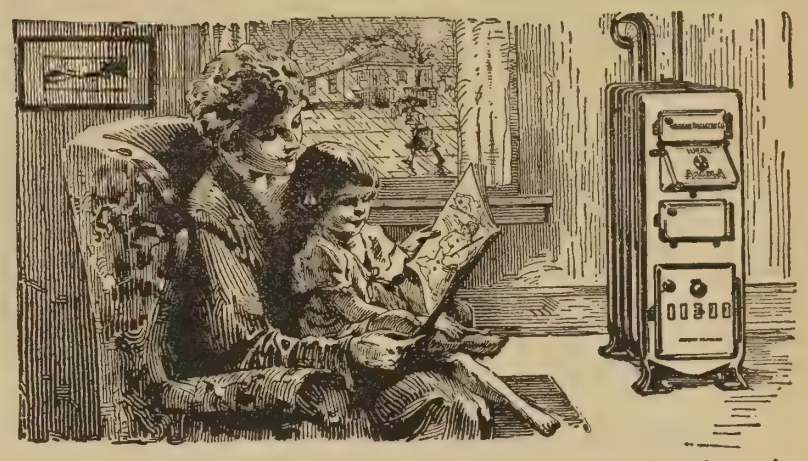
New York. C. O. GOULD.

Pierce County, Wisconsin, Guernsey Sale

A county wide Guernsey campaign has been brought to a successful finish in Pierce County, Wisconsin. In a sale, 33 head brought an average of $420; 18 of the animals being under one year of age. These Guernseys were purchased in New York State and brought to Pierce County for distribution through public auction.

Albert Kline bought the highest priced animal in the sale, Kathergay Crocus, for $1,200. The second highest animal was Kathergay Polyanthus, purchased by John Gipford for $720.

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	" 3-B	" " " " 200 " " "	213
	" 4-B	" " " " 250 " " "	251
	" 5-B	" " " " 300 " " "	290
For Hard Coal	No. 1-A	Size IDEAL-Arcola with 135 sq. ft. of Radiation	$163
	" 2-A	" " " " 200 " " "	206
	" 3-A	" " " " 265 " " "	251
	" 4-A	" " " " 330 " " "	299
	" 5-A	" " " " 400 " " "	349

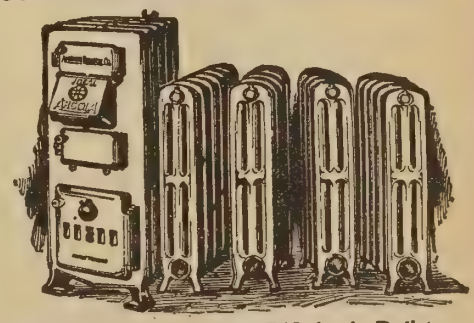
Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

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102 SWEENEY BLDG. KANSAS CITY, MO

EDITORIAL COMMENT



SKIMMILK FOR CALVES

A farmer who feeds whole milk to a calf after it is a few weeks old does not fully understand the value of skimmilk. A calf should have whole milk till three to six weeks old, but after that skimmilk is quite as good. It is very expensive to feed calves butterfat at 57 cents a pound.

We appreciate that there are breeders who hold that whole milk should be fed to calves until they are eight to ten months old. They feel that it develops a better calf. There is no question but that for the first 3 to 5 months the whole milk calf will have a little plumper appearance and its coat will be a little sleeker than the skimmilk calf, but at the end of eight months if the skimmilk calf is otherwise properly fed it will have a smooth, glossy coat of hair, will be well developed, and will change, from the feeding of skimmilk to roughage and grain entirely, better than the whole milk calf. The skimmilk calf will be fully as large if not larger than the whole milk calf. This has been the experience of many successful breeders of pure-bred live stock. One thing is sure, there is not enough difference between skimmilk and whole milk to warrant any dairyman, desiring a profit, to feed butterfat to his calves when it is worth 57 cents a pound. Such men should buy a hand separator for the purpose of separating their whole milk and feed the skimmilk while it is warm and fresh to their calves, chickens, and pigs. Skimmilk, according to the price of hogs, is worth at the present time 50 cents a hundred. Chickens will return more than this and for grade or pure-bred calves it has a value of from 50 cents to $1.00 per hundred.

BETTER CREAM

At the 11th annual convention of the Oregon Butter and Cheesemakers' Association, held recently in Portland, the importance of producing a high quality butter was emphasized. Much discussion was devoted as to how to make good butter from rather inferior cream. Neutralization and pasteurization were discussed by those well informed upon this process of making butter. It was emphasized that it is the best policy for farmers to send sweet cream if they wish their product to command the highest price on the market, that by using fresh cream it will not be necessary to resort to chemicals. It was pointed out that sometimes old cream is not sour but has a very bad taste and odor and its flavor will not permit the production of good butter.

There is no subject of greater importance to the dairy industry today than quality and we believe creamery buttermakers' associations and other dairy organizations can well afford to point out the evil effects of poor cream and how essential it is that sweet cream be delivered if the highest quality of butter is to be produced. The difference in price between the finest grade of butter and what is termed "first" and "second" is sufficiently large at the present time to warrant any dairy or creamery to put forth some effort to produce butter that will command the highest market price.

The creameries we believe should grade cream and pay according to its quality. Paying a uniform price for all grades of cream is an evil practice and is not encouraging the production of a better quality of cream. One of the largest creameries in the United States will not accept poor cream and its success is very marked. Its butter has sold for ten cents a pound more than some brands of creamery butter. Its success leads us to believe that cream grading can be and ought to be done.

HAIRLESS PIGS AND GOITERS

It is not uncommon for farm animals in the northwestern states to be born defective in some way or other. Pigs are born without hair, and calves, goats, and lambs with goiters. The Montana Agricultural Experiment Station, under the direction of Dr. Howard Welch, has done considerable experimenting to determine what causes these defects in new born animals, but so far it has not been determined just what the cause might be that produces these unsatisfactory results.

We surmise that the cause of defective animals may be attributed to a faulty or imperfect ration, some substance lacking in the feeds, but, as Dr. Howard Welch says, "The most puzzling feature is the variation in a single pen of pregnant sows. Some of the sows may produce normal, vigorous litters while others will be hairless or weak and die in a few hours."

It has been observed in herds where most of the calves are born normal that some of them are born with goiters. This peculiar malady is confined to certain areas although there are times when normal animals are produced in these areas.

So far experimental feeding has not revealed a ration that has prevented the occurrence of defective new born animals. The time will undoubtedly come when rations will be made that will produce normal animals in all instances. It has been found, however, that by the feeding of potassium iodine to the dam during the period of gestation that normal animals will be produced. A cow should be fed about 2 grains of potassium iodine daily in her ration during her period of gestation. Sheep and swine should be fed about 1 grain of potassium iodine daily. Dr. Welch, in his bulletin reporting the work done to determine the causes and remedies for hairless pigs and goiters in young animals, says: "We feel justified in advocating the feeding of iodine to pregnant domestic animals in sections of the Northwest where goiter is prevalent."

THE REWARD OF STRUGGLE

"God never crowns natural gifts or faculties. To him that overcometh is given the victor's palm." We have only to look about us; bring to our minds our acquaintances and friends to be convinced of this statement. It would almost seem at times that most of the failures in life are among those with the greatest natural gifts. The student in school receiving the highest standing may well be concerned about his future success; the person of natural social attainments may well watch his step lest the sophistry of people deceive him; the person able to accomplish any task with ease, confidence, and satisfaction to himself may well consider the number who have failed because of similar attainment and conception. Natural gifts are dangerous, for the human being does not grow strong or develop character without a struggle.

There is no branch of agriculture which imposes larger and more exacting duties than dairy farming. Successful dairymen are men of attainment, of courage, and of power, for they "overcometh and carry the victor's palm". There are those who would make life's pathway easy; they would free the world from struggle and strife. To permit them to make this change, even though it were possible, would be to invite disaster.

Dairy farmers are apt to complain of the confinement which their vocation demands; of its many problems; and perhaps of its hardships; but take away the very things which seem the most objectionable, and with them happiness and contentment will also disappear. Men receive their true happiness, their greatest enjoyment, in overcoming obstacles, in solving their problems, in accumulating their fortunes, and not in using the rewards of their labor and sacrifices. What stands in the way very often of happiness and contentment are natural gifts or indifference to improvement. Men, whether engaged in farming or some other business, who start from humble beginnings but with a desire for service and success; men who are willing to struggle, to overcome, those are the ones who reap a harvest of happiness and contentment and are "given the victor's palm".

THE WOOD LOT

The prices of fuel, lumber, and fence posts are such that the farmer can well afford to pay more attention to his wood lot. This part of the farm has been neglected because it was considered unprofitable to pay any attention to giving the new trees an opportunity to grow or cutting out the old timber and generally clearing up the underbrush and fallen timbers in the wood lot. It is quite as necessary to clean up the underbrush as it is to weed the corn field, if young trees are to make proper growth.

Trees will not do well when grown too close together. Permitting live stock to run in the wood lot is not conducive to the development of young trees. Fire produces losses which can usually be avoided if a little attention is given to clearing up the brush and the fallen trees. It is the practice of some to attempt to grow grass in the wood lot for the purpose of furnishing pasture to young stock but when this is done the trees are not close enough together and the timber production is materially reduced. There are places on almost every farm which will give little return and can be used for no other purpose except for the growing of timber for fuel, posts, and lumber, and we are strongly of the opinion that the farmers can, with profit, give more attention to their wood lots.

A very good bulletin entitled "Care and Improvement of the Farm Woods", has been published by the United States Department of Agriculture. It may be obtained for the asking by writing to the Forest Service, Washington, D. C.

A Test Ration Wanted

I am feeding and testing some cows for seven-day test. I wish you would figure out a ration from the following feeds: Ground oats, corn, bran, oil meal, cottonseed meal, beet pulp, beets, molasses, and alfalfa hay, also corn silage.

I have been getting a good yield of milk, but it does not test much. I would like as high a test as I can get with those feeds. Those heifers are Holsteins and will average 1,450 lbs. in weight.

Rock Valley, Ia. W. C. S.

Our experience with cows teaches us that a ration may very well be advised for semi-official testing with considerable surety that it will work out as planned. Seven-day testing is altogether a different proposition. The record which a cow will make in seven days depends very much less upon the particular feeds she secures during that period than upon the feeds which have been used in preparing her for test. Of course, high short-time records depend a great deal upon the tester, but we believe these records are as much made during the preceding weeks and months as during the seven days when the test is actually being conducted.

This question of influencing fat percentages is a very interesting one. It has been proven that certain changes in a ration will temporarily affect this percentage, but no one has found out a system which is reliable even for short times. It is a common practice to feed a very narrow grain ration for seven days, in which such feeds as cottonseed meal play a prominent part. There are some cows, however, which are not affected at all by such abnormal rations. Because of the great variation in the reaction of different cows to these abnormal rations and because we have felt that the long time test is very much more valuable, we make no recommendations for seven-day testing, particularly when the cows have been already fitted for test.

The feeds listed are splendidly adapted to dairy feeding. From the concentrates a palatable, nutritious, milk-making mixture can well be compounded. We suggest that a mixture of 300 pounds of ground corn, 200 pounds of ground oats, 200 pounds of bran, 100 pounds of oil meal, and 50 pounds of cottonseed meal, fed rather liberally to these Holstein heifers, should give good returns. As much alfalfa should be furnished as they will

consume and about 30 or 35 pounds of silage per day.

Molasses will serve its best purpose with those cows which it is desired to stimulate to their maximum consumption of feed. It is an appetizer and has its value in this fact rather than because it furnishes its high carbohydrate content at an economical figure. Corn supplies carbohydrates more cheaply, therefore the only use we suggest for molasses is with those particular cows which are being crowded. It is best supplied by diluting it and sprinkling it over the hay allowance.

Whether beet pulp or fresh beets should be used depends upon the supply and upon the cost, one giving quite as good returns in most instances as the other. Each in its succulence is very valuable in testing. With the pulp, we would feed five to seven pounds per day, soaking it about twelve hours before feeding in three or four times its own weight of water. If fresh beets are fed results will be quite as good, and some feeders claim somewhat better. As much as fifty or sixty pounds may be supplied these heifers per day.

The quantity of grain supplied may be regulated according to the feeder's judgment of the individual cow's reaction to the feeding of grain. Under practical conditions where economical production is the consideration, an allowance of one pound of grain for each three and one-half or four pounds of milk produced will be sufficient.

A Company Lease

A company of four of us are buying a 1,700-acre dairy farm in Michigan. The farm is all fenced and cross-fenced with all No. 9 woven wire 48 inches high. Pastures are well watered by streams and barns are watered by two good flowing wells. Streams furnish all electricity wanted for farm use. It has 65 acres in good alfalfa and an abundance of clover and blue grass. It has three good houses, a large, strictly up-do-date dairy barn, a large young stock barn, large hog and chicken houses, besides other good buildings, all practically new. It is equipped with horses, registered Holstein cattle, sheep, hogs, and chickens; also all necessary machinery, wagons, silo filler, milking machine, tools, etc, etc. The entire equipment is furnished by the company and its appraised value shall be left on the place at the expiration of the lease.

Two of the company of each buy a third interest in the farm with its equipment, the other two buy the remaining third together. The two buying the one-third interest together wish to operate the farm for a term of years. They bring to the farm only their household furniture and are to furnish all the labor for operating farm and are to have vegetables, milk, cream, butter, eggs, and wood from the farm for their own use without cost.

We expect to sell cream that will be shipped from a station on the farm. What would you consider a just share for the tenants to receive from all products sold from the farm?

Chicago, Illinois. T. L. K.

We will assume that the members of the proposed company are A, B, C, and D, the last two to be the actual operators of the farm and to own a one-third interest also.

Such a lease as proposed would seem to us cumbersome, and it certainly would be unusual. To carry it into effect on the basis of a half share lease would require a very detailed system of bookkeeping and would offer large opportunities for disagreement and misunderstanding of its necessarily complicated provisions.

The simplest guess that we could make is that A and B each might receive one-sixth to one-fifth of the income and increase, while C and D will receive as their partnership share from three-fifths to two-thirds of the income and increase.

We would suggest that, if possible, the proposition be so simplified that the company will own the real estate and one-half of the productive live stock. Have C and D purchase for their own account the work, stock, tools, and implements, and one-half interest in the productive live stock. This might be arranged on the basis of the exchange of notes or in such other manner as would put the ownership and operation of the farm under the general rule that is common in share renting. The income of the farm and the increase in productive live stock would then go half to the company and half to the partnership of C and D. In actual settlement this might mean that A and B would each receive one-sixth, while C and D would each receive one-third.

Possibly making a concrete illustration will help the understanding. Assume that the real estate is valued at $201,000, the tools, equipment, and work stock at $12,000, and the productive live stock at $9,000. In this case, the investment of each of the four members of the company would be as indicated in the following table:

	A	B	C	D	Total
Real estate	$67,000	$67,000	$33,500	$33,500	$201,000
Tools, etc			6,000	6,000	12,000
Live stock (as rented)			2,250	2,250	4,500
Live stock (as company landlord)	1,500	1,500	750	750	4,500
Total	$68,500	$68,500	$42,500	$42,500	$222,000

In the division of returns and increase of live stock, C and D would share as owners of the real estate and also as operating tenants. Assuming that this return amounts to $12,000, the company would receive $6,000 as owners and C and D would receive in addition $6,000 as partnership tenants. In actual division this would be as follows:

A—one-third of $6,000	$2,000
B—one-third of $6,000	2,000
C—one-sixth of $6,000 (as owner) plus one-half of $6,000 (as tenant)	4,000
D—one-sixth of $6,000 (as owner) plus one-half of $6,000 (as tenant)	4,000

In other words, A and B would each receive one-sixth of the income and C and D would each receive one-third. If C and D are operating the farm as partners and possibly putting in different investments of capital and labor, the partnership would then get two-thirds of the income and this would then be divided between C and D according to such special agreement as they may have.

Our issue for February 6, 1920, contains considerable information on the basis of a good dairy farm lease and also different forms of leases. No single lease is directly applicable to every case, but adaptations can be made that will be valuable in arriving at an equitable and just division of responsibilities and profits.

Pasture Mixture

Kindly advise me of a pasture mixture for a glady or rocky hillside. This is lime stone soil but a great deal of rock is on the surface. I would like to know what to sow to resist drouthy weather. I want to sow some sweet clover in the spring. Have my ground broke. When is the best time to sow, how much per acre, how many crops will it produce the first year, and how long will it live?

Festus, Mo. E. J. J.

It would be difficult to obtain very much pasturage under the conditions described. The soil is evidently very shallow and because of this, together with the fact that it is sloping, it must get very dry at times during the summer. There are not very many grasses of value that will withstand this condition, but fortunately some will do it better than others. If it is possible to work up a seed bed, a mixture of brome grass, red top, and orchard grass will probably give as good results as can be expected. These would all be better than blue grass as this grass does not resist dry weather very effectually. Of the three grasses referred to, brome grass is probably the best. At the time the seed bed is prepared, we would apply some stable manure. This will make it easier to get a catch of grass. The best time to seed the mixture would be in the fall and winter rye might be used as a nurse crop. Five pounds of red top, together with ten pounds of each of the others, should be sufficient. However, if a seed bed cannot be worked up, there is little that can be done to make this hillside into a satisfactory pasture.

Sweet clover may be seeded in the spring as early as possible with a small grain for a nurse crop. Use about 25 lbs. of seed per acre, and secure the hull-less seed if possible. It will probably not yield very much the first year, excepting perhaps some pasture. The second year there should be two crops if it is handled properly. The first cutting should be made before the plants blossom and there should be a high stubble left, say about six to eight inches. A second crop may be expected. Sweet clover only lives two years and since it takes the first year for the crop to establish itself, there will not be more than two cuttings.

A Farm Cheesery

We have a larger supply of milk at our dairy than we can dispose of at present, and ask that you please give us some information in regard to installing a cheese equipment to make cheese, and if it is very practicable to make cheese in small quantities. I will appreciate it very much if you will give me a list of equipment and the cost of same if possible for installing a small unit.

Manchester, Ga. W. W. A.

In case you are located near a large city market, or within easy shipping distance, the manufacture of Neufchatel cheese is quite profitable, as from 100 lbs. of whole milk you will get about 20 lbs. of cheese, which is commonly put up in 3 or 4 ounce packages and retails at 10 or 15 cents a package. This figures at 10c a package to about $8 per hundred for the whole milk. The necessary conditions are that the milk shall be clean and sweet so as to make a good quality of cheese and that you can keep the cheese cold while it is in your possession and ship it once or twice a week fresh to the retail stores where it is sold.

This cheese must be eaten fresh, as it becomes rather strong in flavor after five or ten days, unless kept very cold. However, there are a number of consumers who prefer the cheese when it is rather strong flavored.

There should be sufficient vat room to hold the milk and a little steam for heating the vat to the required temperature. The milk is thickened with rennet and the next morning the curd is run through the gate of the vat into bags which are hung up and drained for 24 hours. The well drained curd is pressed for one-half hour the next morning, and is then ready to mix with salt and other flavoring materials and pack at once in packages for sale. It requires no curing at all.

In case you have no nearby large city market where such soft cheese can be retailed, I would advise you to manufacture American cheese or possibly Brick cheese, which require several weeks or months for curing and will keep well and can readily be sold to any grocery store or to cheese dealers in any of the large cities.

Another way to dispose of your milk would be to run it into a separator and use your cream for ice cream or butter and make cottage cheese of the skimmilk. The cottage cheese would have to be shipped to a large city where consumers would soon learn to eat all that you could make.

J. L. SAMMIS.

Wisconsin College of Agriculture.

Feeding Roots to the Stock

HOARD'S DAIRYMAN:—Many small farmers who do not have silos find it profitable to raise and feed considerable quantities of roots during the winter. There is an especial need for such feed to properly balance the ration if no silage is available. Not only is this true in the case of the dairy cow but it is also true with almost all kinds of stock. Sheep are particularly fond of all kinds of roots and the same is true of horses. Succulent feed of some sort is needed by all animals and this can be supplied in a very palatable form in the shape of roots.

We have raised mangel beets, turnips, and carrots for the stock and believe we have been more than paid for the labor required. Of mangels, the Long Red has proved the best. The carrot from which the largest yield of stock roots has been obtained is the White Belgian, a short variety which grows one-third above ground. This is easy to harvest and is much liked by stock. There are several varieties of turnips which yield heavily. This year we sowed the Purple-Top Globe broadcast about the middle of August and harvested an immense crop.

In feeding roots to milch cows, we find the best time of day is just after milking in the morning. At this time we have fed all kinds without any trouble with the milk. Some claim turnips cannot be fed to cows giving large quantities of milk but this does not seem to be the case with us. During the cold weather it is not a good plan to feed roots taken directly from the cellar or storage pit. Such roots are only slightly above the freezing point in temperature and we do not think it good practice to give them to the cattle at that stage. Our plan has been to bring the roots from the cellar over night and keep them in a heated room, then in the morning they are cut and fed to the cattle. If roots are fed regularly, about one-half peck daily is sufficient for milch cows. Yearling calves and young stock should have about the same. Feeder steers and bulls may be given larger feeds.

Carrots are excellent for horses. Farm animals which do not have to work hard during the winter may be kept on considerably less grain if plenty of carrots are available. Six or eight quarts of cut or chopped carrots daily will go a long way towards feeding a horse when he is not working. Carrots and mangels are excellent for sheep, also, and are particularly valuable just before lambing to serve as a conditioner for the ewes. We always feed roots rather finely cut, believing it is better to put in a little extra work than to take chances of choking the creatures.

New Hampshire. C. H. CHESLEY.

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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CONTENTS

An Eight-letter Formula for Success - - 1069
First County Tuberculosis-Free - - - 1070
Buying a Proven Sire - - - - 1070
High Producers from Six States - - 1071
Pot Luck or Silos - - - - - 1072
New York Breeders Meet - - - 1073
Dairying Thirty Years Ago - - - 1074
Cheese Markets Inactive - - - 1075
New York Jersey Breeders Endorse Pooling Systems - - - - - - 1075
Pierce County, Wisconsin, Guernsey Sale 1075
Skimmilk for Calves - - - - - 1076
Better Cream - - - - - - 1076
Hairless Pigs and Goiters - - - 1076
The Reward of Struggle - - - 1076
The Wood Lot - - - - - 1076
A Test Ration Wanted - - - - 1076
A Company Lease - - - - 1077
Pasture Mixture - - - - - 1077
A Farm Cheesery - - - - - - 1077
Feeding Roots to the Stock - - - 1077
New Low Prices on Feeds - - - 1078
Live Stock Most Profitable - - - 1078
Idaho Imports Jerseys - - - - 1078
Washington, D. C., Weekly News - - 1079
Ridgway Goes with Creamery - - 1079
Brown Swiss Dispersal Sale - - - 1079
New York Federation of Agriculture - - 1080
Testing Records Give $265 Cow, $1,000 Value - - - - - - - - 1081
Farmers Ask Credit Relief - - - 1082
Freight Rates on Hay Reduced - - 1082
New York Butter Market - - - 1083
New Jersey Record Broken - - - 1083
Cow Testing Associations - - - 1084
Shipping Farm Meat - - - - 1086
Oregon Dairy Council - - - - 1086
New England Ayrshire Club Meeting - - 1086
Reduce Dues One-third - - - 1087
Utah Dairy Course - - - - - - 1087
A Story About Wheat - - - - - 1088
What of Denmark - - - - - 1092
The World's Cow Testing Associations - 1092
Junior Letters - - - - - - - 1093
Butter Markets Hold Firm - - - 1094
Accredited Herd List - - - - 1094
New York Dairy Production - - - 1095
Veterinary—Accidental Abortion—Hematuria—Hard Milker - - - - 1096
Northwest Ayrshire Breeders Organize - 1097
Bulletins of the Week - - - - 1097
Kentucky Dairy Meeting - - - 1100
Leaking Teat - - - - - - 1100

New Low Prices on Feeds

[Report by U. S. Bureau of Markets.]

Very poor export demand for high protein feeds caused a decline of several dollars per ton in these commodities during the week ending December 18. Other feedstuffs declined in sympathy, and practically all registered new low records for the year.

The trade in general reports lack of interest by their customers and does not look upon conditions as favorable for much change in the near future because of the continued use by feeders of locally produced grain and forage.

Bran declined $1 or more and was quoted as follows: $25 at Minneapolis, $29.50 at Chicago, $27 at Kansas City, $36 at Boston and New York, $38 at Atlanta, and $44 at San Francisco. Middlings average about $2 a ton less than bran.

Cottonseed meal quotations given in many markets are nominal asking prices, and bids of $2 per ton under these enabled buyers to obtain their supplies. Forty-one per cent meal was $33 at Kansas City, $34 at Minneapolis, $37.50 at Chicago and Buffalo, $30 at Memphis, $40 at Boston, and $41 at San Francisco. The 36% meal averaged about $3 under these prices.

The trade reports a fairly good demand for linseed meal in mixed cars. Offerings are heavy and sales were made at $43.50 Philadelphia and $41 delivered Chicago. Quotations ranged from $40 in Minneapolis and Omaha to $44 in Boston and New York.

Gluten feed prices are unchanged and several mills are shut down. Quotations range from $48 in Chicago to $55 in New York. Hominy feed remained steady at $31 in Minneapolis, $35 in Chicago, and $42 in Boston. Beet pulp is quoted at $40 in Chicago, $44 in Minneapolis, and $48 to $50 in the East. Cocoanut was $25 in San Francisco, rice bran $23 in St. Louis, brewers grain $44 in Milwaukee, and flour middlings $28.50 in Minneapolis.

The hay market was dull, with timothy one dollar lower and alfalfa $2 lower than last week. No. 1 timothy ranged from $19 Minneapolis, $27 Chicago, $29 Philadelphia, to $38 New York. Mixed hay was about two dolllars under these prices with clover still one dollar cheaper. No. 1 alfalfa was quoted as follows: $21 Omaha, $22 Kansas City, $23 San Francisco, $26 Minneapolis, $28 Chicago, and $37 Jacksonville.

CONSUMERS'

Fair Price List

FOR JANUARY SHIPMENT

Issued by

International Sugar Feed Co.

	Chicago District	St. Louis District	Columbus District	N. York and Pa. District	New England District
Intl. Climax Dairy Feed (12½% Protein, 4% Fat) Better Than Oats.	$31.50	$34.00	$36.00	$38.50	$39.00
Intl. Special Dairy Feed (15 to 16% Protein, 4½% Fat.) Worth $10 to $15 per ton above grain or wheat feeds for dairy use.	$35.00	$37.50	$39.50	$42.00	$42.50
Intl. Ready Ration (20% Protein, 5% Fat) A Complete Balanced Ration.	$44.00	$46.50	$48.50	$51.00	$51.50
Intl. Diamond Dairy Feed (24% Protein, 5% Fat) Guaranteed Best You Can Buy.	$47.50	$50.00	$52.00	$54.50	$55.00

IMPORTANT

International dealers can now supply dairymen in various districts at above fair list prices. Why pay more for other kinds of feeds that produce less milk. See your dealer now. Insist on International Feeds. Satisfactory feeding results guaranteed. Same good feed—same quality—new rock-bottom price.

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INTERNATIONAL SUGAR FEED CO.
MINNEAPOLIS, MINN.

Live Stock Most Profitable

That recent sales indicate that the market is excellent for the buyer, and that the future has very good things in store for Wisconsin live stock breeders were included in predictions by B. H. Hibbard, agricultural economist at the University of Wisconsin, in commenting upon the outlook for live stock husbandry.

"It is perfectly true," said Mr. Hibbard, "that we have relatively few animals in proportion to the population of the country at the present time. This means most distinctly that live stock is, during the next few years, destined to be high enough in price so that it will pay very well to keep and raise it. Farmers who have no pure-bred stock, or who could profitably add a few more head of good stock to their herds, have a splendid chance to buy now at reasonable prices. Breeders, who have the grain just now and who can sell it in the form of live stock, will undoubtedly make more profit than they would be likely to make if they should hold the grain for future sale. While much of the live stock that has recently been marketed has eaten grain so high in price that the breeder may think he has fed at a loss, so far as the present and immediate future is concerned, the feeding should result in a profit."

Whether or not a breeder can do better by selling the grain to the market or to market it by feeding to live stock depends somewhat on the adaptation of the country to the two systems of agriculture, according to Mr. Hibbbard. Grain pays best, of course, where the country is especially adapted to its production, and the same is true of live stock breeding. At the same time there is no large margin between grain and live stock production in a large section of country where the production over a period of several years is under consideration. In other words, live stock certainly does pay in the long run.

"There is always more or less of an increase or decrease in the relative profitableness of live stock and grain marketing, over a period of years," Mr. Hibbard explained. "If grain pays better than live stock, then live stock tends to become scarce. If live stock production pays better than grain, then the later becomes relatively scarce. Neither of these conditions can hold for any length of time, because one must balance the other. That either grain or live stock farming should completely and permanently outdistance the other is unthinkable. At present it seems perfectly clear that producers of live stock have a very good outlook for the future."

Idaho Imports Jerseys

December 8th, 69 head of registered Jerseys were sold in Payette County, Idaho, for $15,000 at public auction. This sale, together with 43 head sold last May for $10,000, gives this county a strong start in Jerseys. Previously the county has been famous for its fruit. The animals in the recent sale were brought in from Washington, County Agent P. T. Fortner and F. R. Cammack selecting them. Banks advanced enough to hold the cattle until sale time and gave the purchasing dairymen a year's time for the payment of the notes given in the sale. Nine calves purchased for the Fruitland Jersey Calf Club for an average of $100 have been distributed to boys and girls of the club.

The proven sire, Brookuna's Manson, was purchased by the Jersey Breeders' Association for $300. The proven sire, Adelaide's Sultan, was sold for $570 to George Eldridge who has fifteen of his Register of Merit daughters. Sultan's Lady Belle, with a two-year-old record of 483.24 lbs. of fat, was sold to C. W. Young for $605, topping the sale. Only two other animals reached the $500 mark, these being Glendale Lyuna, purchased by L. P. Dorothy for $500, and Sultan's Pogis Onwa, purchased by C. H. Sargent for $550.

Coming Events

Jan. 11—Wisconsin State Horticultural Society, Madison.

Jan. 11-12—Certified Milk Producers' Association of America meets at Ansonia Hotel, New York City. Sec.-Treas., Harry B. Winters, Albany, N. Y.

Jan. 11-13—Wisconsin Dairymen's Association, Madison, Paul C. Burchard, Secretary, Fort Atkinson.

Jan. 10-14—Annual Farmers' Week at Purdue University, Lafayette, Ind. The annual meeting of the Indiana State Dairy Association will be held Jan. 13.

Jan. 11-12—Michigan Holstein-Friesian Association meets at East Lansing. H. W. Norton, Jr., Field Secretary.

Jan. 12-13—The thirtieth annual meeting of the Michigan Improved Live Stock Breeders' and Feeders' Association at East Lansing.

Jan. 24 to 29—Grain Show by the Wisconsin Agricultural Experiment Station, La Crosse. E. D. Holden, Ass't Secretary.

Feb. 1-4—Manitoba Dairy Association will meet at Fort Garry Hotel, Winnipeg. Secretary, L. A. Gibson, Winnipeg.

Feb. 1-10—Mid-Winter Farmers' Course, Madison.

Feb. 1-10—Wisconsin Live Stock Breeders' Association, Madison. Geo. W. Davis, Secretary, Madison.

Feb. 4 & 5—State Live Stock Judging Tournament (roundup), Madison.

Feb. 15-17. Michigan Allied Dairy Association, Grand Rapids. Secretary, H. D. Wendt, Lansing.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

WASHINGTON, DEC. 27—The proposed official invitation of the International Dairy Congress to hold its sessions in the United States in 1922, was brought before the Senate on December 23, by a communication from President Wilson, transmitting to the Senate the letter of the Secretary of Agriculture, and the accompanying suggested form of action for giving congressional endorsement to the project. The letter of the President reads as follows:

"I transmit herewith a report by the Acting Secretary of State with an accompanying copy of a letter from the Secretary of Agriculture favoring legislation by the Congress that will give governmental sanction to the World's Dairy Congress, which it is contemplated to hold in the United States in 1922, and will enable the government of the United States officially to invite participation of foreign governments therein.

"I invite the attention of the Congress to the commercial and scientific value which the Secretary of Agriculture thinks will accrue to the important dairy industry of the United States by holding the proposed congress and I ask for the matter the favorable consideration of the Congress.

"It will be observed that no appropriation is asked for at this time but that if the holding of the proposed congress be authorized by the Congress of the United States, it may be that the dairy organizations of the United States may, if found necessary, ask the Congress for a small appropriation in addition to the $100,000 which they themselves propose to raise."

This letter indicates something of the time and effort that has already been put on this project by the committee named at the Dairy Show, of which B. H. Rawl, chief of the U. S. Dairy Division, is the active head. The whole matter had to be thoroughly investigated by the State Department, as it involves official invitations to many foreign nations, and then the inter-departmental arrangement had to be perfected whereby the Secretary of Agriculture and the Acting Secretary of State united in preparing the documents for the attention of the President who transmitted them to Congress. The only question in the way of prompt action is the possibility of appropriations next year. In the present state of the treasury every committee is watching carefully against expenses. It is thought that the way this has been safeguarded will preclude serious opposition on this ground.

⚜

A careful compilation of import figures shows that the first nine months of the year saw a total import of crude oriental oils into the United States amounting to approximately 310 million gallons, and raw material for pressing which would yield in round numbers 150 million gallons more. It is not possible to trace this material into domestic commerce at this time, but it is safe to assume that a large percentage of it is going on the tables of American consumers in the shape of imitation butter. This is the statement of facts back of the inclusion of oriental oils in the emergency tariff bill. Yet butter is omitted from the bill.

⚜

The emergency tariff bill, which was held up in the Senate by objections made by Senator Harrison of Mississippi, was read and referred on Monday, December 27, to the Finance Committee. The bill had a record breaking experience in the House; one day's consideration in committee, introduction in the House, one day's debate in the House, and passage by an overwhelming vote. It is probable that no other tariff bill of equal importance was ever passed so fast. All efforts to get dairy products included failed, and all efforts are now being bent to getting such an amendment in the Senate. The bill as it went to the Senate Finance Committee on Monday includes fourteen items: wheat, flour, onions, corn, potatoes, rice, beans, oranges, cattle, sheep, mutton, wool, peanuts, and oriental oils. Senator Gay of Louisiana has already given notice that he proposes to add a sugar amendment. Telegrams are pouring in on Senator McCumber of the Senate Finance Committee, and various other senators, demanding the inclusion of dairy products.

⚜

Some opposition is developing in the committee against the $30,000 appropriation for barns at the Dairy Division experiment station at Beltsville, Md. Chairman Anderson of the sub-committee seems to think that the high cost of building materials is a reason for postponing the work. The bill calls for most of the work to be done by the regular force at the station, the money being chiefly for materials. The possible saving by waiting for several years for lower prices would not possibly be more than a few thousand dollars.

⚜

The minister from Argentina has filed a protest against the proposed emergency tariff bill, and intimates that retaliatory tariffs will be instituted if Argentine butter, cheese, meats, and cereals are shut out. This illustrates another angle of the tariff tangle.

⚜

Guests of the "Hired Men's Club" the past week included Aaron Sapiro of San Francisco; J. R. Howard, president A. F. B. F.; E. E. Chapman, former National Lecturer of the National Grange; Professor Bristow Adams of Cornell University; and Harlan Smith, Director of Information, and R. T. Cobb, director of Press Service of the Department of Agriculture. "The Hired Men's Club" is the informal organization of agricultural news writers' and farmers' organization representatives.

⚜

As this is written, the bill reviving the War Finance Corporation is still unsigned and in the hands of the President. Opinions differ widely as to its avail in the present emergency. The Capper—Volstead Collective Marketing Bill is in conference, with farm organization leaders making a determined fight to eliminate the Senate amendments. Aaron Sapiro, the California attorney who is representing the California co-operative associations, has stated publicly that he would prefer to have no legislation at all, rather than accept the mutilated Volstead bill as the Senate amended it.

Ridgway Goes With Creamery

Professor J. W. Ridgway, for ten years head of the Dairy Department of the Texas Agricultural College, and recently county agent of Cooke County, Texas, has accepted a position as head of the dairy development work for the Misteltoe creameries of Texas. His work will be dairy extension work among bankers and business men in communities where dairying can be safely developed so that creameries and other marketing projects may come in later.

Brown Swiss Dispersal Sale

The Brown Swiss herd of J. C. Moore of Illinois was recently dispersed. Twenty-one head averaged $247. The high priced animals of the sale were Ramona M. and Olga, purchased by Ferd. Krumpe of Illinois for $400 each. The only other animals to exceed $300 were Helen Mc., purchased by Carl Bormet, Illinois, for $305, and Luvois, purchased by Ralph Sands, Illinois, for the same price.

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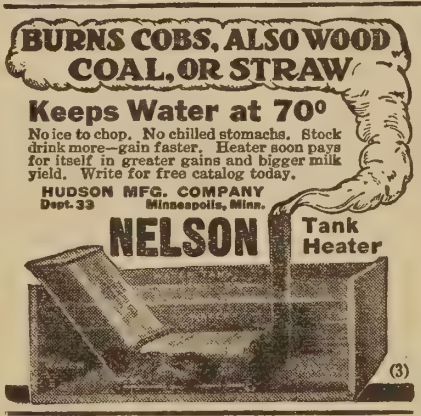
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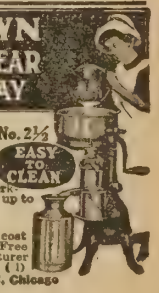
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When Writing to Advertisers, Mention Hoard's Dairyman

New York Federation of Agriculture

H. H. LYON, NEW YORK

THE New York Federation of Agriculture was organized for the purpose of assisting agriculture, especially in the lines of sales and transportation. Farmers, said Mr. Bradley, the president of the federation, think for themselves and they know much. It is unreasonable for outsiders to tell the farmer what to do, or to decide what those outsiders can or should do for him. It might be well to mention the fact that there are really five thousand members of the federation, but only a small proportion was present at the Rochester meeting in December.

Dr. Warren of the state college was introduced as the best equipped man in the United States to discuss economic questions of agriculture.

"The reasons for the present bad conditions in farming are several," said Professor Warren. Among these are the weather the past season, a demoralized world, and too rapid deflation. While we have not a dense population in the sense that China has, yet we have no longer a thinly populated country. Old rough and ready methods are becoming a little out of date. While we do not like to burn foods and should not destroy them, it is better to burn them for fuel than to rot. In years of large crops they should be stored against years of shortage, and this ought to be done by the farmers. There is no real surplus of farm productions. The trouble is unequitable distribution. Dairymen are suffering because there is no market for milk, the markets being blocked by stores of condensed. European children are starving for want of this milk. We need to look ahead further. There is always need for all we produce in the course of four or five years, and usually in two years. Grains can be held on farms. Put cotton and wool in store houses and farmers can hold them by means of co-operation.

The wool problem in New York is a vital one. Not that we are so largely engaged in producing it but those who do grow wool are now hard hit. A tariff of 10 to 12 cents a pound on imported wool will be right, says E. L. Moody, president of state association. The plan to embargo wool until tariff becomes effective is something that needs doing right now.

It is found that the South favors tariff on wool, for wool is coming to be so cheap that it competes with cotton. To go further, it is found that the South wants tariff on oils that compete with cottonseed oil.

The resolutions started off with a statement that country children should have just as good educational advantages as any children of the state. Also that the patrons of country schools are as fully entitled to control their local affairs as those in congested city districts.

A second resolution called attention to the profits of railroads irrespective of efficient management and urged that this is not consistent. Others should have the same advantages if the railroads have them.

Speaking of the shortage of refrigerator cars, the association called for the building of 20,000 cars equal at least to the standard of the U. S. R. R. Standard refrigerator car. All cars over ten years old rebuilt to meet the standard.

The federation opposes all daylight saving laws, and favors terminal markets and wholesale sale of all farm products.

The costs of production and distribution of farm products should be taught in all schools, and charts and figures furnished for the pupils to take home.

The killing of rabbits that are doing damage should be permitted, says one resolution, having particular reference to the orchards.

The federation urges that the federal government facilitate the export of dairy products for the protection of starving Europe and the relief of our home dairy industry.

The meeting favored strongly the bonding of all milk dealers. They also wish to combat discrimination in freight rates. Still another point made was that co-operative banking should be authorized by Congress, and permission given co-operative associations to use capital and make profits.

Some of the problems of agriculture were discussed by Professor Ladd of North Dakota. American agriculture is facing the most serious difficulties ever known, was the first statement. To begin with, he mentioned that bread selling at one dollar returns the producer of the wheat four cents. Cotton batting selling at 46 cents brings the producer of the cotton ¾ of a cent. Cloth at 28 cents brings the cotton producer .1 of a cent. It would take all the wool, now sold at 20 cents a pound, that two men can carry to pay for one suit of good clothes, while four or five men would be required to carry enough hides to pay for a high class of shoes, and each hide would make ten or twelve pairs of shoes. Our problem now, observes Dr. Ladd, is not increased production, or decreased cost of production, but better conditions of distribution. Corn is below the pre-war price while pig iron is 300 per cent above. Farm machinery is being listed for 1921 higher than last year. They have high machinery, high labor, and low wheat. The farmer gets one dollar or $1.50 for wheat. Yet he mentions that there is a real shortage of wheat in the country. To remedy bad conditions we need fewer organizations and better organizations. He regards the farm bureau as the best organization that we have. The farmer has reduced costs to the lowest point and he is poorer paid than any mechanic or laboring man.

In North Dakota the farmers have been driven to the point where they had to do something. They asked for relief by proper legislation, but got nothing, yet they constitute 77 per cent of the population of the state. The next thing was to go at it and elect their own lawmakers and executives. This was some two years ago. For twenty-five years they had been ground down by the oppression of speculators aided by the railroads, the banks, and the government. There was no law of supply and demand. In two years there has been much relief obtained. It has become possible to secure farmer owned elevators. A better system of grading wheat has been introduced and the dockage which was lost to the farmer before is now returned to him or paid for. It is now expected to erect terminals and enter the export trade. To come into the organization farmers must sign up for five years, must sell all they have to the association, and in case of failure to do so they forfeit twenty-five cents a bushel on all they sell outside.

Reports that have come to us indicate that the farmers of North Dakota have done something for themselves, but we also get statements that what they have gained by their

efforts has been offset by increased taxes. Dr. Ladd explained the tax question. For example, an unoccupied farm, owned by a townsman who lets it grow up to weeds, is taxed just the same as the neighboring farm which is farmed and made to produce good crops. This piece pays increased taxes. In other cases a home is exempted to the extent of a thousand dollars to encourage home-owning. It is rather an adjustment of taxes than an elevation of them. The Standard Oil has vast properties in the state where by shrewd management they were able to evade taxation. Laws were changed and now that concern pays taxes like other people. Their taxes have been increased.

I tried to study the federation to see if it is overlapping other associations. The more I see of it the more I am impressed with its usefulness. It does seem as though we are having many organizations, but possibly some of them have been too much social and not enough of the sort that is undertaken by the federation. It would be fine if all these organizations could come more closely in touch with each other and work in unison. More definite work might perhaps be accomplished.

Testing Records Give $265 Cow $1,000 Value

HOARD'S DAIRYMAN:—About six months ago J. D. Wilkerson bought Lady Korndyke Norma Pietertje from a small breeder in a neighboring county for $265. She was just an ordinary pure-bred Holstein cow. She is a large cow of fairly good type, it is true, but that is probably all she was worth as an untested cow. Certainly there was nothing about her to indicate that she would ever be a candidate for a state record.

But right here comes the difference between Mr. Wilkerson and the man who sold him the cow. Mr. Wilkerson is a man who doesn't like to be caught guessing where he is. He wants to know what is going on and where his profits are coming from. For that reason he has been a persistent booster for the Webster County, Missouri, Cow Testing Association and as soon as this association shows him a cow that isn't a money maker he promptly sends for the butcher. When "Lady" freshened she went on test along with the rest of the Wilkerson herd.

Then things began to happen. The first month she led all cow testing association cows in the state with almost 80 pounds of fat. The second month wasn't quite so good, but the third month she came back with better than 80 pounds of fat. She has been on test five months now and has twice broken the state record for monthly fat production. She has already produced over 500 pounds of butter in five months and her fifth month is her highest so far. With proper care from now on she should make 1,000 pounds of butter this year and will easily break the Missouri state record in the cow testing association class.



LADY KORNDYKE NORMA PIETERTJE WITH HER OWNER, J. D. WILKERSON, MISSOURI

A cow testing association record increased her sale price from $265 to $1,000.

But "Lady" has done more than that for Wilkerson. She put him on the map among Missouri Holstein breeders. More than one breeder of Holsteins has come to me in the past few months and asked about "that Wilkerson cow". At those times I am mighty glad to be able to say that I have seen her in action on the Wilkerson farm.

She is not the best type of cow to be found and, as was said before, is not a cow that one would pick for a record producer. But if you could see her fill that big milk pail and then do it again at the same milking, you would change your mind. She is certainly a wonderful producer. And there isn't any very evident reason for it, either. The Wilkerson farm is very little different from other Ozark farms and the Wilkerson barn isn't much different from other Southwest Missouri farms. There is, however, one difference—"Lady" is a real cow and her owner is a real "cow man".

The record this cow was making was noised around until Wilkerson began getting offers for her. He turned all of these down till finally one of his neighbors tempted him just a little too much the other day and he sold her for $1,000. There was nothing about her to mark her as a superior dairy animal. There was only one difference between this cow and hundreds of thousands of other good cows. She was given a chance to prove her worth, and, proving it, made her owner $735 plus a splendid pure-bred bull calf and the profit on her production for five months.

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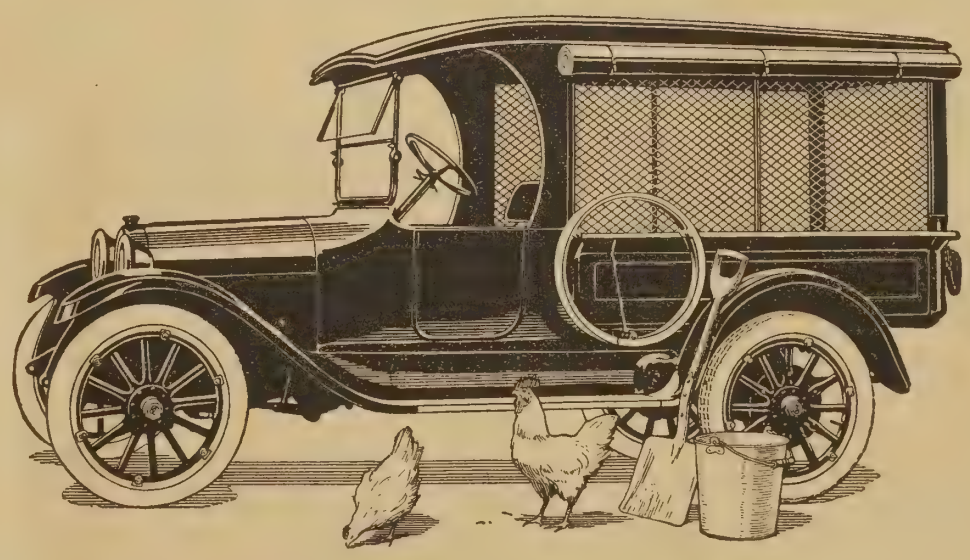
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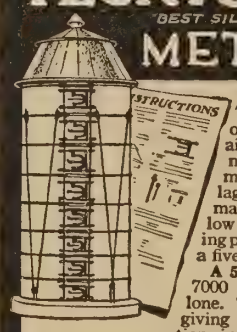
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Farmers Ask Credit Relief

President J. R. Howard of the American Farm Bureau Federation has just returned from Washington where he has been working in behalf of speedy and definite relief for the agricultural credits situation. Mr. Howard and Gray Silver, the Federation's Washington representative, appeared before the joint committee of agriculture and of banking and currency of the United States Senate and advocated measures embodying five definite planks in the American Farm Bureau Federation's immediate relief program.

(1) Regulatory power over farmers' co-operative marketing associations should be in the hands of the United States Department of Agriculture rather than the Federal Trade Commission.

(2) The farmers' co-operative marketing movement must not be hindered by the provisions of the Sherman law, enacted to control trusts and not with any intent to curb co-operation for the benefit of the public at large.

(3) The Federal Reserve Bank Act should be amended so as to provide preferential rates for loans for productive purposes over loans for speculative purposes.

(4) The Warehousing Act should be extended so as to serve the needs of both individuals and co-operative associations, and there should be based upon it a rural credits plan which will enable the farmer, individually or collectively, to market his crops in an orderly fashion.

(5) The Federal Land Bank System should be extended to provide farmers with personal credit, for such purposes as buying improved seed, live stock, machinery and equipment, on the same general plan as real estate loans are now provided.

According to Mr. Howard, these planks form the basis of a platform which he hopes to see forthwith erected by Congress for the benefit and encouragement of the farmers of America, just now heartsick to find that after producing bumper crops with which to feed the world, they are offered prices far below the actual costs of production.

Senator George P. McLean, chairman of the senate committee on banking and currency, presided over the joint committee hearing. The entire farmers' marketing program was discussed. It was agreed that a more direct marketing system must be had. The Capper-Volstead Bill, now in conference, was the particular legislation under consideration. Concerning the farmers' hope in this bill Mr. Howard said:

"The Capper-Volstead bill passed the Senate with two amendments which virtually nullify the intent of the act. The American Farm Bureau Federation is working with the conferees with the hope of having the amendments reconsidered and cancelled.

"The first amendment to which we object puts the regulatory power over co-operative associations in the hands of the Federal Trade Commission rather than the Department of Agriculture. We take the ground that the Federal Trade Commission is an investigational organization, while the Department of Agriculture is a welfare organization. It would be better for all concerned that the distribution of food supplies be under the supervision of the Department of Agriculture.

"The second amendment virtually nullified the whole Capper-Volstead Bill by putting back under the Sherman Act the whole co-operative movement. This amendment must be eliminated if farmers are to benefit by the legislation.

"We also took up rural credits needs and demanded on behalf of the farmers' amendments to the Federal Reserve bank law giving the board power to classify loans and separate loans for productive purposes from loans for speculative purposes. Loans for productive purposes are entitled to preferential rates.

"We ask that the Warehousing Act be extended so as to serve both individual and co-operative needs. We suggested that a rural credits plan be based upon this act which would enable farmers individually or collectively to market their crops in an orderly fashion.

"We hope to see an extension of the Federal Land Bank System so as to provide for personal credit on the same general plan as real estate loans are now provided. Personal loans would be for such purposes as will increase the farmers' productive capital along the lines of enabling him to build silos, drain his land, buy improved live stock and better seed, and in any way increase the efficiency of his farm as a producing plant. These loans, of course, would not run for so long as real estate loans, and would bear a higher rate of interest."

As a result of last week's Washington conference bills will be drafted immediately designed to furnish legislation as outlined.—American Farm Bureau Federation.

Freight Rates on Hay Reduced

HOARD'S DAIRYMAN:—Dairymen and feeders of live stock located far from the important producing sections have been exercising unusual caution in the purchase of alfalfa hay in recent months. The price has been too high compared with the returns from dairy products and from beef cattle and hogs and sheep, and relatively far out of line with other commodities used in feeding and dairying operations. In fact, this disparity still exists, but the prospects for prices for alfalfa hay indicate that the readjustment will be carried downward to a sufficient extent to warrant a friendlier attitude toward the "wonder plant" on the part of the consuming trade.

Basis for the bearishness which pervades the market for alfalfa lies in the recent voluntary action by carriers in placing into effect an emergency rate equal to 50 per cent of the recent tariff from the important producing sections of the Northwest, particularly in Idaho, to Missouri River points, including Kansas City and Omaha. The new rates became effective December 24, the average rate on alfalfa hay to Kansas City from Idaho now being around $10 a ton compared with $15 a short time ago. Even before the emergency tariffs were filed, shippers of alfalfa hay in the Northwest made preparations on a large scale for the sale of their surplus production on the basis of the new rates. Heretofore, the growers of alfalfa in the irrigated districts of the Northwest had been unable to move their surplus harvests because of the abnormal freight rate. At the same time the prices at distributing points in the Middle West, including Kansas City, the largest hay market in the country, have been maintained on an abnormal level because hay could not be drawn from distant and important producing sections. The difficulty, of course, is not entirely eliminated, for the emergency reduction includes only the Northwestern territory, where the growers have been unable to "cash in" on their surplus cuttings.

But the action of the carriers is looked upon as a precedent by the trade, and the districts not already granted reductions are now making

an effort to effect a general change. Not alone the producing sections, but the districts which bring in large quantities of hay for feeding also are agitating for a lower tariff. So far as the emergency exists, the consuming sections deserve the same if not greater consideration than the Northwest. The present exorbitant freight rates to consuming territories are responsible to a far greater extent for the partial demoralization of the forage industry than any other factor, the extremely light demand for hay now being due largely to the high delivered costs to the buyer. Hay prices at the distributing points in the Middle West already are abnormally low, at least considerably under the cost of production, but by the time the hay reaches the ultimate consumer in the East, in the Southeast and other important buying outlets, the price is close to the highest on record. The carriers now are receiving a greater portion of the price paid for hay on the largest markets than the producer receives. If a reduction in the freight rates from the distributing points to the consuming sections is granted, the rates from the producing districts will take care of themselves. And the producer will doubtless benefit by the strengthened position of the market.

Alfalfa prices are expected to decline further. Among the close observers of the market, the prediction is freely made that prices must recede to a basis around $20 a ton for the best grades of shipping alfalfa in Kansas City, if not less, which means that the market must decline further about $5 a ton. In view of the fact that Idaho and other Northwestern hay is of good quality on the whole, it is only reasonable to anticipate that the better grades, which dairymen almost generally demand, will suffer a sharper revision of prices than the cheaper offerings, which already are low, selling down to $12 a ton in Kansas City. Terminals already are receiving more than sufficient hay to meet the requirements of the consuming trade. This is indicated by the fact that on the recent moderate movement rather sharp declines have occurred. During the late fall and early winter of the last few years Middle West markets received enormous quantities of alfalfa from the Pacific Northwestern irrigated producing territory, Kansas City alone getting an aggregate of more than 1,000 cars weekly.

Prospects for improvement in the demand situation are not encouraging. It is probable, of course, that the colder weather may stimulate buying of hay by sections which have depended largely on wheat pastures and local supplies of rough feeds in recent weeks. But the stocks of feeds as a whole are too great in the country to permit of sharp improvement in the demand, and feeders will not show a preference for alfalfa hay when other commodities can be substituted at a cheaper price. While some producers consider the market for alfalfa too low even on the present basis and some are actually refusing to dispose of their surplus cuttings in the hope of forcing a rebound, they doubtless have overlooked the fact that alfalfa is selling at an actual premium over corn ton for ton and is even higher than cottonseed cake and meal with a protein content of 43 per cent in some important producing channels. It is rather ridiculous, for example, for the producer of corn in Iowa to sell his coarse grain at less than a cent a pound net and then be forced to pay about a cent and a half a pound for alfalfa. The consuming trade realizes the relative position of alfalfa, and this is one of the strong influences limiting demand on markets. On this basis, it is hardly reasonable to anticipate firmer prices for alfalfa.

Missouri. SANDERS SOSLAND.

New York Butter Market

NEW YORK CITY, DECEMBER 28:—Danish butter continues to arrive in fairly large quantities. During the past week 874,160 pounds were received in this market. In addition, about 500 casks of Holland butter were unloaded. The Holland butter was a disappointment to its handlers as its quality was rather inferior. At the present time, aside from the fact that it is preventing prompt sale of good firsts, the Danish butter is having little effect on the market. There is a scarcity of fancy domestic butter and the Danish butter is supplying a want. Undoubtedly, the prices of high grade butter would mount considerably but for the Danish butter, but it is, without doubt, better that prices should go no higher. There is keen activity at present which would be materially reduced in case prices were higher. Then, too, high prices would cause a demoralization of the market later when the natural fall in prices materialized, as the slump would be very great. As it is, receivers in general are predicting a sharp decline in prices with the approach of spring.

The buyer continues to demand strictly fancy butter. However, there is a growing demand for butter of medium quality and the price of it has advanced faster than that of extras and higher scoring butter. While fancy butter has advanced but ½c during the week, good firsts have advanced 1c. That is an encouraging sign for receivers who are holding large quantities of firsts. There seems to be little to encourage those who hold large quantities of seconds. Buyers even refuse to make bids on lots of such butter as they state that there is no demand for it. Centralized butter is moving very slowly and at prices ridiculously low. Some receivers who speculated heavily in centralized butter find themselves facing enormous losses. There is no movement of the Argentine butter, which arrived some months ago, and it is doubtful that it will be absorbed at all, unless there should be a prolonged strike period.

On Monday of last week, extras were quoted at 55@55½c. On the following day, because of the increased activity just previous to the Christmas holiday, the price advanced ½c. Since that time, while there has been active trading, there has been no further change in quotations on fancy butter. Firsts, however, advanced ½c today. Held butter is in firmer demand and has advanced in price, high scoring June make selling at 51@52½c. Danish casks are quoted at 51@53c. On the whole, the market can be said to be firm and active on all classes of butter except seconds with quotations as follows: Extras (92 score), 56c; higher scoring than extras (93 score or higher), 56½@57c; firsts (90—91 score), 48@55c; firsts (88—89 score), 43½@47c; and seconds (83—87 score), 37@42c.

W. B. LIVERANCE.

New Jersey Record Broken

Jolly Little Lady, a Jersey cow owned by F. F. Dryden of New Jersey, has completed a record of 10,614 lbs. of milk, 605 lbs. of fat, exceeding her Register of Merit requirement by 139 per cent. This makes her state title holder for junior two-year-olds, her record being begun at the age of two years, 25 days. She displaces Sophie's Tormentor Elvira, whose record is 9,535 lbs. of milk, 525 lbs. of fat.





These Wrappers Advertise Your Butter

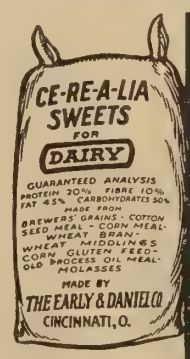
YOUR butter wrappers are your own *paid* advertising space! Use them. Make them pay a profit. Use Paterson Vegetable Parchment wrappers because they not only preserve butter but make your package attractive to the butter buyer.

The sanitary, clean appearance of butter in these wrappers is a mighty factor in the final choice of the fastidious customer.

If you buy Paterson Parchment Paper Wrappers in lots of 5000 or more, we will print your advertisement on them in attractive display and positively guarantee the printing will not stain the butter.

PATERSON PARCHMENT PAPER CO.
Passaic, N. J.

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Make Every Cow Make Money

Here's how to make your dairy pay. Keep only good cows and feed only good feed—CE-RE-A-LIA SWEETS.

Ce-re-a-lia makes more milk 49 cases out of 50 and the 50th "case" is very likely a "sleeper." Sell her and buy more CE-RE-A-LIA SWEETS for the other 49. Try Ce-re-a-lia on our famous money-back offer:

Feed One Cow Four Weeks at Our Risk. If she does not give more milk or more butter fat at less cost you get your money back. Write for details.

THE EARLY & DANIEL CO.
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Ce-re-a-lia Sweets

All feed, No filler of any kind.

Big Special Offer—Write Us At Once

We are Making a great big Special Offer to Farmers on our Oil Burning Tank Heaters

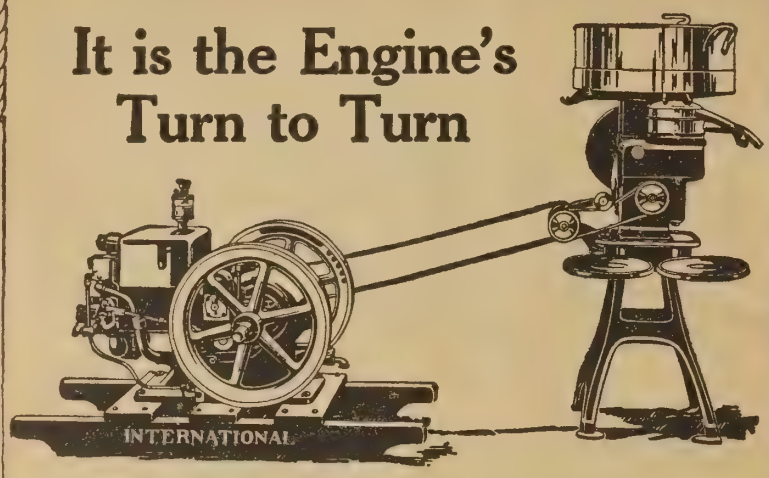
This is your opportunity to get a CLOVER LEAF Tank Heater under conditions that are unusual—

The short season finds us with a small stock on hand and rather than carry them over we are going to make a proposition that NO Farmer can afford to overlook—

Write us about this and we will give you full details. You cannot afford to have your milk and dairy cattle drinking ice water—causing a loss of profit—not when you can get such a special offer as we want to make you—Direct. Let us tell you about it—Write us at once.

Cedar Rapids Foundry & Machine Co. Cedar Rapids, Iowa

It is the Engine's Turn to Turn



EVERY dairy farmer who handles a large volume of milk knows that turning the easiest running cream separator in the world by hand gets to be monotonous work before the day's run is finished.

The **Primrose Direct Power Drive** has simplified greatly the matter of separation on a considerable scale. This practical little addition to Primrose efficiency can be attached to any hand-operated **Primrose Cream Separator** and does not interfere in any way with hand turning of the separator.

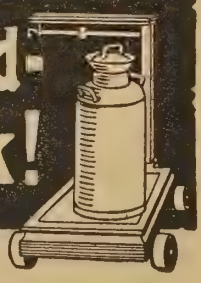
By means of this simple attachment, direct connection can be secured with an engine without speed-reducing gear, to a line shaft or portable electric motor.

If your milk volume has reached such proportions as to make separating a real task, then it is most certainly the engine's turn to turn. A **1½ h.p. International Kerosene Engine** and **direct-power-drive Primrose** will shoulder the job and handle it efficiently.

INTERNATIONAL HARVESTER COMPANY
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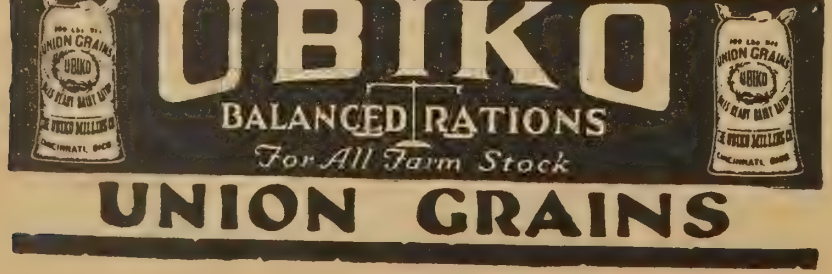
Big Dairies use it. The Hershey Chocolate Company's big herd of 2,000 cows have eaten it for years and the Hershey Company urges all the farmers whose milk it buys to use it. They want more milk. They want it produced as cheaply as possible. So they buy an average of four carloads of Union Grains every month. And they're the kind of people who know whether it pays or not!

Seventeen years of experience in mixing dairy feed goes into every bag. It's a work of real experts. You can't be sure that your own mixtures are the best you can do until you have tried Union Grains.

Write for a Union Grains Cost Sheet and know what dairy feed actually is costing you.

We also make Ubiko Stock Feed, Ubiko Pig Meal, Ubiko Buttermilk Egg Mash, Growing Mash, and Scratch Feed.

THE UBIKO MILLING CO. Dept. F Cincinnati, Ohio



Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ia.	West Branch—Tri-County	R. Houser	Nov.	210	11	60.6	Geo. Jensen
Ida.	Weiser—Payette Co-op.	G. E. Hardin	"	202	23	61.3	R. T. Davis
Kans.	Bourbon Co. Co-op.	T. A. Trull	"	330	3	44.6	Bert Wiley
Ill.	Du Page Co.	C. J. Rieck	"	310	26	59.2	W. A. Rogers
"	McHenry Co. No. 1	H. A. Link	"	456	47	79.0	R. Corlett & Sons
Ohio	Washington Co.	Erna Moore	"		7	51.7	J. C. Russell & Son
"	Washington Co.	Erna Moore	Oct.		11	59.9	C. E. Chase
"	Barnesville Co-op.	Clyde F. Lewis	Nov.	205	32	75.9	McCartney & Wilson
Wis.	Falls—Wilson	Wm. Braun	"		33	66.8	L. Verhulst
"	Rockfield	Wm. F. Liesener	"	240		79.2	J. B. Bast
"	Whitewater	A. F. Probst	"	432	79	83.6	A. M. Anderson
"	Richfield	A. R. House	"	300	23	71.8	Adolph Kurtz
"	Ellington	Matthew Nelson	"	376	9	51.5	H. Riesenweber
Colo.	Johnstown	Walter Guernkink	"	265	75	66.8	W. A. Purvis
"	Douglas County	R. E. Sherman	"	412	17	87.4	E. J. Lindquist
"	Arkansas Valley	D. H. Burwell	"	232	35	75.5	Ark. Valley Sugar Beet & Irrigated Land Co.
"	Platte, Boulder and St. Vrain	L. L. Simpson	"	324	30	82.5	W. C. Sauer & Son
"	Logan Co. High School	H. Sandhouse	"	24	2	44.5	Wm. Mueller
Mo.	St. Louis Co.	J. Lloyd Malone	"	278	31	76.5	St. Stanislaus Seminary
Conn.	Canaan	B. F. Dibble	"	216	27	57.4	A. H. Burlburt
N. H.	Merrimac Valley and Strafford—Carroll	C. F. Emery	"	506	11	56.3	L. H. Kimball
"	Claremont and Lebanon	A. E. Norman	"	373	28	58.1	H. A. Benson
Pa.	Clinton	K. S. Bailey	"	277	4	52.5	B. F. Kennedy

Association Notes

West Branch—Tri-County, Iowa:—The association began its second year on November 1st with 18 members owning 210 cows. During November butterfat sold for 65—68c per lb. and milk on a basis of $1.10 per lb. of butterfat contained. Bran retailed at $38 per ton; oil meal, $60; cottonseed meal, $50.

Weiser—Payette Co-operative, Idaho:—A car of feed was purchased co-operatively during the month of November. Glendale herd of registered Jerseys sold at Payette at good prices. Many purchased their first pure-bred dairy cattle. Market milk testing 3.4% sold for $3.85 per cwt. The creamery paid 60c per lb. for fat. Milk retails for 14c per quart, butter for 65c per lb., and cheese for 35c per lb. Feed prices are: Soy bean meal, $67 per ton; linseed meal, $89; molasses feed, $64; mill run, $43.

Bourbon County Co-operative, Kansas:—About six unprofitable cows were sold in November. One pure-bred bull has been purchased to be used in the pure-bred Holstein Association in this county. This is the second bull purchased since last spring. The two bulls will be used in the two units, about fifty cows in a unit. The county agent has ordered a carload of cottonseed meal to be distributed among the farmers and dairymen. They expect to ship in a car each month this winter. Four per cent milk sold for 27c per gallon. The condensery paid 65c per lb. for fat and the creamery paid 55—60c per lb. Milk retails for 14c per quart, butter for 50c per lb., and cheese for 40c per lb. Corn sells for 40c per bushel; oats, 40c; bran, $32 per ton; cottonseed meal, $40.

Du Page County, Illinois:—November market milk testing 3.5% sold for $3.05 per cwt. and 4c per point above. Milk retailed for 15c per quart and butter for 66c per lb. Feed prices are as follows: Alfalfa, $30 per ton; stover, $5; bundle corn, $10; silage, $8; barley, $40; oats, $40; bran, $35; oil meal, $68; gluten, $58; corn, $32; cottonseed meal, $51.

McHenry No. 1, Illinois:—During November, milk sold for $3.05 per cwt. for 3.5% test and 4c per point over. Prices of feeds were: Bran, $40 per ton; oats, $38; oil meal, $70; cottonseed meal, $60; corn and cob meal, $40; barley, $45; alfalfa, $35; clover, $32; silage, $8.

Barnesville Co-operative, Ohio:—Dairymen received $3.50 to $4 per cwt. for 3.5% milk during November, and 5c per point above this test. Feeds sold as follows: Larro, $3.25 per cwt.; oil meal, $3.50; bran, $2.25; cottonseed meal, $3.50; hominy, $2.75; beet pulp, $3.10; oats, $2.20; corn, $2.25.

Coshocton County, Ohio:—This organization in its first month's endeavor has been quite successful. From the 21 herds, totaling 175 cows, the high cow for November is a Jersey owned by J. L. Sicker, which produced 52.33 lbs. fat in 918 lbs. milk. Another Jersey from the same herd produced 52.18 lbs. fat in 1,065 lbs. milk.

Whitewater, Wisconsin:—Most of the cows in the association have increased their production over that of their last freshening, some of them as much as 40 per cent. This is due to better care and feeding. The November price for 3.5% market milk was $3.05 per cwt. and 4c per point above. The condensery paid 65c per lb. for fat. Milk retails for 14c per quart, butter for 60c per lb., and cheese for 27c. Prices paid for feed are: Bran, $38 per ton; oil meal, $66; corn, $22; oats, 48c per bushel.

Richfield, Wisconsin:—One member, Mr. A. A. Wiedmeyer, has proven to himself that it pays to test. After joining the association, he was encouraged to run a seven-day test, and without any preparation he made two 22-lb. butter records and one 18-lb. record. One of his Holstein cows, Johanna Pontiac Segis De Kol, made 22.5 lbs. butter and 544.6 lbs. milk 89 days after calving. In nine months she produced 13,950 lbs. milk containing 474 lbs. fat, losing the first month of her period before starting the association year. Her last calf sold for $225 in October at a sale where calves of the same age and an equally good type brought only $80 to $135. Mr. Philip Becker, another member, advocates keeping fewer cows, caring for them properly, and feeding them well. Six members are fitting for seven-day tests. Most of the dairymen are feeding balanced rations. Farmers are well supplied with corn and silage and most of them have their supply of

protein feeds on hand. Eleven head of pure-bred Holstein females were bought during October. The condensery paid $2.55 per cwt. for milk and 4c per point above or below. The cheese factory paid 65c per lb. for fat. Butter retails for 55c per lb. and cheese for 32c per lb. Prices for feeds are: Oats, 64c per bushel; barley, $1; corn, 70c; bran, $36 per ton; oil meal, $64; gluten, $52; middlings, $60.

Ellington, Wisconsin:—All members are feeding grain and most of them are using a balanced ration. Farmers are looking for lower feed prices so very little feed is stored for future use. In November the condensery paid $2.50 per cwt. for 4% milk. The creamery paid 62c per lb. for fat and the cheese factory paid 65c per lb. Feed prices are: Bran, $35.50; middlings, $35.50; oil meal, $60; gluten, $54; oats, 46c per bushel; corn 71c; barley, 90c.

Johnstown, Colorado:—The average for this association for the year 1918—1919 was 6,300 lbs. milk containing 250 lbs. fat, 214 cows completing the year. For the year 1919—1920, 312 cows finished the year and averaged 8,149 lbs. milk containing 316.2 lbs. fat. One herd in the association shows a 40% increase in butterfat in three years testing. This herd averaged 283 lbs. fat, with 10 cows, during 1917—18, 388 lbs. fat the next year with the same number of cows, and 396 lbs. fat during the year 1919—1920, with 20 cows. The November price for milk was 35c per gallon. The condensery paid 55c per lb. for fat and the creamery paid 65c per lb. Milk retails for 14c per quart. Feed prices are: Alfalfa, $10 per ton; silage, $6—$7; bran, $1.70 per cwt.; cottonseed meal, $3; linseed meal, $4; oats, $1.90; barley, $1.90; corn chop, $1.80.

Douglas County, Colorado:—Mr. W. G. Schubarth has had the high herd three months in succession and Mr. E. J. Lindquist has had the high cow four straight months. These cows are fed grain according to their individual production and the records show how well it pays. Two members have purchased 17 head of heifers, one has bought 15 high grade Holsteins, and another has bought two cows and a registered bull. Butterfat sold for 85—90c per lb. in Denver and for 75c per lb. at Castle Rock. November feed prices are: Alfalfa, $14—$16 per ton; silage, $8; bran, $1.80 to $2.50 per cwt.; cottonseed meal, $2.50—$4.50; linseed meal, $4—$5.50; oats, $1.65—$3; rolled barley, $3; corn chop, $1.80—$3.

Arkansas Valley, Colorado:—All members have silos but one. Six have two silos each. Every herd is headed by a pure-bred sire. Several breeders are preparing stock for the National Western Stock Show in January. November market milk testing 3.5% sold for $2.50 per cwt. Milk retails for 14c per quart. Feed prices are: Alfalfa, $10 per ton; silage, $5; beet pulp, $2 per cwt.; beet tops, 50c; bran, $1.35; cottonseed meal, $3; oats, $2; barley, $1.40; ground barley, $1.50; corn chop, $1.85; maize, $1.50; alfalfa meal, $1.50; shorts, $1.75; speltz, $1.25; cane hay, $6; fodder, $2.50.

Platte, Boulder, and St. Vrain Valleys, Colorado:—For three months the herd of W. A. Ewing & Son has had the highest average in the association. During November the condensery paid 55—85c per lb. for fat and the creamery paid 65c per lb. Feed prices are: Alfalfa, $8—$10 per ton; silage, $6; dry beet pulp, $31; bran, $1.85—$2.50 per cwt.; linseed meal, $4.50; cottonseed meal, $4; oats, $2—$2.50; barley, $2—$2.50; corn chop, $2—$2.40.

Logan County High School, Colorado:—This is an association of high school students who are keeping records on herds under the supervision of Mr. Sandhouse. They are doing fine work. They almost doubled the number of cows tested this month. Market milk sells for 32c per gallon and retails for 40c per gallon. Feed prices are: alfalfa, $8.50—$10 in stack; beet products, $3—$4 per acre; pulp, $2 per ton delivered; bran, $2 per cwt.; cottonseed meal, $50 per ton; oats, $2 per cwt.; barley, $1.75; corn chop, $1.50.

St. Louis County, Missouri:—Cooperative bull clubs are being organized in this county. One member of this association bought a bull from Wisconsin for a little less than $1,000. Due to her record, one average grade Jersey cow sold for $125. Three unprofitable cows were sold during November. Market milk testing 3.25% sold for $3.50—$3.90 per cwt. and 4—5c per point above. Milk retails for 12—20c per quart. Prices paid for feed are: Alfalfa, $38 per ton; clover, $30; mixed hay, $26; silage, $8—12; bran, $40; shorts, $44; ground barley, $60; Cow Chow $58; Shumacher, $58—$60; Big Q, $72; cottonseed meal, $56—$60; linseed meal, $70.

Canaan, Connecticut:—Twenty-two "boarder" cows were sold during November. One pure-bred bull was placed. Three per cent market milk sold for $3.74 per cwt. and 4c per point above this test. Bran sold for $48.50 per ton; gluten, $58.50; cottonseed meal, $58; mixed feed, $49; oil meal, $64; hay, $30; silage, $8.

Merrimac Valley and Strafford—Carroll, New Hampshire:—One new herd was taken on in November. Most of the members are buying their grain of the Farmers' Exchange. One herd had an auction to sell off surplus stock. Market milk sold for $4.59. The creamery paid 76c per lb. for fat. Milk retails for 15—18c per quart and butter for 75c per lb. Feed prices are: Bran, $45 per ton; gluten, $60; cottonseed meal, $65; oil meal, $65;

(Continued on page 1092)



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Let KODAK Sell *Your* Livestock.

You know cattle and horses and sheep and hogs. You know the pose that will bring out their strong points. The rest is easy. Kodak has so simplified photography that anybody can make good pictures—and it's less expensive than you think.

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are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalog and prices mailed free. Ask for them.
Address Wilcox & Harvey Mfg. Co., 568 W. Randolph St., Chicago, Ill.

Shipping Farm Meat

Numerous inquiries have come to our office during the past year relative to the shipment of meat or meat products to points outside the state. These inquiries indicate a lack of knowledge on the part of those offering the product for interstate shipment, and also on the part of the express or depot agent whom the shipper feels should have an adequate knowledge pertaining to this subject.

We have numerous inquiries from people living close to state boundaries and contiguous to large cities or mining towns in adjoining states which afford them the best kind of a market for veal calves and other food animals slaughtered by farmers on the farm. There seems to obtain in the minds of people wishing to market their products in this manner the idea that some regulation covers this, but they do not know just what has to be done. As previously stated, frequently the express and depot agents are not posted, and in many instances show a lack of familiarity with the regulations and are as prone to place a misconstruction on them as they are to guide the shipper in the right direction. However, the regulations provide for the legal shipment of such products and do not make such action difficult for the shipper. In fact, the law is clear and specific.

The shipper simply furnishes a certificate in duplicate describing the meat or meat product offered for shipment and certifies that on this date it is sound, wholesome, and fit for human food. The certificate should be furnished the transportation company. The following is the regular form used in such cases. It comes under Section 8, Regulation 25, of B. A. I. Order 211.

"When cattle, sheep, swine, or goats have been slaughtered by a farmer on the farm, and any meat or meat product derived therefrom is offered to a carrier for transportation from one state or territory or the District of Columbia, or to or through another state or territory or the District of Columbia, or to any place under the jurisdiction of the United States, or to a foreign country, the carrier may so transport such meat or meat product which is identified as derived from any of such animals slaughtered by a farmer on the farm. The carrier shall require, and the shipper shall make and deliver to the carrier, a certificate in duplicate in the following form: 'I hereby certify that the following described uninspected meat or meat food products are from animals slaughtered by a farmer on the farm, and are offered for transportation in interstate or foreign commerce as exempted from inspection according to the act of Congress of June 30, 1906, and that at this date they are sound, healthful, wholesome, and fit for human food, and contain no preservative or coloring matter or other substance prohibited by the regulations of the Secretary of Agriculture governing meat inspection.

"The signature of the shipper or of his agent shall be written in full. This certificate shall be separate and apart from any waybill, bill of lading, or other form ordinarily used in the transportation of meat. The duplicate certificate shall be forwarded immediately by the initial carrier to the Chief of the Bureau of Animal Industry, Washington, D. C."

Any carcass slaughtered by a farmer on the farm, or meat products manufactured by a farmer on the farm, may be shipped interstate under this certificate. This does not apply to local butchers or those conducting slaughtering establishments.

We advise keeping this for future reference.

Oregon Dairy Council

HOARD'S DAIRYMAN:—Joseph E. Dunne, president of the Pacific Coast Ice Cream Manufacturers' Association, was elected president of the Oregon Dairy Council on December 15 at the annual election of officers of the council. P. O. Powell, a member of the Oregon state legislature, was elected vice-president. F. L. Shull, manager of the Globe Mills, was elected treasurer. The secretary, Edith Knight Hill, who has been with the council since its formation and who has had charge of all the educational work, tendered her resignation, saying she believed that a good foundation had been laid and that the council is ready to get on a firmer financial basis and branch out and for this reason a good, live man should be elected secretary-manager or fieldman. The secretary has had charge of the publicity work also and she stated that she hoped that when reorganization takes place she may still be able to help in this line. The board re-elected the secretary to serve until reorganization makes necessary a change in the personnel of the force.

Mr. Dunne appointed a committee on reorganization. Fred W. Merrill, formerly of Minnesota, gave an address on plans for reorganization. He stated that Professor Bouska of Chicago said that nowhere had he tested better butter and cheese than was shown at the Butter and Cheese Makers' convention in Portland and that Oregon has a great future as a dairy state.

The council gave a vote of thanks and appreciation to Professor P. M. Brandt, the retiring president, whose leadership has been a great inspiration to the council.

E. K. HILL, Sec.

New England Ayrshire Club Meeting

Sixty members of the New England Ayrshire Club met in annual session in Boston, December 7th. C. F. Riordan of Massachusetts was elected president of the club; R. M. Handy of Massachusetts was re-elected secretary and treasurer. Speakers on the afternoon program were A. L. Tryon, J. A. McLean, E. A. Hutchins, and J. G. Watson.

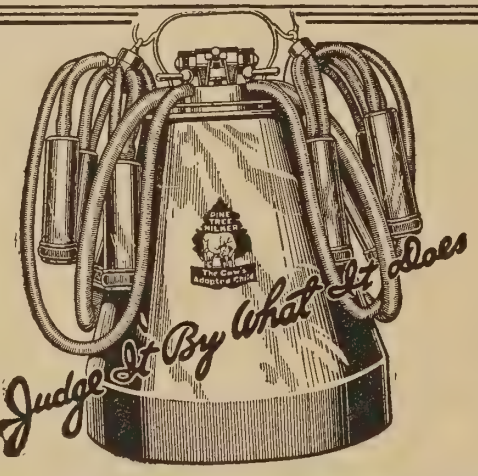
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Foundation and bottom courses of a Natco Silo. Note the still air spaces and the steel reinforcing bands.

Reduce Dues One-third

Due to the large membership and the increase in our finance, the executive committee of the American Association Creamery Butter Manufacturers decided to cut the dues from 15c to 10c a thousand for the members, on condition that all members pay on the amount of butter manufactured. The amount of dues the members will pay will be based on the calendar year of 1920 at 10c per thousand.

For the small fee of 10c a thousand, the members are entitled to one complete analysis of butter, chemically and bacteriologically, weekly. In addition to this, members who want to get their butter scored can have this done by sending in a pound weekly. This butter will be criticised and suggestions offered for improvement. This will accompany the analysis.

A weekly letter is sent to each member, giving a general review of market conditions. Also, a statistical letter is sent to each member, giving the increase or decrease in the make of butter. These statistics are based on the make of our members, who manufacture about 300 million pounds of butter annually, and cover a range of territory almost from the Atlantic to the Pacific, and extending from Canada to Alabama and Texas.

The American Association of Creamery Butter Manufacturers at the present time keeps two field experts, Professor F. W. Bouska and Professor J. W. Mitchell. Professor Bouska is well known to the creamerymen of the United States. Professor Mitchell is not as well known. He is a graduate of Queen's University at Kingston, Ontario, and was superintendent of the Kingston Dairy School for three years, leaving that position to take the chair of dairy husbandry at the Manitoba State Agricultural College, which he held for three years. He also had charge of dairy extension work in connection with his college position. Later he was professor of dairy husbandry in the maritime provinces, and had charge of dairy extension work. Professor Mitchell came to the association unusually highly recommended by Canadian authorities.

Where creameries are having trouble that cannot be adjusted by letter, they can get the service of Professor Bouska or Professor Mitchell by merely paying the railroad fare and hotel expenses while there. In the summer months, districts are mapped out and creameries in a certain territory will get the service of the expert, thus reducing the expense of railroad charges, as the creamery only pays the railroad expenses from the nearest point to their plant. The next creamery getting the service of the expert does likewise.

The dues paid, as stated above, are based on the make of the calendar year at 10c a thousand pounds of butter manufactured.

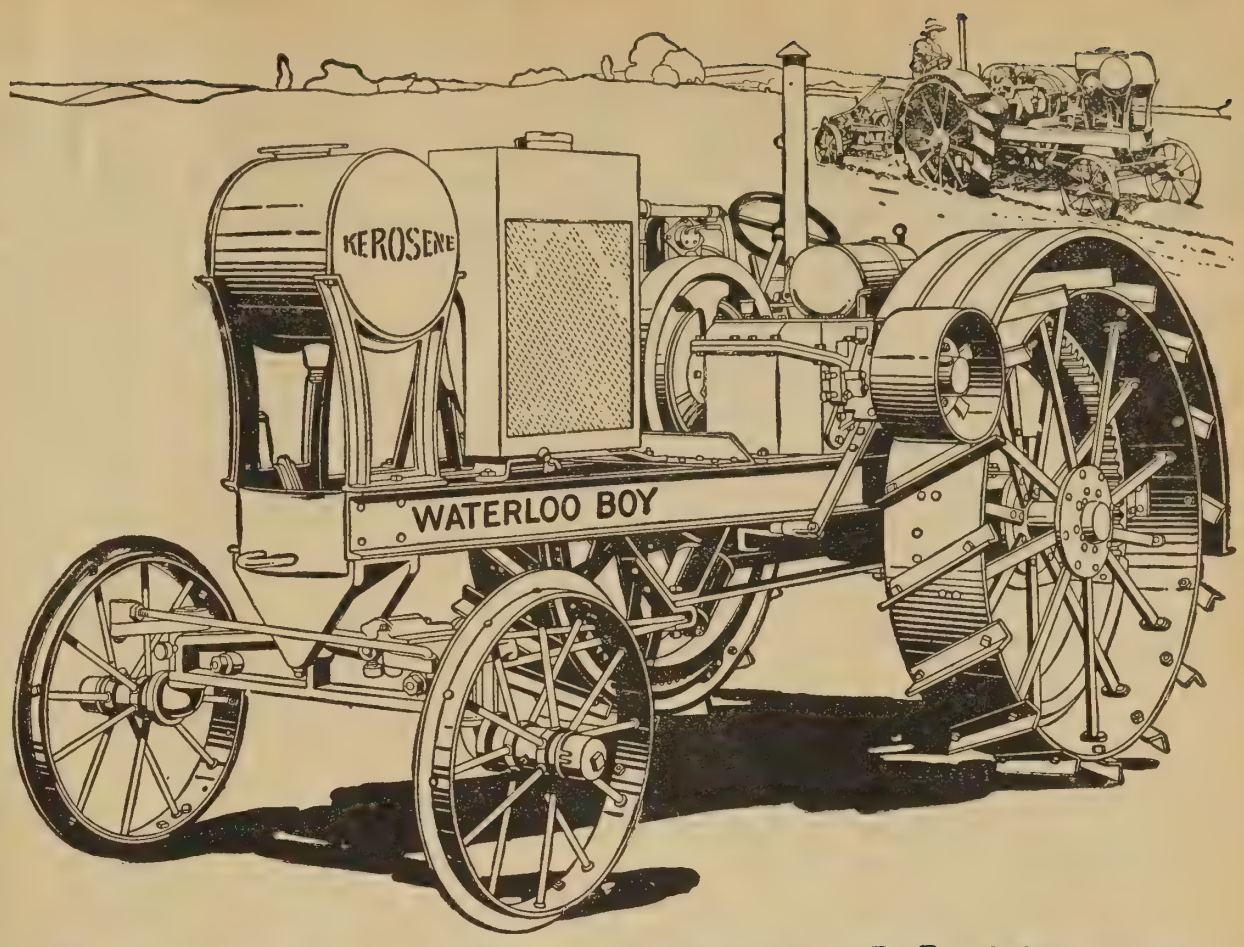
Any kind of a creamery is eligible to membership, whether centralized, individual, or co-operative. The smallest creamery is entitled to the same service as the largest creamery. Creameries making only 100 thousand pounds of butter annually are eligible to membership at $12 a year.

A resolution was passed at a meeting of the Executive Committee favoring an increase in tariff on butter and other dairy products.

G. L. McKAY, Sec.

Utah Dairy Course

Beginning January 17th, the Dairy Department of the Utah Agricultural College will give a two weeks' special butter and cheese course. A butter contest will be held Friday, January 21st. A cheese scoring contest will also be conducted.



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Mr. Huffman's four Waterloo Boys burned 2,470 gallons of kerosene in plowing his 1,520 acres, or an average of only 1.6 gallons per acre—a remarkable showing, but not unusual for a Waterloo Boy. This is the sort of economical power that appeals to farmers who want their work done well at small cost.

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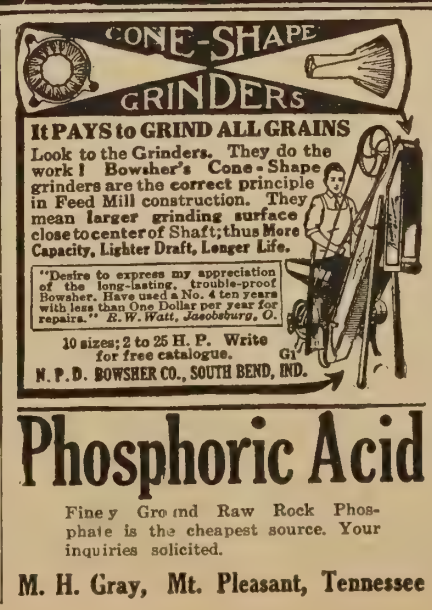
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HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

A Story About Wheat

Of Interest to Teachers of Agriculture

Bread is such a common article of food found upon the tables of American families three times each day, that most of us, if closely questioned about the interesting wheat crop which makes our daily bread possible, would realize how little we all know about the thing which is of such vast importance to the human race.

The wheat plant has long been under cultivation, and it is quite evident that its origin even preceeds human history. To be sure the varieties which are being grown today are not the same as those which were grown through the past ages. In fact it would not be incorrect to say that the varieties of common wheats known today among the American and Canadian wheat growers are quite different from those grown by the Chinese 3,000 years before the birth of Christ. Environment and careful selection have been responsible for most of the changes that have been made. Evidently the ancient peoples of Egypt and Palestine grew wheat as a cultivated crop. Proof of this is to be found in the Bible, especially in the books of Job and Matthew. But, although a story telling about the history of this great crop would be very interesting, we shall have to leave that for another time, because our story is to deal with something quite different and perhaps more important.

The scientists who have studied wheat tell us that there are eight classes, some being of far greater importance than others. I doubt if any of the Juniors who read this story will be familiar with all of these classes. To the average boy and girl, wheat is just wheat and this is correctly so because all of our experiences have been with wheat as it is commonly grown on the farms. But, even so, there are large differences between varieties of common wheats that many of us do not know. For example, there are winter wheats and spring wheats, so named because they are either seeded in the fall or in the spring; and in either class there are numerous varieties. It would be folly for any one to attempt to learn all of the varieties in either group, but to know those which have always had an important place in wheat growing is quite another matter for Juniors who are interested in agriculture.



BREAD WHEATS
Left to right: Club, common (Turkey Red).

It will not be out of place to go back again to the eight classes of wheat and learn what they are. Perhaps the most primitive of these and nearest related to the wild ancestors of wheat is the one known as Einkorn. This is a German word meaning one grain, and if you were to examine a head of this wheat you would find that each little part that goes to make up the head contains only one grain and hence the name. Einkorn is a peculiar wheat because when it is threshed the kernels remain in the chaff and the heads merely break up. This is a wheat of little importance and it is found growing on the farms of some of the poorer European farmers. It is not used for flour at all, but is used by those who grow it as a feed for stock. No American farmer grows Einkorn.

Then there are two others something like Einkorn because they too do not thresh out of the chaff. They are Emmer and Spelt. Neither of these is used for flour but, like Einkorn, they are fed to stock in place of other grains like oats and barley. Both are grown to some extent among American farmers for this purpose. Emmer will withstand rather dry climates and also rust attacks and so it is somewhat popular in such regions, taking the place of oats as a feed for stock.



TYPICAL HEADS OF STANDARD COMMON WHEAT VARIETIES
Left to right: Turkey Red (winter), Bluestem (spring), Red Fife (spring), Marquis (spring), and Preston (spring).

Because these three wheats are quite a little alike, they are placed in one class, known as the Spelt group. It should be remembered that they are of little importance and they should never be confused with the more important wheats from which bread flours are obtained.

Then there is a second group made up of three others of the eight classes. These are known as the Durum group. Durum or Macaroni wheats as they are sometimes called are by far the most important ones of this group. This is a very interesting group. Durum wheats have quite compact heads and are very heavily awned or bearded. The kernels are very hard and glassy, some varieties being light colored, while others are red like the common wheats. Durum wheats do not make the best kind of flour for bread, because it is dark colored flour and very sticky. This is just the kind of flour for making macaroni and spaghetti and hence it is used largely for that purpose. Durum wheats are grown now to quite an extent in the eastern parts of the Dakotas where the common spring wheats do not do so well on account of the dry conditions existing there. This wheat will stand dry weather, in fact, it will make a good crop where the rainfall is as low as 11 to 18 inches a year. Its production has been on the increase ever since it was introduced for this reason. Kubanka is perhaps the most important variety being grown. As important as Durum wheat is, we must remember that it does not belong with the common wheat classes.

We said that there were three classes in this second group. Durum is the first and foremost one. The others are Polish and Polard wheats. The first of these doesn't look like wheat at all, but more like rye. The heads are large and chaffy and the plants grow very tall. It is of no value in this country and is but little grown anywhere excepting in the dry regions of wheat growing areas. The other class, Polard wheats, is grown to quite an extent in some of the European countries. France grows varieties of this class, and, like the common wheats with which we are somewhat familiar, they are used for bread flours. In fact there are varieties of Polard wheats that resemble the common wheats so much that they are hard to tell apart.

Six of the eight classes mentioned have now been accounted for. They are Einkorn, Emmer, Spelt, Durum, Polard, and Polish. There remains then but two others, and it should be stated right here that these two are very important in this country. In fact, Durum wheat is the only other one which has met the needs of certain American wheat growers.

If you were to go out to California about harvest time, you would find the wheat growers there growing wheats that look quite different from the ones we grow in other sections of the country. The heads would be rather short and very compact, even more so than Durum wheat. The straw of the plants is so very stiff that lodging so common in the other



DURUM GROUP OF WHEATS
Left to right: Durum, Polard, Polish.

wheats is scarcely known. The heads are either square or club shaped and for this reason these wheats are known as club wheats. The grains are usually very light colored, in fact so much so that they are called white. They are very starchy and soft and make a flour that has little stickiness. For this reason, the flour does not make the best bread, but is used in making crackers and pastries. Club wheats seem to be adapted only to this section of the country, and for those of us who do not live there, club wheats are quite as unknown as the others already referred to.

The last of the eight classes has to do with the wheats as they are commonly known to us. This whole class goes under the name of common or vulgare wheats, and it is here that the most valuable part of our story begins. One can travel for hours through Canada and the middle west of this country and see little growing in the fields but varieties of this class of wheats. It is from wheats of this class that the best flours are made. The thousand or more varieties belonging to this class are either winter or spring wheats. Did I say a thousand varieties? Well, do not be alarmed for not very many of these are valuable to our wheat growers. Winter wheats are always more valuable where the winters are not too severe, and, since we have some very hardy varieties, winter wheats are more important in this country than spring wheats; in fact, there are fully twice as many acres seeded to winter wheats in this country as spring wheats. What is known as the middle west produces the best flour wheats of the country. Here the climate is somewhat dry and usually



SPELT GROUP OF WHEATS
Left to right: Einkorn, Emmer, Spelt.

sunshiny at ripening time. This makes a hard wheat, the kind that is wanted for bread flours. Kansas, North Dakota, South Dakota, Nebraska, and Minnesota are by far the most important wheat states, and it is for this reason that the American people are always interested in the preliminary reports about the prospects for a big wheat crop in these states.

What should a junior know about these wheats? One thing to be sure, and that is the leading varieties of both hard winter and spring wheats. We learn about the leading breeds of cattle and hogs, so why should we not want to know about the leading varieties of the crops we grow? Any live boy or girl will agree with me that we should. And so we will try to give you some help that will make you a great deal wiser about this subject.

The leading hard winter wheat grown in this country is one called Turkey Red; not because the heads are red, but for the reason that the grains are reddish brown. The reason that this is such a valuable wheat is because it is very hardy and does not winter-kill very easily and because it is a splendid yielder, producing grain of excellent quality. Kansas wheat growers grow it or some kind that has been derived from it. The heads are always bearded or awned, smooth chaffed and quite short.

Turkey Red wheat has a very interesting history. It came to this country directly to Kansas in about 1870. At that time a colony of Russians, a religious sect known as Mennonites, settled in Kansas and they brought with them a few bushels of their best wheat. This happened to be Turkey Red and because the Kansas wheat growing conditions were so similar to those of that part of Russia from which they came, it did very well when planted here. And so this best of all hard winter wheats is not a native of this country, but a foreigner like the people who brought it to us and like them also it has been subjected to American civilization, until now we claim both as very useful citizens of America. But has American civilization changed the general appearance of this wheat? Not in the least, but it has improved it in some other ways. By carefully selecting from it, we have bred strains of Turkey Red that are better yielders and hardier, and although they go under different names, such as Kanred and Wisconsin Pedigree No. 2, they are still Turkey Red wheats of a little higher order. Although there are other hard winter wheats, you will be doing very well indeed if you learn to know this much about Turkey Red, the leader of all hard winter wheats.

And now we are ready to consider hard spring wheats, the ones that are grown in Minnesota, the two Dakotas, Nebraska, Montana, and Canada. In this section the winters are usually so severe that Turkey Red would kill out, so spring wheats are the rule, and we must look to the Canadians and thank them for many of the good things which we will say about spring wheats.

To simplify matters about hard spring wheat varieties, we will make three groups of them so any variety referred to will fall within one of the three. Undoubtedly what is known as Red Fife has been the leading variety of hard spring wheats up to within the last few years. This variety, together with others which have borne the same name, made up the Fife group. The greatest difficulty in spring wheat growing has always been a matter of getting varieties that would mature early so as to escape dry weather and rust, the two things which often ruin large areas of spring wheats. Red Fife met these demands better than other varieties and so it has always been popular. But it has not been without its faults. It is a beardless wheat, smooth chaffed, with medium long heads, and, like the Turkey Red, it, too, is a foreigner if we are to believe its historical record. There are two very good reasons for its name, red because its kernels are a reddish brown color and Fife after the man who introduced it into Canada.

David Fife, an Ontario farmer, introduced this wheat about eighty years ago. This is how it happened. A friend of Fife, living in Glasgow, Scotland, secured a small sample of wheat from a cargo of wheat in the harbor of Dantzig. Knowing that Fife was interested in wheats, he sent the sample to him. It was in the spring of the year when Fife received it, and not knowing whether it was spring or winter wheat, he took a chance and seeded it the same spring. But it proved to be a fall or winter wheat because it did not head out, excepting a few heads here and there. But David Fife did a sensible thing. He preserved the few heads that did ripen and the next spring he seeded the few grains he obtained and it is from this small amount that Red Fife wheat has sprung. The fact that the original sample came from a boat load of wheat in the harbor of Dantzig leads us to believe that Red Fife is also of Russian origin. Evidently the sample sent by his Glasgow friend was a mixture of spring and winter wheats. Such names as Glyndon's Fife and Power's Fife merely refer to improved strains of the original stock grown by David Fife. This wheat has always been prized for its excellent flour making qualities, but it has never met the demands of spring wheat growers because it does not mature early enough to guarantee against the ravages of dry weather and rust, and in parts of Canada against frosts.

What is known as the Bluestem group has also been of considerable importance to growers of hard spring wheats. This is also a beardless wheat, but instead of being smooth chaffed, it is downy or fuzzy. It, too, is somewhat late in maturing and so never has really filled the place demanded of these wheats. There was a time when Bluestem wheat was grown as a winter wheat in some of the mild sections of the east, but as it advanced westward it was developed into a spring sown grain. This variety may always be known from Red Fife and other spring varieties on account of its velvety chaff. Both Red Fife and Blue stem were the leading hard spring wheats being grown up to at least 1900. About this time plant breeders began to try to develop other varieties which would mature early. The Canadians were foremost in this and so we find a man by the name of Dr. William Saunders trying to develop new wheats by crossing two varieties. Red Fife was usually one of the wheats used in the crosses on account of its good qualities as a flour wheat. It was in this way that the third group of which we will now speak came into existence. This is the Preston group, but sometimes called the Velvet Chaff group. However, the first name is the preferable one for the wheats belonging to this group are not velvet chaffed at all but smooth and bearded, so to call them Velvet Chaff would be quite confusing.

Preston spring wheat is the result of a cross made betwen Red Fife and another hard spring wheat as the parents. The work was done under the direction of Dr. Saunders. This wheat was quite popular for a time, but it has never been considered the

(Continued on page 1093)



What King Albert Learned from an American Engineer

King Albert of Belgium—in the cab window—drove the Twentieth Century Limited engine part of the way between Toledo and Elkhart.

Hamilton Watch
"The Watch of Railroad Accuracy"

As they approached Elkhart, Engineer J. A. Lux—in the gangway—pulled out his watch. His Majesty consulted his, and they compared time. After one look, "What watch do you carry?" asked King Albert. "A Hamilton," answered Lux. "Is it a good one?" inquired His Majesty. "Well, I've run trains by it for 25 years," said Engineer J. A. Lux.

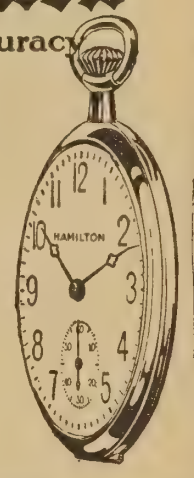
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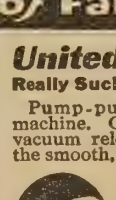




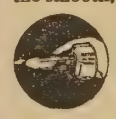
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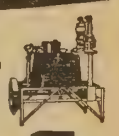
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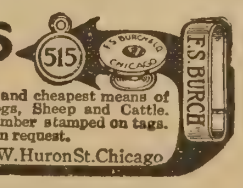
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The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

For Sale—200 head high grade Holstein cows and heifers and 6 registered bulls, consisting of 4 entire herds. Must sell at once. Also calves from 4 to 6 weeks old. Write or call. ALBERT M. HANSON, Whitewater, Wis. 23*

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C. S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows, fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S. D. SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS, Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater, Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM, Whitewater, Wis. 11-tf.

Serviceable Holstein bulls—30-lb. son of 37lb herds the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

For Sale—22 high grade Holstein cows, springing and fresh, well marked, young and good size. CRAWFORD STOCK FARM, Mukwonago, Wis. 24-2

Registered Holstein bulls, old enough for service. Fine individuals. Best of breeding, $100. Yearling heifers, $100. Older heifers bred to 36-lb. bull at low prices. My 36-lb. herd sire at a bargain. DR. BLACKBURN, Cuba, Ohio. 21-5

12 high grade Holstein heifer calves, 60-lb. dams, yearly record sire. $27 erated. Shipped C. O. D. ERNEST FERO, Route 5, Whitewater, Wis. 23-4

Do you want the very best? I offer beautifully marked, high grade Holstein heifer calves at only $20. Registered bull calves, $40. Will ship C. O. D. and if calves don't satisfy don't take them. J. M. McFARLAND, Watertown, Wisconsin. 23-3

For Sale—30 high grade Holstein milkers and springers. Will sell one or all. FRED JOHNSON, Waupaca, Wisconsin. 23*

If you want to buy high grade or pure-bred Holsteins, write BOX 528, care Hoard's Dairyman. 24-2

A 30-lb. 4-year-old bull by 33-lb. sire, ¾ white. Very good individual. Good condition, absolutely gentle. Guaranteed. $600. Also 12 heifers, four to 18 months, nine from A. R. O. dams up to 25 lbs., all sired by 32-lb. bull. Price $2,400. Address BOX 527, care Hoard's Dairyman. 24-2

Registered Holstein bull, 13 months old, show type, well grown. Dam, 23-lb. junior four. Sire, 29.50 lbs. Write price, pedigree. W. GANZ, Lyons, Wis. 24-2

Closing out herd of grade Holsteins, $100.00 each. H. A. KUHTZ, Waukesha, Wisconsin. 24*

Registered Holstein bull calves, three to six weeks old, $35.00 each while they last, registered and transferred to you. PHILLIP KEISECOMB, (Herdsman), Assumption, Illinois. 24-3

Pure-bred Holstein bulls. Sire's 22 nearest dams average 31.10. H. GARSIDE, Oostburg, Wis. 24-3

Good Stock—Registered Holstein sire, thoroughbred—unregistered and grade Holstein dams. Calves, both sexes, well marked, two to six weeks old, $25.00 each. F. O. B. Twinsburg, Ohio. FRANK T. BOUMAN. 24-2

Registered Holstein calves, either sex, also bulls of serviceable age. DIEHL, LANUS & WENTE, Montrose, Illinois. 25-3

Holstein bull calf for sale, 3 months old, nearly all white. From a 26-lb. sire and A. R. O. dam. Price $100. L. A. GRADE, Granton, Clark County, Wis. 24-3

Holstein bull, ready for service, 2 dams averaged 106 lbs. milk 1 day, 40.67 lbs. butter 7 days. $200. Terms. ROY HARRIMAN, Appleton, Wisconsin. 25-6

Registered Holstein heifer calves $75. 7 months old, $100 each. E. A. FOTH, Sparta, Wisconsin. 25-3

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio. 4*

Young registered bulls from heavy producing dams. The dam of my herd bull has a record of 768.50 pounds of fat in class B. Prices reasonable. ADAMS & SWAIN, Algona, Iowa. 14*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vranque of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

STOCK FOR SALE

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated, F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS, Mankato, Minnesota. 19*

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

For bargains on May Rose bulls with type and production, write KUHTZ BROS., Waukesha, Wis. 21*

Registered Guernsey bull calves from 1 month to 1 year. Some from A. R. dams. OTIS A. MARKEN, Valders, Wisconsin. 22-5

100 head of pure-bred and grade Guernseys. A great bargain for someone who can handle that number. Address BOX 518, care Hoard's Dairyman. 23*

For Sale—Daniel Rilma 49395, a junior 4-year-old Guernsey bull of merit. Price $150. HARRY W. DOTY, Savanna, Illinois. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Two serviceable Guernsey bulls for sale. Dams Advance Registry records average over 600 lbs. fat. HOMER RUNDELL, Livingston, Wis. 24*

Bulls—Guernsey bulls, bull calves, bulls of breeding age. Sons of Florham Victor, sons of Norwood of Pencoyd and sons of Daisy Pearl's Governor for sale. Come and see our "Bullavard." If you are short of cash we will take your note, if it is good. Also offer a few young females. W. W. CLARK, Vesper, Wis. 24-2

For Sale—Four Guernsey cows, registered. LLOYD DICKSON, Dallas City, Ill. 24-2

For Sale—Registered Guernsey bull calves, good producing dams at farmers' price. OTTO KRUEGER, 427 East Broadway, Toledo, Ohio. 24*

For Sale—Registered Guernsey bulls of serviceable age, May Rose and Sequel breeding. Dams have good A. R. records. ORE HILL FARM, Dale E. Rundell, Livingston, Wisconsin. 22-spl

Guernsey females—Six pure-bred Guernsey cows. Good type, size and production. Fully guaranteed. Fine foundation stock. Come at once. FRISSDALE FARM, Hopkins, Minnesota. 25-4

For Guernsey bulls, eleven to fourteen months old, from dams with records to 501.6 lbs. fat, write HARVEY CHRYSLER, Osseo, Wisconsin. 25-2

Extra good bull calves—I have ten fine, well grown out bull calves for sale. This ad good for $25.00 for the first five men sending this ad to me and buying a bull. Tested dams and fully guaranteed. FRISSDALE FARM, Hopkins, Minnesota. 25-4

Four serviceable Guernsey bulls. Your choice at a bargain. H. W. GRISWOLD, West Salem, Wis. 25-2

Jerseys—Cows, heifers and young bulls, Association records. H. F. ROCKWELL, Mondovi, Wisconsin. 24-4

Thoroughbred Brown Swiss heifer and bull. Unrelated. Herd Federal Tested. O. K. NELSON SONS, Peoria, Illinois.

STOCK WANTED

Wanted—Best Holstein herd sire, eight months old. $200 will buy. Must be show bull with production. Send picture. J. F. BOST, Mesquite, Texas. 24-2

Want to buy 50 head of Holstein heifers, 3-year-old close-up springers. Every one must be the right type and quality. G. J. THOMAS, Sioux Falls, South Dakota. 25*

Wanted—Registered Guernsey heifer calves or yearlings. SUMMIT FARM, Waynesboro, Pa.

Wanted—Two registered Guernsey cows. Must be fresh in January. Send pedigree and price in first letter. HIGHLAND FARM, Lock Box 4, Brucces Crossing, Michigan.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

DOGS

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

POULTRY

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 24*

EXCHANGE

For Sale, or will trade for dairy cattle, a fine half section of Pennington county land. Fargo clay soil, ready for the plow. Two and one-half miles from a good, live town. Write STUART McLEOD, (Owner), Goodrich, Minnesota.

For Trade—160 acres in Eau Claire County, Wisconsin. Want cattle, hogs, poultry, tractor. A. J. ANDERSON, Thorn St., Chicago Heights, Illinois.

HONEY AND CHEESE

Honey and cheese of superior quality in family size packages. Price list free. I. B. ROSA, Monroe, Wis. 21*

Clover honey. Ten-pound pail $3.00 postpaid. Larger sizes, write for prices. SCHULTZ APIARIES, Ripon, Wisconsin. 25-3

MOLASSES

Molasses—Richest feed, lowest cost. Write for special price. CHICAGO MOLASSES COMPANY, 1131 East 77th St., Chicago, Illinois. 25-spl

FEED BAGS

Ship your bags to LARIMER BAG CO., Washington, D. C. 11-spl

Bags—We buy second-hand bags; pay one-half freight on 200 or more. LINCOLN BAG CO., Springfield, Illinois. 3-spl

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

FARMS FOR SALE

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

137 acres fine land. 17 miles macadam roads to City Hall, Philadelphia. Owner's residence, tenant houses, stone stable, modern cow barn, 48 standing and 4 box stalls. Large implement and tool house, chicken houses. Macadam roads each side and through farm. $50,000.00—less than cost of the buildings alone. FARM 2024 N. Tenth St., Philadiphia, Pennsylvania. 8*

Grain or Dairy Farm—167 acres of best soil. Land easily tilled with tractor. Three miles from two markets. Small house, large barn with basement, three hay barns and horse barn. Buildings in fair condition, but land is high producer. Must be sold to settle Estate. Deal direct and save commissions. J. L. WHITE ESTATE, Cayuga County, Locke, N. Y. 24-3

160 acres. 2 miles, county seat. Dark clay loam, high state fertility, good 9-room house, 2 good barns, plenty out buildings, excellent 10-acre orchard, $100 per acre. Write us for farm bargains in southern Michigan. MICHIGAN FARMS AGENCY, Box 928, East Lansing, Michigan. 11*

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol 125, Madison, Wisconsin. 13-13

For Sale—Choice Ohio farms. All sizes and prices, some great bargains. Write for list. I. J. MILLER, JR., Conneaut, Ashtabula Co., Ohio. 22*

For Sale or Rent—A modern up-to-date dairy farm, ½-mile from the town of Traer in Tama County. Best equipped dairy barn in the state. For particulars write ADAM H. HOTZEL, Box 129, Traer, Tama County, Iowa. 23-3

For Sale or Rent—335-acre stock farm, north central Otter Tail Co., Minn., together with herd of Guernsey cattle and all machinery necessary for farming the place. Good soil and buildings. New barn just completed at a cost of $11,600. Located on shores of a beautiful lake four miles from Dent and 12 miles from Perham, Minn. If you want to rent, do not write unless you have plenty of help to handle a large farm and can furnish first-class references. Can give possession at any time. A. MARCKEL, Perham, Minn. 23-3

Dairy Farm for Sale—170 acres on state road, one mile from town and milk station. Running water at house and barn. Barn 36x80, with fine basement. Ten-room house, and nice condition. Hen and hog house. Ideal dairy farm with land in good state of cultivation having been a stock farm for years. Must be sold to settle estate. Deal direct. J. L. WHITE EST., Cayuga County, Locke, N. Y. 24-3

For Sale or Money Rent—186 acres at $225 per acre. 150 acres under cultivation. 30-cow dairy, gross sales $20,000. Will furnish statement showing net $10,000. Correspondence solicited. BOX 124, South Erie Station, Erie, Pa. 24-3

Farms, ask French if he has what you want. Write him and state your wants. Reference any bank here. J. R. FRENCH, Cortland, N. Y. 24-13

Good Dairy Ranch—Bargain. 1,420 acres, Iosco Co., Michigan. Divided into 12 parts; has railroad siding; has two hollow tile silos, one 16x30, one 18x40; one cellar barn 100x50, one 70x45; 8-room house; 3 good wells; over two hundred acres under cultivation, balance pasture of the very best; two miles from Hale. Price, $45.00 per acre. A stone road expected to be built this year by ranch. Address C. L. FANCHER, No. 813 Ulmer Building, Cleveland, Ohio. 24-2

Big farm bargain in New York. 396 acres, fine upland, raises large crops of corn, hay, oats and potatoes, large fields can be tractor worked, two to four miles from three small towns, nine miles to city of 14,000. Good nine-room house, fine cellar, barn 36x70, three stories, cement basement, barn 34x36, cement floor, milk house, ice house, shop, granary and wood house, well at house, water piped to barn. Buildings and stock insured for $13,800.00. In the New York milk zone, league price for December being $3.50 per 100 lbs. for milk testing 4%. For quick sale, owner includes 4 horses, 41 cows, bull, all farm machinery, milking machine, also all hay and grain at time of sale. Possession given at any time. Low price of $16,000.00 for everything, $7,000.00 to be paid when possession is taken. Thirty of these cows averaged $170.00 each in 1920. I. R. DAVIDSON, Route 1, Oneonta, New York. 23-spl

Dairy, stock, fruit and general farms. We have them at bargain prices. NEW YORK FARM AGENCY, Westfield, N. Y. 21-spl

Free map and list land bargains near Twin Cities. BAKER S-76, St. Croix Falls, Wisconsin. 6-spl

200 acres, on good road 5 miles from town of 5,000. Well improved, price reasonable. M. O. WILKINSON, Brookhaven, Miss.

Modern dairy farm for sale—"Park Farms" at Linnsburg, Montgomery County, Indiana, on traction line and Big 4 Railroad; Indianapolis 39 miles; Crawfordsville 6 miles; grade and high school half mile; Wabash College 6 miles. 325 acres; 3 dairy barns; 120 stanchions; 4 silos, 550 tons; horse barn; large log house; excellent quality of soil; location most attractive. Run as dairy 7 years. Possession at once. Favorable terms. Non-resident owner. For full particulars address WM. L. ELDER, 201 Saks Building, Indianapolis, Indiana.

For sale by owner—160 acres in fine dairy section, half mile from creamery, mile from store, school, church. Sixteen-room house, silo, basement cow barn, tool and horse barn, field barn, hen house, hog house tenant house, equipped maple sugar camp. Maple orchard, fruit, telephone. Running water in house and cattle yard. Pasture watered by trout stream. Timber for fuel. Twenty-four Guernseys (9 registered), three horses, fodder to winter stock, tools to operate farm. For quick sale, eleven thousand dollars, one-third cash. E. N. DAVIS, Route 1, McDonough, New York.

Landology special number just out, containing 1921 facts of clover land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE-RIEHLE LAND CO., 47 Skidmore-Riehl Bldg., Marinette, Wisconsin. 25-12

Auction Land Sale, January 15, 1921, Fergus Falls, Minnesota, 3 farms, 640 acres. 5% and 10% on sale day. $2,000 on 2 farms, March 1, 1921. Balance 3 to 10 years at 6%. Improved farms, black soil, all in cultivation. Will take any amount of your liberty bonds on sale at par. ERNEST A. OLSON, Owner.

WANTED TO RENT

Two brothers want to rent on shares large dairy farm. Need two houses. Prefer Ohio. ERNEST STAUFFENECKER, Foley, Minn.

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

DAIRIES

For Sale—A fully equipped, old, established dairy, together with stock and all equipment, and will rent or sell farm. The winters are mild; feed is cheap; milk retailing at 25c per quart with customers for all we have to offer and eighty-two customers on our waiting list. If you are intercsted and in the market for a real business proposition, write to me for particulars and details and if you are not,do not waste my time nor yours, by writing to satisfy curiosity. J. M. SPRINGER, Box 11, Tulsa, Oklahoma. 23-4

MILK PLANTS

Opportunity to purchase or become interested in new milk plant with $100,000 business developed. Sells pasteurized milk, cream, butter, ice cream, etc. Only plant in Central Missouri town of 25,000. Dairy farming fast becoming leading industry of county and milk production large, with Holstein herds showing highest butterfat record in state. Address BOX 519, care Hoard's Dairyman. 23-4

MACHINERY

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00, 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Empire milking machine outfit, consisting of one gas engine, one No. 4 pump and tank, four 70-lb. silver double units or pails. A bargain at $780.00. Address BOX 822, Chicago, Illinois. 22-4

For Sale—Colt Lighting Plant, never used, in original crates, $175. Empire double unit milker, slightly used pump, tank, unit, complete, $175. M. F. GOULD, Cassadaga, N. Y. 23-3

For Sale—Case 30-horse steamer, cheap. H. C. KNICKERBOCKER, Pittsford, N. Y.

For Sale—Double cylinder White washing machine. JOHN A. MULDOON, 1201 West Lake, Chicago, Ill.

For Sale—Less than wholesale 18-30 Monarch tractor. Creeping grip for soft ground. JAS. BRUNKAN, Dyersville, Iowa. 25-2

For Sale—La Crosse tractor with three bottom Oliver gang plow. Used part of two seasons. Business reasons for selling. L. R. HEAD, Madison, Wis. 25-2

For Sale—Eddie two-way sulky plow in good condition, $45.00. M. F. GOULD, Cassadaga, N. Y. 24-2

HAY

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 20-10

Alfalfa hay direct from producer, Nebraska dry land grown. For quick shipment wire ROSENBERG BROS., Lexington, Nebr. 24-4

SEEDS

Want to Buy—Medium red clover, alsike, and timothy seed. DADMUN BROS., Whitewater, Wis. 23*

Pure Grass Seeds at ½ of last year's prices, also seed corn, soy beans, seed grains, etc. Bargain list free. BECKMAN'S SEED FARM, Cokato, Minn. 24-6

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

Agents—Mason sold 18 sprayers and autowashers one Saturday. Profit $54.00. Square deal. Steady work. Write RUSLER COMPANY, Johnstown, Ohio. 25-spl

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, "The Tobacco of Real He-men," 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 23-4

MISCELLANEOUS

Men Wanted—Railway mail clerks, $110 month. List positions, free. FRANKLIN INSTITUTE, R 149 B, Rochester, N. Y. 23-spl



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted by March first. Single man to work with herd of A. R. O. Holsteins. Must be willing to help take care of cows on test as well as all other work in barn. Prefer young man with clean habits who is a hustler. Give references and salary expected in first letter. KILPATRICK BROS. CO., Beatrice, Nebr. 19*

Wanted—Good, steady, single and all round farm hand for the whole year. State experience and wages wanted. BUREAU COUNTY HOME, Princeton, Ill. 24-2

Female help wanted—A housekeeper, by a single young man on a farm. State age and reference in first letter. Address BOX 533, care Hoard's Dairyman. 24-2

Wanted—Herdsman for herd of mixed pure-bred and grade Holsteins. Herdsman must be able to keep herd records, must be experienced in feeding, both for production and for short and long time tests, also a successful calf raiser. Answer stating experience, with references and salary desired. Address WARWOOD FARM, Lisle, Illinois. 24-2

Wanted—March 15, reliable, experienced married man for general farm work. A small or no family. Give reference, age, nationality and wages. Only industrious party need apply. Address BOX 346, Mayville, Wisconsin.

Wanted—A single man of Christian principles to work on modern 30-cow dairy where Class A milk is produced. Hours from 4 a. m. to 6 p. m. If you do not like cows don't apply. Man must be well recommended. Address G. E. EMSTROM, The Meadows, Ann Arbor, Michigan.

Wanted—Railway mail clerks, $135 month. Vacancy list free. Write, FRANKLIN INSTITUTE, Dept. G 118, Rochester, N. Y. 25-5

Wanted—Middle aged herdsman to take charge of modern dairy barn. Prefer married man with no children. G. J. THOMAS, Sioux Falls, South Dakota. 25*

Experienced married herdsman to take charge herd registered Holsteins. Must thoroughly understand feeding and fitting for test work. Wife to board extra men in dairy. This is a real opportunity for a man of the right calibre. Very pleasant living quarters. In reply give all particulars as to experience, references and wages expected. BOX 232, New Castle, Pennsylvania.

Wanted—Married man for foreman on large dairy farm producing milk and cream for market. Must be capable of handling help and producing results. Excellent proposition for right party. References required. H. B. HOWELL, Preston Farms, Route 82, Jamestown, N. Y.

Wanted—Married man for general farm work. Wife to assist with housework in modern home. HENRY COIT, Galesville, Wisconsin.

Wanted—Good, steady woman to take care of old ladies and do general housework. No cooking. BUREAU COUNTY HOME, Princeton, Illinois. 24-2

Dairy manager—Married, six years' experience running dairy farm with most profitable results. Best references. Right man to make your dairy pay. Write offer. GASTON RIGAUX, General Delivery, Moline, Illinois. 25*



Advertising in this department is 7c per word. Remit in advance.

HELP WANTED

Wanted—Married man March 1, on dairy and pure-bred Poland China farm, to work for wages until he proves his ability to handle the job alone, then percentage of income or partnership. Must be a hustler and a natural stock feeder. Address BOX 546, care Hoard's Dairyman.

Wanted—Experienced single man to handle cows on semi-official test. Good opportunity for men who can get results. State experience and salary desired in first letter. Address BOX 547, care Hoard's Dairyman.

Wanted—Single man. General farm work, milking. Registered Holsteins. Steady employment. Give age, weight, experience, wages expected. W. J. MARTIN, Darlington, Wisconsin.

Wanted—Married man, with small family, as working foreman on 200-acre ranch. Familiar with handling sunflowers for silage, soiling crops and the care of hogs preferred. House, garden and cow furnished. Must board extra help. State wages expected in first letter. E. F. GENTRY, Wallace, Idaho.

HELP WANTED

Wanted—Single man for milk room and creamery work. Give references and wages expected. SPRING GROVE FARM, Fort Wayne, Indiana. 25-2

POSITIONS WANTED

Young man wants job on dairy farm. Can run milkers and separator. ARVID NICK, 333 Messer St., Rhinelander, Wisconsin.

Estate manager disengaged March 15, 1921, desires correspondence with owner of large estates who are in need of a practical, energetic manager, 3 years present position. Modern methods of farming, up-to-date machinery, drainage, construction work, tree surgery. American, Protestant. Married, no family. Age 48. Address BOX 548, care Hoard's Daryman.

Position wanted by middle aged, single man in dairy barn (no outside work). Have worked in dairies all my life, and am experienced in Sharples milking machines, also experienced in the manufacture of butter and cheese. State wages and full particulars in first letter. Address BOX 508, care Hoard's Dairyman.

Herdsman dairyman—Agricultural school graduate. Six years' experience show cattle and sanitary dairying, excellent buttermaker. Well recommended. HARRY SHOR, 106 Fulton St., New York.

Position wanted by single man, 37 years old, 17 years' experience. Understand all dairy work. State wages. Address BOX 543, care Hoard's Dairyman.

Wanted position on Wisconsin farm by March first. Good dry hand milker and understand milking machines. Good habits, age 22, finest reference. Address BOX 545, care Hoard's Dairyman.

Herdsman—Young, single, American, employed by one man nine years. Jerseys. Expect best of wages and willing to earn them. PRESTON B. WATSON, Rockford, Michigan.

POSITIONS WANTED

Position wanted as manager. I managed the farm and the herd that made the world's record. 50 head on test all ages from 2 years. Averaged last year, over 11,000 lbs. of milk, 450 lbs. of fat. I understand everything a first-class manager should. All stock, machinery and land. Manager past 12 years. Graduate 1906. Investigate. Address BOX 541, care Hoard's Dairyman.

Position Wanted—By a single, reliable, energetic young man as herdsman. Life time experience, familiar with A. R. work, good calf raiser, best of references. Write JAMES SHORTLE, 5907 Francis Ave., Cleveland, Ohio. 24-3

Wanted—On high class pure-bred dairy farm, Guernseys preferred, position as herdsman. Lifetime experience, have developed several trophy winners, American, married, small family. Unquestionable reference. Address BOX 540, care Hoard's Dairyman.

Farm Superintendent—Scientific, practical, energetic, desires position on large modern farm or estate and will put same on paying basis. Experienced in Advanced Registry, pure-bred stock, modern farming, tractors, orcharding, road and building construction. Married, no family. Excellent references. Address BOX 544, care Hoard's Dairyman. 25-4

Wanted Position—Or on half share basis with some good dairy farmer in New York State, by single man, 36 years old, who has his mother with him to keep house. Might buy later. NICK FUCHS, Route 3, Cuba City, Wisconsin.

Position wanted by married and single men. Experienced on modern dairy farm. Write wages and particulars. BOX 542, care Hoard's Dairyman.

Position wanted by experienced dairy hand, single, middle-age, strong, healthy, willing worker, no tobacco habits, etc. Reference furnished. Address BOX 539, care Hoard's Dairyman. 25-3

POSITIONS WANTED

Position wanted as farm manager. Single, agricultural college training, life time experience with live stock and crop production, up-to-date with farm implement and tractors, 10 years in managerial capacity, best of references. Address BOX 509, care Hoard's Dairyman. 22-8

Farm manager and graduate veterinarian with energy, push and proven ability, desires position on large, modern, certified milk or stock farm, where results will be appreciated. Fifteen years' experience with pure-bred stock and everything pertaining to the management of an up-to-date farm and dairy. Breeding for results a specialty. No proposition too large. Married, age 36 years. Best of reference. Address BOX 537, care Hoard's Dairyman. 24-2

Farm and dairy manager, with energy, push and proven ability, desires position on large, modern, certified milk or stock farm, institution or private estate where results will be appreciated. Seventeen years' experience in Advanced Registry, pure-bred stock, modern farming and in everything pertaining to the successful management of an up-to-date farm and dairy. Breeding for results a specialty. No proposition too large. Married. Age 38. Excellent reference. Address FARMER AND DAIRYMAN, 4463 North Uber Street, Philadelphia, Pa. 19-spl

Single man, age thirty, wishes position as working foreman on farm. Fully understand modern farming in its various branches, an expert on all up-to-date farm machinery. Lifetime experience, best of references from last employer. ROY E. GARDNER, North East, Md. 25-2

Experienced herdsman, single, wants position. Understands feeding and can produce results. Place where A. R. O. work is done, preferred. Best references. State wages in first letter. Address BOX 538, care Hoard's Dairyman.

Consigned to the Waukesha Holstein Bull Sale — January 12

HIS DAM



PABST WHITE CLOVER 2D

Butter 7 days, 28 months of age.....19.15 lbs.
Milk, 7 days, 28 months of age.....475.00 lbs.

She's a combination of the blood of Korndyke Segis Johanna and King Pontiac Champion.

Dicmere Korndyke Creation

Born July 10th, 1920.

THE COMBINED BLOOD OF:

Sir Pietertje Ormsby Mercedes,
"The World's greatest sire of Show Ring Winners and Yearly record daughters"

Spring Brook Bess Burke 2nd
The 1200-lb. daughter of "The greatest mother of the breed."

Korndyke Segis Johanna
Sire of the World's record $30,000 three-year-old.

King Pontiac Champion
Sire state champion long distance cow, Champion Dora Korndyke.

HIS SIRE



CREATOR

His dam, Spring Brook Bess Burke 2d, has three records over 1,000 lbs. His sire is S. P. O. M.

H. E. DICKENSON

Oconomowoc, Wisconsin

WAUKESHA HOLSTEIN BREEDERS'
SECOND ANNUAL BULL SALE—JAN. 12, '21
70 Pure-bred Holstein Bulls — Six Months to Two Years Old



His sire is S. P. O. M. 41st, the richest yearly record bull in the world. His dam is A. W. P. Alma Coin, a 16-lb. 2-year-old, now on yearly record.



You will find a great number of bulls of this type and breeding from 30- or 40-lb. sires some with yearly record dams with over 1,000-lb. records, and from the choicest young cows, some with records of close to 1,000 lbs.

The man who is looking for a pure-bred bull to increase the production of his herd, grade or pure-bred, will never have a better opportunity for the selection of a good bull from the best blood lines.

Individually Selected and Guaranteed Breeders
[The Holstein Industry is the Most Substantial Farm Industry of Today]

You are invited to come and inspect the choicest lot of bulls ever consigned to a public sale.

Sale commences at 10 A. M. in heated sale pavilion, Waukesha, regardless of weather conditions. Dinner at noon.

There Will Be:

A 10-month-old son of the 30-lb. bull, Colonel Pontiac Korndyke, out of a 24-lb. daughter of Terrace Lawn Hengerveld Segis. She will make between 800 and 900 lbs. of butter in 305 days. She is a sister of the First Prize Get of Sire at the National Dairy Show, 1920.

A 5-month-old son of Creator out of one of the best young cows whose dam combines the blood of Korndyke Segis Johanna and King Pontiac Champion.

A yearling son of Spofford Pietertje Echo out of the 29-lb. Molly Spofford Pietertje. His two nearest dams average 570 lbs. milk in 7 days.

Three yearling sons of Beauty Pietertje Prince 15th out of A. R. O. dams, one of whom is making in the neighborhood of 30 lbs. butter at the present time.

Two yearling sons of Hillvale Endymion out of A. R. O. dams.

Three yearling sons of Pabst Champion Albert, a brother to the State Champion Milk Cow, Champion Dora Korndyke with 1,315 lbs. butter in 365 days, and out of Ormsby cows with A. R. O. records up to 22 lbs.

A son of Carnation Ormsby Pet out of a 21-lb. 3-year-old with 575 lbs. milk.

A yearling son of King Pontiac Boon Artis, sire of the First Prize Senior Bull Calf at the Wisconsin State Fair, 1920.

Two yearling sons of Bairdland Pontiac Champion, Grand Champion Bull at the Waukesha Dairy Show, 1919.

Two yearling sons of Meadow Holm Palestine Ormsby out of A. R. O. dams with records on all sides.

Three yearling sons of King Superba, sire of the first and second prize Get of Sire, Wisconsin State Fair, 1918, out of record dams up to 25 lbs. as 4-year-olds.

Three yearling sons of Pabst Blackberry Korndyke, a brother to the World's Record Three-year-old and out of A. R. O. dams.

Three yearling sons of Hengerveld Salo Beets De Kol out of some of the choicest cows of the breed.

Three yearling sons of Woodcroft Perfection, Wisconsin's first 40-lb. bull with a yearly record dam of over 1,000 lbs.

OTHERS EQUALLY AS GOOD. AN OPPORTUNITY TO SELECT A "BRED FOR PRODUCTION" BULL AT YOUR OWN PRICE

Get a Catalogue at the Sale

Waukesha County Holstein-Friesian Breeders' Association

Waukesha - - - Wisconsin

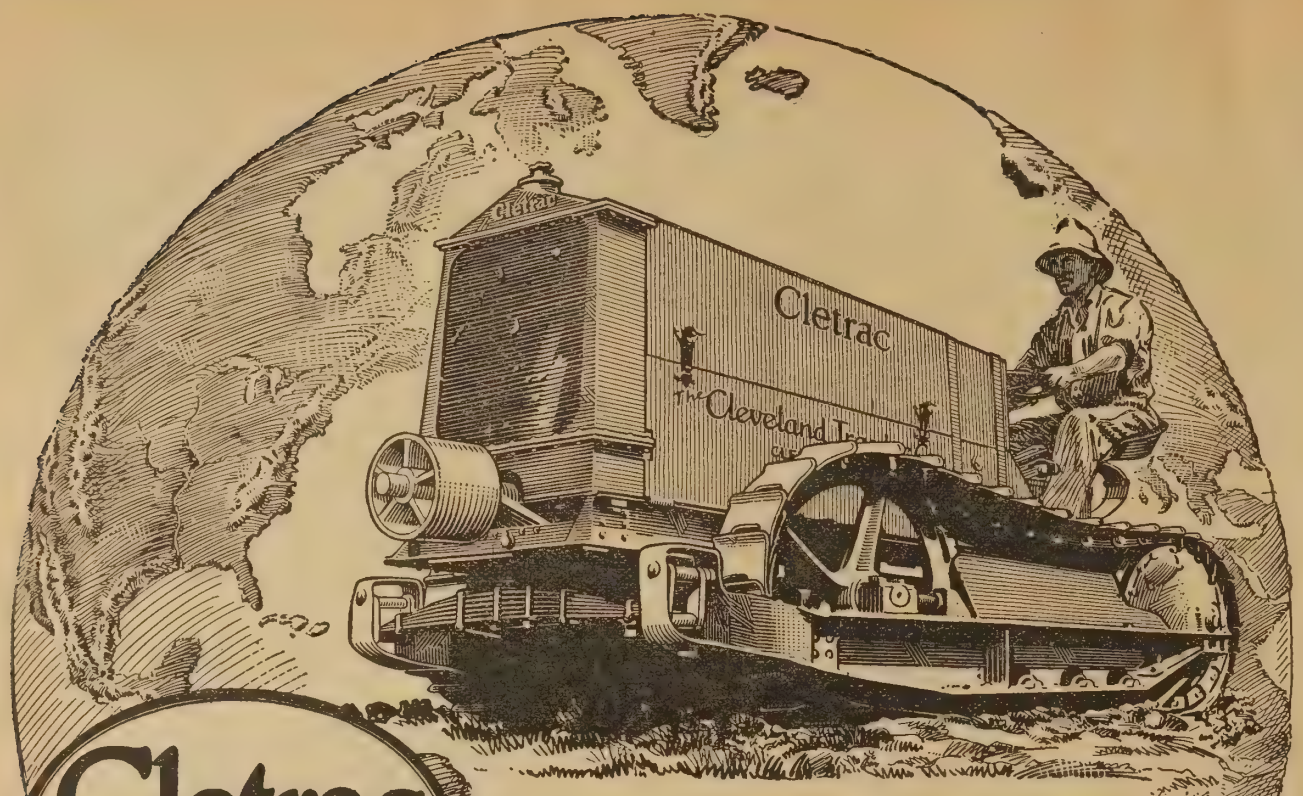


A yearling son of S. P. O. M. 43rd, sired by S. P. O. M. and from the famous Aaggie Wayne Peep with over 1,235 lbs. butter in 365 days. His dam is Ashburn Hengerveld Dora with over 30 lbs. butter in 7 days. See the catalogue. He's a show bull.



A yearling son of Sir Korndyke Fytje Pietertje, whose dam is one of the best daughters of S. P. O. M., World's Greatest Sire of Yearly Record Daughters. His dam is a young cow that has 27 lbs. at the present time and will be tested again before the sale.

Each animal comes from a state or federal tested herd and is sold subject to a 60-day retest.



Cletrac
TANK-TYPE TRACTOR



EASY ON A TRACK THE CLETRAC WAY

SPECIFICATIONS

Horsepower: 12 at drawbar, 20 a belt pulley.
Length: 96 inches.
Width: 50 inches.
Height: 52 inches.
Weight: 3420 pounds.
Turning Circle: 12 feet.
Traction Surface: About 800 square inches
Center to Center of Tracks: 38 inches.
Belt Pulley. Dia. 8 inches, face 6 inches.

"Stands Up" The World Over

CLETRAC carries power farming to the four corners of the earth. Its ground-gripping tracks, its heavy-duty motor and its sturdy construction are helping to modernize the farming customs of sixty-five countries.

In the far North where the short season makes speed the first consideration, Cletrac's "more work per day" ability has won prompt popularity among the farmers. And it is equally in demamd in tropical countries where man and beast so quickly succumb under the burning sun.

Cletrac's ability to stand up under constant use counts most in the far places where broken or worn parts may mean weeks of idleness. And, of course, it's just as big a factor in Cletrac's year-'round dependability here at home, too.

The Cletrac story of power farming is told in the interesting booklet "*Selecting Your Tractor.*" We will gladly send you a copy on request.

The Cleveland Tractor Co.

"Largest Producers of Tank-Type Tractors in the World"

19005 Euclid Avenue **Cleveland, Ohio**

What of Denmark

HOARD'S DAIRYMAN:—Denmark, the home of cow testing associations, has nearly 700 active associations. In the United States there are fewer than 500 and yet Denmark is one-sixth the size of the single state of Iowa. The first associations were organized in 1884 and still operate. Soon after their organization the Danes sent nineteen young testers to Russian Poland to introduce the work into that territory. This was the first piece of International Dairy Extension work on record.

Somewhat on the same plan, a number of Danish dairymen visited the United States last summer. They reserved space in the National Dairy Show and also in a New York show for a dairy products display. In New York they invited a large number of distributors to banquet with them and told them of dairying in Denmark. Now these same men sell thirty-three per cent more Danish butter each month than was imported from all countries during 1919. Twelve million pounds, or enough to feed the entire United States three days, arrives each month and is bought readily because of its advertised quality.

When Denmark has a surplus, or the price drops, she makes a market. In the United States we resort to selling our cows, closing our condenseries—one of the largest has shut all but three of their twelve—and wailing about the market.

TEMPLE R. LOVETT.
Iowa College of Agriculture.

The World's Cow Testing Associations

A recent news letter from the Canadian Department of Agriculture contains tables showing the number of cow testing associations in operation in the various countries of the world during 1919 and in the years preceding the great war. These figures were taken from a report issued by the Co-operative Danish Agricultural Societies and entitled "The Dairy Record Associations During Twenty-five Years."

We give below the table showing the number of associations in operation during 1919, together with their membership and the number of herds tested:

Country	Associations	Members	Cows
Denmark	636	15,000	208,900
Sweden	427	5,503	102,812
Norway	102	2,080	23,286
Finland	142	2,463	41,927
Germany	333	4,560	135,540
United States*	468	11,498	203,472
England	44		32,000
Scotland	22	426	17,827
Canada*		3,847	33,382

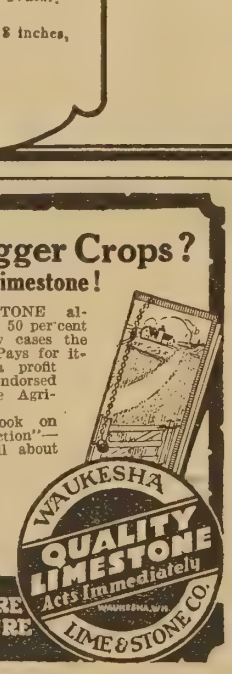
*Figures given are for the year 1920 instead of 1919.

Pure-bred or grade dairy cows frequently earn for their owners 25 to 100 per cent more than the returns received from scrubs.

Want Bigger Crops?
—Then Use Limestone!

QUALITY LIMESTONE always increases crops 50 per cent or more. In many cases the yield is doubled. Pays for itself and returns a profit the first year. Endorsed and used by State Agricultural Dept.
Write for free book on "Increasing Production"—it will tell you all about QUALITY LIMESTONE and what it will do for you.

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PATENTED Self aligning **TENSION FENCING SYSTEM**
10 Times Strongest, No Breaking, Buckling Etc.
Half the Cost — No Concrete
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Learn Auctioneering
at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog.
Jones Nat'l School of Auctioneering, 38 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

Association Notes

(Continued from page 1085)

ground oats, $55; hominy, $45; N. H. Dairy, $63; silage, $10; hay, $25—$28.

Claremont and Lebanon, New Hampshire:—Five unprofitable cows were sold in November. There are 24 cows on official test. Five of the twelve separators tested this month need adjustment. For 3.7% market milk, a price of $4.22 was received, plus 6c for each point above this test. Fat sold at the creamery for 67c per lb. Milk retails for 14—16c per quart and butter for 75c per lb. Local feed prices are: Bran, $50—$55 per ton; cottonseed meal, $58—$75; corn meal, $48—$68; gluten feed, $55—$75; linseed meal, $62—$80; ground oats, $50; hominy, $69; beet pulp, $70; Union grain, $80; mixed hay, $20; silage, $8.

Clinton, Pennsylvania:—More heifer calves are being raised than last year due to records which have pointed out the profitable producers. One carload of gluten, one of cottonseed meal, and one of bran were bought cooperatively by the testing association and the Grange. Most of the members selling milk have signed the Dairymen's League contract. Three per cent milk sold for $3.65 per cwt. and 4c per point above in November. Fat sold for 63c per lb. at the creamery. Milk retails for 7c per quart and butter for 67c per lb. Feed prices are: Gluten, $60 per ton; bran, $43; cottonseed meal, $64; oil meal, $65; corn and oats, $49; corn meal, $67.

When writing advertisers please mention Hoard's Dairyman.

Sale Announcements

Jan. 12—Holsteins. Waukesha Co. Holstein Bull Sale at Waukesha, Wis. W. L. Baird, Sec'y.
Jan. 12-13—Holsteins. New York State Breeders' Sale, Syracuse, N. Y. New York Holstein-Friesian Association, E. R. Zimmer, Sec'y.
Jan. 28—Holsteins. Pennsylvania State Sale at Harrisburg, Pa. S. F. Zook, Mgr.
Jan. 29—Holsteins. Northern Illinois Live Stock Breeders' Ass'n. Sale at Rockford, Ill.
Feb. 1, 1921—Holsteins. Watertown Holstein Bull Sale at Watertown, Wis. Francis Darcey, Sale Manager.
Feb. 26—Holsteins. John Wuethrich's Holstein Sale at Greenwood, Wis.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
April 24-25—Holsteins. Waukesha County Holstein-Friesian Association Sale at Waukesha, Wis. W. L. Baird, Sec'y.
May 3—Holsteins. Clark County Quality Sale at Owen, Wis. J. Wuethrich, Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 12—Holsteins. Jefferson County Holstein-Friesian Breeders' Ass'n. second consignment sale. A. F. Gafke, Sec'y.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.
May 25—Guernseys. Portage County Guernsey Breeders' Ass'n. Sale of pure-bred cattle at Stevens Point, Wis. R. K. McDonald, Sec'y.

A Story About Wheat

(Continued from page 1089)

equal of Red Fife. It is a bearded wheat with rather long heads. It will be easy to remember among the other spring wheats for it is the only one of the important varieties that is bearded. It has been called various names in different sections of the wheat belt, Preston, Velvet Chaff, and Blue Ribbon being among the commonest ones.

Our Canadian Juniors and also those living in the great Northwest of this country will wonder why we have not said anything about Marquis spring wheat. We have kept this one for the last because we believe it is the most important variety of hard spring wheat being grown at the present time. For this valuable addition to spring wheat varieties we are all indebted to Dr. Charles E. Saunders of Ottawa, Can.

He crossed Red Fife on a spring wheat known as Red Calcutta. This was done about 1892, but it was not until about the year 1900 that the selection was made which resulted in the prize Marquis. What Dr. Saunders was trying to find or produce was a wheat that would ripen earlier than Red Fife, but that would still have the good milling qualities of Fife. So he figured if he crossed Red Fife on a variety like the Calcutta, an early variety, he might combine the qualities of the two in a new wheat. And that is exactly what he did. Marquis ripens about a week earlier than Fife and its milling qualities are just as good and perhaps a little better. He called this wheat Marquis, I presume, for the reason he regarded it as the nobility among all other varieties. Because it is early, it usually yields a better crop than Fife.

Marquis wheat is beardless and smooth chaffed like Fife, and it is rather difficult to tell the two apart. However, upon close inspection, it will be seen that Fife heads are a little longer and they are not quite as compact as Marquis. Because it looks so much like Fife, we shall place it in the Fife group already referred to. The kernels are short and stubby with quite a wide V-shaped crease. A bushel of good Marquis will give about 40 to 45 pounds of flour of fine quality.

It seems almost unbelievable that this wheat which is now so popular all came from a single head. But such is the case, and were it not for just such patient men as Dr. Saunders, spring wheat growers would never have known this wonderful variety.

Junior Letters

Hoard's Dairyman Juniors:—We live on 42 acres of land and have 11 cows and a bull. I have a rabbit and expect her to have little ones. I have a Guernsey cow and she will have a calf soon. I have no brother or sister. I am in the 7th grade. I like to read books and interesting stories. We have two horses and two pigs. I have 28 White Leghorn chickens that will lay this winter. Wishing good luck to the juniors.

Oregon. Henry W. Meyer.

Hoard's Dairyman Juniors:—I live on a sixty-acre farm. We are milking three cows and have a heifer that will freshen soon. I have a high grade Holstein calf. Papa gave it to me. He also gave me a sow. She had six little pigs and I sold them for $5 apiece.

Papa is trying to get the county agent to start a calf or pig club.

We have had bad luck this summer. Three of our horses died.

I would like to have some of the juniors write to me. My address is R. F. D. 1, Centreville, Mich. Leo Cook.

Hoard's Dairyman Juniors:—I have a calf, lamb, and seven chickens. I live on a farm of 300 acres. We have 20 cows, 4 head of young stock, six horses, fifteen pigs, and 150 sheep. Good luck to all the juniors. I wish some of the juniors would write to me. I will answer every letter. My address is Hoosick Falls, N. Y. Harry Guiden.



"Old Number One," the first OilPull, built in 1909, has worked ever since and isn't half through. Repairs cost less than 5c a day. Owned by Frank Schultz, Agar, S. Dak.



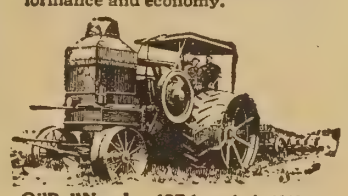
OilPull Number 174, built in 1909, 12 years ago. The owner, C. J. Chandler, Lincoln, Kan., says it will last another decade. The only renewed parts of motor are four piston rings.



OilPull Number 314, owned by F. Gasperich, Onida, S. Dak. Built in 1909, it has cropped from 600 to 900 acres a year. Pulls eight bottoms in soil so tough that eight horses can't pull a single bottom.



"The Swamp Angel," so named by proud admirers in Northern Indiana for its ten years' work in the muck of the famed Kankakee. Has a record of marvelous performance and economy.



OilPull Number 437, bought in 1910, owned by James Moss, Blue Island, Ill. Is still "young" after 11 years of hard, faithful work on the farm, and moving buildings at odd times.



Buy a Tractor on Performance —*not* Promise

THAT'S the one right way to buy a tractor—not on promises of what it *may* do, but on the record of what it *actually has done* over a long period of years in the hands of thousands of owners.

The twelve year performance record of the Rumely OilPull tractor stands out as a safe guide post to the tractor buyer.

The first OilPull tractor, built over twelve years ago, is still on the job. And hundreds of other old OilPulls—still going strong—prove that unusually long life is the rule with the OilPull, not the exception.

And the OilPull you buy today has the same basic features of design and in addition is greatly improved and refined through twelve years of field service and constant factory tests. That is why the OilPull is, as it always has been, cheapest in cost per year of service.

The OilPull tractor has for years held all the world's official tractor fuel economy records. It is the only tractor with which is given a written guarantee to successfully burn kerosene at all loads and under all conditions.

Economy of upkeep is as marked. Less than $200 has been expended on "Old Number One" for repairs during its twelve years of work.

Truly, it is the part of wisdom to prefer a tractor with a record of performance such as this and in addition you have the assurance of such splendid features as 25% overload capacity, cooled with oil, double system of lubrication, Hyatt Bearings, and Rumely service including a factory trained expert for every ten tractors in use, scattered throughout the length and breadth of the land.

There are four sizes—one to fit your farm—3 to 10 plow. Talk with your Advance-Rumely dealer or write us direct.

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LaPorte, Indiana
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For kids wash clothes



RENFREW DEVONSHIRE CLOTH
32 INCH

A yarn-dyed fabric. Outwears Galatea. Stands the strain.

Send for color card to your dealer or to

RENFREW MANUFACTURING CO.
ADAMS MASSACHUSETTS
Established 1867

"Perhaps You Don't Know"

says the Good Judge

How long a little of the Real Tobacco Chew will last.

Nor how much genuine chewing satisfaction the full, rich real tobacco taste will give,

Ask any man who uses the Real Tobacco Chew. He will tell you that this class of tobacco will give more satisfaction—and at less cost—than the ordinary kind.



Put up in two styles

W-B CUT is a long fine-cut tobacco
RIGHT CUT is a short-cut tobacco

Weyman-Bruton Company, 1107 Broadway, New York City

? Larro-feed

Many Imitations Prove Its Superiority

How much milk will it produce?

That's what counts in buying your feed.

Not how much it costs but how much milk it produces.

How much profit it puts in the bank.

You will find that the extra milk you get from Larro pays not only the extra first cost, but makes you a nice profit besides. You can afford to pay three or four cents more to feed a cow when you get a quart or two more milk.

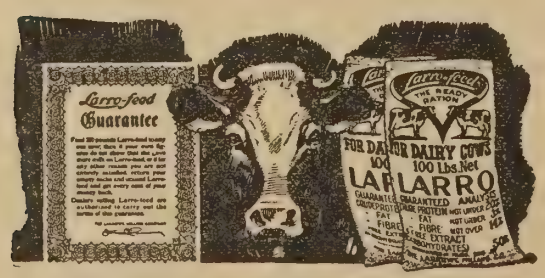
Remember, that no matter how much milk your cows are now giving, you are assured that with Larro they must give more — or you get your money back.

Write for the names of successful dairymen in your neighborhood who use Larro year after year for just one reason — ***because it makes more money for them.***

The Larrowe Milling Company

204 Larrowe Bldg., Detroit, Mich.

(4)



"You Get More Milk or Your Money Back"

Butter Markets Hold Firm

[Report by U. S. Bureau of Markets.]

After almost a month of weak and unsettled conditions butter markets appear to have taken a turn upward. For the week ending Dec. 18, trading was considerably better and there was a firmer tone on all markets. An important factor in stimulating consumptive demand, thereby causing more active trading on the wholesale markets, was the fact that retail prices, which up until recently have been relatively high, were brought down to lower levels.

Storage Butter Surplus Heavy

The monthly cold storage report shows that total holdings in the entire country on Dec. 1 were 79,889,000 lbs. This is a surplus of 6,235,000 lbs. over last year, and 14,779,000 lbs. over 1918 on the same date. The reduction of stocks during November this year amounted to 21,889,000 lbs., as compared with a reduction during November, 1919 and 1918, of 26,820,000 lbs. and 15,763,000 lbs. respectively. The storage movement in the four large markets is much lighter than in 1919. During November last year the reduction in the four large eastern markets represented close to 75% of the total reduction in all storages, but this year the reduction was less than 60% of the total. A year ago the situation was helped somewhat by export trade, which during the last three months of 1919 relieved domestic markets of some 7,700,000 lbs. of butter, much of which no doubt came out of storages. This year, however, there is practically no export trade and in addition importations are an influential factor in the slow movement of storage stocks.

Foreign Arrivals Lighter

No large cargoes of foreign butter arrived during the week. Butter from the heavy cargo of a week ago was available on the New York market, and showed up better than some of the recent shipments. Orders for Danish butter have been considerably checked by lower domestic prices. Even the low prices quoted on new offerings do not look particularly attractive to buyers. Some shipments are coming on consignment, and others have been shipped subject to inspection by the buyer and guaranteed free from mold. There are said to have been rejections on a few of these lots. Recent importations include small lots from Holland.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending December 18, 1920, and the corresponding week last year were as follows:

	Week ending Dec. 18	
	1920	1919
	Cents	Cents
New York	54.53	73.00
Chicago	50.71	67.00
Philadelphia	54.83	73.20
Boston	52.83	71.80
San Francisco	47.41	65.90

The receipts of butter at these markets for the week were 5,549,940 lbs. as compared with 5,160,546 lbs. a year ago and 6,196,354 lbs. last week.

Accredited Herd List

Accredited Herd List No. 3, just issued by the United States Department of Agriculture, is the official record of progress in tuberculosis eradication under the accredited herd plan. So extensive has the work become that the list of accredited herds, together with summaries, requires 52 printed pages and three times as large as a year ago. And this does not include herds which have successfully passed one official tuberculin test with a view to being accredited. Such herds are listed in two supplements to the main list.

Accredited Herd List No. 3 is now



4,200 Eggs From 48 Hens

Simply write me and I will send you a big double size box of my famous **Buttermilk Compound Tablets** by return mail, postpaid. I want you to know that you can double and treble your poultry profits by doubling or trebling your egg yield—perhaps get five to seven times as many eggs as did many of my friends last winter by using these wonderful tablets. Fed in drinking water or feed. Because I want these tablets known in every township in America I say: Try them at my risk. If you like them, tell your friends. If not, you are not out a cent.

Over 10,000 People Wrote Me Last Year

Here are a few samples of the kind of letters I get from all parts of the United States.

4,200 Eggs.

I used two boxes of your tablets. Before using them got only 6 eggs a day. Within two weeks was getting 12 to 15 eggs a day. In seven months I got about 350 dozen (4,200) eggs from my 48 hens. I did not have any Roup. I give your tablets the praise.
MRS. ARTHUR TUCKER, Wilkinson, Ind.

75 Eggs Instead of None.

I found the tablets were fine to start hens to laying. Before using the tablets I wasn't getting any eggs. Within 10 days after using tablets increase started. I was finally getting 75 eggs a day and fed the tablets until spring.
MRS. R. H. TULTZ, Scranton, Kans.

Makes 'Em Lay in Coldest Weather.

Last winter I fed two boxes of your tablets mixed with feed. Before using tablets got only 12 eggs a day—afterward 30 to 36 eggs a day. This was within three weeks. After feeding the tablets six weeks got 50 and 60 eggs a day and in the coldest weather in winter.
MRS. ELMER HOTTMAN, Ridgeway, Wis.

Best Tablets Made.

The Buttermilk Compound Tablets I think are better than the common tablets. I got more eggs within two weeks after using them. I have some other tablets but the "Buttermilk" are the best. I fed three boxes last winter. My flock did not have the Roup. Will send for more tablets.
MRS. WALTER ELLIS, Gypsum, Kans.

30-DAY FREE TRIAL

Because I want one million new users of these wonderful tablets I am willing to send you a big double size box if you will just write me. Your name and address is all I need. Use a postal card if you wish—I'll send the tablets by return mail, post paid. You use the tablets 30 days then report results to me. If **you are not satisfied in every way—if you are not more than pleased**—the tablets are to cost you nothing. But if you do find that you get many, many more eggs—probably three to five and even seven times as many—and your flock is healthier than ever before—full of pep and strutting around with healthy red combs—the tablets cost you only $1.00. No matter what you have tried before, I want you to remember that my secret formula is absolutely different from anything else—that it has been known to succeed where others failed. Not only that—you must remember that I send you a big double size box—nearly three times as big as the ordinary box of tablets.

At any rate, the risk is all mine. You can't afford to pass up this Special Introductory offer a single minute—it may never be made again.

Send No Money — Just Write Me, That's All.

All I need is your name and address—just put it on a postal card or use the coupon below—I'll understand and send you the tablets post paid by return mail.

MILK PRODUCTS CO.,
R. C. Combs, General Manager,
668 Creamery Bldg., Kansas City, Mo.

As per your offer send me your big double size box of Combs' Buttermilk Compound Tablets. I understand I am to use these tablets in a thirty days' test at one dollar the trial package, and if not satisfied, they are to cost me nothing.

Name .....

Address .....

R. F. D. .....P. O. Box.....

ready for distribution, and may be obtained on request from the Bureau of Animal Industry, United States Department of Agriculture.

Arranged according to number of accredited herds on June 30, 1920, the various states co-operating with the Federal Bureau of Animal Industry in bovine tuberculosis eradication are shown in the accompanying table:

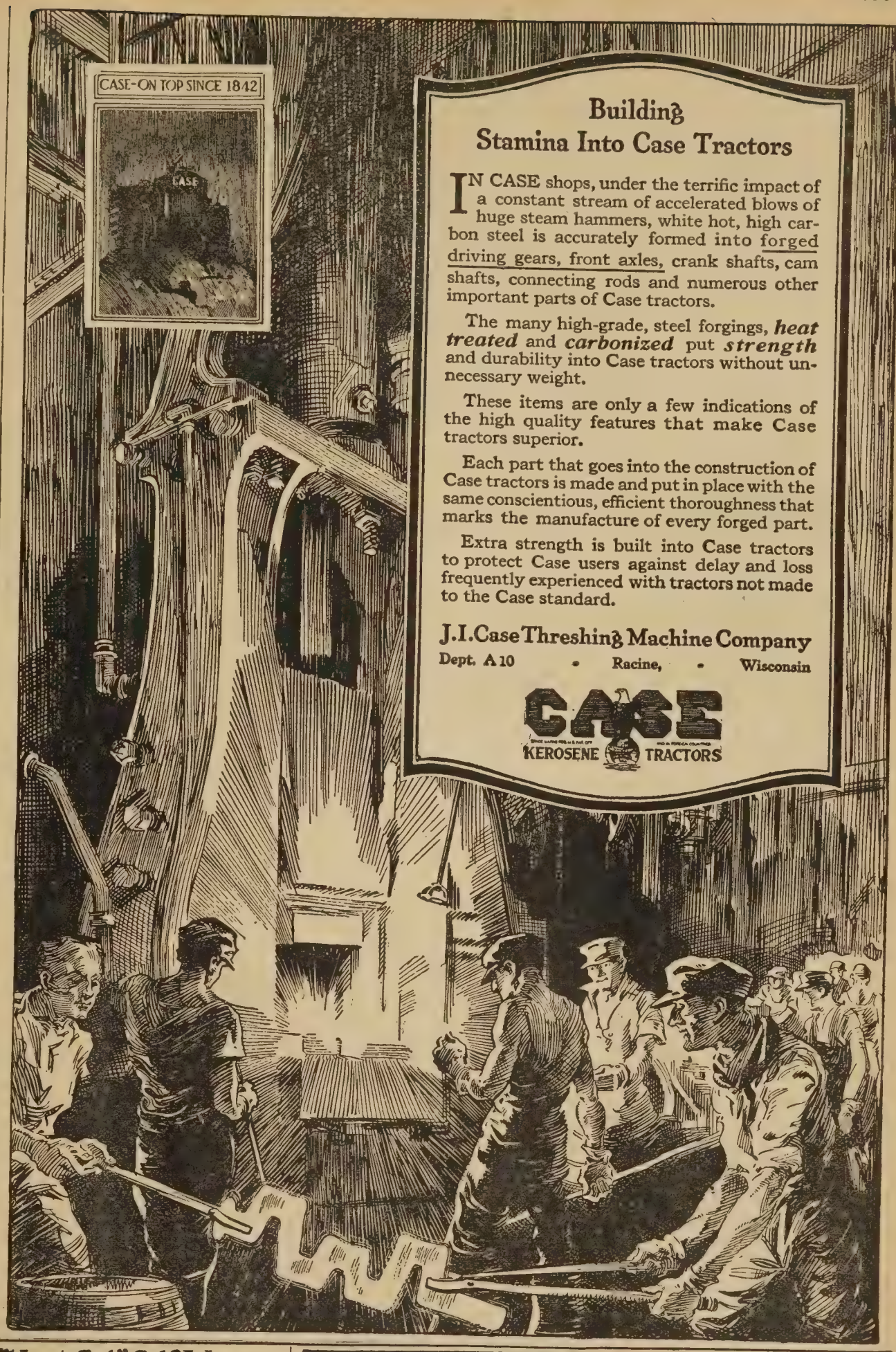
State	Accredited herds	Once-tested free herds
1 Minnesota	494	994
2 Virginia	354	591
3 Wisconsin	287	835
4 Pennsylvania	261	639
5 District of Columbia	190	94
6 North Dakota	172	936
7 Maine	127	941
8 Indiana	121	392
9 North Carolina	105	1,045
10 Ohio	104	714
11 Maryland	103	261
12 Michigan	103	133
13 Tennessee	86	292
14 Kansas	80	81
15 Illinois	70	293
16 Vermont	63	1,343
17 Mississippi	59	288
18 Kentucky	55	270
19 Montana	48	97
20 New York	47	186
21 Iowa	44	377
22 Utah	36	377
23 South Carolina	34	153
24 Alabama	34	79
25 Oregon	30	263
26 West Virginia	29	763
27 Nebraska	29	205
28 Louisiana	28	153
29 New Jersey	28	21
30 Florida	21	1,295
31 Massachusetts	21	34
32 Connecticut	18	58
33 Washington	16	264
34 South Dakota	15	124
35 Arkansas	14	53
36 Delaware	10	45
37 Idaho	8	526
38 Georgia	8	180
39 New Hampshire	7	30
40 Missouri	6	585
41 Rhode Island	5	10
42 Nevada	1	297
43 Oklahoma	1	228
44 Texas		51
45 Colorado		2
46 Wyoming		1
Total	3,370	16,599

New York Dairy Production

The following report of New York's dairy production for 1918 and 1919 has just been released by the State Department of Farms and Markets:

	1918	1919
Number of plants reporting	1,742	1,432
Number of dairies supplying milk		84,766
Number of cows producing milk	1,023,034	1,172,727
Milk received during year, lbs.	4,436,932,413	5,329,769,749
Milk received during June, 1919, lbs.		629,330,085
Milk received during Dec., 1919, lbs.		274,651,979
Milk received during April, 1920, lbs.		420,813,040
Milk sold for human consumption, lbs.	2,341,401,288	2,443,471,352
Cream sold for human consumption, lbs.		61,681,768
MANUFACTURED PRODUCTS	Lbs.	Lbs.
Creamery butter	13,897,740	14,056,768
Whey butter	528,965	773,070
Whole milk American cheese	37,610,008	62,568,829
Part skim and whole skim American cheese	3,878,645	3,126,731
Limburger cheese	4,455,674	4,473,824
Swiss cheese	1,170,239	1,733,384
Brick and Munster cheese	1,453,914	2,119,122
Cottage, pot, baker's and hoop cheese	12,160,255	12,242,493
Cream and Neufchatel cheese	3,085,617	2,625,217
Italian and Greek cheese	1,567,892	2,950,313
All other varieties of cheese		2,696,229
Condensed milk (whole and skim)	236,518,941	426,268,709
Evaporated milk (whole and skim)	91,428,870	68,388,232
Powdered or dried whole milk	2,397,397	4,130,523
Powdered or dried skim-milk	12,075,712	15,112,589
Powdered or dried cream	534,906	535,349
Dried casein	2,203,244	2,874,825
Milk sugar	1,707,235	703,255

The report for 1919 shows the average number of cows per dairy was 13.83 and that the average production per cow was 4,544.8 pounds.



Building
Stamina Into Case Tractors

IN CASE shops, under the terrific impact of a constant stream of accelerated blows of huge steam hammers, white hot, high carbon steel is accurately formed into forged driving gears, front axles, crank shafts, cam shafts, connecting rods and numerous other important parts of Case tractors.

The many high-grade, steel forgings, ***heat treated*** and ***carbonized*** put ***strength*** and durability into Case tractors without unnecessary weight.

These items are only a few indications of the high quality features that make Case tractors superior.

Each part that goes into the construction of Case tractors is made and put in place with the same conscientious, efficient thoroughness that marks the manufacture of every forged part.

Extra strength is built into Case tractors to protect Case users against delay and loss frequently experienced with tractors not made to the Case standard.

J.I.Case Threshing Machine Company
Dept. A10 • Racine, • Wisconsin

CASE KEROSENE TRACTORS

"Kant-Suk" Calf Weaner

LIGHT—strong—humane! Cannot possibly injure cow or calf. Being made with a hinge-joint, it swings out of the way when calf eats or drinks, but absolutely prevents sucking. Extremely easy to put in place. Endorsed by dairymen everywhere. At dealers. Sent Prepaid: Calf size 45c; Cow size 60c
Wagner Specialty Co.,
Dept. F. Burlington, Wis.

PAT'D. AUG. 15. 1910

BUY YOUR COFFEE WHOLESALE IN 5 LB. LOTS
from JEVNE'S and SAVE 10c per pound
We Pay Parcel Post. We sell only High Grade Coffee and Tea
Send for our Money-Saving Price List, or better still
Send $1.55 for 5 lbs. JEVNE'S ECONOMY COFFEE
or $1.65 for 5 lbs. JEVNE'S EXCELLO COFFEE
or $1.80 for 5 lbs. JEVNE'S SPECIAL COFFEE
or $1.90 for 5 lbs. JEVNE'S PERFECTION COFFEE
JEVNE COFFEE CO. (Est. 1881) Coffee Specialists
DEPT. 11, 2855-57 W. MADISON ST., CHICAGO, ILL.

Horns Off Quick
With Leavitt Dehorner

—two shearing snips and it's all over with. No crushing, no nerve-racking sawing. Two V-shaped knives cut from four sides at once. Powerful, heavy-cogged slide makes sure easy work of it. More than 75 000 in use all over the world. Fully guaranteed. Insist that your hardware man sell you a Leavitt. Free circular tells advantages of dehorning—better prices for stock.
Leavitt Mfg. Co., Mfgrs.
352 Griggs St., Urbana, Ill.

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.
Electric Wheel Co.
31 Elm St., Quincy, Ill.

THE GENUINE CHAMPION
Improves Milk Quality
This milk cooler halts bacterial growth, removes odors, insures uniform product. Saves its cost in one week. Recommended by leading producers. Write for special offer. Folder free.
CHAMPION MILK COOLER CO.
Dept. B, Cortland, N. Y.

PERFECT EAR TAG
Insure Against Loss
You can't afford to lose one of your valuable dairy cows by neglecting to mark your herd with Perfect Ear Tags.
They are made of light weight aluminum, non-poisonous and non-corrosive. Easy to attach in single operation.
For cattle, sheep and hogs.
SALT LAKE STAMP CO.
45 W Broadway
Salt Lake City, Utah
Send for Free Samples
Without obligation to me, please send FREE Samples of PERFECT EAR TAGS and Price List
Name
Address
H.D

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Barren Cows

Must Be Made to Breed or Your Dairy Business Will Be a Failure. They

Can Be Made to Breed

By the use of

Hood Farm Breeding Powder

We say this confidently because it has been used with such marvelous results by so many breeders. Every cow at Hood Farm is treated with the Breeding Powder, and we know that it does make barren cows and heifers breed; we know that it checks and prevents abortion; we know that it makes cows clean quickly, thereby saving us hundreds of dollars annually.

Order today, mentioning this paper.

Prices prepaid $1.15, $2.75 and $5.00. Flexible Injection Tube, by mail, 90c. Mammoth size Breeding Powder and Tube, prepaid, $5.75.

C. I. HOOD CO., Lowell, Mass.



Pronounced Incurable

SAVE-The-HORSE saves

"Bone Spavin cured with Save-The-Horse four years ago. Never taken a lame step since." O. C. Williams, Modesto, Ill. "Bog Spavin and Thoropin—absolute cure and removal of enlargements. Bad case." Chas. R. Moulter, Erin, N. Y. "Ringbone, Spavin and Founder all treated with success with Save-The-Horse." Chas. Phillips, Fairbank, Iowa. "Cured worst case of Thrush any man ever saw, and it was pronounced incurable." John Hittson, Bradyville, Tenn.

Over 300,000 satisfied users. **SAVE-THE-HORSE** has more than 27 years' success curing even the worst cases of Ringbone, Thoropin, SPAVIN—or Disease of Shoulder, Knee, Ankle, Hoof or Tendon—when all other remedies have failed. It is sold with a signed **Guarantee to CURE or RETURN MONEY.** Use it once and you'll always depend upon it. Send today for FREE 96-page BOOK on how to locate, understand and treat all lameness; also sample of GUARANTEE and expert veterinary advice—all **FREE.**

TROY CHEMICAL CO. 327 State St., Binghamton, N. Y.
Druggists everywhere sell SAVE-THE-HORSE with Signed Guarantee, or we send it direct by Parcel Post Prepaid.



Smooth Potatoes

assured to every farmer if he will first rid his seed potatoes of infection by using:

FORMALDEHYDE
The Farmer's Friend

The official standard seed cleanser. Gives increased yield of from 30% to 40%. Potato scab and black-leg once in the ground may persist for many years. U. S. Dep't of Agriculture recommends cleansing all seeds with *Formaldehyde* solution to prevent the spread of potato diseases. Also positively destroys smuts of grain and fungus growths. One pint of our *Formaldehyde* from your dealer treats 40 bushels of seed. New illustrated book sent free on request.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK
8

A GUARANTEED REMEDY FOR CONTAGIOUS ABORTION



Save calf, cow and herd by the use of *Aborno*. Easily administered by hypodermic syringe. Kills abortion germs quickly without injuring cow. Write today for free booklet with letters from users and full details of our moneyback guarantee.

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Accidental Abortion

It is possible for premature expulsion of an embryo calf, or fetus, to be induced by accident, but instances of this are comparatively rare. Germ infection is the cause in almost all cases of premature birth of a live or dead fetus, as it is of calves that are born at full time but so weak that they quickly succumb and promptly decompose. Such calves at one time were termed "living abortions" by stockmen.

The unborn calf sometimes is killed in the womb and either expelled promptly or when partially decomposed and it possibly may be retained and become mummified. Death of a fetus from accident (traumatism) usually results from horning by another cow, a kick from a horse, a bad fall, squeezing in a narrow door, or other severe accident. Death of a fetus, not due to traumatism, may be incidental, by which we mean that it is the result of conditions, circumstances of agents affecting the cow injuriously in one way or another, yet not the result of abortion germ infection. Of these the following may be mentioned: Drugs, such as aconite, aloes, sulphates of iron and copper, iodide of potash and ergot, given medicinally, and others; ergotism, from prolonged consumption of the ergot fungus (Claviceps purpurea) in grain, meal, grass, hay, or straw infested by the poison; acute deranging attacks of indigestion or other serious disease, including anthrax and hemorrhagic septicemia; starvation; twisting and knotting of the umbilical cord; exposure to storms; moldy feed, etc.

No matter what may be thought to have caused abortion the affected animal should be treated as if known to have aborted from abortion germ infection. This is the more necessary when it is remembered that germ infection may be the actual cause and accident or incidental irritation the aggravating or contributing cause. The fetus, afterbirth, and all soiled bedding should be burned or deeply buried and the stall the cow has occupied cleansed, disinfected, and whitewashed. The womb of the cow should be cleansed and disinfected by a specially trained veterinarian possessed of the necessary modern instruments for the work and the skill required for their efficient employment. The vagina should then be douched daily for at least a week with lukewarm, boiled water containing a heaping teaspoonful of table salt, or such antiseptic as the veterinarian may prescribe. It may also be necessary to repeat the treatment of the womb. The vaginal injections should be repeated daily for two weeks or more before the animal is rebred and that had better not occur until the time she would have been bred had she not aborted.

All cows that abort from any cause also should be kept isolated until known to be safely in calf and the veterinarian may consider it necessary to give mild antiseptic vaginal douches several times a week, after service, until it is seen that the cow is not going to come in heat. It is deemed unlikely that abortion will recur when these precautions are taken and the "uterine seal" or "plug" has perfectly formed.

Impending abortion may sometimes be prevented by medicinal treatment, if applied before death of the fetus. The drugs usually employed for this purpose, under direction of the veterinarian, are fluid extract of black-haw (Viburnum prunifolium), cannabis Indica or Americana, and tincture of opium, but there is no specific preventive.

Hematuria

I have a cow that passes red water. I have seen her pass red water a couple times about three weeks ago. I would like to know if there is any cure for it.

Mt. Vernon, Wash. B. W.

This ailment is common among cattle in your state and is supposed to be caused by protozoa or irritants in wild pasture or water. The experiment station of your state may have discovered some specific treatment, but we are not aware if that is the case. Write the veterinary department on the subject. Meanwhile it would be well to keep the cattle off wild pasture and give them sound feed and drinking water from a deep well. In the feed twice daily mix a heaping teaspoonful of a mixture of one part of dried sulphate of iron and two parts of powdered alum. Gradually increase the dose as found necessary. Iodide of potash in dram doses two or three times daily also has given good results in some cases.

Hard Milker

I bought a Jersey cow last October thinking she was all right every way but when I got her home I found it extremely difficult to get her milk. She simply won't or can't give the milk down except a few drops at a time. It takes an hour to get a gallon from her. I let the calf suck but it can't get all the milk either and I have to take time to milk her out every day to keep her udder from spoiling.

Ponce de Leon, Mo. T. R. W.

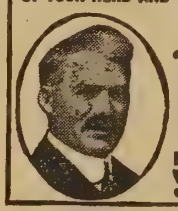
If the milk is held back by growths or strictures in the ducts of the teats such condition possibly may be overcome by operation with dilators first and by cutting with a bistoury or removing growths by scraping downward with a sharp edged cone shaped instrument. If no such causes are present we should advise drying off the secretion and fattening the cow, as there is no specific remedy in such cases.

Stop Losing Calves

Treat Your Own Herd as *Dr. David Roberts* Himself Would Treat Them. His Treatment Used Successfully for Past 30 Years.

Easy to Apply—Sure Results

Stamp Abortion Out OF YOUR HERD AND Keep It Out



ASK FOR "The Cattle Specialist"

Sent free on request. Answers every question pertaining to **Abortion In Cows.** Tells how to treat your own herd at small expense. Write

DR. DAVID ROBERTS VETERINARY CO., Inc.
638 Grand Ave., Waukesha, Wis.



ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

Reduces **Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness** and allays pain. **Heals Sores, Cuts, Bruises, Boot Chafes. It is a SAFE ANTISEPTIC AND GERMICIDE**

Does not blister or remove the hair and horse can be worked. Pleasant to use. $2.50 a bottle, delivered. Describe your case for special instructions and **Book 5 R free.**

ABSORBINE, JR., antiseptic liniment for mankind, reduces Strains, Painful, Knotted, Swollen Veins. Concentrated—only a few drops required at an application. Price $1.25 per bottle at dealers or delivered.

W. F. YOUNG, Inc., 254 Temple St., Springfield, Mass.

Lump Jaw Fleming's Actinoform, for 30 years the standard Lump Jaw remedy. $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Lump Jaw and 200 other Cattle and Horse diseases.

FLEMING BROTHERS, 265 Union Stock Yards, Chicago



64 BREEDS Most Profitable pure-bred Northern raised Chickens. Ducks, Geese, Turkeys. Fowls, Eggs, Incubators all at low prices. 28th year. Largest plant. Send 5c for large valuable book and catalog.

R. F. NEUBERT Co., Box 836 Mankato, Minn.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

SWINE



MASTERPIECE
A Son of Pathfinder from a Daughter of Proud Colonel

Sows & Gilts

of popular blood lines, bred to **Masterpiece, Model Sensation, Bertley Orion Cherry King** and **Panama Special 15th.** If you want a high class Duroc Sow at a reasonable price, let us tell you about one on our guarantee to satisfy.

BERTLEY FARMS - P. O. Box B
GLENWOOD, ILLINOIS
JUST OUT OF CHICAGO

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.

H. W. and Wm. Watts, Leland, Illinois

Cedar Crest Farms

have never possessed a finer lot of **BERKSHIRES** than at present. Let us name you prices on fall and spring boars and young gilts.

J. K. Dering, Owner, Lake Villa, Ill.

DISPERSAL SALE

January 14th, 1921

IOWANA FARMS BERKSHIRES

50 Bred Sows and Gilts
Several Herd Sires

All strong in the blood of our Great Foundation boar, RIVAL'S CHAMPION 112500. IOWANA BERKSHIRES are famous for their Uniformity of Type, and their Quality combined with Size.

The entire herd is being dispersed to provide room for further development of our Holsteins. This is your opportunity to select what you want at your own price from the best of Berkshire herds. Don't neglect it.

Write for private sale catalog of selected yearling and spring boars; also for catalog of our January dispersion of females announced above.

Iowana Farms **Davenport, Iowa**

New York Breeders Meet

(Continued from page 1073)

securely. All will stay by when the tendency is upward, but when downward there comes a change of feeling, this not because the farmer is mean but he lacks the education that enables him to see right on the question.

The closing address was by Mr. Teal of the Onondaga Creamery Association. The farmers formed an organization with a capital of $150,000 and issued bonds that were taken also by the farmers, to the extent of $250,000. They have the finest equipment that is known probably in any creamery and a splendid brick building. It was the thought of the association to retail milk, but it was seen before they were ready to open the business that the dealers would refuse to buy, and on the morning of opening there was only one dealer who bought. He took about 200 quarts. The association then had to equip and enter the retail trade. They sent out a dozen or so solicitors but could only get a trade of about four thousand quarts. This has been increased to about 10,000 quarts. Meanwhile the small dealers have been coming to them slowly and whenever they come they are furnished milk and his trade given back to him. Moreover, attempts are made to get the trade of these dealers segregated within certain areas and so eliminate the long routes and much expanse. The prospect for the future of the association is unquestionably bright.

Officers elected for the ensuing year were the following: president, Harry S. Gail; vice-president, C. P. Miller; secretary, Albert E. Brown; treasurer, Wing R. Smith.

New York. H. H. LYON.

Northwest Ayrshire Breeders Organize

Ayrshire breeders of the Northwest met at Portland November 17th and organized the Northwest Ayrshire Breeders' Association. Officers elected were: J. R. Maben, Oregon, president; E. W. Van Tassell, Washington, first vice-president; J. U. Smith, Oregon, secretary. The association will represent Oregon, Washington, Idaho, and British Columbia.

Bulletins of the Week

Clover Stem-borer as an Alfalfa Pest, by V. L. Wildermuth. Bulletin 889, U. S. Dept. of Agr., Washington, D. C.

Culling for Eggs and Market, by R. R. Slocum. Farmers' Bulletin 1112, U. S. Dept. of Agr., Washington, D. C.

Diseases of Apples in Storage, by C. Brooks, J. S. Cooley, and D. F. Fisher. Farmers' Bulletin 1160, U. S. Dept. of Agr., Washington, D. C.

Can Home-grown Rations Supply Proteins of Adequate Quality and Quantity for High Milk Production, by E. B. Hart and G. C. Humphrey. From the Departments of Agricultural Chemistry and Animal Husbandry, Uni. of Wisconsin, Madison.

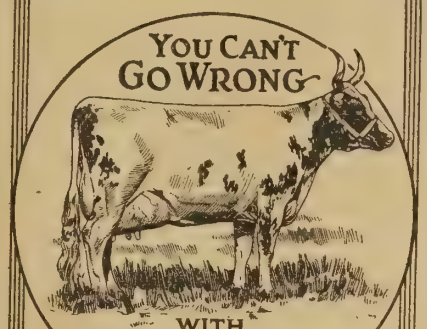


EXERCISER FOR BULL

A bull confined in an ordinary yard will very frequently not get sufficient exercise. In this case he may become very lazy and in some cases an uncertain breeder. In order to give his bull an opportunity to exercise, a Wisconsin dairyman hung a fair sized stump on a chain and suspended it from a cross bar between two poles in the bull's yard.

The accompanying photograph shows the bull enjoying himself with his exerciser. On cold days he seems to particularly enjoy it and often spends hours bunting it.—D. S. BULLOCK, Washington, D. C.

AYRSHIRES



THEY "STAND UP" AT THE PAIL "STAND OUT" IN THE SHOW RING AND "STAND APART" FROM THE OTHER DAIRY BREEDS

AYRSHIRE BREEDERS ASSOCIATION
BRANDON ---------- VERMONT

Aldebaran Farms
Racine, Wis.
AYRSHIRES

Lippitt Farm Ayrshires
For the first time we offer females for sale. They are producers with type.
Write for prices to Hope, R. I.

South Farm
250 Registered Ayrshires
Stock of all ages for sale. Write for prices.
George A. Cross, Mgr., Willoughby, Ohio.

Bensalem Ayrshires
For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

6 Registered Ayrshires $600
The first New York draft for $600 buys 6 registered Ayrshires—5 cows and a good bull coming 2 years old, not related. Cows are in calf to Hobsland Masterpiece 2nd. They are right in every way. T. B. tested.
Carman Eyre, Harlem, Ont., Canada.

Double Your Cream Check
By Breeding Increased Production With a
Ravinia Ayrshire Bull
We offer you the fruit of twenty-five years of the most successful, intensive, and scientific breeding for production. We offer you young bulls and bull calves that will put to work for you in your own herd the same blood that has brought to our herd more A. R. records and more world records than any other Ayrshire herd. Isn't this the blood you want? We know the wonderful profit power of Ravinia Ayrshires—their unequalled production, their size, good teats, splendid conformation, and tremendous vigor. We want all dairymen to know them as we do; and to do so we offer you a limited number of splendid individually selected young bulls and bull calves at less than half our regular prices. Write today for individual descriptions and prices. Be sure to tell us the age you want.
Write to Box 100 E, Martinsville, Ind.
Martinsville, Ind. Preston, Kans. Axial, Colo.
GOSSARD BREEDING ESTATES

Weymouth Farms
"Ayrshires of Quality"
All cows on Advanced Registry Test. Herd Tuberculin Tested.
We can supply you a herd sire of choicest breeding.
MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

BLACKBURN FARM
HOME OF
Addington's Champion
Grandfathers—Nox'emall and Finlayston
Father—Rena's Champion, 17 A. R. Daughters
Mother—Addington Queen 3d, two Mature Records each over 19,000 lbs.
For Sale—
4-year-old cow—Fresh Dec. 12, 1920
2-year-old heifer—Fresh Jan. 16, 1921
Also Young Stock
Tuberculin Free Herd
Sewickley, Pennsylvania

Pure-bred Ayrshire Cattle For Sale
Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis

When writing advertisers please mention Hoard's Dairyman.

ALTA CREST AYRSHIRES
Special Offering of
Ayrshire Bull Calves
Imported — Home Bred
which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.
Write for Sale List
Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.
ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

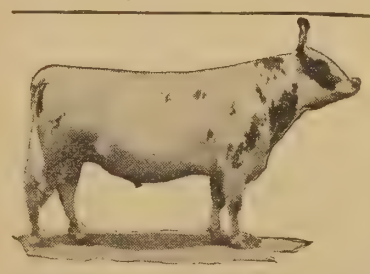
World's Champion Ayrshires
Fully Accredited Tuberculosis Free
— 200 Head in Herd



AUCHENBRAIN WHITE BEAUTY 2ND
A. R. 14,721 lbs. milk, 4.33%
In 13 years, 112,486 lbs. milk and 13 calves
110 animals in herd are descended from this cow. 4 of our cows hold the 1st, 2nd, 6th and 7th highest Ayrshire records. They average 22,823 lbs. milk, 1,046 lbs. butter in one year. 20 cows in herd average 17,074 lbs. milk, 803 lbs. butter. 100 Advanced Registry records made here average 13,246 lbs. milk. 30 head, choice animals for sale at reasonable prices.
Write us your needs.
PENSHURST FARM, Narberth, Pa.

Delchester Farms Ayrshires
Tell us your wants and we can supply them at prices you can afford to pay.
Aged cows, bred to Glenury, an A. R. son of Finlayston.
Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.
Heifers, bred to these two great sires.
Young heifers.
Bull calves.
All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.
Herd free from tuberculosis
DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Ayrshire Stock
of all ages for sale. Satisfaction guaranteed
L. W. McCONNELL, Wellington, Ohio



We Have For Sale
the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.
Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.
BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANIA

Middlesex Meadows Ayrshires
NANCY WHITEHALL, World's Jr. 4-yr.-old Champion Ayrshire, has just completed another record of 22,075 lbs. milk, 858 lbs. butterfat. Her bull calf, *NANCY'S CHANCELLOR OF MIDDLESEX*, born September, 1919, by a show ring champion with great milk production behind him, is a winner in the show ring this year, and is now being used on all the Middlesex Meadows Farm heifers. He is offered for sale for immediate delivery. Guaranteed a breeder and right in every way. Price $2,000.
A. Henry Higginson
South Lincoln, Mass.

BROWN SWISS



BETTY OF LAKE VIEW

Breed Brown Swiss Cattle

As producers they are worth every cent you pay for them. Cows are easily sold at reasonable prices. Their earning power has not been capitalized. Brown Swiss meet the ideals of working farmers.

BROWN SWISS CATTLE BREEDERS' ASS'N
IRA INMAN, Secretary, Beloit, Wis.
William B. Hale, Pres., Aqueduct Bldg., Rochester, N. Y.

Brown Swiss Cattle For Sale

Male and Female

We solicit correspondence.

Dahlem & Schmidt, Box 85, El Dorado, Kans.

JUBILEE FARM

Brown Swiss Cattle

Completely sold out on heifers. We offer a number of excellent young bulls at special prices.

BOX 747, PEORIA, ILL.

Brown Swiss Cattle

Stock For Sale

Correspondence Solicited

HULL BROS., Painesville, Ohio

JERSEYS

JERSEYS—DUROCS

TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys

Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd

At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

Valley Farm is Offering

Several bulls, 6 to 12 months old, from R. M. cows. Sired by Golden Maid's Viscount and Kilda's Royal Majesty, two of the best Island bred bulls living. At prices to sell. Write
FRED STUBLEY, Black Earth, Wis.

Dunn and St. Croix Counties Jersey Breeders' Ass'n

have a few choice bulls and several pure-bred and grade cows and heifers for sale.
S. A. B. AUSMAN, Secy. Elk Mound, Wis.

Serviceable Bulls From R. M. Dams

We have a few very good individuals 6 to 13 months of Majesty and Raleigh breeding. A tuberculosis free herd. Every animal guaranteed right.
Your inquiry promptly answered.
E. E. HILL & SONS, Tomah, Wis.

POLLED JERSEYS

Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
CHAS. S HATFIELD, Secy, R4, Box 5, Springfield, Ohio.

GOLDEN MAID'S PRINCE BLOOD

Choice bull calves from dams in R. of M. or on test. Line bred to Golden Maid's Prince with outcrosses to Pedro, Hood Farm Torono, Loretta D, King Sappho King. Tuberculin tested herd free from contagious abortion.
Address: J. Q. Emery & Son, Edgerton, Wis.

Raleigh Bulls For Sale

2 are ready for heavy service, others younger, all from Register of Merit cows with one exception. Also a 2-year-old heifer just fresh and some Register of Merit cows with records from 400 to 500 lbs. butterfat.

P. G. Warmington, Honey Creek, Wis.

Bulls—JERSEY—Bulls

A splendid lot of Majesty bulls out of Register of Merit dams for sale at very low prices. We must sell to make room for our winter and spring calves. These bulls are from three months to two years old and sell with full guarantee to be breeders. We have a Federal Accredited Herd. For pedigrees, descriptions and prices, write Thos. T. Bacheller, Jr., Mgr.
ELMS JERSEY FARM
M. D. Munn Forest Lake, Minnesota

For Better Jerseys

We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.

We have a few young bulls for sale.

THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Montpelier Jerseys

Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves and Heifers

Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

Bull Clubs

We are in excellent shape to furnish several very high class Jersey bulls ready for service.
These bulls are out of Register of Merit dams with excellent records, sired by bulls backed with the largest production of the breed.
The World's Champion producing blood in these bulls insures their siring large cows of correct type and big profitable producers.
If you are in need of one bull or several bulls, we would appreciate your writing us about the quality and priced animal you need, and this will save time, money and correspondence.
AYREDALE STOCK FARM
F. W. Ayer, Prop., Bangor, Maine

World's Champion

For Production and Progeny

Successful Queen

four years' R. O. M. Class AA records 59,907 lbs. milk, 3,072.2 lbs. fat.
We offer Bull calf No. 286, dropped April 5, 1920.
Sire, a Son of Pogis 99th of Hood Farm, Champion A. J. C. C. Gold Medal Bull, Champion sire, sire of 82 in R. O. M.
Dam, Trudie's Queen of Hood Farm (full sister of Successful Queen) R. O. M. record in seven and one-half months, 8,749 lbs. milk, 502 lbs. fat.
The calf is a very fine individual.

Price $350.00

HOOD FARMS, Inc.
Lowell - - Mass.

GUERNSEYS

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses).
BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of
Jury and Gilt-Edge of K. P.
Herd on Federal Accredited list.
A. R. HOARD. - Fort Atkinson, Wis.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

GORDONDALE

Guernsey bulls of serviceable age offered for sale, also younger ones. They carry May Rose breeding, are from A. R. dams and have splendid A. R. backing Ask us about them.
Herd under Federal Supervision.
L. E. GORDON, JR.,
Nelsonville, Portage Co., Wisconsin.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.
Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Our last 9 official records average over 510 lbs. fat, including all ages. Our herd sire has 8 A. R. daughters, including one with 572 lbs. fat in Class GG. His three nearest dams average 822 lbs. fat. Send for pedigrees and prices on young bulls with this backing.
Folly Farm, Box 587, Libertyville, Ill.

May Rose Guernseys For Sale

Bull Calves and Heifers from A. R. Bulls and A. R. Cows

Sweet Springs Farm
Troy, Ohio

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.
For Sale by
RADISSON FARM, ANOKA, MINN.

Meadowland Guernseys

Sixty-five females, priced conservatively, are offered from which to make selections.
MEADOWLAND FARM, Litchfield, Conn.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.
Herd under Federal Inspection
OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Harbor Hill Guernseys

Masher's Galore 8572 A. R.

Increased the Average Production Credit of 12 A. R. daughters out of A. R. dams by 181 lbs. We offer his double grandson out of another daughter also making a better record than her dam.
C. H. Hechler, Superintendent
Box 30, Roslyn New York

Forestdale Farm

3 Bully Baby Bulls 8 Handsome Healthy Heifers — 2 to 18 months

from Superior Standard Sires, also a few A. R. matrons. May Rose Breeding. Tuberculin tested. $250 lowest price.
R. D. DeForest, Amsterdam, N. Y.

Barry Farm

Offers for sale a bull calf born July 2, 1920, by Langwater Raider and out of a cow on A. R. test. Also a few heifer calves.

Herd under Federal Supervision.

Far Hills, Somerset Co., N. J.

Falcon's Grenadier (65834)

Dropped Feb. 12, 1920

Sire: *Falcon's Proud Warrior* (*47559*). Pronounced by many experts as "the greatest son of Langwater Warrior".
Dam: *Stockbridge Olive* (*30883*), from a noted family of high producers. Olive has an A. R. record of 11,503.2 lbs. milk, 617.36 lbs. fat and dropped two calves during the year.
Grenadier is a high class, well grown bull: priced very conservatively at $600 f. o. b., Litchfield.

Write about him today.

Falcon's Flight Farms, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.
Taconic, Conn., Litchfield Co., (C. N. E. R. R.)



"Get" of Pencoyd's Secret Marose

This bull won first prize, senior and grand championships at the New England Fair, Connecticut and New York State Fairs. His "get" (4-mo.-old calves) was first at The Eastern States Exposition and fourth at the National Dairy Show with thirteen "gets" shown. His heifer calf, Appletree Point's Dolly Dimple, was Junior Champion at New England Fair, first prize at Eastern States Exposition, and was Junior and Grand Champion female at Connecticut State Fair. His bull calf was unbeaten in all eastern shows and won at Waterloo and National Dairy Show. Write for prices on May Rose calves that combine type and production.

U. A. Woodbury, II Burlington, Vermont

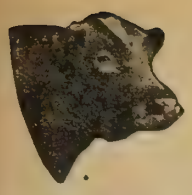
For Sale—A Bull Calf of Real Merit

Dropped Aug. 28, 1920, and Sired by **Langwater Cavalier 21012**, whose daughters have put him to the front as one of the great bulls of the breed. His highest record daughter made 734 lbs. fat in F.

The dam of the **Bull Calf** is Georgette of Edgemoor, who is on test and is a daughter of Mildred II of Les Godaines (55120), who was the **Grand Champion** Cow at the **National**. Her record is 14,890.9 lbs. milk, 702 lbs. fat. Her daughter **Century Girl** was first prize two-year-old.

The **Bull Calf** is a fine individual and splendidly marked. Send for extended pedigree and full description. A few choice females to offer.

Upland Farms, Inc., Ipswich, Mass.
F. P. Frazier & Son, Proprietors, W. K. Hepburn, Manager



Economy in Production ← GUERNSEYS → Quality of Products



One Guernsey cow has produced over 1,100 lbs. of butterfat in one year, and 6 have produced over 1,000 pounds. The total production in one year of these 6 cows is equal to that produced by 36 cows in an ordiary herd. Guernseys are not only large producers but their milk is better than ordinary milk. This combination means most money for the owners. Send for our free literature.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H19, Peterboro, N. H.



SON OF NE PLUS ULTRA

We are offering several of his sons and daughters. Also sons and daughters of our other herd bull, who is a son of Golden Secret of Lilyvale and a half brother of Nellie Joy IV, 1,019 lbs. fat. Eighteen of his half sisters average over 600 lbs. fat. Write or come and see them.

W. W. Clark, Vesper, Wisconsin

Daughters of Anton's King Confidence (43517)



These heifers are not for sale but one glance at them tells you that *Anton's King Confidence* sires the kind you want in your herd. Since we value his females too highly to set a price on them your only opportunity is to get one of his sons for your next Herd sire. We have several growthy, vigorous and well put up young fellows ranging from 9 to 15 months of age for sale at the present time. We appreciate your inquiry. Send for our circulars.

Hoard's Dairyman Farm
Fort Atkinson - - Wisconsin

Waukesha — The Guernsey County

Nearly two hundred members in our Association. Many of the best sires of the breed are being used. We can supply your wants. Pure-breds or grades, male or female, all ages. Prices will interest you.

Come to the County or Write

Waukesha County Guernsey Breeders' Association
F. E. Fox, Secretary **Waukesha, Wisconsin**

We Offer For Sale

Simplicity's Winner of Iowanola (54404)

orn August 25, 1918. A show bull. First rize in class and member 2nd prize get of re, Waterloo Dairy Congress, 1920.
re, Cherub's Winner (34180). The sire of all e animals that won all of the cups and ophies awarded at the N. D. S., 1920.
am, Simplicity of Haddon (47876), A. R. 07. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. big, strong, typy cow, a very easy milker d a good breeder.
rite for further information. We have a w younger bulls.

ountain Bros., Carrier 403, Des Moines, Ia.

SLAND FARMS

ay King No. 59478. Dropped May 20, '19

re—Beda's May King 11893. The reatest living proven May Rose sire day.
am—Imp. Garenne's Dairy VI No. 9814, a half sister to Imp. Princess ergere and Imp. Bella 2nd du Grand rt.
his is a show bull and guaranteed ght in every way.
Price $500.00 f. o. b. Island.
Address
ISLAND FARM,
loodwood, Minnesota

horewood Farm Offers

s of Ladysmith's Cherub, three times National d champion. One of his first daughters to finish le 591 lbs. fat in Class G. Others equally as nising now on test.
se bull calves are from 3 months to serviceable age of dams with records up to 777 lbs. fat. They bine size, and type with persistent production.
OREWOOD FARM, Crystal Bay, Minn.

Guernseys

t May Rose breeding. Both sexes and all s from an Accredited Herd. Write your nts and send for lists.
S. Person, Minot, N. D.

Hillswold Farm

Shrewbury, Mass.

gistered Guernsey bull calves for sale. Dams in anced Registry and tuberculin tested. Prices right. animals guaranteed to suit. W. A. Cloues, Mgr.

Young Bulls For Sale From A. R. Dams

I am offering several young sons of Golden Noble of Craigmoor A. R. He is a son of Langwater Raritan A. R. and from Imp. Daisy Moon 4th (639 lbs. fat).

These bulls are from A. R. dams with records up to 648 lbs. fat.

They are from 3 months to a year old. For prices and pedigrees call or write

Maple Heights Guernsey Farm
Frank E. Swan, Wauwatosa, Wis.
Federal Accredited Herd.

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS
James H. Murphy, Mgr. Delavan, Wisconsin

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

Here's Your Opportunity!

Good Grade Cows in car lots. Pure-bred Males, Females with type and good producing ability. Investigate.

Fox River Valley Guernsey Breeders' Association
Harry Leppla, Sec'y, Appleton, Wis.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Just What You Want!

An 8 months old bull calf. Partly white, light fawn, very fine individual.
SIRE—Cream Cup's King Regent of Allenwood 33889, by Allenwood King Regent 23641 and Allenwood Cream Cup 41291 who has a record of 436.89 lbs. fat Class G.
DAM—King Regent's Fanny of Allenwood 2d 73637, now on test in Class FF and will finish between 500 and 600 lbs. fat and has milked as high as 49 lbs. in one day. She is a daughter of Noble Regent 31691 and King Regent's Fanny of Allenwood 58290 who has a record of 347.64 lbs. fat at 2 years.

CORIUM FARM, F. J. Rueping, Owner, Fond Du Lac, Wisconsin.

TWO OR MORE CARLOADS

of grade Guernsey cows and heifers, also few Registered females and young bulls.

FOR SALE

Large and straight animals from one of the oldest and strongest Guernsey territories in Wisconsin. Cow testing association work has been carried on for years. Our County ranks second in the state for number of herds under federal supervision for eradicating tuberculosis.

Write or wire, E. A. Hotz, Sec'y, Scandinavia, Wis.

WAUPACA COUNTY GUERNSEY BREEDERS' ASSOCIATION

Guernsey Pedigrees Tabulated

Typewritten, $1.00 each, satisfaction guaranteed.

Private herd books written up, and entire management taken of Guernsey sales. Write for information.

F. E. FOX
Waukesha, Wisconsin

4 Bulls of Serviceable Age

for sale. Sired by Prince Royal of Edgemoor whose 4 nearest tested dams average 721 lbs. fat. They are from tested dams or dams now making good on test; daughters of Noble Governor of Walnut Ridge, a double grandson of Governor of the Chene. Write for complete information.

Geo. S. Love & Sons, Waukesha, Wis.

BIRCHWOOD GUERNSEYS

Young bulls for sale sired by Sunkistson No. 45371 who has thirteen dams in the first four generations that have A. R. records that average 582 lbs. fat, and out of officiallly tested dams.

M. L. Welles, Rosendale, Wis.

When writing advertisers please mention Hoard's Dairyman.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

Kentucky Dairy Meeting

A big dairy meeting will be held at the Kentucky State University, Lexington, February 3. The speakers include B. H. Rawl, Chief of the Dairy Division and W. W. Fitzpatrick, southern representative of the American Guernsey Cattle Club. Mr. Neil Roach will tell about the food value of milk according to the latest scientific researches on the subject.

A number of fine cows will be brought before the audience and premiums will be offered for correctly rating them. Coldstream Farm and the University will furnish cows for this judging contest.

Premiums will be offered for the best samples of milk, cream, and butter that are sent to the meeting.

Meetings will be held by the creamery men, the Jersey cattle breeders, and the Holstein breeders.

February 4 forty-four head of Holstein cattle will be sold by the Holstein breeders of the state. Each breeder is contributing a few animals. A trip will be made to Coldstream Farm. J. J. HOOPER, Sec'y.

Leaking Teat

We have a cow that had the end of one of her teats cut off by barb wire. Since it has healed the milk keeps running out all the time.
Three Oaks, Mich. J. A. P.

Apply flexible collodion to the tip of the teat after each milking. If this does not suffice, a rubber thimble will have to be devised and applied between milkings.

HOLSTEINS

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

Bull For Sale — Born January 2, 1920
Dam:—A 22.62-lb. granddaughter of Johanna McKinley Segis. She has several good daughters in the herd with records up to 33.48 lbs. butter in 7 days and 112 lbs. milk in one day.
Sire:—A son of Molly Johanna Korndyke, former world's record 2-year-old with 30.62 lbs. butter in 7 days. Write for pedigree and price.
W. J. McROBERT, Waupun, Wis.

Another Good Young Bull

A son of Hester Aaltje Cornucopia, 24-lb. 3-year-old. His sire is King Pietje Alcartra Pontiac. His 7 nearest dams average 32.19 lbs. butter in 7 days. This fellow is a mighty good individual. He was born March 11. Write us about him.
Brown Bros., Hartford, S. D.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to
McKAY BROS., - - CADDOA, COL.

M. & P.
Healthy Holsteins

A year ago we sold a bull calf to a Virginia breeder. The dam of that calf has just finished a year's record of 17,600 lbs. of milk, 800 lbs. of butter. Was he pleased? His letter states "The bull is growing nicely, and I am glad his dam made so good a year's record."
We supply this kind at moderate prices. Write
Markham & Puffer
Avon - New York

Holstein Bull Calf
8 Months Old

Sired by King of the Rag Apple, a 39-lb. son of Rag Apple Korndyke 8th. Dam of King Segis breeding, has junior 4-year record of 24.27 lbs. butter and won 3rd prize as a 3-year-old at the National Dairy Show. Calf is mostly white and his photograph will be sent to interested parties. Price $200.00. Herd under Federal Supervision.
Grayfield Farms, Greenwich, N. Y.

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.
ELM GROVE STOCK FARM,
Box 253. Cortland, N. Y.

Yearling Bull
Ready For Service

Here is a show bull whose dam has a 3-year-old record of 23 lbs. butter and 511 lbs. milk. His sire's dam is a 31-lb. daughter of Lord Netherland De Kol, while his sire's sire is by a son of King of the Pontiacs.
The first check of $150.00 takes him.
G. G. Burlingame, Cazenovia, N. Y.

ORIGIN FARM
HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.
GEO. E. STEVENSON, Scranton, Penna.

Son of
Colantha Johanna Champion

a 3-year-old herd sire having several young daughters promising to do well in the future. Dam is a 21½-lb. 9-year-old. Have a 34-lb. daughter, world champion on yearly production besides others with fine records.
Will sell cheap. Tuberculin tested. Prices and Pedigree on request.
ONTONAGON COUNTY FARM,
Dr. J. S. Nitterauer, Secretary, Ontonagon, Thos. G. Roberts, Herdsman, Michigan.

THE TRAVERSE HERD
We have what you want in
BULL CALVES
the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

The Pontiac Herd
"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich

MR. CATTLE BUYER
We can supply you with good, healthy registered Holstein cows and heifers, singly or in car lots.
We always have some very desirable young bulls for sale.
It will pay you to look into our high class listings.
LENAWEE CO. HOLSTEIN BREEDERS' ASS'N, ADRIAN, MICH.
L. W. Harwood, Sales Mgr. R. C. Curtis, Sec.

$225 Buys a Registered Holstein Bull — 14 Months Old
A good individual, large sized, perfect top line and about ⅞ white. His dam is one of my largest and best cows, with a large square udder and exceptionally straight top line.
She has just completed a 7-day Official test, making 24.2 lbs. butter and 505.3 lbs. milk.
His sire is a 29-lb. bull of good breeding and individuality.
A Bargain for Someone
I have also some very choice bull calves of excellent breeding from dams with A. R. O. records of 20, 23, 24 and 26 lbs. of butter in 7 days.
I. M. SHORMAN, Route 4, Fowlerville, Michigan

HOLSTEIN CATTLE

Fred W. Kiesel, Vice-President of the California National Bank, Sacramento, California, writes:

"Recognizing the strength of the Holstein Association and acting upon the advice of men who should have known, I finally picked out the Holstein. I am more than thankful that I had sense enough to make the decision along practical lines."

Send for Free Booklets

The Holstein-Friesian Association of America
101 American Building Brattleboro, Vermont

$600
Will Buy A Bull
Whose—

3 nearest dams are yearly record cows averaging 964.5 lbs. butter and 19,435 lbs. milk.

5 nearest dams average 948 lbs. butter and 20,000 lbs. milk.

7 nearest dams average 30 lbs. butter and 546 lbs. milk in 7 days.

The calf, himself, is a high-class individual; being straight, deep bodied and well grown for his age. He was born June 15th, 1920. He is just a trifle more black than white and is nicely marked.

Write for pedigree and photograph

WINTERTHUR FARMS
Winterthur Delaware
Federal Accredited Herd — 325 Females

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month, Feb. 1-2, Apr. 5-6, June 7-8, 1921.** *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company.

Waukesha County

Contains more tuberculin tested cattle than any other county in the world. There is more attention paid to official records than in any other county in the world.

When in the market for foundation stock, grades or pure-breds of all ages, write or wire for information to

Waukesha County Holstein-Friesian Breeders' Association

Office—254 Broadway, Waukesha, Wis.

A Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 lbs. as a heifer; second dam 24.79 lbs.; third dam 28.88 lbs. Bull mostly white, very good individual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record 19.75 lbs.; second dam 18.75 lbs.; third dam 21.45 lbs. Half white. A show bull. Price $200.

For complete information and pedigree write

A. M. Anderson, Whitewater, Wis.

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ollie, sire of world's youngest 1,000-lb. 2-year-old, good individuals from tested dams, some with yearly records. These calves grow into profitable sires. Write

WALCOWIS FARMS

Lake Geneva, Wisconsin

Cows and Heifers

A Few Good Bulls

Because I am overstocked, I am offering some very good registered females for sale. They either have A. R. O. records or are from A. R. O. dams.

Can also offer some excellent young bulls by a 33-lb. sire and from A. R. O. dams with records up to 28 lbs.

Every animal sold is guaranteed to be as represented.

Write or come and see for yourself.

J. D. McDonald West Salem, Wis.



Mr. Dairyman—

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
D. W. Norris, Owner, E. Loehndorf, Herdsman

$100 to $200

buys a good bull. Sired by very typy, 26-lb. bull and from tested dams up to 25.46 lbs. butter in seven days.

Tuberculin Tested

H. W. Crawford, R. 5, Campbellsport, Wis.

Three Holstein Bulls

fit for service, sired by sons of King Segis Pontiac. Pure-bred and grade females, any age, in carload lots for sale.

W. R. GATES, Fort Atkinson, Wis.

When writing advertisers please mention Hoard's Dairyman.

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for fall service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

A 20-Mo.-Old Service Sire

out of a 26-lb. daughter of King Korndyke Veeman Wayne and sired by a 26-lb. son of King Segis Pontiac. A fine individual—Well grown—Well marked—Well bred. A few younger bulls out of record dams and priced right. Herd tuberculin tested. Come and see these at any time.

RIDGEHURST STOCK FARM,

Glen C. Ramsey. Ft. Atkinson, Wis.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Mooie Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

ORMSBY BULL - Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

2 Of My Sons Are For Sale



RAG APPLE PONTIAC

They are full brothers, one 18 months old, the other 8 months old. Both are first class individuals, nicely marked and very well grown.

Their dam is one of the best producers in the herd and has a 7-day record of 26.96 lbs. butter.

I am Rag Apple Pontiac. My dam is a 30-lb. daughter of King of the Pontiacs and I trace several times to Pontiac Korndyke.

There are a few other high class sons of mine for sale here.

Several A. R. O. Cows

and some good heifers are for sale. The cows' records run up to 72 lbs. My boss is offering these females and young bulls at bargain prices because he needs the room. Better write him today. He is

W. W. Quackenbush - West Salem, Wis.

Let This Young Bull Head Your Herd

HIS SIRE—King Pontiac Artis Sadie Vale, a 34-lb. son of the great King Korndyke Sadie Vale.

HIS DAM—Mary Segis Beets, 32-lb. cow that has twice made over 31 lbs. and is now going at a 1,000-lb. rate on yearly test.



KING PONTIAC ARTIS SADIE VALE

This calf is fit to head any good herd of Holsteins. We are very sure he will suit you. We have several other sons of "King" for sale.

Gustave Pabst's Hollyhock Farms

Fred J. Southcott, Manager Dousman, Wisconsin

4 Serviceable Bulls

ALL SONS OF THE 1235-LB. YEARLY SIRE

Sir Korndyke Bess

The Dams' yearly records all over 800 lbs.

R. E. Benson - - Dousman, Wisconsin



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Holsteins For Sale

PURE-BREDS	78 Cows 88 Heifers 18 Heifer Calves 250 Young Bulls	GRADES	67 Heifer Calves 112 Heifers 245 Cows

Other Live Stock: Breeders are listing with us other dairy cattle, beef cattle, horses, sheep, and swine. Write us if you want stock. We will answer promptly.

BANKER FARMER EXCHANGE

D. H. Otis, Director, 1822 Chadbourne, Ave., Madison, Wis.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a 3 years of age. They are backed by Also a few bulls sired by King Korndyke age over 37 lbs. butter in 7 days. Come dozen or more heifers from 1 month to some of the best families of the breed. Veeman, whose two nearest dams averand see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

1000---HERD---1000 Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,

A. F. Gafke, Secretary, Jefferson, Wis.

Wayside Lawn Farms

offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

MONEY

Is Hard to Get. So Are the Right Kind of Bulls!

We have both. Don't go without the bull you need just because money is tight. LET US HELP YOU. We also have a few females. WRITE FOR OUR BARGAIN LIST AND PAYMENT PLAN. Every milking animal in our herd has an official record. We need the barn room. Take advantage of this opportunity. SATISFACTION GUARANTEED.

GRAHAMHOLM FARMS, Holstein-Friesians
Federally Accredited.
H. R. Searles, Mgr., Rochester, Minn.

For Sale
A Few Good Females
Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.
CHAS. OBY, Maple Lake, Minn.

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters. one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.

His dam has a record of 23.778 lbs. and now on yearly test.
Geo. H. Elwell, - Minneapolis, Minn.

Serviceable Sons of Dutchland Aaggie Tidy Prince

I have three of these youngsters for sale, all ready for service and from A. R. O. granddaughters of S. P. O. M. Their sire is from a sister to Tidy Abbekerk Prince and already has a good list of tested daughters, including one above 36 lbs.

Write today for complete information.
E. J. BROSIOUS, - - Stillwater, Minn.

Baby Bull For Sale

Grandson of Sir Ormsby Hengerveld Korndyke. Dam, a 16-lb. four-year-old. Price for immediate sale $100.
V. R. Holmes, Anoka, Minn.

SIZE

King Segis Pontiac Fayne Star, "The best individual King Segis Pontiac Count ever sired." Weighs 2,311 lbs. at four years. His dam is the highest record daughter of Sir Johanna Fayne with 32 lbs. in seven days and 941 lbs. for the year. We offer his sons from high record cows. Yearly record backing.
Flecks Farms, Faribault, Minn.

Woodell Farm
Offers a Few Serviceable Bulls

Sired by a son of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.
Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

Buffalo Creek Farm Holsteins

This yearly record bull calf for sale, born Nov. 28, 1919.

Name, King Lavera Ormsby No. 297926. Sire: King Pietertje Homestead Ormsby No. 221488. Dam: Lavera Hortensia Bawn 2d, No. 124734, with a record of 26,010.2 lbs. of milk and 1,050.55 lbs. of butter in a year. Write for price and pedigree. This calf won 5th premium at the Dairy Show.
Herd under Federal Supervision.
H. L. BINGHAM, Supt., Arlington Heights, Ill.

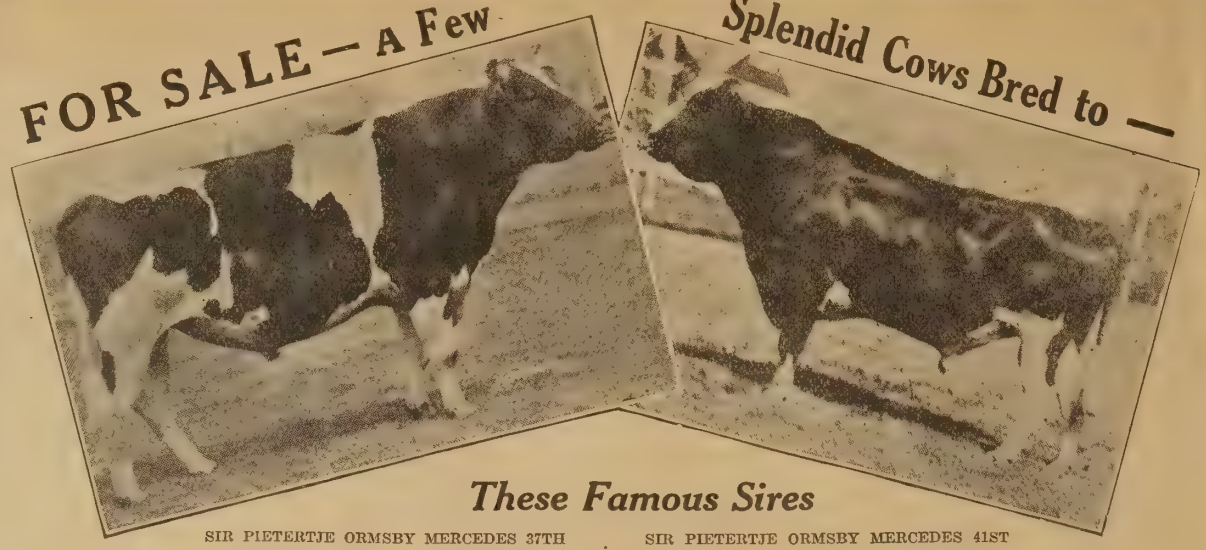
57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.
WOODLAWN FARM, STERLING, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.
A. F. Randolph, Prop., Canton, Ill.

FOR SALE — A Few Splendid Cows Bred to —



These Famous Sires

SIR PIETERTJE ORMSBY MERCEDES 37TH
He already has two 1,000-lb. three-year-olds and a 900-lb. junior two.
A full sister has twice made over 1,000 lbs. in 305 days.
Dam:—Spring Brook Bess Burke 2d, 1,290.91. Two other records above 1,000 lbs.

SIR PIETERTJE ORMSBY MERCEDES 41ST
His daughters are real producers and show ring winners. One of his daughters was grand champion at the Dairy Cattle Congress, defeating the National Champion.
Dam:—Spring Brook Bess Burke 1,094.16, "Greatest Mother of the Breed".

And You Know Their Sire —

SIR PIETERTJE ORMSBY MERCEDES, the world's greatest sire of show ring winners and yearly producers. Thirteen of his daughters have made above 1,000 lbs. Twenty have made over 20,000 lbs. milk in a year.

We are offering a few splendid cows—not culls—bred to these bulls at prices that will move them quickly. Come and look them over.

E. C. SCHROEDER FARMS *(Fully Accredited Herd)* **Moorhead, Minnesota**

Major Oliver S. Johnson



The Dairy Auctioneer
—
Tipton, Ia.

365-Day Milk Production
Still Another One

The May bull has been sold, but we offer another grandson of Sir Pietertje Ormsby Mercedes out of a granddaughter of Colantha Johanna Lad, born July 30, 1920. A handsome calf and well grown out, perfect top line; in fact, a fine individual of the popular breeding. This bull will get you "all the year round" producers. Our price is within the reach of the farmer or small breeder.
Cerro Gordo Farms, Mason City, Iowa

YOUNG BULLS
Backed By Real Production

We are offering for sale sons of our Sir Pietertje Geneseo Alcartra whose dam, Miss Pietertje Alexina 2d, has a 42.42-lb. 7-day record and a yearly record of 1,290.94 lbs. butter from 24,219.1 lbs. milk. These youngsters are good individuals from heavy producing dams. They are priced to sell.
Hubert Stuckart, - Raymond, Iowa

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.
BLUEBELL FARM, RICEVILLE, IOWA.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.
MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.
Address correspondence to Axel Hansen, formerly with John B. Irwin.

A 1045-Lb. Son of K. P. O. P.
For Your Herd Sire



He is 7 months old and a dandy,—fit to go into the show ring any day.
His sire is King Pietertje Ormsby Piebe—you know him.
His dam, Rose King of Cornella, made 25 lbs. butter in 7 days and 1,045 lbs. in a year as a 4-year-old.
His 2 nearest dams average over 1,217 lbs. for a year as 4-year-olds.
He's priced right and we offer easy terms of payment.

KING PIETERTJE ORMSBY PIEBE 22ND Do you want him?
Hargrove & Arnold **Norwalk, Iowa**
Herd UnderFederal Supervision

Light Colored—Ready For Service

Born November, 1919, a son of King Korndyke Sadie Vale 24th. Dam—18 lbs. butter at 4 years, from 3 quarters, her full sister with 638 lbs. butter in a year, ¾ sister with 740 lbs. at 3 years. This bull has a perfect rump, is well grown out, has strong official backing.
W. B. BARNEY & SONS - - CHAPIN, IOWA

A Few Bulls at Bargain Prices

Old enough for service. Sired by Sir Rag Apple Korndyke Hengerveld and from good A. R. O. dams. These bulls are well grown and right in every way. Photo and extended pedigree upon application.
Patterson & Dickinson, Bellefontaine, Ohio

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.
Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop.

WILSONDALE FARMS
Young Holstein Bulls Backed by Yearly and Seven-Day Records
Herd under Federal Supervision

We have several young bulls up to 17 months of age, sired by Maplecrest Sir De Kol, whose dam made 31.07 lbs. of butter and is a daughter of Daisy Grace De Kol, former World record Junior 4-year-old in the yearly production division.

These bulls are all well grown, and are of show type individuality. They are from dams with records up to 31.70 lbs. of butter in seven days, and 640 lbs. of milk.

Included in the above are a few young calves from 2 to 4 months of age from untested dams, which I will price very reasonable for immediate acceptance.

Prices and full description, with photographs will be furnished upon application.

These calves should be seen to be appreciated.

C. A. WILSON, Prop., Decatur, Illinois

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.
Long Distance Phone 389.
DUETT ROBINSON, R. 3, Capron Ill.

Fairhurst Herd
On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.
KITTLE BROS., Holland, Ohio.

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

If Holstein Breeders' Were Profiteers

But then — they are not!

They would not do much advertising — they would not sell a single animal — they would hold onto every one they had, every one they could get, and everything that was born on their farms.

BECAUSE

We are just about to feel the swing to the opposite extreme of what we have been experiencing in Holstein prices. We look to see them increase, and probably exceed what they have been in the past.

And the fellow who keeps what he has, and buys everything he can possibly get, is the one who is going to be on Easy Street this time next year.

THIS IS THE BUYERS' MARKET.

VERY SOON, YOU WILL SEE THE SELLERS' MARKET.

And it will be better to buy now than to be sorry a year from now.

Good thoughts materialize. Let's all get together and wish good things, think good thoughts and

BOOST.

J. M. HACKNEY

Minnesota Holsteins



Miss Korndyke Akkrummer Ormsby 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

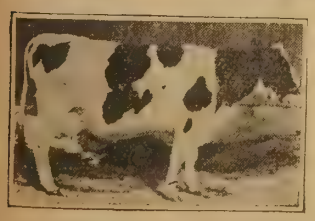
For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F,
Minneapolis, Minnesota.
"The Home of the Ormsbys."

HER YEARLING SON—$200

Ready For Service



ELMWOOD MARIE NETHERLAND

Put straight rumps, good udders, size and type in your herd, that the breeding back of this bull will transmit. Good A. R. O. records all the way back — a junior two-year-old sister just finished with 20,184 lbs. milk in a year.

Just the bull to improve your grade herd. He is nicely marked and a good individual. Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.
Federal Accredited Herd



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

THE MARK OF QUALITY

Here Is Your Chance

to Get A Son of the Sensational

Johanna Ondine Grahamholm Lad

Winner of three first prizes at the Minnesota State Fair, one first and one second at Waterloo and third at the National. He is by the famous old show bull, Aaggie Cornucopia Johanna Lad, Jr., sire of the first 31,000-lb. cow with a 1,000-lb. record. The dam, Johnson Jewel Mercedes, 26.98 pounds, was sired by Sir Pietertje Ormsby Mercedes 8th.

Write us for this bull's pedigree. Space will not permit us to go into detail.

Better still, come and see him at our farms

at Blooming Prairie, Minnesota

Act now as we have priced this fellow to sell and sell quickly.

OAK DALE FARMS

INCORPORATED
BREEDERS of
HOLSTEIN FRIESIANS
Austin Minnesota

Mankato Holstein Farms

Offer a Son of

King Colantha Ormsby Bess, A Sir Pietertje Bess Burke combination. Nine dams average over 1,000 lbs.

Dam is going at better than 800 lbs. butter for the year. Has over 25 lbs. butter in 7 days.

This calf was Grand Champion over all bulls at a Southern Minnesota district fair.

Several bulls at prices warranting their use in grade herds.

Write or better still come and see them
(A Federal Accredited Herd)
Marlow & Randall, Mankato, Minn.

RICHLY BRED
HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes,** a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby,** a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.

Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., Warren, Minn.

Sir Ormsby Segis Korndyke

grandson of Pietertje Maid Ormsby on sire's side and from a good daughter of King Segis Pontiac Count, heads our herd. Our bulls are all sold but we will book orders for future delivery. We have a few good high grade cows and heifers for sale for cash or on time.

ISLAND PARK STOCK FARM,
Hanscom & Anderson, Props.,
R. F. D. No. 1, St. Cloud, Minn.

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. Lakeland, Minn.

Grandsons of
Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., Hotel Hastings
Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.

For pedigrees and prices, write

O. J. GROVER, - GLYNDON, MINN.

Grandsons of S. P. O. M. 41st and a Few Good Cows For Sale

The cows either have A. R. O. records or are from tested dams, and are in calf to my herd sire, a son of S. P. O. M. 41st. The young bulls are from A. R. O. dams.

Herd under state and federal supervision. Write for complete information to

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for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

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Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

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Grandsons of "Count" and "Piebe"

I have just purchased from the University of Nebraska, which owns the highest record son of PIEBE from BEAUTY GIRL PONTIAC SEGIS, the World's Record Daughter of COUNT.

Eight Young Bulls

from six to eighteen months old, all from good A. R. O. dams. Individuality faultless. Beautifully marked.

Most Popular Combination of Breeding of the Day
They Won't Last Long **Write Me At Once For Prices**

J. M. HACKNEY

ARDEN FARMS, 602 Merchants Bank Bldg., St. Paul, Minn.

How Much Air Does A Cow Need

This Is The Answer:

"A cow needs TWICE the WEIGHT of pure air that she needs of FOOD and WATER combined!"

Pile up two days' rations of hay and silage and grain; beside it put all the pails of water a cow will usually drink in two days and two nights.

The WEIGHT of that feed and water equals the weight of fresh air a cow requires during 24 hours.

If the stable were air tight and no fresh air brought in, the cow would die, just as a fire choked with ashes would soon die, though it be supplied with coal or wood.

Of course, no stable is air tight; but in the colder states, most stables are built as tight as possible, to insure warmth.

Unless sufficient ventilation is provided, this means that the cows will not get enough fresh air.

Some Fresh Air Not Enough

They will get *some* fresh air, and so do not die; but they get *too little* fresh air, hence their vitality is lowered and diseases such as tuberculosis may get started.

Health is affected and expensive feeds given them are not properly assimilated; the milk yield falls.

But how bring in plenty of fresh air and yet have warmth?

Prof. King of Madison, Wis., to a great degree solved that problem.

Mr. James and his associates, because of many years' experience in solving ventilation problems, have developed improvements.

The James complete ventilation system, including insulated metal outtake flues, intake registers and and James ventilators, enables any farmer to have fresh, pure air in the barn.

Get Rid of Excess Moisture

Thirty cows will load the stable air with one and one-third barrels of water daily.

If that amount of moisture is permitted to stay in the barn, harmful results will follow. It is this excess moisture that causes the disagreeable "steaming" so noticeable in many barns on cold days.

"Steaming" is a sure sign that moisture is excessive and that the air in the stable is not being changed with sufficient frequency to keep it fresh and pure.

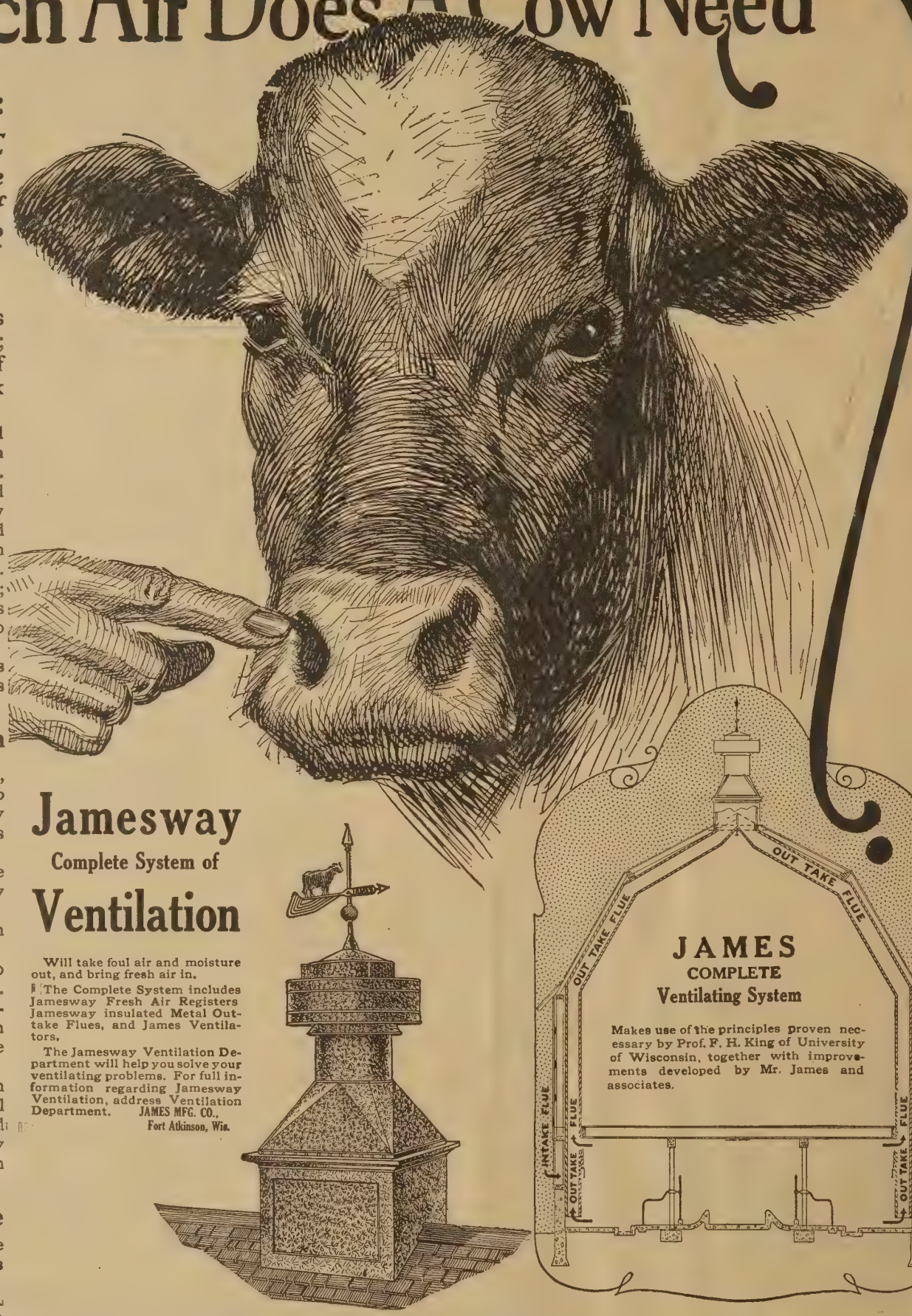
James system removes excess moisture.

Is Your Barn "Steamy?"

How about your barn? Is it "steamy?" Is it full of foul odors? Are your cows losing in health for lack of fresh air? Is impure air cutting down your milk yields?

These are intensely practical questions. To make milk requires feed, water and pure air. Why buy expensive feeds and not provide plenty of water and fresh air—water and air are free.

If you are interested in this subject of ventilation, write for our book, "The Jamesway"; and ask for the free help of our service men who have had so much practical experience in solving ventilation and other barn problems.



Jamesway
Complete System of
Ventilation

Will take foul air and moisture out, and bring fresh air in.

The Complete System includes Jamesway Fresh Air Registers Jamesway insulated Metal Outtake Flues, and James Ventilators.

The Jamesway Ventilation Department will help you solve your ventilating problems. For full information regarding Jamesway Ventilation, address Ventilation Department. JAMES MFG. CO., Fort Atkinson, Wis.

JAMES
COMPLETE
Ventilating System

Makes use of the principles proven necessary by Prof. F. H. King of University of Wisconsin, together with improvements developed by Mr. James and associates.

Work-Saving Devices

This book also describes many James devices that save labor, increase milk yields, help sanitation and improve cow health, such as Cow, Calf and Bull Pens, Feed Mangers, Calf Pail Holders, Sure-Stop Swinging Post, Swinging Cranes, "Safety First" Bull Staff, Handy Milk Stools, etc.

Also equipment for the hog barn, horse barn and beef barn.

Easy Installation

It explains the easy way of putting up carriers, setting up stalls and pens and attaching drinking cups. It shows how skilled help is not required, because of the ingenious James Anchors and because the equipment is assembled at the factory.

Free Dairy Barn Book

This 320 page book—"The Jamesway"—tells all about James inventions that save so much of labor, prevent spread of disease, promote better cow health, protect against dangerous bulls, make simpler the care of calves and sick cows and increase milk yields.

It tells about James Barn Plan Service; the many James barn experts who are at your service—men who know what has been successful and what has not; what not to do as well as what to do in planning convenient, money-saving barns.

Their advice on barn planning, ventilation and other barn problems is free, with no charge for floor plans.

A postal card request will bring you the book postpaid. Send for it today. Ask for Jamesway No. 23.

James Mfg. Co., Ft. Atkinson, Wis., Elmira, N.Y., Minneapolis, Minn.

The James way

Labor Saving Equipment for the Dairy Barn

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING



Fort Atkinson, Wisconsin Volume LX, No. 26 January 14, 1921

Douglas Fir
Northern White Pine
Idaho White Pine
Western Soft Pine

WEYERHAEUSER FOREST PRODUCTS
TRADEMARK REGISTERED IN U.S. PATENT OFFICE

Western Hemlock
Washington Red Cedar
Red Fir and Larch
Norway Pine

HOW CHOOSING THE RIGHT WOOD MAY DOUBLE THE SERVICE YOU GET FROM LUMBER

"I cannot conceive at this time of a greater service to more people than to put order and system into the marketing of lumber."

This was said recently by one of the great industrial men of America.

He spoke as a buyer and user of lumber—thinking of the needs of industrial America, the big construction plans and the great era of home-building ahead; of the fact that every building project involves the use of lumber wholly or in part; and that the question touches every farm, every business, every town and city in the land.

Wood is the natural building material of America, just as stone is of France and Italy.

It is a startling fact that the service value of the average purchase of lumber could be increased 100%, if the buyer chose the most practical wood for a given purpose.

Putting order and system into the lumber business means wood in its right place.

It means selecting the kind of wood best suited for a given use.

It means specifying the grade best adapted for the job.

As substantial factors in the lumber business the Weyerhaeuser people wish to render real service to you and to everyone who uses lumber.

To this end we will supply to lumber dealers and to the public any desired information as to the qualities of different species and the best wood for a given purpose.

This service will be as broad and impartial as we know how to make it. We are not partisans of any particular species of wood. We advise the best lumber for the purpose, whether it is a kind we handle or not.

What we advocate is conservation and economy through the use of the right wood in its proper place.

If we could insure your getting the wood you ought to have, it might mean a difference of years in the life and service of the lumber—fifty years perhaps as against a few months. So important is the selection of the right wood or grade of wood for a given use.

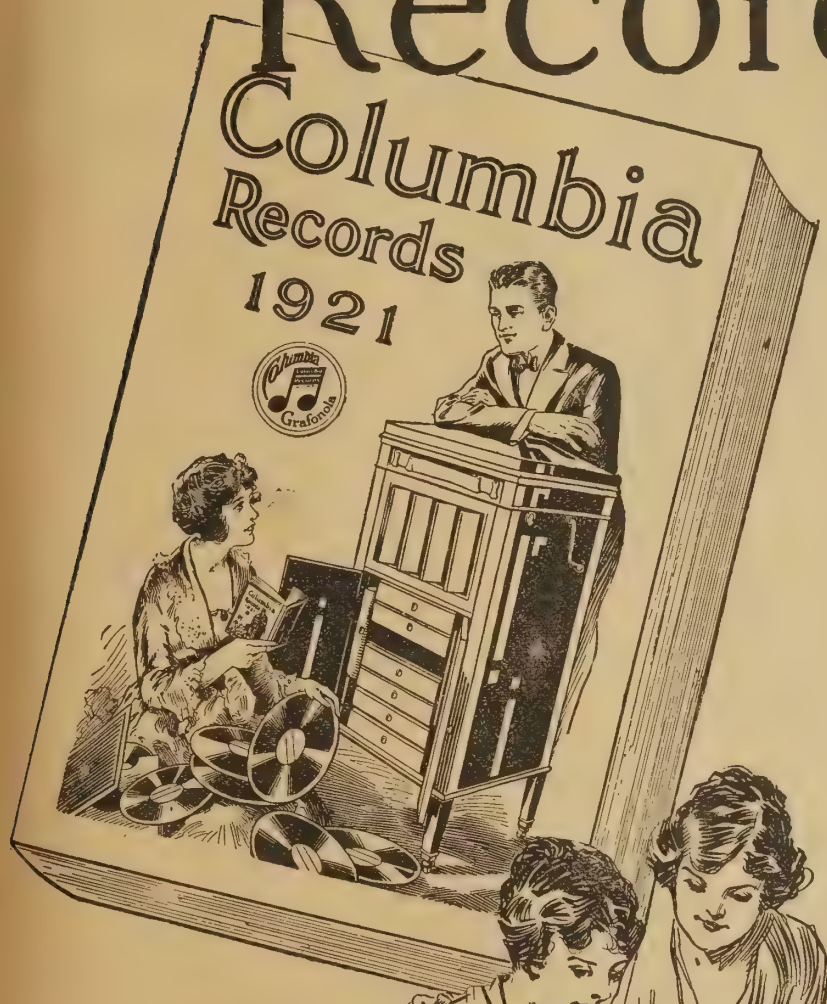
From now on the Weyerhaeuser Forest Products trade-mark will be plainly stamped on their product. You can see it for yourself at the lumber yard or on the job after it is delivered.

When you buy lumber for any purpose, no matter how much or how little, you can look at the mark and know that you are getting a standard article of known merit.

WEYERHAEUSER FOREST PRODUCTS
SAINT PAUL · MINNESOTA

Producers of Douglas Fir, Western Hemlock, Washington Red Cedar and Cedar Shingles on the Pacific Coast; Idaho White Pine, Western Soft Pine, Red Fir and Larch in the Inland Empire; Northern White Pine and Norway Pine in the Lake States.

The New Columbia Record Catalog



The Latest News of the Newest Music

The new Columbia Record Catalog makes it easy for everyone to have the very latest music. Whether it's whistled or fiddled or sung, strummed on strings, blown on brass, or played on the pianoforte, the latest music is always yours upon the newest Columbia Records.

All the latest popular hits by the biggest, best-known headliners, all the old familiar melodies from home songs to the hymns you love, all this season's jolliest dances, band pieces, instrumental selections and all the time-defying classics are in the Columbia Catalog.

A limited complimentary edition of this new Columbia Catalog has been sent to all Columbia dealers for distribution without charge. Call or write for yours now while the supply still lasts. Then a look at this book and a note to your dealer will bring you any kind of music that you and your family want to hear.

New Columbia Records on sale at all Columbia dealers the 10th and 20th of every month.

COLUMBIA GRAPHOPHONE COMPANY
NEW YORK

Canadian Factory: Toronto



Standard Models
from $82.50 to $300.00
Period Designs
from $335.00 up to $2100

Columbia
Columbia Records
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Price Readjustments *and* Agriculture

Farmers today are sharing the national burden

IT is inevitable that present and future price readjustments should be felt by farmers as well as by all other industries. Yet men familiar with rural conditions know that decreases in income will bring many farmers dangerously close to failure. Means must be found to increase the farmer's earning power.

Greater production is one means to greater earnings. The ever-growing use of machinery shows that this fact is receiving careful thought. However, much can yet be done to lower operating costs. Particularly where machinery is used, operating costs very often eat heavily into profits.

In this connection, lubrication is the most important and often the most neglected factor. The way in which you lubricate your machinery is an important factor on whether it will have a long or short life; whether your repair bills will be large or small; whether your fuel expense will be high or low; and most important of all, whether your work will be interrupted by frequent breakdowns.

Prominent engineers agree that over 50% of all repairs on tractors, trucks and automobiles are due to incorrect lubrication. Thousands of public and private tests made by the government, agricultural colleges and manufacturers have shown that incorrect lubrication is often directly responsible for excessive fuel consumption, breakdowns and loss of power.

The Vacuum Oil Company has for years been recognized the world over as an authority on scientific lubrication. Gargoyle Mobiloils, when used as specified in our Chart of Recommendations, have in many tests, shown a saving of oil of from 50% to 70%, and a fuel economy from 17% to 25%. Gargoyle Mobiloils enable you to get more power from your engine.

The Chart of Recommendations (shown in part on this page) specifies exactly what grade of Gargoyle Mobiloils will give you best results from your automobile, truck or tractor.

* * *

Gargoyle Mobiloils are put up in 1-and 5-gallon sealed cans, in 15-, 30- and 55-gallon steel drums, and in wood half-barrels and barrels.

Write for "Correct Lubrication," a booklet containing complete automobile and tractor charts and other valuable data.

GARGOYLE

Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

DOMESTIC BRANCHES:	New York	Philadelphia	Detroit	Minneapolis	Kansas City, Kan.
	Boston	Pittsburgh	Chicago	Indianapolis	Des Moines

Chart of Recommendations *for* TRACTORS

(Abbreviated Edition)

How to Read the Chart

THE correct grades of Gargoyle Mobiloils for tractor engine lubrication are specified in the Chart below.

A means Gargoyle Mobiloil "A";
B means Gargoyle Mobiloil "B"
BB means Gargoyle Mobiloil "BB"
Arc means Gargoyle Mobiloil Arctic

These recommendations cover all models of tractors unless otherwise specified.

Where different grades of Gargoyle Mobiloils are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

This Chart is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and constitutes a scientific guide to Correct Tractor Lubrication.

If your tractor is not listed in this partial chart, consult the Chart of Recommendations at your dealer's, or send for booklet, "Correct Lubrication for Tractors," which lists the Correct Grades for *all* Tractors.

Tractor, 1920	1920		1919		1918		1917		1916	
NAMES OF TRACTORS	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Allis-Chalmers (General Purpose)	A	A	A	A	A	A	...	...	...	...
" " All Other Models	BB	A	BB	A	BB	A	BB	A	A	A
All Work	B	A	B	A	B	A	B	A	B	A
Appleton	BB	A	BB	A	BB	A	BB	A	...	...
Aultman-Taylor (18-36)	...	...	...	...	BB	A	BB	A	A	A
" " (22-45)	BB	A	BB	A	...	...	...	...	...	...
" " (15-30) (Waukesha Eng.)	BB	A	BB	A	...	...	...	...	...	...
" " All Other Models	B	A	B	A	B	A	B	A	A	A
Avery (5-10)	A	A	A	A	...	...	A	A	A	Arc.
" Motor Cultivator & Planter	A	Arc.	...	...	...	...	...	...	...	...
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Bates Steel Mule	B	A	B	A	B	A	B	A	...	...
Bean-Track-Pull	B	A	B	A	B	A	B	A	...	...
Big Bull	...	...	B	A	B	A	B	A	B	A
Buckeye (Findlay, Ohio)	B	A	B	A	B	A	B	A	B	A
Case (9-18)	...	...	...	...	A	A	A	A	...	...
" (10-18)	...	...	BB	A	...	...	...	...	...	...
" (10-20)	...	...	...	...	A	A	A	A	A	A
" (12-25 & 20-40)	...	...	...	...	BB	A	BB	A	B	A
" (15-27)	BB	A	BB	A	...	...	...	...	...	...
" All Other Models	B	A	B	A	...	...	B	A	B	A
Cletrac	BB	A	...	...	...	...	...	...	...	...
Cleveland	...	...	BB	A	BB	A	BB	A	...	...
Coleman	B	A	B	A	B	A	B	A	...	...
Common Sense	BB	A	BB	A	BB	A	BB	A	A	A
C. O. D.	...	...	BB	A	BB	A	BB	A	A	Arc.
Craig	BB	A	BB	A	...	...	...	...	...	...
Creeping Grip	...	...	BB	A	BB	A	BB	A	B	A
E. B. (9-16)	...	...	B	A	B	A	...	...	...	...
" (Reeves)	B	A	B	A	B	A	B	A	A	A
" All Other Models	A	A	A	A	A	A	A	A	A	Arc.
Flour City (20-35)	B	A	B	A	B	A	B	A	A	Arc.
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Fordson	BB	A	BB	A	BB	A	...	...	...	...
Gas Pull	...	...	...	...	B	A	B	A	B	A
Grain Belt	BB	A	BB	A	BB	A	BB	A	...	...
Happy Farmer	...	...	...	...	B	A	B	A	B	A
Hart Parr	B	A	B	A	B	A	B	A	B	A
Heider	BB	A	BB	A	BB	A	BB	A	B	A
Hession	...	...	B	A	...	...	...	...	...	...
Hollis	...	...	BB	A	...	...	...	...	...	...
Holt Caterpillar (Model 18)	...	...	...	...	...	...	BB	A	...	...
" " (Model 45)	BB	A	BB	A	BB	A	BB	A	BB	A
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Huber	BB	A	BB	A	BB	A	BB	A	B	A
Illinois	B	A	B	A	B	A	A	A	...	...
Indiana	A	A	A	A	...	...	...	...	...	...
K. C. Prairie Dog	BB	A	BB	A	BB	A	BB	A	B	A
La Crosse	B	A	B	A	...	...	...	...	...	...
Liberty	B	A	B	A	B	A	...	...	...	...
Lightfoot	...	...	BB	A	BB	A	...	...	...	...
Minneapolis	B	A	B	A	B	A	B	A	B	A
Mogul (8-16)	...	...	...	...	A	A	A	A	A	A
" All Other Models	...	...	BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A	BB	A
Monarch	BB	A	...	...	...	...	...	...	...	...
National	...	...	BB	A	BB	A	...	...	...	...
Nevership (20-12)	...	...	B	A	B	A	BB	A	...	...
" (30-18, 10-6)	...	...	BB	A	BB	A	...	...	...	...
" All Other Models	...	...	...	...	B	A	...	...	...	...
New Age	...	...	BB	A	BB	A	BB	A	...	...
Nilson	BB	A	BB	A	BB	A	BB	A	B	A
Oil Pull (14-28, 10-20)	...	...	...	...	BB	A	...	...	...	...
" " (12-20, 16-30)	B	A	BB	A	...	...	...	...	...	...
" " (20-40)	B	A	BB	A	BB	A	...	...	...	...
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Parrett	B	A	BB	A	BB	A	BB	A	A	A
Pioneer	B	A	B	A	B	A	B	A	B	A
Royer	B	A	B	A	B	A	...	...	...	...
Rumely (8-16)	...	...	...	...	BB	A	BB	A	BB	A
" (12 24)	...	...	...	...	B	A	B	A	A	A
Rushell (Giant)	B	A	B	A	B	A	B	A	A	Arc.
" All Other Models	BB	A	BB	A	BB	A	BB	A	A	Arc.
Sandusky	BB	A	BB	A	BB	A	BB	A	A	A
Square Turn (15-30)	...	...	...	...	BB	A	...	...	...	...
" " (18-35)	B	A	B	A	B	A	...	...	...	...
Titan	BB	A	BB	A	BB	A	BB	A	BB	A
To-Ko	A	A	A	A	...	...	...	...	...	...
Townsend	B	A	B	A	...	...	...	...	...	...
Trundaar	BB	A	BB	A	BB	A	...	...	...	...
Turner Simplicity	BB	A	BB	A	BB	A	BB	A	...	...
Twin City (Model 15)	...	...	...	...	...	...	...	...	A	A
" " (Model 16)	...	...	BB	A	BB	A	...	...	...	...
" " (Model 12-20)	BB	A	BB	A	...	...	...	...	...	...
" " (Model 20-35)	BB	A	...	...	...	...	...	...	...	...
" " All Other Models	B	A	B	A	B	A	B	A	B	A
Velie	...	...	B	A	A	A	...	...	...	...
Wallis	BB	A	...	...	...	...	...	...	...	...
" Cub	...	...	...	...	B	BB	B	BB	A	Arc.
" " (Junior)	...	...	BB	A	A	A	...	...	...	...
Waterloo Boy	A	A	A	A	A	A	A	A	A	A
Wheat	...	...	B	A	...	...	...	...	...	...
Whitney	BB	A	BB	A	BB	A	A	A	...	...
Wisconsin	B	A	B	A	B	A	BB	A	...	...

HOARD'S DAIRYMAN

A WEEKLY JOURNAL DEVOTED TO DAIRY FARMING

Volume LX | FORT ATKINSON, WIS., JANUARY 14, 1921 | Number 26

HOW A CHAMPION WAS RAISED

Discussion of Calf Feeding

E. G. WOODWARD, State College of Washington

CHINOOK Segis Pontiac David, the junior champion Holstein bull calf at the Pacific International Live Stock Exposition, was bred and exhibited by the State College of Washington. After the show, this calf was sold at auction to C. A. Harrison of Seattle, who now describes him as the best individual bull calf in America.

At birth "Davy" was included in an investigation in which different methods of raising calves were compared. He weighed an even hundred pounds at birth and was assigned to the skimmilk group of calves, which meant that he was to be raised on skimmilk according to the best practices known.

"Davy" was allowed to remain with his mother for a part of his first day until he had nursed and until his mother had cleaned. He was then removed to an individual pen, 4 by 6 feet in size, which was boarded up solid on three sides to a height of three and one-half feet to keep him from associating with his neighbors, and with an ordinary slat gate in the front to allow ventilation and so that he might see out.

For the first few days he was fed whole milk from his mother, and later was given mixed whole milk from the herd. He received only whole milk for fourteen days, and during this time drank 112 pounds of milk, an average of 8 pounds a day, and made a gain of 17 pounds in weight.

During the third week of his life, a gradual change was made from whole milk to skimmilk, until at the age of 20 days he was receiving no whole milk. During these six days he received thirty-five pounds of whole milk and twenty-six pounds of skim. During this week he also began to eat a grain mixture of equal parts, by weight, of bran, ground oats, rolled barley, and linseed oil meal, which was kept before him in a feed box. During this week of change, he gained an average of .8 of a pound a day in weight.

During the next ten days of his life "Davy" received 109 pounds skimmilk, 9.4 pounds grain, and began for the first time to eat alfalfa hay in earnest, although he had nibbled at the hay which was kept before him previous to that time. In this ten-day period he gained an average of a pound a day.

"Davy" was then thirty days old, and from that time on his weight as well as his appetite grew steadily. Accurate records of his feed and growth were kept until he was 184 days old. He was gradually weaned during the last few days of this period. A study of his record shows that at the age of one hundred days he was receiving 14 pounds of skimmilk a day, which is as much as he was fed at any time. At that age, he also ate approximately as much grain and hay as at any time up to the age of 184 days. At the age of one hundred days, he was eating approximately four pounds of grain a day and three pounds of hay.

The records further show that at the age of 184 days "Davy" weighed 426 pounds, which was a gain of 326 pounds, or an average of 1.7 pounds a day. He had also grown 10⅜ inches in height at shoulders. This growth was made with the following feed and cost:

Whole milk, 147 lbs. at $3.50 per cwt.	$ 5.14
Skimmilk, 1,915 lbs. at $1 per cwt.	19.15
Grain mixture, 601.8 lbs. at $3.55 per cwt.	21.36
Alfalfa hay, 405.4 lbs. at $30 per ton	6.08
Total cost	$51.73

Normal weight for a Holstein calf at the age of six months, as determined by the Missouri Experiment Station and reported in Circular 88 of that station, is 349 pounds, so that "Davy" was approximately 20 per cent above normal weight for his age.



CHINOOK SEGIS PONTIAC DAVID AND C. W. KRASSIN, THE STUDENT WHO RAISED THIS CALF

In addition to earning his way as he went through college, he paid his own fare to Chicago as a member of the Dairy Cattle Judging Team, borrowed money enough to buy two extra good Holstein cows at the recent Portland sale and took them home to his father's grade herd, and now has one on semi-official test.

Up to this time the calf had shown signs of sickness only twice. At the age of 19 days while the change from whole to skimmilk was being made, he had a mild attack of scours. This condition was met successfully by slightly reducing the milk fed for two feeds. This case of scours was attributed to feeding milk that was too warm.

At the age of nine weeks the calf became constipated and appeared sluggish and droopy. He was given a dose of four tablespoonfuls of castor oil and was allowed no feed for a day. On the third day he was back to normal. This constipation was thought to be due to a lack of exercise while the calf was eating a rather heavy grain feed.

After being weaned at the termination of the feeding trial it was decided to fit this calf for the show circuit, and he was consequently fed skimmilk again for a period of about a month before starting on the circuit. During this time he never received more than 16 pounds of skimmilk a day. While on the show circuit he received a small feed of whole milk twice a day as skimmilk was not available. During the show season his grain ration was also changed slightly and a small amount of molasses added. At the age of nine months this calf weighed 636 pounds, which is equivalent to an average gain of nearly two pounds a day from the time of birth.

"Davy" competed at four shows and made the following winnings: Spokane Interstate Fair, Grand Champion; Walla Walla Agricultural Fair, Junior Champion; Washington State Fair, Second in Class; Pacific International Live Stock Exposition, Junior Champion.

The excellent results in the feeding of this calf were probably due to the close observation of the following points:

1. Avoiding the overfeeding of milk while the calf was young.
2. Increasing the feed of skimmilk gradually.
3. Weighing out the exact amount of milk for each feed.
4. Keeping the calf separate from other calves while young to avoid the sucking habit.
5. Keeping water and salt before the calf at all times.
6. Feeding a good grain mixture and alfalfa hay up to the limit of the calf's appetite.
7. Keeping both stall and calf clean.
8. Keeping calf in well ventilated barn of moderate temperature.

The practices followed in raising this calf may be criticized in several ways:

1. This calf probably did not get sufficient exercise. Some of the calves kept in small pens in this investigation developed a stiffness of the legs which disappeared gradually when allowed exercise each day.
2. This calf was never on pasture. There is every reason to suppose that a good pasture and shade might have added to the thrift of the calf.
3. The calf received no silage, although it is considered good practice to feed silage in limited amounts to calves.

What Milk Lacks as a Beverage

HOARD'S DAIRYMAN:—I have read with very much interest the article in the December 3rd issue of Hoard's Dairyman, entitled "Advocating the Ad." The author makes some very enticing and appetizing suggestions for advertising, but the trouble is with the product to be advertised rather than the lack of ability to place the subject before the public.

She talks about picturing the wholesomeness of the noon-day lunch that may be but a crusty roll spread with sweet country butter, and a schooner of milk fresh from the clover fields. The trouble is that while she might advertise a schooner of milk fresh from the clover fields, the businessman is not able to procure it, and one of the first principles of business advertising is that we must be able to furnish a product that will live up to the advertising. The only thing a business man can get now-a-days in a city is a schooner of milk that is two or three days away from the clover fields, that has been standardized and pasteurized, and more often than not is on the verge of turning sour.

I have no doubt whatever but that she could advertise in a way to make the city man long for the products of the dairy, but she must first see that he can get these products when he wants them before stimulating his desires. One big reason why milk is not more freely consumed as milk, is that it is not palatable and inviting.

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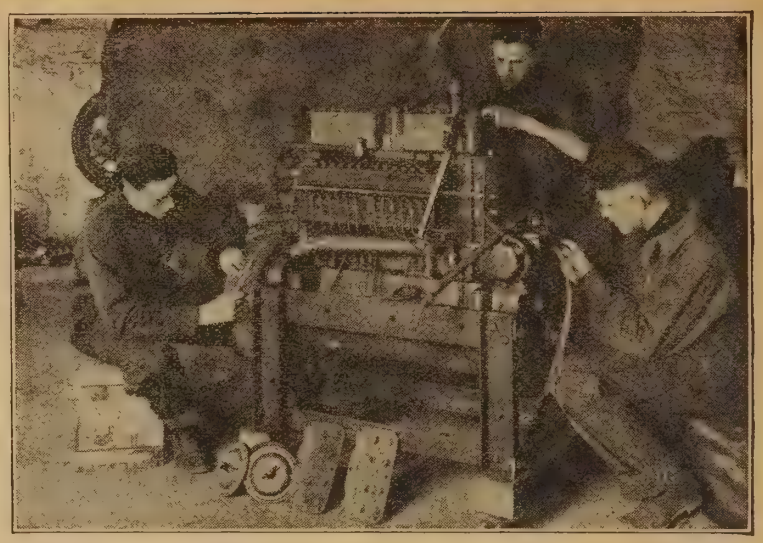
Lubricating Tractor in Cold Weather

R. U. BLASINGAME, Pennsylvania College of Agriculture

MOST of the fuel, lubricating oil, and various grades of grease used by the farmer at the present time in the automobile, truck, and tractor come from the distillation of crude oil. When heat is applied to the still the lighter grades of gasoline are the first to be given off. At still higher temperatures the ordinary grade of gasoline is the next produced, followed by kerosene distillate and various grades of lubricating oil. Thus we see that in the distillation of petroleum the products which follow each other are more dense, thus requiring a higher heat to cause them to vaporize and cause them to pass from the still.

As a general rule the instruction books which come with the tractor say that the thick grades of oil should be used in summer and the thin grades should be used in winter. There is a very definite reason for this, owing to the fact that when the temperature drops to zero or below a thick oil in the crank case of the tractor engine may become solid or congealed. When the engine is operated in extremely cold weather and the lubricating oil is solid, the pump will fail to deliver the oil to the various bearings of the engine until the engine is warm enough to heat the oil to a point that it will be reduced to fluid form. During the intervening time the various moving parts and bearings of the tractor motor may become dry and burned and will have to be repaired. If the grade of oil is used which will not solidify, the lubricating pump will function properly and the motor will not be damaged.

Every substantial, well known, and well advertised oil company maintains a staff of engineers to test the various tractor motors as they come on the market to determine which oil is best suited to that engine in the various seasons. This procedure costs the oil companies quite a lot of money, and the farmer should take advantage of the results which they obtain. After the tractor motor has been tested with the various grades of oil, the engineers make up a lubricating chart in which they recommend for particular tractors certain grades of oil for winter and summer. It was noticed in the beginning of this discussion that there are various grades of oils which come from the still at various temperatures. Those oils which come from the still first are thinner and thus congeal at a lower temperature than the thicker grades of oil.



SHOWING LUBRICATOR SIDE OF A TRACTOR ENGINE. IT IS EVIDENT THAT A HEAVY OIL WOULD NOT FEED WELL THROUGH THESE PIPES IN COLD WEATHER

By writing to the various well-known oil companies one can receive very excellent literature on the matter of tractor lubrication; also on request one may receive a lubricating chart which shows the various tractors, trucks, and automobiles and the different grades of oil which are recommended for use in various seasons of the year. This literature may be had for the asking.

There are various systems of lu-

(Continued on page 1147)

IN THE OLD DOMINION STATE

S. R. WINTERS, WASHINGTON, D. C.

THE Fairfax County Cow Testing Association of Virginia, having the supervision of 522 cows, has retained the services of Miss Olive McEvally of Herndon as the first woman to be employed in the capacity of official cow tester in the Old Dominion State. The exigency of the World War afforded opportunities for women to weigh feed, analyze milk, and instruct farmers in the details of dairy management. The war once over, however, the difficult assignments given women as testers reverted to men who by training and experience are better qualified for the jobs.

The satisfactory service rendered by Miss McEvally, justifying her retention for another twelve months, emphasizes the possibilities and accomplishments of a woman in this singular capacity. She was raised on a farm in Virginia, where she spent all of her life except brief periods in which she was a student in schools not located in the community. Her early schooling was obtained in the rural schools, later supplemented by a course in home economics at the Harrisonburg Normal School. By special training she was equipped for her present job by pursuing a course for cow testers at the Blacksburg Agricultural College, which is to be further amplified this winter by a short course at the Virginia College. The expenses incurred are to be borne by popular subscriptions from farmers who have heretofore shared the benefits of her services.

The benefits accruing from the eight cow testing associations in Virginia are applicable in a relative degree to the organization of which Miss McEvally is official tester, the Fairfax County Association being the largest in the state. The average dairy cow in Virginia produces 4,000 pounds of milk and 150 pounds of butterfat a year. The cow testing records, as recently tabulated by the Dairy Division of the United States Department of Agriculture, indicate an average milk production of 5,670 pounds and a butterfat yield of 250 pounds. There is a 40 per cent difference favoring the animal whose productive capacity is observed by the cow testing association.

Miss McEvally is a farmerette both by previous training and inclination. When her brother went to France as a soldier, she donned his old clothes, went into the fields, and took his place as a worker in tilling the soil and harvesting crops. She is now in charge of the Fairfax County Association, her duties involving the weighing and testing of the milk of 522 cows, maintaining a record of the grain fed each animal, and keeping of the books of the organization. As she travels from farm to farm not infrequently does Miss McEvally lend a helping hand in driving a tractor, milking the cows, and washing the dishes. The performance of these chores invites co-operation from farmers in her work of determining the quantity of feed given in accordance with the known milk production, with the ultimate purpose of discarding the low producing cow.



MISS OLIVE McEVALLY, THE WOMAN TESTER OF VIRGINIA, AND THE HERD WITH WHICH SHE GAINED HER PRACTICAL EXPERIENCE

OHIO'S PLANS FOR THE FUTURE

CLARENCE M. BAKER, OHIO

OHIO'S leaders in agriculture are laying the foundation to cope with the future. To be sure the foundation is laid upon rock and not upon the sand, every effort is being extended to complete, to co-operate, and to finance agricultural affairs in such a way that there can be no slip in the cogs that control the destinies of the farmers. Such facts were brought out at a recent meeting of county agents and agricultural workers at the Ohio State University, Columbus.

Basis of Organization

Farm bureau work has gone forward to such an extent that praticalIy all the counties of Ohio have agents and are ready to organize for financing campaigns so that farm bureau work and county agent co-operation can be stauncher than ever. Agricultural advancement from the farm bureau standpoint is going forward in Ohio on the basis of the smallest agricultural unit of community, which in most cases involves a township. The county agent organizes these communities according to the type of farming and desires determined by the people themselves. The community forms a unit, having representation on a county board. The county board as far as possible determines the policies of the county and handles their relation to the state farm bureau federation.

In Ohio the grange has been active for almost fifty years and represents in most places the dominant feature of community social life. In some cases the Grange has looked after the financial interests of the farmer, but it is regarded that the farm bureau will do most of this in the future and that the grange will still function in its most important office —that of social and educational affairs.

L. J. Taber, master of the state grange, pointed out that "competition cannot keep two organizations going with the same people. With proper division of work the best results will be obtained. There is nothing so important to rural life as the proper division of labor and co-operation. The interest of the rural people will be the interest of America."

Ideals Sought by Ohio Farmers

Dean Vivian of the College of Agriculture pointed out that Ohio will not suffer severely from entering an era of fallen prices because of the organizations that have been perfected among agents. In Ohio there is a system of regional agriculture, in which the selling organizations are much more important than the buying, for the average Ohio farmer sells five times more products than he buys. Dean Vivian characterized the financial situation by stating that if the banks did not serve the farmer properly, the farmers would operate banks of their own. Furthermore, it is necessary in preparing for the future to organize in such a manner that it will be possible to increase incomes to the producer without increasing excessively to the consumer. Dean Vivian has passed the 30-year mark of agricultural work and feels that he is just beginning to realize what the vision of the future means.

Alva Agee, of the Department of Agriculture of New Jersey, believes that the next few years will determine the policies of American agriculture and that the foundation and pillars for this work must be laid deep and firm. There is a danger at present, he states, of class consciousness which may ruin the advancement of agriculture. The idea that one class can control the price and the distribution of food will work a detriment, but if this class operates with the idea of service to all interests of the country and the welfare of America, then the foundation will have been laid on a rock.

How the Farm Bureau Helps

The operation of farm bureau work in Ohio is somewhat regional. In the western half of the state the work is divided mainly into crops, live stock, and various organizations, while in the hilly sections, good roads, better schools, and community life are developed; but in all sections the farm bureau fosters the smaller organizations, standing back of associations like the wool growers, live stock, and shipping organizations.

For instance, in a central Ohio county, a business agent for the farm bureau was able to keep out low grade, inferior fertilizers and bring in 1,500 tons of good fertilizers through the work of the co-operative elevators and buying associations. The agent himself did no buying nor selling—simply acted as a co-operator with the organizations already present.

Another county business agent handled almost $10,000 worth of products in a short time for farmers, at a saving of approximately 30 per cent. This business agent received orders from local communities for dairy feeds and pooled all orders for the county, but used local elevators and merchants as distributors, returning to them almost as much profit as they generally make, but handling material in larger bulk with more service to farmers. For instance, linseed meal was selling for $90 a ton in one section, but by pooling and placing the orders, it was possible to furnish it to the farmers at a cost of $70 a ton without interfering with the business of local concerns. Through this co-operative effort, storages were used.

Shipping and Buying Organizations

In all this work there is an attempt to make the bank the logical credit center, arrangements being made with banks to take over notes that are given for goods at co-operative elevators. Thus the problem of waning finance is passed on to the proper community institution for handling and loaning money.

Interest in Ohio is being centered on live stock shipping associations. Through shipping and grading of hogs it has been possible to secure Chicago prices at some Ohio markets with no commission charges or loss from shrinkage. The live stock shipping associations generally bear an intimate relation to the farm bureau, as $1 from the $10-farm-bureau-membership fee in Ohio pays for one share in the live stock shipping organization. The live stock organizations are mainly a selling agency, composed of a board of directors that employ a manager. This organization sells stock. They have been able to eliminate ungraded live stock, the common live stock "fill", and to eliminate shrinkage charge on live stock delivered in trucks to markets. For some reason in some localities live stock delivered in truck had been docked as much as 50 cents per cwt. Better railroad rates were secured in some cases.

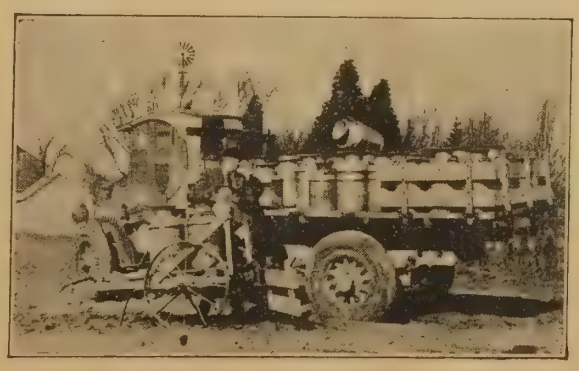
In one county it was found that 325 fertilizer agents were operating. Through work of the business agent this was reduced to 25 doing the same service and saving the farmers money. There was a saving of $15,000 in freight charges in one instance by pooling all business for freight rates.

Home Making Considered

The development of the business end of farming, however, will not be the only thing that will be considered in Ohio. The profession of home making will undoubtedly be given equal consideration and a little glimpse of the future shows what is coming in that line. The Ohio farm woman, it has been found through surveys, has a 12-hour day. Only 9 per cent of country people in Ohio have running water in the kitchen and 80 per cent still burn kerosene lamps. The average distance that farm women carry drinking water for the home is 67 feet and soft water, 24 feet. This shows what problems home demonstrators have to work with in counties and these women agents are beginning to be looked upon as super-agents.



DEAN VIVIAN OF THE OHIO COLLEGE OF AGRICULTURE STATES THE FARM SHOULD BE A PLACE TO MAKE MONEY AND A PLACE TO LIVE COMFORTABLY. WE FIND SUCH IN THIS OHIO HOME



HAULING MILK CO-OPERATIVELY



A LIVE STOCK SHIPPING POINT

The Corn Song

HOARD'S DAIRYMAN:—I know that Homer sometimes nods, but I am amazed that the editorial staff of Hoard's is so little versed in the works of the farmer-poet, John G. Whittier, that it prints the Corn Song and ascribes it to an unknown author! Not only that, but four of the best verses are left out.

Wish I had time to write you a dissertation on why every farmer should read Whittier's poems. There have been many so-called "farmer-poets", but to my mind Whittier was supreme among them all. A volume of his verse ought to stand on every farm table along with the Bible. Nothing equals it in homely philosophy and love of simple farm life. You might well reprint parts of the following poems: The Huskers, The Drovers, Maud Muller, The Barefoot Boy, and Among the Hills. No lover of farm life ought to let the winter pass without rereading Snow Bound, My Psalm, and The Eternal Goodness, the finest examples of simple faith and trust ever penned in any language.

Pardon my somewhat lengthy discourse on one of the "humbler poets", but I have always felt that good poetry is a great inspiration to anyone, and Whittier speaks the language of the "plain people". A dip into his works is refreshing in these times of radicalism and unrest.

ERNEST KELLY.

[Editor's Note:—We plead guilty to the impeachment, but are glad to be classed with Homer, the gifted poet of the Grecian Golden Age, whose Iliad and Odyssey have been the bete noir of the classical school boy of every age and the delight of those who could read in translation the heroic deeds of Achilles and the enthralling story of the wanderings of Ulysses.

We, too, have admired the Quaker poet and can confirm all that Mr. Kelley says. We regret the oversight, but are happy to have made it in finding that Hoard's Dairyman is so well read and that other men and women are lovers of the kindly author of The Huskers, The Barefoot Boy, and Snowbound. To the readers who have written us and to those who sent music to which the poem is sung, we send on our thanks and greetings.]

SUPPLYING A LARGE CITY WITH BUTTER

W. B. LIVERANCE, NEW YORK

GREATER New York, consisting of the boroughs of Manhattan, Brooklyn, Queens, Richmond, and the Bronx, has a population of about six million people. In addition, it would be safe to estimate a permanent transient population in the city of about a half million. Adjacent to New York, there are hundreds of cities and smaller towns which draw their food supplies in great part from New York. It is very probable that the aggregate population of such cities and towns is fully three million people. New York then is the receiving and distributing point of food products, to say nothing of various other products, for a population approaching ten million people. The immensity of the marketing machinery necessary to efficiently supply such an aggregation of human beings is beyond the comprehension of the individual who gives the matter but superficial thought. It might seem that the distribution of products of various kinds to such a throng might result in considerable confusion. However, unless there is some unnatural agency in operation, the delivery of food in a big city for several days is a factor whose significance is thoroughly appreciated. The stocks of food which are held in warehouses from day to day, while relatively large, are comparatively small when the consumption of food per day in a large city is given consideration. Failure to deliver entire fresh stock every ten days would practically cause the city to face starvation. An urban population thoroughly appreciates the value of well operated thriving railroads to the country as it is entirely at the mercy of the public carrier.

As compared to bulkier food products, the volume of butter that is consumed in a large city is small. On the table it occupies a very small space when compared to bread, meat, and potatoes. However, in the aggregate the quantity consumed in and about the city in the course of a year assumes considerable proportions, and the value in round numbers expressed on paper is stupendous. Let us suppose that the average per capita consumption of butter of the ten million people in the vicinity of New York is only one-fourth pound per week. That would mean a consumption of 130 million pounds, or 65 thousand tons, of butter per year. That is without doubt a low estimate. It is safe to say that fully 200 tons of butter are consumed in the vicinity of New York each day. In other words, practically 60 thousand tubs of butter are demanded each day of the year by New York City. The distribution of such a vast quantity of any one product would require the assistance of many traffic experts if it were necessary to work out a system of distribution in a very short time. However, that is not necessary as the marketing machinery that now operates is the result of many years of development. It works very efficiently although to the uninitiated, and even to those familiar with its operation, it sometimes appears to cause much duplication of effort.

There are three classes of merchants in the city who act as agents in distributing butter after it arrives in the city. They are the wholesaler, the jobber, and the retailer. The wholesaler receives the butter direct from the producer and handles it in very large quantities. He usually sells direct to the jobber. Oftentimes, he conducts a jobbing business in conjunction with his wholesale operation. His commission on the individual unit of butter, the pound, is relatively small as he figures on a large volume of business and a quick turnover. As the quantities of butter which he handles are large and quickly amount in value to large sums of money, his one great concern is to find reliable jobbers with whom to deal. The credit end of the wholesale butter business is very important. The wholesaler must depend to a great degree on the judgment of his salesmen as to whether or not an account is safe. The salesmen usually remain in the store during the day but frequently call on jobbers in an effort to develop new business. Practically all the butter is sold in the store, however, after the prospective buyer has inspected it to determine whether or not it will conform to the requirements of his trade. The wholesaler receives the greater part of his butter on consignment and he remits to the shipper all the money that is received from the sale of the butter minus the commission and transportation charges. The wholesaler is entirely responsible for collecting money derived from the sale of butter and he must make remittance to the shipper regardless of whether or not he is able to make collection from the individual to whom the butter is sold. The progressive wholesaler very seldom allows bills to remain uncollected longer than ten days.

The jobber disposes of his butter to the retailer. Necessarily, he must sell the butter in smaller quantities than the wholesaler. It is a custom of the trade that retailers be granted longer credit than jobber. As the usual time of collection is from 30 to 60 days, the jobber at times has huge sums of money tied up. However, the jobber has his compensation in that his commission usually amounts to two or three times that of the wholesaler. The jobber runs a greater risk in making collections as he deals with a multitude of small business men, many of whom have very little financial backing. It is not uncommon to hear reports that a jobber has lost considerable money through a poor account. The retailer receives his butter in whatever form he desires. He may get it in the original package, in bulk packages of various sizes, or in prints. The jobber is at a considerable expense in operating his business as he must employ traveling salesmen to dispose of the butter, he must have employees to print and otherwise prepare the butter for his market, he must have delivery equipment as he delivers the butter to his customers, and his office force must be larger than that of the wholesaler as he has a multitude of accounts with a resultant volume of clerical work.

To the retailer, butter is only one of many products which he sells. However, he is put to considerable expense in preparing to handle it as he must install a refrigerator. There is also considerable waste if the butter is sold in bulk form, that is, direct from the tub, as the greater percentage of all butter is sold, as there is of necessity a



INTERIOR OF "COOLER" OR REFRIGERATOR OF A LARGE WHOLESALE BUTTER HOUSE



TYPICAL BUILDINGS IN THE WHOLESALE BUTTER SECTION

When one becomes more or less familiar with the distribution of food products in a great city he becomes greatly impressed with the necessity for efficient service on part of transportation agencies which carry the products from the producer thence from one distributing factor to another. Not only must railroads be operating efficiently but local carriers must also be doing their part. The butter receiver, as well as the general public, was caused to realize as never before the importance of proper transportation during the strike that prevailed on practically all railroads in the early spring. It was then that the large city found itself facing a shortage of all food products and there was ample excuse for the pessimistic feeling that prevailed throughout the country and especially in the large centres of population at that time. Food products must be kept moving at all times if the population is to be served as it should be. Any agency that halts



ONE OF THE WHARVES ON NORTH RIVER WHERE GREAT QUANTITIES OF BUTTER ARE UNLOADED AFTER HAVING BEEN FERRIED ACROSS FROM THE JERSEY SIDE

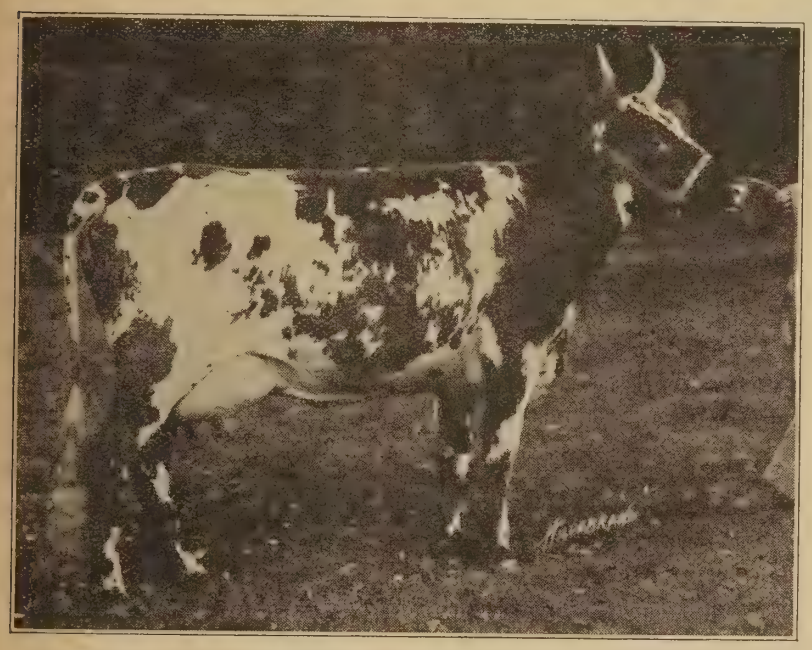
considerable loss in moisture and small scraps. The retailer's profit is larger than that of either the wholesaler or jobber, in fact it is larger than the two combined. It is he who is in direct contact with the consumer and therefore he is a very important agent in the scheme of butter distribution.

It is unquestionably somewhat unfair to both the producer and consumer of butter that there should be so many middlemen between them. However, it is a condition that as a whole can not be avoided. Theoretically, it would be ideal for the consumer to buy his butter direct from the producer, thereby eliminating the profits that go to the wholesaler, the jobber, and the retailer. Practically, such a method is impossible as the factors of preparing shipments for individuals, the making of collections, the furnishing of refrigeration for long distance shipment of small quantities, and the solicitation of business at long distances are barriers that can not be eliminated. The present arrangement, while far from ideal, makes for quick and economic disposal of butter as soon as it arrives. However, it can not be denied that one shipment of butter is oftentimes juggled from one wholesaler to another, possibly several times, before it passes on to the jobber and ultimately to the consumer. That is a condition which prevails in all lines of goods which are placed on the open market and it is very probable that there is less manipulation in the butter market than in any other. Eventually some scheme of distribution may be worked out that will be a great improvement on the present one. It is very doubtful, however, if there will be any radical change of method in the near future.

The wholesale butter market of New York City is located at the lower end of the island of Manhattan, near North River, the stream of water which flows between the island and the state of New Jersey. All the butter destined for New York is delivered by railroads to points as near that district as possible. The New York Central Railroad has a terminus, St. John's Park Station, which is in the heart of the butter market. All butter over that line is delivered to that station. The terminals of all other lines from the West are on the New Jersey side. Butter arriving on those lines is transferred by ferry to wharves on the New York side near the market from whence it is delivered to stores by truck. At the stores, the butter is prepared for ultimate disposal. If the containers have become broken to some extent in transit, they are thoroughly coopered. If the butter is moldy or dirty, each tub is scraped to remove all foreign matter and if necessary the tubs are re-lined with fresh parchment. The butter is then weighted and the net weight of the individual container is marked on the tub, or whatever package may have been used. Those weights constitute the basis of weight for which the shipper is paid, as well as that for which the buyer must pay.

It undoubtedly would be advisable to describe briefly how the market quotation is established each day. The organization of butter, cheese, and egg dealers, which in the butter market corresponds to the Stock Exchange in the money market, is the New York Mercantile Exchange. The 'Change, so-called, meets every business day at 10 o'clock where stocks of butter are bought and sold. Transactions on 'Change indicate the trend of the market for the day. If receipts are high and demand somewhat low, the price tendency is usually downward. If the opposite is true the tendency is in the opposite direction. However, each day shows individual characteristics which affect the market for the day. The price is not entirely governed by the transactions on the 'Change. The market reporter visits many of the leading wholesale stores in order to determine the activity of the market and to check up on the Exchange transactions to satisfy himself that they were correct indicators of the market trend for the day. He then, arbitrarily, uses his judgment in fixing the quotations.

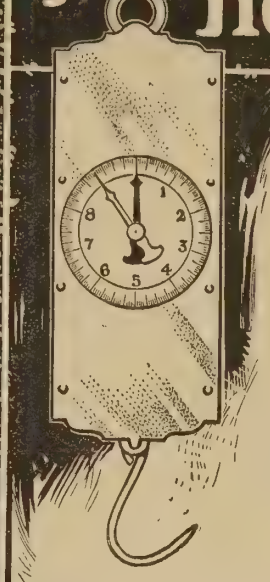
The subject has scarcely been touched. A volume could be written on the subject and yet much would be left unsaid. There is no question but that in many instances too many commissions are made on a single shipment of butter. That is unjust to the producer and consumer. However, business men throughout the country in the chase for the elusive dollar do not stop to consider the finer ethical points of the game. The practice of manipulating sales so that more than one profit is made is considered honorable and is generally practiced. Many of us are not as yet so calloused but that some of the practices seem to be on the border between legitimate and dishonest business. Until some better scheme is developed, it is very probable the present method of marketing butter will continue in vogue.



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The most important part of a horse's harness is the collar, for no horse can work right in a poor fitting collar Give your teams comfort by fitting them with

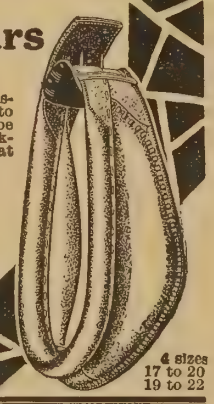
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Will fit any horse, fat or thin, and fit *right*. The pressure is evenly distributed over the shoulders. This smooth, comfortable fit means an end to all collar troubles. No time lost doctoring sore necks. No money need be spent for sweat pads that only create heat, which softens the shoulder making it susceptible to infection from the unsanitary pad. See the FitZall at your dealers, and judge for yourself.

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Silage Corn a Good Nurse Crop For Alfalfa

JOHN B. ABBOTT, VERMONT

ALFALFA hay and corn silage constitute about the best possible roughage basis of an economical and otherwise desirable dairy ration. Given such roughage the dairyman needs little or no concentrates for low and medium producing cows. The higher producers will pay for what concentrates their extra production necessitates anyway and handling them at a profit is no such problem as is handling the average dairy herd.

The combination of corn silage and alfalfa hay is so good, not only on paper but in the test of actual practice, that it seems peculiar that alfalfa culture is not making faster progress in those dairy sections outside the region where alfalfa is the principal hay crop.

Why is it? If alfalfa is such a desirable supplement to corn silage as it is claimed to be, if alfalfa adds so much fertility to the farm by way of nitrogen fixation, if alfalfa outyields nearly all other hay crops,—and alfalfa certainly does possess these advantages—and if alfalfa can be grown with success on so much land where it is not grown at present, as the county agents have demonstrated that it can be, why then does alfalfa culture spread so slowly?

Probably there are a number of contributory reasons but in my judgment one of the principal reasons is to be found in the fact that alfalfa culture has been made to appear to be both more expensive and more difficult than it really is. It is neither expensive nor difficult to secure a stand of alfalfa. It is not necessary to lose the use of the land for a whole season in spite of the fact that the most widely advocated method, mid-summer seeding without a nurse crop, involves such loss. Alfalfa seed costs no more per acre than the ordinary grass and clover mixtures, in fact not as much as the mixture which I use, and the amount of lime required is no more than ought to be used anyway for grass and clover. Inoculation involves only a negligible amount of time and expense.

I have established well over fifty demonstration fields of alfalfa on as many farms in four states during the past ten years and in all that time I have never secured a better stand, amount of seed considered, than I secured this summer on my own farm using silage corn as a nurse crop, nor have I ever secured a good stand so economically.

I was led to try silage corn as a nurse crop because I could not afford to lose the use of the land for a whole year as is usually the case with summer seeding without a nurse crop and I had no particular use for beardless barley, which is often recommended. I did have a very definite use for all the silage corn which I could grow.

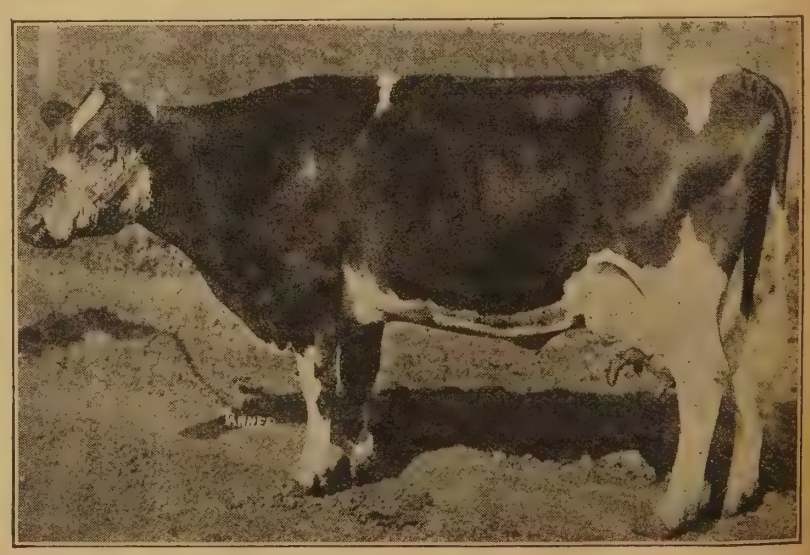
The field selected for seeding had most of the desirable attributes for alfalfa culture. It slopes enough so that water never stands on any part of it. The soil is deep, well drained, in fact it is inclined to be drouthy, and free from ledges and hard-pan. The field was in timothy in 1918 and in silage corn last year, manured less heavily than might be wished but still enough to grow a good crop. It was cultivated thoroughly enough to kill the sod and to prevent any of the annual weeds making seed. I plowed it last fall, applied ground limestone at the rate of two tons per acre, and harrowed it over once with the disk so as to give the lime an opportunity to sweeten it more or less during the winter.

As soon as the ground was in condition to work in the spring I harrowed it with the disk and spring-tooth exactly as though I were preparing a seed bed for corn. Then, at irregular intervals as other work permitted—but often enough to kill weeds as fast as they started—I went over it with the smoothing harrow set to work about as shallow as possible. This treatment was continued until the latter part of June.

In the meantime I procured some Montana grown alfalfa seed, a few sticks of hard glue, and some soil from an old and well inoculated field of alfalfa.

With everything in readiness and rainy weather in prospect I took the one horse corn planter and planted rows of silage corn five to six feet apart over about two-thirds of the field. The balance I left without corn for comparison. Immediately after planting the corn I harrowed the field again with the smoothing harrow to destroy the planter tracks and prepare a fresh seed bed for the alfalfa. I then proceeded to inoculate the alfalfa seed, sow it and cover it by cross harrowing and rolling it in.

In order to inoculate the seed I dissolved a few sticks of the hard glue in warm water in a double boiler, barely moistened the seed with the glue solution, and then dusted it with the inoculating soil enough to dry up the glue and cover each seed with



BUFFALO PARTHENEA SKYLARK, HOLSTEIN COW WHICH IN ONE YEAR HAS PRODUCED 22,207.9 LBS. MILK, 844.14 LBS. FAT, FOR THE MINNESOTA HOLSTEIN COMPANY

dust. I may have used four or five pounds of inoculating soil and a quarter of a pound of glue for forty pounds of seed, certainly not more. I sifted the soil through a window screen to get rid of pebbles and trash. The whole process of inoculation did not consume more than fifteen minutes once the glue was dissolved.

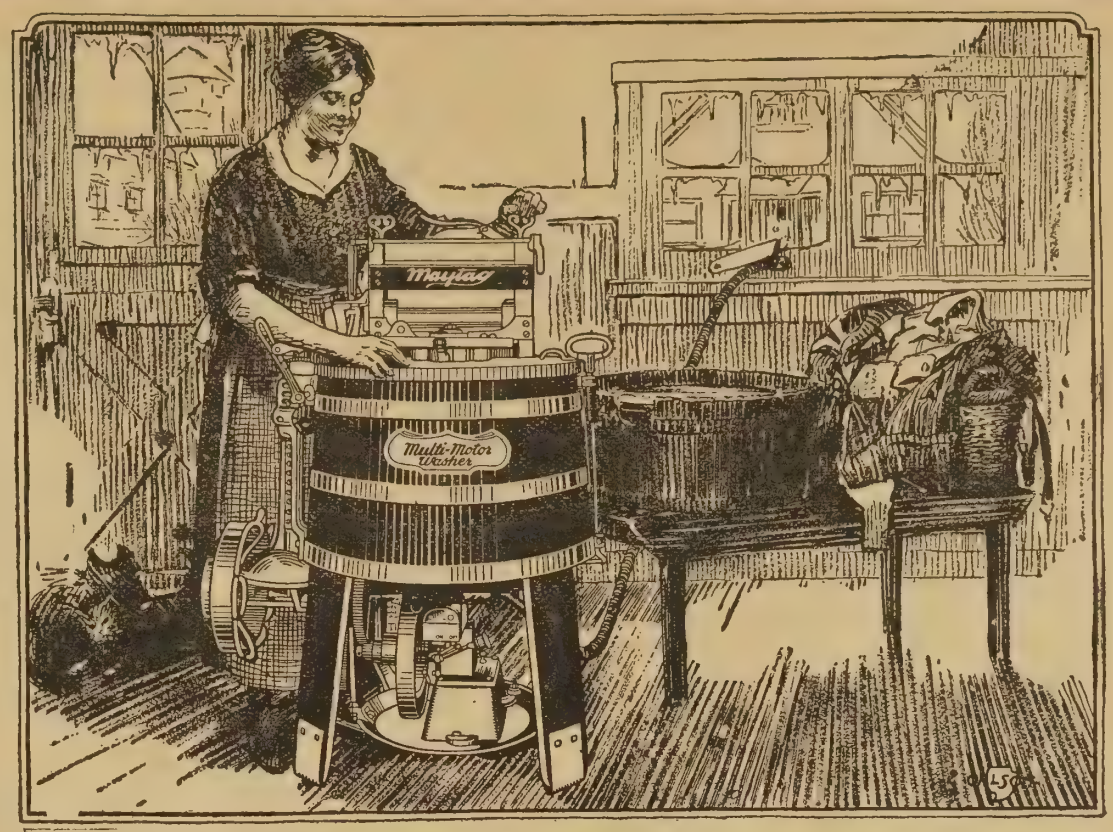
The alfalfa came up before the corn did and both crops, thanks to the thoroughly prepared seed bed, grew amazingly. Cultivation of the corn was not possible, of course, nor was it necessary as the thorough surface cultivation through May and June had eliminated most of the weeds previous to planting.

By the twentieth of September the corn stood ten to twelve feet tall with ears in the hard roasting stage and the alfalfa was more than knee high and in bloom. New shoots at the crowns indicated the start of a second crop. About that time the corn was frosted so it was cut for the silo. Immediately afterward I set the mowing machine to cut about five inches high and cut and hayed the alfalfa. I am not at all certain that cutting the crop at so late a date is a safe practice for general recommendation in this latitude but in this particular case the crop was all done growing and the second crop starting. The five inch stubble left, together with the new growth, would seem to be adequate winter protection and the hay harvested, with hay worth $40 a ton, justified taking some risk.

November first, the field was green and well covered, having gone into the resting stage for the winter looking as good as midsummer seeding without a nurse crop and I am "to the good" by about five or six tons of good silage per acre.

It seems to me that this method of seeding is worthy of a trial by dairymen outside the alfalfa region. It is materially less expensive than midsummer seeding without a nurse crop and apparently just as effective. It gives the alfalfa a decidedly better chance than seeding in standing corn a month or more older than the alfalfa and planted standard distance between rows.

It does not render the use of lime and inoculation unnecessary or minimize the importance of suitable soil and eradication of weeds but it does minimize the importance of suitable soil and eradication of weeds but it does minimize the cost of securing a stand of this most desirable hay crop.



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A Farm Account Book

Several hundred Badger farmers will use this year the new simplified farm account books issued by the College of Agriculture here. These books represent the result of efforts of the department of agricultural economies to develop a concise, simple, and adequate system of accounts for Wisconsin farmers.

"In farming as in other business any problem can be answered if enough facts relating to it are gotten together," said J. S. Donald, in charge of farm management demonstrations, in commenting upon the use of records and accounts on the farm. Farm account books take up only the really important aspects of the farm business. In this way a great deal of useful information is possible with the least possible work on the part of the farmer. Every business man likes to know how his expenses are being distributed, how each part of his business is progressing, and how the whole business is developing from year to year. Also, everybody likes to deal with a man who is certain of his statements—who has his business records and accounts in good shape. The fact that there is a distinct demand by Wisconsin farmers for a simple, easily handled farm account book shows how a great many farmers appreciate the value and the necessity of good businesslike records."

Wisconsin's new improved farm account book is distributed through individual requests, and through cooperating farmer agencies as the county agent and farmer organizations. A complete inventory of the farm equipment and capital is provided for in opening the book. Records of cash receipts and expenses are made throughout the year, and crop production records aid in checking up on all parts of the farm business as they occur. A balance can be taken at any time, and the whole record and summary makes it easy to use the same form of book from year to year, according to Mr. Donald. The only charge for the book is the cost price of fifty cents and it will be supplied by the Agricultural Economics Division, College of Agriculture, Madison, Wisconsin. With income tax laws in operation, accounts are considered to be a protection to the farmer. Many farmers without records of a great many incidental expenses such as repairs, and various items which are exempted, are obliged to make rough estimates of their taxable incomes which are very apt to be wrong—too high in many cases.

"Farm accounts," says Mr. Donald, "are also the foundation of a successful state marketing program. For instance, the State Division of Markets and other agencies which are trying to make a study of production and marketing problems with a view to aiding the farmers in these problems, need definite information which can only be supplied by farm accounts. Probably most farmers open their books at the beginning of each year, because at that time tax figures and other items are needed. On many farms, however, accounts are closed in March."—Wisconsin College of Agriculture.

Jersey Cattle Notes

For week ending Dec. 17: Number of animals registered: bulls, 231; cows, 655; total, 886. Number of transfers recorded: bulls, 182; cows, 597; total, 779.

Hoard's Dairyman

Fort Atkinson, Wisconsin

Founded 1885 by W. D. HOARD

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CONTENTS

How a Champion Was Raised 1109
What Milk Lacks as a Beverage - 1109
Lubricating Tractor in Cold Weather 1110
In the Old Dominion State 1110
Ohio's Plans for the Future 1111
The Corn Song - - - 1111
Supplying a Large City with Butter 1112
Silage Corn a Good Nurse Crop for Alfalfa - - - - - 1114
A Farm Account Book - - - - 1115
Jersey Cattle Notes - - - - 1115
Feed Market Dull - - - - 1116
Butter Market Advances - - - 1116
Cheese Market Inactive - - - 1116
Include Butter in Tariff - - - 1116
Shorthorn Breaks Record - - - 1117
The Man Who Doesn't Know - - 1117
Eau Claire Milk Producers' Association 1117
The Emergency Tariff - - - 1118
Progress of Farmers - - - - 1118
Making a Business of Farming - - 1118
Wages and Food - - - - - 1118
Raising Calves on Skimmilk - - - 1119
The Ophthalmic Tuberculin Test - 1119
Milk Secretion - - - - - 1119
Ventilation Flues - - - 1119
The Spanish Bull Fighter and the American Bull Handler - - - - 1120
Profit from Grain - - - - - 1120
Dairying Thirty Years Ago - - - 1120
New York Butter Market - - - 1121
Delaware Holstein-Friesian Association Meeting - - - - - - - 1121
Annual Meeting of New York State Agricultural Society - - - - - 1121
Cow Testing Associations - - 1122
Butler Road, Ohio Testing Success - 1123
Aitken Calls for Farm Efficiency - 1124
Southern Illinois Milk Producers Capitalize at $500,000 - - - - 1125
Missouri Better Bull Campaign Rules 1125
What the Wisconsin Dairy Council has Accomplished - - - 1126
Does Heavy Feeding of Concentrates Pay? 1127
As Howard Sees It - - - - - 1128
Dairying in Colorado - - - - 1128
Notable Canadian Holsteins - 1130
Boiler Explodes - - - - - 1130
A New York Representative Agricultural Meeting - - - - - - - 1132
Specifications for Ice House - - 1132
Washington, D. C., Weekly News - 1133
Cheese Prices for December - - - 1133
Points in Judging Cows - - - - 1134
Judging Market Swine - - - - - 1134
Junior Dairy Show at South St. Paul 1134
December Condensery Prices - - - 1136
Sudendorf Retires - - - - - - 1136
Washington Offers Creamery Short Course 1136
December Milk Prices - - - - - 1138
Prices for Butter and Cheese in 1920 - 1140
Butter Prices for December - - - 1140
The National Dairy Union - - - 1142
Veterinary—Contagious Abortion—Lump on Jaw—Obstructed Teat—Prolific Cow—Abortion Disease—Contagious Keratitis 1146
British Milk Question - - - - - 1145
Permangnate Solution - - - - 1145
Bulletins of the Week - - - - 1146
Bettering Spartanburg with Butter - - 1147
Junior Letters - - - - - - 1148
Inventions and Appliances of Interest to Agriculture - - - - - - 1149
Hens Need Fresh Air for Winter Health 1149
National Dairy Union Finances - 1150
Handling Milking Utensils - - - 1151

Include Butter in Tariff

On December 6 the Senate Finance Committee took up the demand for the inclusion of dairy products in the emergency tariff bill which had previously passed the house with duties assessed on wheat, onions, and twelve other items. W. F. Schilling of the Twin City Milk Producers' Association made the opening statement and other witnesses were heard on Monday, January 10. The rates sought are 10 cents a pound on butter, about the same on cheese, and other dairy items in the same ratio.

If there is to be tariff legislation at this session, it should not fail to include dairy products. Dairymen may well write or wire their senators urging them to use their influence in having an import duty on dairy products inserted in the emergency tariff bill. Even though the prospect may not be bright, as indicated on our editorial page, for the final passage of this tariff bill, a good showing at this time will be of assistance when the tariff bill of the next session is up for consideration.

Butter Market Advances

[Report by U. S. Bureau of Markets.]

Light receipts of fancy butter, a generally satisfactory holiday trade, and a regular good consumptive demand acted to keep butter markets in a firm condition during Christmas week. The small percentage of fancy quality in current receipts was barely sufficient to take care of the demand, and as a result prices showed a gradual advance. Top grades were so scarce that buyers were unable to supply their wants and turned to medium grades. This gave these grades also a firmer tone, but as yet little interest has been shown in lower scoring lots unless offered at very low prices.

The average wholesale prices on 92-score butter at five of the principal markets for the week ending December 25, and the corresponding week of last year were as follows:

	Week ending Dec. 25 1920	1919
	Cents	Cents
New York	55.90	70.80
Chicago	52.90	65.60
Philadelphia	56.20	72.00
Boston	53.90	70.10
San Francisco	47.88	65.10

The receipts of butter at these markets for the week were 5,204,739 lbs. as compared with 5,873,885 lbs. a year ago and 5,549,940 lbs. last week

Cheese Market Inactive

[Report by U. S. Bureau of Markets.]

Inactivity continued to feature cheese markets during Christmas week. Buyers in all markets operated very cautiously and none were taking goods in excess of immediate trade requirements. There is a general desire to carry as light stocks as possible over the first of the year when inventories are usually taken and the larger accumulations are now held by first-hand receivers.

Basic asking prices on fresh cheese at country points in Wisconsin were about the same as the previous week, and actual sales in primary markets as well as distributing markets were made at prices practically unchanged. The market on held cheese, however, was not quite so firm as it has been for several weeks. In fact, wholesale prices at distributing markets were lower by about one-half cent toward the latter part of the week.

The average wholesale prices on American cheese style Twins for the week ending December 25, 1920, and for the corresponding week the previous year were as follows:

	Week ending Dec. 25 1920	1919
	Cents	Cents
New York	27.50	31.50
Chicago	22.50	30.89
Boston	24.50	31.50
San Francisco	26.10	27.95
Wisconsin boards	20.63	30.50

The receipts of American cheese for the week at the four markets first mentioned and at Philadelphia totaled 2,042,875 lbs. as compared with 2,535,045 lbs. a year ago and 2,770,366 lbs. last week.

Experiences of an A. R. Tester

HOARD'S DAIRYMAN:—Some people say to me: "You fellows must get a great experience traveling around from place to place." Yes, that is what I would call it, "a great experience". I would not trade it for the same amount of time in any school in the world.

As an Advanced Registry tester I meet with all kinds of people, on all kinds of farms, under all kinds of conditions. Perhaps my first stop made as good an impression upon my memory as any one since. It was at a large farm. I was most impressed by the farm manager. His congeniality, his promptness in all business, and his attitude toward fellow breeders assured that large breeding establishment of marked success. Men who came to buy did not see that farm only. They were shown first the home farm and then, if they showed any desire to buy but were not entirely pleased, they were shown around amongst the different fellow breeders. Invariably they travelled from farm to farm and returned to their former designation well impressed with the cattle of that breed. Usually they purchased from him who had so favorably impressed them from the start.

Again, I was at a place where everything seemed topsy turvy. Men were going and coming. I sat at a table with thirty men and could find but two who were on the farm over eight months, although this was an old established farm. The farm manager was a city man. Coming to the office at 10, he left at 4, giving him ample time to show what he knew.

One day last March I was riding on the trolley, inquiring my way to a certain place. A long bearded Dutchman explained he knew the place well. "Young man, you will see a great place. He has 'pedigree' cattle. You'll find last year's manure, this year's crops, the cattle, horses, chickens, and pigs all under one roof." The old gentleman's disgust was apparent. I was in one of the best agricultural communities of the United States. The old man had pride in his community and showed utter disgust for such a "ranch". When I arrived I found all I had expected and considerable to boot. This man, otherwise an ordinary farmer but a pedigree fanatic, tried to run the place on advertising. I am safe in saying very few ever bought of him, after they had seen his farm. Many of the farmers in that community were disgusted with "pedigree" stock. They had seen his ads and had visited his place. If this was an example of such stock, they didn't want any. Such places are rare but they do much harm among farmers who would like to better their stock by pure-bred sires.

Often I am asked if this high priced stuff is a rich man's hobby. I answer that rich men have different hobbies. Is it a discredit to the pure-bred business that they pay big prices and then lose out? A man will fail in any business if he does not know how to run it. Some rich men fail at it but I have seen very few poor men but what prosper through breeding and A. R. testing. We find among the directors of our different breed associations many men who are far from being rich.

Some people nurture the idea that most pedigree records are crooked. That is a grave mistake. The publicity of a few crooked records has given some that impression. I have seen cows make a thousand pounds of fat just as easily as others made 600 lbs. It is surprising how much the different herdsmen know about the work of each other. This is likewise true among the different breeders. Anyone expecting to do business in the breeding line had best walk straight.

I have noted many small things during my year of testing. Many of these experiences have cost others heavily, have caused the failure of some, and are consequently priceless in value. I feel I have some practical ideas as well as technical ones. I am interested in the pure-bred business far more than when I started and, to others contemplating a course along this same line of business, I can highly recommen l a little A. R. work.

Pennsylvania. W. R. ROONEY.

Feed Market Dull

[Report by U. S. Bureau of Markets.]

The feed market during the week ending December 25 displayed very little activity.

A somewhat better interest was manifested in cottonseed meal and middlings. The latter feed is now selling from $3 to $4 per ton lower than bran, while only 3 months ago it was quoted about $10 per ton higher than bran. Cottonseed meal was bought because of its relative cheapness; 1 pound of good quality meal being usually considered equal to 2 pounds of bran for milk production, while the prices for these commodities are about on a par in several markets, which fact explains the present light consumption of bran.

Pure wheat bran was offered at $1.50 less per ton than last week in Minneapolis, quotations ranging from $25.50 at that point to $30.50 in Chicago and $36 in the East. Middlings ranged from $2 to $4 under these prices in the various markets.

Cottonseed meal (41%) was quoted at $34 in Kansas City, $36 in Chicago and Minneapolis, $30 in Memphis, $41 in San Francisco, and $39 in the East. Linseed meal ranged from $40 in Omaha and Minneapolis to $42 in Chicago and $45 in the East. Peanut meal (36% protein) was quoted at $36 in Richmond.

Alfalfa meal ranged from $25 to $40, gluten feed from $48 to $55, hominy from $30 to $41, and beet pulp from $42 to $46.

In the hay market No. 1 timothy ranges from $20 in Minneapolis to $26.50 in Chicago and as high as $38.50 in New York. Mixed hay and clover hay carry prices of $3 and $4 a ton under timothy.

Alfalfa hay (No. 1) was quoted at $21 in Omaha, $21.50 in Kansas City, $23 in San Francisco, $27 in Chicago and Cincinnati, and $25 in Minneapolis.

Coming Events

Jan. 24 to 29—Grain Show by the Wisconsin Agricultural Experiment Station, La Crosse. E. D. Holden, Ass't Secretary.

Jan. 27-28—Southern Wisconsin Cheesemakers' and Dairymen's Association. Secretary, Henry Elmer, Monroe.

Feb. 1-4—Manitoba Dairy Association will meet at Fort Garry Hotel, Winnipeg. Secretary, L. A. Gibson, Winnipeg.

Feb. 1-10—Mid-Winter Farmers' Course, Madison.

Feb. 1-10—Wisconsin Live Stock Breeders' Association, Madison. Geo. W. Davis, Secretary, Madison.

Feb. 4 & 5—State Live Stock Judging Tournament (roundup), Madison.

Feb. 15-17. Michigan Allied Dairy Association, Grand Rapids. Secretary, H. D. Wendt, Lansing.

Feb. 16—18, 1921—Virginia Dairy Show and Annual Convention of the State Dairymen's Association held in Roanoke. Secretary, Frank A. Buchanan, Blacksburg, Va.

The Man Who Doesn't Know

J. C. McDOWELL

TWO boys were in a row boat on a small lake in Southern Wisconsin. The boat capsized and, because they didn't know how to swim, both were drowned. A young man failed as a teacher of history because he didn't know his subject. A young lady failed as a stenographer because she was a poor speller. A merchant failed in business because he didn't keep books. Everywhere, in every occupation, you will find failures and, as a rule, the man who fails is the man who doesn't know.

An acquaintance of mine, a breeder of registered dairy cattle, thought it cost too much to test his cows for Advanced Registry. Because his cows were not tested, the offspring sold slowly and at low prices. That farmer finally lost his farm. He is now in the city working for wages. His cows were good cows and well bred, but the owner couldn't sell them on the strength of production records because they had no records. In short, he failed because he didn't know the records of his cows.

In tabulating the records of the Grove City (Pennsylvania) cow testing association, the Dairy Division found that the cows that freshened in April, May, June, and July had an average income over cost of feed of $45, while those that freshened at some other time of year had an average income over cost of feed of $60. Among the cows on test in that association there were nine cows whose owners did not know the date of freshening. For those nine cows the average income over cost of feed was $7.82. The lack of records may not have been the cause of the low production of these cows, but it does seem that the dairymen who keep breeding and production records are usually the owners of good cows.

A short time ago, B. H. Rawl, chief of the Dairy Division, made a speech at a dairymen's meeting in Kansas. Among other good things, he said: "I want the dairyman to know what he is doing. I believe he wants to know what he is doing. I don't believe the average dairyman does know, and I am frank to say that when a man doesn't know what he is doing in dairying, he is doing something rotten."

A New York dairyman built up a large herd of registered dairy cattle. He had some of the best blood lines in the country in his herd. Among his cows were some of the highest milk and butterfat producers of the breed. The herd had never been tested for tuberculosis. The cows looked to be in good health and, anyway, the owner didn't believe much in the test. Finally when he had some surplus cattle to sell he discovered that to make satisfactory sales he would have to test his cattle for tuberculosis. He did so and, to his dismay, over half the herd reacted. He had gone to great expense to build up a high-producing, pure-bred dairy herd; but he had been careless on one essential point. He failed because he didn't know that tuberculosis was spreading through his herd.

A Wisconsin farmer sold his registered Holstein bull to the local butcher. At the time of the sale, the bull had many promising daughters, but none of them had production records. Within a year from the time the bull was sold, eleven of the daughters freshened and their average production at the ages of two and three greatly surprised their owner. The average milk production of the eleven daughters was 15,047 lbs. and the average butterfat production was 571 lbs. When these records were available, the farmer knew the true value of that bull, but it was too late. Because he didn't know in time a $5,000 bull had been sold for $150.

The Wisconsin University says that the dairymen of Sheboygan County are losing a half million dollars a year through the use of scrub and grade dairy sires. These dairymen would never allow such a tremendous loss to continue if they realized what they were doing. If the dairymen in one county are losing a half million dollars a year, how tremendous must be the loss in the whole United States from the use of scrub and grade dairy bulls. That loss could easily be eliminated if every owner of dairy cattle not only knew the results that come from using scrub and grade sires in dairy herds, but would act on that knowledge.

Every dairymen should know the production records of each cow in his herd. In a herd of ten cows or more, the cow testing association will give him that knowledge at small cost. Every dairyman should own a good registered dairy bull or, if the herd is small, he should own a share in one. The cow testing associations and the bull associations take the guesswork out of dairying. They make it possible for any dairyman of ordinary intelligence to build up a high-producing and profitable dairy herd. Having available all the experimental work that has been done in connection with selection, feeding, and breeding of dairy cattle, with so many well-bred registered dairy bulls to be had at a reasonable price, and with the help of the cow testing and bull associations, there is no excuse for the dairyman who doesn't know.

Eau Claire Milk Producers' Association

The Eau Claire, Wisconsin, Milk Producers' Association was started about two years ago by a group of farmers who saw the possibilities in marketing their dairy products on a co-operative basis. Several speakers, experienced in the management of milk producers' associations, were asked to come to Eau Claire to relate their experiences and offer suggestions.

Following the meeting, one of the first things decided upon was that it would be necessary to hire a capable man to look after the business of the association. The acting secretary wrote to Madison inquiring for a man, and a year ago in July the association started its real work with a manager to look after the interests of the several individual members.

Among the more distinguished accomplishments during the past year, which stand out as milestones of progress, may be noted the following:

1. Each producer has been paid for milk or cream on the basis of accurate weights and correct weights and tests, this work being done by the association manager.

2. The association has taken a contract to supply the city milk dealer with all milk and cream used for city distribution, together with all milk used in the manufacture of ice cream. This contract is for a year and covers everything from strikes to weather. The price to be paid for milk under this contract is based on the Chicago butter and cheese markets allowing certain amounts for skimmilk and whey. The price to be paid for sweet cream is based on the Chicago market for 92 score butter. These prices have been in effect since the first of May and the method of determining prices has proven very satisfactory.

3. The surplus milk problem has been met and solved. A new Swiss cheese factory has been built at a cost of approximately $12,000. This factory, together with an American cheese factory, has established a satisfactory market for our surplus milk. At the present time the American cheese factory is closed, due to the price of American cheese, and all of the surplus milk is being made into Swiss cheese. The new cultures of bacteria, isolated by Doctor Sherman of the Dairy Division of the United States Department of Agriculture, are being supplied by the department at Washington. Mr. C. M. Gere was here a few days and instructed th cheese maker in the use of the bacteria. Nothing but a "fancy" grade of cheese is being made.

4. Now that the association is on a working basis and in a position to do business, the individual member is sure of a market for his product year in and year out. He is no longer at the mercy of the dealer who may be able to use his product at the time of a shortage and then be dropped again with but brief notice. In other words, the producer looks after the production end and the management of the association looks after the marketing.

5. Under the present system of contracting all the so-called "fluid-milk" we have established a market which is comparatively steady. Dissatisfaction over great changes in price from one month to another has been eliminated to a great extent.

The association is incorporated under the laws of Wisconsin, is a non-capital stock organization, and its officers are farmers who are members of the association and also producers.

Due to the fact that the association is handling its own surplus milk it has been necessary to establish a checking system. The entire amount for any period is paid to the association, and then the individual members are paid by the association, from the total receipts, according to the quantity and quality of product supplied. A membership fee of ten dollars is required of each member. This money is used for office equipment and other incidental expenses. The monthly expenses of the association are subtracted from the total receipts and in this manner the cost to each member is proportioned to the amount of product marketed.

It would require too much space to give all the minute details connected with the numerous problems and difficulties which we have had to meet during the past year. At the present time, however, everything seems to be progressing nicely, and we are looking forward to a profitable future. —G. H. SHEPARD, in Wisconsin Institute Report.



LA VERNA LINCOLN, NEBRASKA'S NEW CHAMPION COW

LA VERNA Lincoln, the new queen among Nebraska's dairy cows, is a Holstein owned by the University Dairy Husbandry Department. She has just finished a year's record of 29,555 pounds of milk, 1,048.5 pounds fat. This ranks her as the champion milk and butter producer of Nebraska. She has produced more milk and butter than any living cow owned by any university or agricultural college in the United States. Her record is exceeded by only sixteen cows of the breed in the United States.

La Verna Lincoln was put on official test December 23, 1919, at the age of seven years, one month, and nine days. During the year, ending December 21, 1920, her average daily production has been 81 pounds of milk. Her highest daily production reached the remarkable record of 112.7 pounds or a little more than 13 gallons. Her best 7-day record was 729.0 pounds milk, 27.528 pounds fat. Before she freshened, she weighed 1,800 pounds and when her strenuous year's work ended she still weighed 1,750 pounds, showing that she still is in good condition. She is a strong, rugged, good sized, well built cow—a cow that can do lots of work—eat large quantities of coarse, rough feed, like alfalfa and corn silage, and be healthy and vigorous, ready to repeat the performance. She was bred four months ago and is safe in calf.

La Verna Lincoln is a daughter of La May, once state champion cow whose record was 26,660 pounds of milk, 772.8 pounds fat. Her sire was Sir Prince Mercedes De Kol, perhaps the best transmitter of dairy characteristics we have ever had in the Dairy Husbandry Department.

Nebraska. J. H. FRANDSEN.

Shorthorn Breaks Record

A New Jersey Shorthorn cow, Snowdrop, owned by William L. Gelschenen, has broken the record for this breed by producing 15,550 pounds of milk containing 691 pounds of fat. She exceeded her Record of Merit requirement by 130 per cent. She replaces Ruth 3d whose record was 15,559 pounds of milk containing 664 pounds of fat.

EDITORIAL COMMENT



THE consumption of oleomargarine last year was equivalent to six billion pounds of milk; that is, it would require six billion pounds of milk to manufacture the butter equivalent in pounds to the quantity of oleomargarine consumed. This six billion pounds of milk is more than was manufactured into condensed milk in the banner year. In 1919 less than five billion pounds of whole milk were manufactured into condensed and evaporated milk.

The regrettable part about this large consumption of oleomargarine is the fact that so many dairy farmers consumed their share. It is safe to guess that the dairy farmers who used oleomargarine are not readers of dairy literature and are the ones complaining the most bitterly at the present time about the decline in the prices of dairy products.

THE EMERGENCY TARIFF

Despite considerable news publicity, we have not been deeply concerned regarding the Emergency Tariff Bill. We appreciate that it has passed the House of Representatives with a substantial majority, but we expect it to have a more difficult time in the Senate. Even if it passed the Senate, we are of the opinion that it will not receive the president's approval.

The Emergency Tariff Bill has been hastily drawn and illy considered. Its purpose is to bring some relief to the farmers, but its value in this regard is extremely doubtful. It places a tariff upon sheep and cattle, but there is no tariff upon frozen beef or on dairy products. There are comparatively few live sheep, or beef animals imported into this country, while butter and cheese are coming to our shores from Argentina, Denmark, New Zealand, and Australia, as well as frozen meats from many countries. It would seem that if it is desirable to have any tariff legislation it would be well to include more commodities than the present bill does.

We have a suspicion that this bill has been introduced very largely to bring peace to the minds of the farmers, and that no serious thought has been given to its ultimate effect. In fact, we have information from reliable sources that there will be no tariff or tax legislation at this session of Congress. These matters will receive attention after March 4, and we trust the dairy interests will be sufficiently alive to the situation at that time to see that their industry secures proper consideration.

PROGRESS OF FARMERS

Intense interest in the affairs of people is likely to breed impatience. We have been keenly desirous of having dairy farmers improve their agricultural methods and so secure larger returns for their efforts. We are not unmindful of the fact that, notwithstanding all the shortcomings of the American farmer, he is the most efficient farmer in the world. Through the use of modern machinery and the great store of plant food found in our soil he produces more food per man than any other farmer. Granting this to be so, he still has a tremendous opportunity to do better, and we are anxious to have him do better. The result of increased efficiency and endeavor should mean better farm homes and greater enjoyment in life. This is the goal of all sensible men.

When we survey the progress we have made in farming, noting the farm improvements made in recent years, the installation of modern conveniences in the home and stables, the improved roads, the general use of the automobile, the improved quality of seed grain and live stock, and the many other things common to the farmer now, but unheard of 25 years ago, we are encouraged and delighted with the progress the farmer has made.

Eugene Davenport, Dean of the Illinois College of Agriculture, has said: "The fundamental facts of soil fertility and crop production are slowly but surely becoming established, and the farmer has begun to shape his agricultural practice by the discoveries of science.

"When we remember that chemistry as a science dates practically from the time of the American Revolution, . . . and when we recall that the great science of bacteriology has entirely developed since the time of the Civil War . . . , it is evident that rapid progress is being made in the establishment of a truly scientific basis, and that slow as discovery seems to be, it is after all relatively rapid."

We are not only making progress in our farm practices, but science also is doing its share to bring about a larger agricultural development.

MAKING A BUSINESS OF FARMING

The unusual prices for farm products the past two years caused the land in various states to rise materially in price. This is especially true in the states of Illinois and Iowa. In some of the states like Wisconsin, New York, and Pennsylvania, while the prices of land strengthened, its advancement was no-where near that in some of the corn belt states.

A number of states have made farm surveys and have established what is known as farm management departments in the agricultural colleges. Their duty is to investigate the various incomes of the farm for the purpose of determining, if possible, some plan which the farmer may use to bring him the largest returns. Iowa has such a department which is under the management of Professor Munger. In 1914 he investigated 965 farms averaging 207 acres, the average valuation, including live stock, buildings, etc., being about $46,000. These farms at that time returned to their owners a labor income of about $300 after paying 5% interest on the investment. In 1919, using the 1914 valuation, the labor incomes of the farms investigated would have amounted to $1,379, that is when corn sold at about $1.50 a bushel, hogs at fifteen to twenty or more per hundred, and the prices of other products in about the same relation. This condition brought about a rapid rise in the price of land beginning the latter part of 1918 and continuing well along into 1919. On the new valuation of land the 1919 labor income was estimated at about $262 when the high prices of farm products then prevailing were used. If the computation had been based on the present prices of farm products there would have been no labor income.

It is fortunate for the dairy interests of Wisconsin, and we presume of other dairy states, that land values did not advance as they did in the corn belt states for we have not the readjustment to make. Dairy products did not advance in price as rapidly as did some of the other farm products. Neither have they declined in price so rapidly, which we believe is better for agriculture and for those operating farms. Those who purchased high priced lands will find it difficult to make interest on their investment and those who have not paid for their farms may lose them. This is not a healthy condition for agriculture.

We must bear in mind that farming is a family job. This has its advantage and its disadvantage. The advantage lies in the fact that the father and mother are in position to utilize the labor of their children and themselves to best advantage. Through this co-operative effort much wealth is accumulated and the family is kept together. Farming being a family job defeats the attempt to place agriculture upon the same basis as other enterprises are conducted. This is a disadvantage.

Let us explain what we mean. The prices of farm products advanced during the war so that five per cent could be paid on the investment and a good labor income paid to the manager of the farm and fair wages to his children, but the moment that this became general the land advanced sufficiently to reduce the farmers' income to less than $1.00 per day. That is what took place in Iowa, as is given by the figures of Professor Munger. The same thing took place, in a measure, in Wisconsin, and especially in the section supplying Milwaukee with milk. It could not be calculated that milk was selling at a price above cost of production, yet the farmers in that territory increased milk production over 30 per cent in the year 1919.

These facts are well worth considering when we attempt to place farming upon a basis similar to that of the manufacturer.

WAGES AND FOOD

A letter from one of our subscribers expresses what will take place if the American Federation of Labor and the Railroad Brotherhood leaders carry out their declarations that wages must be kept up. It would be nothing short of a miracle if they could carry out their plans, in view of the severe decline in the prices of farm products. Our subscriber writes, in part, as follows: "I thought it would be well for me to let you know how things are and how I figure the present farm situation. I have a family on my farm of 80 acres and I furnish the horses and cattle and implements and I give them half of the crop, so I think they can make a living. I stopped farming last spring and am glad I did. Last spring I planted 11 acres of beans and what are they worth? I could write more, but it is of no use. I am working in a saw mill and I earn more money than if I were farming. I am going to keep my farm for some day things might change."

This man has written enough to express our present economic situation. He has shown by his action the fallacy of any labor organization attempting to keep up the prices of labor when farm products have fallen far below the cost of production. Not all farmers are so situated that they can leave their farms as this man has, but there are many farmers who will, on account of prices, reduce their production. They will not hire high priced labor to carry on the farm to its full capacity and many of the two or three millions of hired men on the farms will not be satisfied to work on them for the wages which the farmers can afford to pay when wages are high in the city. It is only the foolish man who thinks that through organization artificial conditions can be created which will bring him high remuneration for labor and cheap food. These men forget that agriculture is the basic industry and that practically the prices of all commodities must sooner or later be adjusted to the prices of farm products, for unless the farmers can purchase the commodities manufactured by labor, there will be no opportunity to labor.

A western farmer at a farmers' meeting summarized the agricultural situation and its results very cogently and very much to the point. He said: "Fact is, the good Lord Almighty just stacked the deck against us this year. He gave us the biggest corn crop we ever grew, and most other crops way above anything we expected or deserved. That is what caused the price tumble all of a sudden. Of course Germany could not buy, and the prices would probably have slid down, but the bumper crop smashed things all at once. Of course we are all hurt, but it just had to come; the balloon had to come down. But you can just bet your best forty that it is bringing other things along down too, and unless other things do come down so we can hire men, and buy machinery and feed and fertililzer and what we eat and what we wear just as cheap as we are selling our corn and hogs, there ain't going to be any corn and hogs raised on my farm nor on most of my neighbors' farms, to sell to the city fellows. I can live, and I can stand that way of getting along just as long as the other fellow can."

The farmer has sustained his losses, but it is the man of the city that must now be concerned regarding the final outcome. He must expect to have his wages or his industry adjusted to meet the prices of farm products or he is likely to be hungry.

Raising Calves on Skimmilk

HOARD'S DAIRYMAN:—To be succuessful in growing skimmilk calves, the farmer must understand the proper method of feeding skimmilk. It is a well established fact that a calf properly raised on skimmilk is as good as one nursed by its mother; however, on account of ignorance and carelessness in feeding, in many localities there exists a strong prejudice against the feeding of skimmilk because of unhealthy and undersized calves that have been raised this way.

To properly raise the calf, begin on the cow before the calf is born. The cow should be dry at least four weeks before calving. During the pasture season there is no better plan than to leave her in the pasture under observation until the calf is born. If the cow is kept in the barn at calving time, she should have a roomy, clean stall where there will be no danger of the calf getting navel infection from the filth.

The new-born calf should receive the colostrum milk of its mother for the first three or four days. This is important, as the calf needs this milk to start its digestive organs working properly. The amount of whole milk to feed depends on the size and appetite of the calf. For about the first two weeks, five or six quarts, or ten to twelve pounds a day, is sufficient for a large growing calf. A small calf, as a Jersey, does not need more than eight or ten pounds a day for the first few weeks. It is best to feed the young calf three times a day for the first week or ten days. After that, twice a day is sufficient. In the normal calf, the change from whole to skimmilk can commence when the calf is three weeks old. The change should be made gradually, taking about ten days to make the change. After the change has been made to skimmilk, and as the calf grows older, the amount of milk fed can be gradually increased to eight or nine quarts a day. The milk should be fed warm. For the best development, the skimmilk should be fed until the calf is six or seven months old.

It never pays to overfeed a calf on skimmilk. Overfeeding is one of the common causes of inferior calves. Because the fat has been removed is no excuse for gorging the calf on skimmilk. Protein, none of which has been removed in skimming the milk, is the most important nutrient of milk as far as the growing calf is concerned. A good rule is to always keep the calf a little hungry. This will keep the appetite keen.

Teach the calf to eat grain and hay as soon as he will take it. This will be when he is about three weeks old, or at the time the change to skimmilk is made. By putting a little hay or grain in the calf's mouth after feeding milk, it will soon learn to eat. Corn makes a good grain feed for a skimmilk calf. It was found, by the Kansas station, that shelled corn gives equal, if not better, results than corn meal, after the calves are well started eating grain. Corn and oats, mixed half and half, with timothy or prairie hay mixed with clover or alfalfa, makes a good ration for the calf. The young calf should not be allowed all it will eat of clover or alfalfa alone, for, because of their laxative effect, large amounts of these legumes are apt to cause scours or indigestion. A small amount of grain is all that is necessary. Never feed more grain than the calf will clean up. At the age of six weeks, this will be about one-half pound a day; at the end of two months he will be eating one pound daily; and a month later two pounds a day, which is all the grain that is necessary up to six months of age.

The most common trouble in calf raising is scours or indigestion. This is brought about by overfeeding, by feeding sour or old milk, or cold milk, and by feeding in dirty pails or troughs. A bad case of scours gives the calf a setback from which it recovers very slowly. Since it is much easier to prevent scours than to cure them, certain precautions should be taken. Feed sweet, warm milk; do not overfeed; feed regularly; keep the feeding pails and mangers clean; keep the calf in clean quarters.

The calf's growth will be stunted if any of the above rules are violated. Often the first sign of scours is foul smelling dung. The bowels are usually very loose. The feed should be immediately cut to one-half the usual amount. For two or three feeding periods, add a teaspoonful per pint of milk fed of a mixture of one-half ounce formalin in 15.5 ounces of water. After two or three feeding periods, the milk may again be increased to the usual quantity. We have often checked scours by adding a handful of fine wheat flour to the milk.

A calf that has had a severe dose of scours receives a setback in growth for several weeks, and never will be as good an animal when mature as he would have been had scours been avoided.

Milk should be fed at the same temperature every day. If the milk is separated immediately after it is drawn, and fed immediately after it is separated, it does not have to be warmed for the calf. It should be fed as near the body temperature as possible. As the calf gets older, colder milk may be fed at the same temperature from day to day. Never feed sour milk to a calf accustomed to getting sweet milk. It is better to miss a feed or two than to upset the calf's stomach by such a change. Regular feeding of sour milk gives good results, providing the milk is soured properly. Calves also do well when fed on buttermilk when fed on it regularly. Any change in feed should be made gradually, and the calf watched for any disorders that may arise.

One kind of calf scours, commonly known as white scours, or calf cholera, is an infectious disease which gains entrance to the body soon after birth through the freshly broken navel cord. The symptoms are sunken eyes, and usually a white, foul-smelling dung. This disease was considered practically incurable until a method of vaccinating with calf cholera serum was discovered. When intelligently used, this cure is quite effective, but the best remedy is prevention. Keep the stall where the calf is born clean and disinfected, and disinfect the navel cord with creolin or any other good disinfectant, using it in a mild solution. Keep the calves separate for the first two months so that if any thing goes wrong, it can be immediately detected. Keeping them separate also prevents the calves from sucking each other, a disagreeable habit. After the calf is six weeks old, there is little danger of it getting scours or indigestion.

Iowa. C. O. LEVINE.

The Ophthalmic Tuberculin Test

Is the eye test for tuberculosis reliable? Is the intradermal test or tail test reliable? Can the cattle be plugged so they won't show in these two tests as on the subcutaneous test for tuberculosis?

New Douguas, Ill. O. W.

On page 1005 of our issue for December 24th will be found a short discussion of the several tests for tuberculosis.

It is somewhat more difficult for the novice to interpret properly the eye test and the intradermal test than it is the subcutaneous test. In general, these first two tests have not been considered quite as reliable and trustworthy as the other, but they do have some value in checking up and disclosing some reactors that will not show the characteristic rise in temperature. One of these large values is that all three tests can be applied at the same time without interfering with each other.

According to our understanding, an animal cannot be so treated with tuberculin that if she is tuberculous she will not, possibly, show the characteristic reaction to the intradermal test or the ophthalmic test.

Of the three tests, probably the ophthalmic, or eye test is the least reliable and its greatest value is in checking up on the others.

Milk Secretion

Will you kindly settle an argument regarding the formation of milk in the udder of a dairy cow? One party maintains that the milk is produced before milking time in the udder. The other maintains that the milk is not produced before milking time, but is in the milk glands and that the process of milking stimulates the glands so that the milk is then produced or secreted as fast as the milker draws it.

What are the milk veins? Is it not true that the milk veins contain blood, and not milk?

Madison, Wis. A. J. B.

The secretion of milk by the cow is one of the mysteries that science as yet has been unable to solve. Various theories have been proposed, but in general it is believed that milk is formed in the small sack-like bodies, known as alveoli, found in the udder of the cow. In some manner these alveoli seem to be able to extract the nutrients of the blood brought to them by the small capillaries and transmute them into milk which is entirely different in composition from the blood itself. The proteins of the milk differ from all other proteins of the body and the milk fat, also, has entirely different properties.

From the alveoli the milk passes through the network of milk ducts, and these, in turn, open into the small cavity called the milk cistern, which is just above the teat. The only actual milk in the udder at any one time will be found in this milk cistern, and this is a relatively small portion of the entire milk a cow yields at any one milking. The secretion of milk is a continuous process and the milk cistern is continually replenished until the whole mysterious process of nature is completed.

The blood which contains the nutrients is carried to the udder by means of the arteries and there diffused through the udder tissue in the manner indicated, so that the cow extracts, as it were, those necessary elements which will permit her to manufacture her milk. The blood continues its passage through the udder and passes out through the venous system. The particular veins carrying the blood from the udder are called "milk veins". These are both those which show on the under side of the body and others which are buried in the body tissue. These veins, like other veins in the body, merely carry blood. There is absolutely no circulation of milk, as one might be inclined to infer from the fact that these veins are called "milk veins".

Ventilation Flues

I am planning a ventilation system for my barn. I plan to have a register, just over the concrete foundation running along the upright walls to the ceiling and then across the ceiling to the center of the room. There will be four intakes leading to two outlets in the interior.

To remove the foul air from the interior, I plan four registers placed on the inside of the barn just over the cement foundation running through pipes up along the walls through the ceiling and out through the roof either at the ledge or at some other point that you may suggest. My greatest concern is as to the proper sizes of the pipes. I would be very grateful for any suggestion you may care to make me in the matter. This refers to the cow barn.

I would also appreciate some suggestion as to installing a similar ventilation system in the horse barn.

Toledo, Ohio. J. A. N.

The capacity of flues required to remove foul air from a stable is ascertained by considering the number of cows, horses, and other stock in the stable that must be supplied with fresh air. The exact number of stock housed in this barn is not given; however, as we understand the sketch, the cow stable is 34 ft. x 40 ft., which would accommodate about 18 head of cows.

If four flues are used for removing foul air, each flue should be 15 inches in diameter if round, or a 10x18 inch rectangular flue.

If metal flues are used, they should be galvanized, and from second story joists to ventilator they shall be insulated with some good insulating material such as "Flaxlinum" or equal. Wood flues must be double boarded with matched lumber with heavy paper between. The flues must extend above the highest point of the roof. It is the general practice to run the flues along underneath the rafters to the ridge, and into roof ventilators, of which there are a number of different kinds on the market. These ventilators are designed to secure the added benefits from wind impact and suction, without back draft or smothering. Care must be used if the flues are simply run through the roof and covered with a wood or sheet iron cap to prevent the efficiency of the flue from being impaired. If the cap is too low the draft will be smothered while a cap too high may cause down draft.

The outtake flues should commence about 12 inches above the stable floor and run as straight as possible to the roof ventilators.

In connection with the fresh air intakes it is suggested that six of these be used instead of four, as this will give a more uniform distribution of air and keep the stable temperature more uniform. If fresh air intakes are too large they create harmful drafts. The combined area of intake flues should be approximately equal to the combined area of the outtake flues. A good insulator should be placed between the stable ceiling and the flue proper to prevent frost and condensation from forming along the flues.

A separator should be placed between intake flues that meet at center of barn, or otherwise the wind will blow into one flue and out of the other. Each intake flue should have a register in ceiling with chamber so that the flow of air can be regulated.

To ventilate the horse barn, one 16-inch diameter round flue placed behind horses as near the center of barn as possible should be sufficient. A couple of fresh intakes should be run in and be opened above feed alley.

The Spanish Bull Fighter and American Bull Handler

WM. C. LEE, U. S. Dairy Division

THE daily papers recently reported the death in Spain of a famous bull fighter, who was impaled on the horns of a fierce bull. He had been a great expert, had won many plaudits, and was a popular favorite—something like Babe Ruth. He was only 33 years old, but had amassed a fortune of $100,000 by his bull-ring prowess. Yet a bull finally was too much for him.

Some American farmers also have amassed fortunes in dealing with bulls; but it was in breeding, not in fighting them. The toreador makes his money by killing the bull; the American by keeping the animal alive and in good health. With the Spaniard it is a question whether he will be able to kill the bull; with the American, the question is whether he can afford to keep it alive. For with us, unfortunately, it often happens that the bull fights against the man, though the man may not feel like quarreling at all; and the outcome of the conflict has often been the death of the unfortunate owner of a vigorous bull. It has in fact become proverbial that we should trust no bull, however good natured. Even if he has been dehorned, his heavy head and powerful muscles will crush a man to death if they come into full play.

What shall we conclude? That it is better to have nothing to do with bulls? This course is impossible, because we must have cows and calves. The dairy business can not be spared from our social economy—even though people begrudge the price of milk.

Another course is open, and has been much followed. This is to use only immature bulls, because they are gentle. The calf is harmless, of course. As he grows up, he acquires breeding power before he acquires the aggressiveness and combativeness of maturity. When these latter qualities develop the animal is called ugly, and the owner, saying he does not want to handle an ugly bull, sends him to the slaughter house.

This is a mistake. The so-called ugliness is often merely the sign of maturity and vigor. Selling off every bull that develops these qualities means that the breeder must always depend upon bulls that have not made their growth. Of course a young bull, just beginning service, has no record of performance. He is just starting his performance. It takes approximately four years for him to make a record through one of his daughters. If he proves to be a superior bull, that is one which will increase the productiveness of his daughters as compared with their dams, then he cannot continue in service after that fact is known, unless the owner will consent to keep an "ugly bull", because when he is old enough to have made a record he will act like a bull of that age. If the breeder then sells him and starts with another young bull he will again be at the mercy of luck. Perhaps the new young bull will also have the character of improving his daughters; but again he may have the character of making them worse than their mothers. Or he may be indifferent. What then? Must the breeder choose between risking his herd with a succession of untried sires, or risking his life with one of proved value but ugly?

No, there is a third course open. He can build the kind of a bull stable and corral that will enable him to keep the bull under control all the time, without exposing himself to the bull's attack. With a bull barn of the right design, the farmer can feed the bull without going into its stall. He can turn the bull out in the yard while he cleans the stable; he can bring in a cow for service, have her served, and take the bull away again—all this while he stays outside of the fence. It is not done by pressing a button either. It is done by having a bull barn and pen with the right ground plan.

Such a stable and exercise yard have been devised by the bull association specialist, Mr. Joel G. Winkjer, of the United States Dairy Division. What drew his attention to it was the fact that fear of "ugly bulls", that is, bulls of mature age and vigorous strength, is an obstacle to the working of co-operative bull associations, since an essential feature of bull associations is the practice of keeping proven sires in continuous service. This bull pen which Mr. Winkjer has devised seems to meet the difficulty very effectively; and the Dairy Division at Washington has had the plans put in the form of blue prints, which may be had free on application.

Readers of Hoard's Dairyman may remember a description of this bull pen that was written by Mr. Winkjer some months ago and appeared in the issue of March 6, 1920. It has been called the Safe Keeper bull pen, because it renders the keeper safe. It also keeps the bull safe; he does not have to be killed. By the use of this kind of a bull stable, farmers who have valuable bulls can keep them for use as long as they wish, and then sell them at a good price as tried sires.

If bull associations find some of their bulls inferior, they can dispose of these, but the good ones they can keep as long as the animals live, shifting them about from one block to another. If a high quality sire lives long enough he can go the round of the blocks, and after several years come back to the first block, and all the while be building up the herds of the members with more and more productive cows.

It is a sorry business to have excellent proved sires slaughtered simply because they display the qualities of maturity. Yet who can blame a farmer if he is unwilling to risk meeting the fate of the Spanish bull fighter—making a fortune and then being gored to death? How much better to keep the bull under control by means of the Safe Keeper bull pen, and continue to derive benefit from him year after year.



CASCADE JOHANNA ILLUSTRITES, HOLSTEIN COW, OWNED BY HOLLYWOOD FARM, WASHINGTON, WHICH DIED DECEMBER 26, 1920

She held the world's record for milk production for 24 hours with a production of 161.4 lbs. Her year's record was 30,110.1 lbs. milk, the twelfth in the world over 30,000 lbs. She was bred by Todd & Sons of Washington and purchased by Hollywood Farm at auction for the sum of $300 in 1916.

Cascade produced three calves, two males and one female. One of the males has been sold at auction for $2100, or seven times the purchase price of the cow. The other one brought $80, as he was sold before she made her record.

Profit From Grain

"A greater profit may be made from feeding grain to dairy cows this winter than ever before, on account of the low price of grain and the high price of butterfat."

A. J. McGuire, dairy specialist with the agricultural extension division of the University of Minnesota, makes this statement without qualifications of any sort. Considering the feed required for a pound of butterfat and the cost of the feed, he says:

"A ration composed of 15 pounds of clover or alfalfa hay, 30 pounds of corn silage, 5 pounds of ground oats, and 3 pounds of ground corn contains sufficient feed for a cow weighing 1,000 pounds and producing 1 pound of butterfat a day, or 25 pounds of 4 per cent milk. The cost of this ration at farm prices (December 1) may be estimated at no more than 22 cents. The whole ration can be produced on the average Minnesota farm. It is one of the most economical rations to be had, while at the same time it gets results in milk production.

"Without clover or alfalfa hay in a ration, a greater amount of grain is required for the production of a pound of butterfat a day. A ration composed of timothy or wild hay and corn stover (corn from which the ears have been husked) would require each day 15 pounds of grain composed of 5 pounds of bran, 2 pounds of oil meal, 5 pounds of ground oats, and 3 pounds of ground corn. The cost of this ration would be one-fifth more than the cost of the first one, on account of the greater amount of grain used and the more expensive grain.

"With a good grade of clover and alfalfa hay and corn silage, not much grain is required—I should say not more than 1 pound of grain to 3 or 4 pounds of milk. With a poor grade of roughage, timothy, wild hay, corn stalks, and straw, 1 pound of grain is required daily for every 2 pounds of milk produced daily.

"Roots of all kinds may be made to take the place of a part of the grain in a ration. From 7 to 10 pounds of roots are required to take the place of 1 pound of grain.

"We must keep steadfastly in mind the fact that it requires a certain amount of feed to produce a pound of butterfat, and that the amount of feed required depends upon the kind of feed and also upon the kind of cow. The average common cow is capable of producing 200 pounds of butterfat a year. The average half-blood dairy cow is capable of producing 250 pounds of butterfat a year. The average high grade and pure-bred dairy cow is capable of producing 300 pounds of butterfat a year."

Dairying Thirty Years Ago

Taken From the Issue of Hoard's Dairyman of January 9, 1891

If you are making a cattle barn, make it with plenty of windows so that it will be as full of light as you want a factory to be in which men are employed to do work that requires a good light. The cow may not need to be furnished with much light to do her work, but she does need, especially in the winter, the genial blaze of the sunshine on her and all around her, and will pay well for every warm sunny day.

⚜

We saw two fine Jersey cows kept by some parties in our city that were drinking last Saturday out of Rock river, through a hole in the ice, and this is the 19th century and Hoard's Dairyman is printed within a quarter of a mile of said hole in the ice! Is then our preaching and our labor in vain? Oh, no. It only proves over again the truth that the greatest sinners sit right in the shadow of the sanctuary.

⚜

At the Minnesota State Dairy Convention, Assistant Dairy Commissioner Lawrence read a paper containing many valuable suggestions, among which are the following:

"Three essentials to the successful creamery are honesty, cleanliness, and intelligence, and these three graces are as becoming to the patron as to the operator.

"Every transaction in and about the creamery must be honestly done, else that confidence between the patron and operator so essential to the success of each is forever gone."

Minneapolis Dairy Market

The Tilton Com. Co. advises us that best gilt-edged creamery butter is worth in that market 28 cents; fancy creamery 24 to 25c; choice dairy 17 to 20c; roll and print 14 to 15c; common dairy 8 to 12c; Cheddar cheese October make 11 to 11½ cents; Brick 12 to 14 cents; part skims 4 to 6 cents; Young Americas 10 to 11 cents; Swiss 12 to 14 cents.

⚜

In answer to the question, "What is the best way to raise a calf?" Mr. F. O. Ives answers as follows:

"Leave it with its mother, if her udder is inflamed, two or three days; then tie it up and teach it to drink. Mix a little linseed meal in its milk—a mere pinch at first, and give a small ration of clover hay, wheat bran, and linseed meal. Keep a calf in the stable and shade the window so the flies cannot torment it."

New York Butter Market

NEW YORK CITY, JANUARY 4:—The general butter market, at the beginning of the new year, is in excellent condition In fact, the general feeling is highly optimistic, which was not anticipated during November and the first part of December. Receivers were inclined to feel that there would be marked price slumps immediately following the holidays and that it would take several months for a healthy tone to develop. The one encouraging feature of present conditions is the heavy consumptive demand. Daily receipts are clearing up very readily with the exception of undergrades and foreign butter is moving as well as could be expected. The trend of the market is for advancing prices, although receivers are not encouraging price advances as they feel that eventually there must be a marked decline of butter prices. When prices are extremely high slumps cause greater losses than when values are at more reasonable figures.

There has been a development during the past week of several features which may have a bearing on the importation of Danish butter. The Danish Butter Export Committee, which has governed the butter trade of that country for the past five years, has released all restrictions on the sale of butter. That means that individuals may now export butter from that country. A report is going the rounds at present that England has made Denmark an excellent offer for its entire output of butter, the price being so high that merchants in this country would find it difficult to handle the Danish butter at any profit. If the report be true, it is very probable that less Danish butter will be imported in this country during the coming months. The advance in Danish exchange, which still continues, is making it impossible for the Danes to sell their butter at former prices. That, too, will naturally cause a curtailment of shipments of Danish butter to this country.

No large shipments of foreign butter have been received during the past week or ten days. One freighter arrived recently bearing 1,300 casks from Copenhagen. Another steamer bearing approximately 4,000 casks is soon to arrive and a third one with a very heavy load, said to be more than a million pounds, is due to leave Copenhagen January 7. It is thought that no further shipments will be sent during the month of January. Some Holland butter is reported to be on the water and several cars of New Zealand butter are en route between this city and San Francisco.

Interesting figures have just been published showing the amounts of butter that were received in this market during the past year. Domestic receipts were very low totalling 2,262,428 packages or 782,833 packages less than during the year 1919. That is accounted for in part by the disturbances on railroads during the year, by the arrival of heavy shipments of foreign butter in this market which discouraged many shippers from marketing their butter here, and also because of the condition of this market as regards undergrade butter. Prices paid for such butter were so low that manufacturers shipped elsewhere. Receipts of butter during 1919 were high because large quantities of butter passed through this port en route to Europe.

While the market has gradually strengthened during the past week, there was only one change in quotations, that being on Wednesday when prices advanced 1c. That advance was due to a scarcity of fancy butter. Undergrades, while not moving freely, are clearing up better than for some time. Receivers hope that all low grades of butter will clear before the materialization of a price slump. Quotations today were as follows: Extras (92 score), 57c; higher scoring than extras (93 score or higher), 57½@58c; firsts (90—91 score), 49 @55½c; firsts (88—89 score), 44@47c; and seconds (83—87 score), 37 @42c; Danish prices, 52@54c.

W. B. LIVERANCE.

Samuel R. Guard, for eight and a half years associate editor of the Breeder's Gazette, has accepted the work of directing the publicity and educational activities of the American Farm Bureau Federation. He was



SAMUEL R. GUARD

reared on an Ohio Farm and graduated from the Ohio State University in 1912. His practical agricultural information and his proved qualities as an entertaining and instructive writer fit him unusually well for the important position he now assumes.

Delaware Holstein-Friesian Association Meeting

The winter meeting of the Delaware Holstein-Friesian Association took place at Newark, December 30. The program for this meeting was a co-operative arrangement with the Delaware Corn Growers' Association. A large number of farmers and dairymen from all sections of Delaware and Maryland were in attendance.

The college herd was inspected during the forenoon and many favorable comments were heard regarding the splendid Holsteins, and especially the herd sire, Meadowholm Ona Ormsby. Over 200 breeders and visitors enjoyed a splendid luncheon which was served in the spacious dining hall of the college. The members and guests were welcomed by Dean C. A. McCue, who told something about the activities of the various departments of the college and explained how they were co-operating with the dairymen and farmers of the state with a view to bettering the farming and dairy conditions of the state.

The chief speaker of the occasion was D. D. Aitken, president of the Holstein-Friesian Association of America. He congratulated the breeders and dairymen upon the favorable conditions prevailing in the state. In his opinion the conditions for dairying and live stock raising are as good in Delaware as in any state in the Union, and the proximity to the large cities of the East creates a favorable market for disposing of dairy products. President Aitken recommended a more extensive use of silos among the dairymen of Delaware and also advised making a special effort to increase the average production of milk of the dairy herd. In his opinion six thousand pounds of milk per year from each cow in the herd is necessary to pay for the feed and labor incident to maintaining that particular cow and all above six thousand pounds represents the profit.

The speaker is of the opinion that it is simply a matter of breeding and selection in order to get together a herd that would average 12,000 pounds of milk per year. By keeping a good high class herd sire and raising young stock to maintain the herd, every dairyman should be able to gradually improve the milk production of his herd.

He advocated the idea of several breeders in each neighborhood combining and using a high class herd sire which would give the bull a better opportunity, as the average dairy herd in Delaware is comparatively small. This would permit the use of a better bull than any individual farmer would be likely to use. In the matter of securing a higher price for dairy products President Aitken suggested that one of the surest means of attaining this end and obtaining a material increase in the quantity of milk consumed in any large city would be to properly educate the consumer in regard to the high value of milk as an article of food.

Delaware. J. R. DANKS.

Annual Meeting of New York State Agricultural Society

The annual meeting of the New York State Agricultural Society at Albany, January 18—19, 1921, promises to be of unusual interest. The subjects to be discussed are those which have large current importance, particularly co-operative buying and selling, marketing and transportation. The gentlemen who are to discuss these subjects are eminently qualified to do so. One-half day will be given to the consideration of the problem of milk distribution.

On September 7th and on December 17th and 18th important conferences were held at Syracuse over the problems of agriculture and marketing. Committees were appointed to consider various phases of these subjects. At the last session, on December 18th, the conference voted to accept an invitation to meet in connection with the annual meeting of the State Society, at which time it is expected that these committees will report, and that further steps will be taken for continuing conferences of the allied agricultural interests of New York which shall deal broadly with agricultural policies. The last half day of the annual meeting is reserved for this adjourned meeting of the conference. The one thing demanded for New York agriculture more than any other is unity in purpose and action, and it is hoped that the state-wide societies, at least, will authorize the attendance of delegates.

W. H. JORDAN, Pres.

Swelling

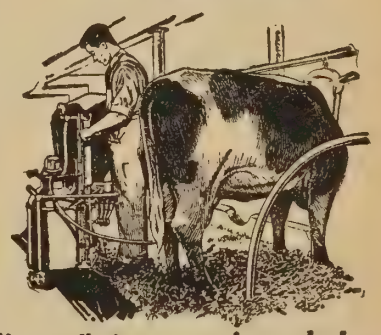
I have a Holstein heifer 2½ years old to freshen in April. She has a lump on her right side between the two back ribs a little larger than a good sized apple. It is soft and feels as though it was full of pus. It has been there five weeks. She has been running in wooded pasture and is getting a little thin, otherwise she seems to be all right. Can you tell me what this lump is and what I should do for it?

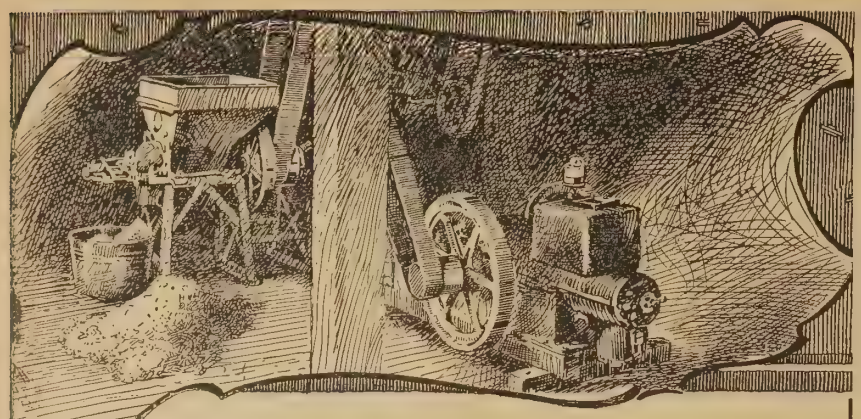
Minneapolis, Minn. T. T.

If a rupture is present, it will be possible to work the bowel back into the abdominal cavity by manipulating with the fingers, after which a strong truss should be built up by sticking successive layers of surgeon's tape upon the part. If pus is present, the swelling will be hot and sore, and by this time show a soft place which should be cut through for liberation of pus. Without an examination, we can not advise you which condition is present.

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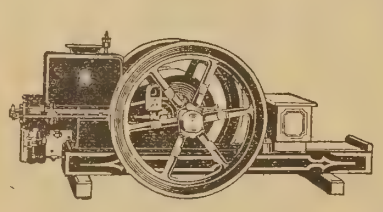
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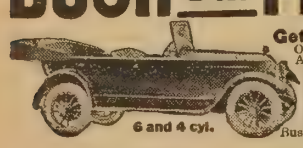
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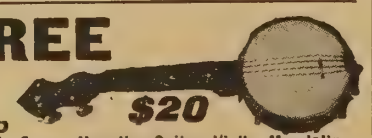
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Cow Testing Associations

RECORDS, PRICES OF FEEDS, FAT, AND MILK

Following is the summary of reports received during the week and up to the time of going to press of this issue:

State	Association	Tester	Month	No. of cows tested	No. of cows producing over 40 lbs. fat	Fat production of high cow	Owner
Ia.	Dallas Co.	Don L. Chase	Dec.	183	28	81.4	J. E. Elliott
"	Winneshiek Co.	Carl Wennes	"	168	6	52.5	W. Headington
Ill.	DeKalb Co.	Earl R. Jackson	"	397	56	93.0	Hulmes & Sons
Ohio	Sullivan	René O. Tardiff	Nov.			54.0	A. C. Snoddy
"	First Portage	Lowell W. Lee	Dec.	243	21	73.3	C. H. Straight
"	Geauga Co.	C. M. McEwen	Nov.	223	31	68.5	P. H. McNish
Wis.	North Crandon	Chas. Stivers	"	250	2	46.8	H. Peterson
"	Richland Co.	Henry Engsberg	Dec.	485	10	52.2	Scott Chitwood
"	Wausau—Marathon	N. M. Nelson	"	413	15	57.0	M. C. Ewing
"	Monticello	H. T. Albrecht	Nov.	500	36	78.1	Fred C. Marty
Mich.	West. Allegan Co.	C. O. Robb	"	243	18	54.7	F. T. Lane
Pa.	Juniata Co.	Karl A. Fettig	"	300	13	68.4	H. I. Gray
"	West Branch	Hiram Savidge	"	260	19	55.7	Hurley Remley
Ill.	Tri-County	Edgar Booker	Dec.	361	55	70.5	Mrs. L. A. Ralston
Cal.	Marin Co.—Tomales unit	E. H. Wolfenden	Nov.	676	22	65.4	E. C. Steinbeck
Cal.	Marin Co.—Pt. Reyes unit	L. H. Meads	"	889	125	65.7	E. J. Filippini

Association Notes

Dallas County, Iowa:—December market milk testing 3.5% sold for $3.75 per cwt. and 5c per point above. Feed prices are: corn and cob meal, $12 per ton; oats, $25; bran, $37; cottonseed meal, $55; oil meal, $60; alfalfa, $25; silage, $8; clover, $20.

De Kalb County, Illinois:—Seven boarder cows were sold during December. Dairymen received $2.60 per cwt. for 3.5% milk and 4c per point above this test. Local prices for feeds are: bran, $2 per cwt; oats, $1.70; corn, $1.07; barley, $1.50; oil meal, $3; cottonseed meal, $2.50; Union grains, $3.50; gluten, $2.50; alfalfa hay, $35 per ton; clover hay, $30.

Sullivan, Ohio:—This is a one hundred percent association in the use of pure-bred bulls. There are eleven herds in the association at present, ten of which are composed almost entirely of pure-breds. One herd has two pure-breds and the balance grades. The November price for 3.5% market milk was $3.45 per cwt. Feed prices are: clover hay, $18 per ton; silage, $6; corn, 38c per bushel; oil meal, $4 per cwt.; cottonseed meal, $4; hominy, $2.70, bran, $2.50.

First Portage, Ohio:—One of the members made application for a tuberculin test this month. Seven of the 30 herds are tested. The dairymen are figuring carefully on good and economical rations on account of high feed prices and the low prices for milk. December market milk testing 3.5% sold for $3.40 per cwt. and 5c per point above. Milk retails for 14c per quart and butter for 55c per lb. Feed prices are: silage, $8 per ton; hay, $25; corn fodder, $7; beet pulp, $50; bran, $48; gluten, $56; oil meal, $60; cottonseed meal, $68; ground oats, $30; ground corn, $38.

Geauga County, Ohio:—During November five cows produced over 60 lbs. of fat, eight produced over 50 lbs. and eighteen others produced more than 40 lbs. November milk testing 3.5% sold for $3.35 per cwt.

North Crandon, Wisconsin:—Nine unprofitable cows were disposed of and a scrub bull butchered in November. Farmers are feeding better rations than usual. Most herds are drying up. November market milk sold for 40c per gallon. The creamery paid 56—58c per lb. for fat. Milk retails for 11c per quart, butter for 65c per lb., and cheese for 32c per lb. Local prices for feed are: oats, 70c per bushel; barley, 90c per bushel; bran, $40 per ton; Wisconsin Dairy Ration, $62.50; Unicorn, $80; oil meal, $80; clover hay, $25; timothy, $26.

Richland County, Wisconsin:—Several unprofitable cows were sold to the butcher in December. A few members are increasing the feeding of balanced rations. Last year there were three Register of Production cows and this year there will be about fifteen, which shows the value of the testing association. Four per cent milk sold for $2 per cwt. in December. The condensery paid 60c per lb. for fat, the creamery paid 63c, and the cheese factory 54c. Milk retails for 11c per quart, butter for 52c per lb., and cheese for 19c per lb. Oats sold for $40 per ton; bran, $40; barley, $47; oil meal, $65; corn, $42; Schumacher, $55; silage, $8; alfalfa, $28; clover and mixed hay, $20.

Wausau—Marathon, Wisconsin:—Members are feeding more grain now that prices have declined. Eleven low producers were sold and one registered Guernsey bull purchased. Farmers are giving more thought to a proper balanced ration for their cows than they did a year ago, due, no doubt, to cow testing work. Four per cent market milk sold for $2.20 per cwt. in December, and 5½c per point above this test. The creamery paid 55c per lb. for fat and the cheese factory paid 54c per lb. Milk retails for 12—14c per quart, butter for 53c per lb., and cheese for 35c per lb. Feed prices are: hay, $20 per ton; silage, $6; bran, $37; middlings, $37; International Dairy Feed, $45; Wisconsin Balanced Ration, $56; corn meal, $40; hominy, $44; oil meal, $58; cottonseed meal, $56; barley, 80c per bushel; oats, 45c.

Monticello, Wisconsin:—One farmer installed water cups for his cows during November. The creamery paid $2.40 per cwt. for 3.7% milk, and 6c per point above. The condensery paid 53—60c per lb. for fat and the cheese factory about $2 per cwt. for milk. Milk retails for 10—15c per quart, butter for 60—65c per lb., and cheese for 24—30c per lb. Feed prices are as follows: silage, $8 per ton; hay, $30; bran, $33; oil meal, $54—60; oats, 52—58c per bushel; corn, 90c per bushel. Pierce Bros. sold a cow for $1,750, which is the highest priced female sold in this county at private sale. She had a seven-day record of 757.7 lbs. of milk and 25.72 lbs. of butter. She is one of three cows in the county to produce over 100 lbs. of milk a day and had the highest average. Her name is Mutual Segis Piebe DeKol.

Western Allegan County, Michigan:—November 3.5% milk sold for $3 per cwt., 4c being paid up to 4% and 6c per point above 4%. Fat sold for 54—66c per lb. at the creamery. Local prices for feeds are: hay, $17—$25 per ton; silage, $8; cottonseed meal, $55; oil meal, $75; bran,

$46; middlings, $53; corn, $53; oats, 50—65c per bushel.

Juniata County, Pennsylvania:—There were some profitable cows sold in November, the older cows being sold to make room for new ones coming in. Most of the unprofitable cows have been turned into beef. There is one proven Holstein bull in the association. Of the first six of his daughters to come in milk, not one is inferior to her dam. In most cases they are doing as well at two years as their dams at four or five years. November market milk sold for $2.85. Fat sold for 60c per lb. at the creamery. Milk retails for 12c per quart. Feed prices are: silage, $6 per ton; hay, $20; stover, $8; corn and cob meal, $38.20; ground oats, $35.20; bran, $41—$45; cottonseed meal, $65—$75.30; oil meal, $63; Peerless Dairy Feed, $70.

West Branch, Pennsylvania:—Two unprofitable cows were sold during November. Six of the members have started feeding balanced rations during this testing month. One car load of cottonseed meal was purchased by the association at $53.50. Four per cent market milk sold for $2.65 per cwt. and 4c per point above. Milk retails for 10c per quart and butter for 65c per lb. Feed prices are: corn and cob meal, $24 per ton (farm value); ground oats, $28 per ton (farm value); cottonseed meal, $53.50; linseed oil meal, $60; mixed clover and timothy hay, $27; corn stover, $6.

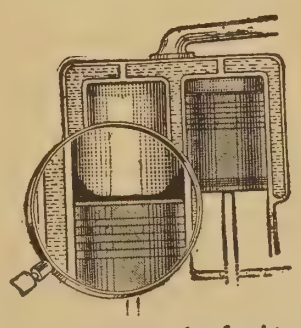
Tri-County, Illinois:—During November two unprofitable cows were disposed of. Three per cent milk sold for $3.40 per cwt., 2c per point being paid for 3.5% and 5c per point above 3.5%. The creamery paid 51c per lb. for fat. Milk retails for 16⅔c and 18c per quart, creamery butter for 62c per lb., and country butter for 50c per lb. Feed prices are: brown middlings, $2.10 per cwt.; gray middlings, $2.40; bran, $1.85; hominy hearts, $2.15; Purina Cow Chow, $3.40; oil meal, $3.25; cottonseed meal, $2.50; corn 85c per bushel; oats, 65c per bushel; barley, $1.10 per bushel; alfalfa, $35 per ton; clover, $32 per ton.

Marin County, California:—Two testing associations are now in operation in Marin County, California, 2,600 cows being signed up in the two. Less than 25 per cent of the herds are in the forty-pound list and over 80 per cent of the cows making forty pounds or more are in herds where pure-bred bulls are used.

Bloomfield—Sparta, Pennsylvania:—Among the 600 cows tested during the past year, 58 were sold as being unprofitable. Many more were kept at a loss to their owners. In the 47 herds tested, there are 36 pure-bred cows and 9 pure-bred bulls. Thirty-six of the members have silos and 3 have milking machines. The average production of the cows completing the year was 6,272 lbs. milk containing 251.4 lbs. fat. The average cost of feed was $102.16 and the average rate above cost of feed $111.64. The herd of John Obert lead the association in having the highest profit above feed cost. His 13 cows returned $2,104.42 above the cost of their feed. The Frank Platt herd was smaller, but the cows averaged a profit of $200.90 above. The average production of the herd was 12,029 lbs. of milk, 423.5 lbs. fat.

Oneida County, New York:—Twenty-five dairies tested with two hundred eighty-two cows in milk and one hundred five dry. Three herds are doing Advanced Register work. The list is headed for the third consecutive month by the grade Holstein cow, "Star", owned by Oscar Alberding. She produced last month 63.3 pounds of fat in 1,977 pounds of milk, and 5,881.4 pounds of milk for three months. The pure-bred Holstein junior two-year-old heifer, "June 2nd", owned by Clifford Gallup, the 15-year-old son of one of the members, made a record of 1,245 pounds of milk and 37.4 pounds of fat for the month.





In freezing weather the piston must really plow its way through oil that has congealed

"I Wonder How She'll Start"

IT'S bitter cold. The snow crunches crisp at every step. Everything seems frozen into one solid piece—especially the tractor, which has been idle for hours—or even days.

"Turning her over" may be next to impossible, unless you are using the proper grade of oil.

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All operating conditions have been considered in making up the TEXACO Chart, which should be consulted and recommendations followed to secure best results.

TEXACO TRACTOL comes in 33 and 55 gallon steel drums, wooden barrels, and half barrels, and five gallon sealed cans.

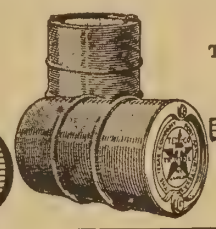
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TEXACO TRACTOL

Butler Road, Ohio, Testing Success

The year just ended was a very successful one for the Butler Road Cow Testing Association, Ohio. The leading cow for the year is Gerda Hengerveld 3rd, owned by P. J. Fay, with a production of 14,674.6 pounds milk containing 509.03 pounds fat. The second cow is Mobby's Nellie, a Jersey owned by George Biddle of New London, Ohio. She produced 8,528.3 pounds milk containing 495.35 pounds fat at a profit above feed cost of $292.64, in the ten months she was milked. Zwenis 2nd Fanny Girl, owned by Claud F. Searles of Wellington, produced in ten months 14,331 pounds milk, 493.03 pounds fat, at a profit over feed cost of $334.69. Fourth place is taken by Orange Blossom De Kol, owned by M. O. Fay, Ohio. This cow produced 12,290.7 pounds milk, 491.3 pounds fat, in the eight months she was milked at a profit of $447.90 above cost of feed. The fifth cow, Judy De Kol, is also owned by P. J. Fay. She produced 14,229.1 pounds milk containing 487.06 pounds fat in ten months, with a profit above feed cost of $375.61.

The leading herd is owned by Claud F. Searles. This herd averaged a production of 9,217.7 pounds milk containing 328.66 pounds fat, with an average income above cost of feed of $217.33. The second highest herd, owned by P. J. Fay, averaged 8,860.1 pounds milk containing 311.15 pounds fat, and a profit of $235.33 above feed cost.



GERDA HENGERVELD 3D, OWNED BY P. J. FAY, OHIO, IS THE LEADING COW FOR THE YEAR IN THE BUTLER ROAD COW TESTING ASSOCIATION

In the nine months she was milked she produced 14,674.6 pounds milk containing 509.03 pounds fat at a profit above feed cost of $419.91. She is shown with her two heifer calves.



Not So Bad this Month

"Now, that's better! It's the first time the expense figures haven't given me a horrid feeling.

"Why didn't I know sooner about Jell-O and some of the other money-savers?"

It doesn't matter whether you live in the city or country whether you keep an account book or not,

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will help you out, for it is cheap as to cost and it can be made up into more different kinds of good things to eat than anything else.

Every woman who wants to know how Jell-O can help her out will find the information she desires in the Jell-O Book, which will be sent free to every woman who will send us her name and address.

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THE GENESEE PURE FOOD COMPANY
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SILOS AT HALF PRICE

My Winter Sale of Silos is now on. I will allow a discount of 50% on all silos sold this month. My silos are of a well-known make, all new and first class in every way. Built of the genuine Clear Oregon Fir, the most durable material used for silos. Your neighbor probably bought one from me last year. Ask him how he likes it and how much he saved.

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MFRS. AGENT
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Why a "B-V-T" Silo is the Best Investment

Because it has been on the market TEN YEARS, without a SINGLE FAILURE.

Made of famous Brazil Vitrified Fire Clay—ONE ton costs as much as FIVE tons of shale.

THE "B-V-T" WILL LAST FOREVER

Will not freeze or crack. Keeps silage in perfect condition. You never have to rebuild a "B-V-T"

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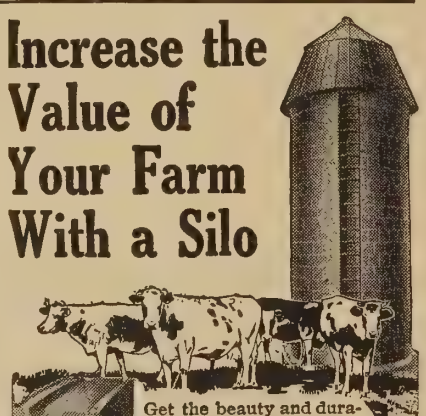
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Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

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Get the beauty and durability of tile in the Lansing "ship-lap" block. Ends overlap — extended shoulders top and bottom—less mortar exposed, better settling of silage—less chance for frost, better looking silo, blocks uniform in shade. Stronger walls. Notched ends on blocks prevent mortar from slipping. Twisted steel reinforcing. Steel hip roof—steel or tile chute—fire proof. Write for Catalog.

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Large Round Herring, per lb. 5½c. Dressed 5½c. Pickerel 7½c, Yellow Pike, 13c, Halibut 14c, Salmon 12c, Steak Codfish 11c, large dressed Bluefins 5½, Sheephead 7c. Order smoked fish delivered to you door anywhere in Wisconsin by Insured Parcel Post. Postage charges prepaid by us. Smoked Bluefins, 10-lb. basket, $1.14; smoked Tullibee Whitefish, 10-lb. basket, $1.99; smoked chunk Salmon, 10-lb. basket, $2.09; 10-lb. box smoked boneless lunch Herring, $2.00; 9-lb. keg genuine salted Holland Herring, $1.10. Write for complete price list of all varieties, frozen, smoked, salted, spiced and canned lake and ocean fish.

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The Stewart No. 1 Clipping Machine is a necessity for every farm. A quality product, built right all through. Solid metal gears enclosed in dust-proof metal box — all wearing parts hardened steel. Lasts a lifetime. Clip cows in fall and winter for clean milk production and all over in spring; clip horses and mules spring and fall. Only $14 at your dealer's, or send $2, pay balance on arrival.

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Aitken Calls for Farm Efficiency

Holstein-Friesian President Declares Three-fourths of Milk Producing Machines of Antiquated, Inferior Design

D. D. AITKEN, president of the Holstein-Friesian Association of America, in his addresses at recent Farmers' Week meetings at Ames, Iowa, and Lincoln, Nebraska, laid great stress on the necessity of the dairymen and the breeders of pure-bred dairy live stock coming to the understanding that they must work out their own salvation. He insisted that there is no reason why dairymen should succeed unless they use good judgment and good business sense. The farmer would be the first man, he said, to laugh at the idea that he was required to pay a manufacturer a profit on his operations if he was using an antiquated piece of machinery that was inefficient and wasteful, and the consumers of the dairy products and the consumers of the products of the farm generally have a right to expect that farmers and dairymen are going to use efficiency and good sense in the production of their products.

He declared, "Three-quarters of all the machines that are in use today in the production of milk on the farms are of an antiquated and inferior design, not calculated to produce at a reasonable cost. Three-quarters of all the machines that are used on the farms of the United States in the production of beef are antiquated, inefficient, scullion producing machines, only operated at a tremendous expense, and the product produced is at great cost. Yet, the beef men everywhere are wondering why the business is not more profitable.

"In every state where any dairy industry is carried on, you will find herds of cows that are averaging all the way from 4,000 lbs. of milk per year to 12,000 lbs. of milk per year, ofttimes in the same neighborhood. To assume that the man who is keeping the 4,000-lb. cows is using reasonable intelligence or is entitled to any profit on his operations is an insult to the intelligence of the consuming public and is something they will not stand for."

Mr. Aitken said he was particularly interested in calling the attention of breeders to the manner in which they should improve the quality of their registered and pure-bred animals. He said it was idle and childish for a man with two or three cows to think he could keep a worth-while herd sire. For that reason the small breeders must unite in the purchase of a first-class bull and all use him under some arrangements that they can work out among themselves. If they want the bull taken about the circuit, or if they want to take their cows to where the bull is kept, is a matter entirely for their own convenience, but if they hope to make money and raise the standard of their animals this can only be accomplished through the services of a high-class herd sire. He said, "Your cows may be improved by development, you may enhance their reputation by testing them and having them registered in the Advanced Registry, but you cannot change their nature—that remains the same; but you can improve on them through their offspring if you use the proper sire.

Of all things absolutely essential to the well-being of dairy husbandry is a better understanding on the part of the consuming public of the value of dairy products.

He said, "If the producers of milk in the states of Iowa and Nebraska would take it upon themselves they could promote a campaign of education, the echo of which would be heard in every schoolhouse in America, but the trouble is that the dairymen and the breeders are all waiting for "George" to do it instead of taking it up with their own creamery or their own distributor, and having a certain percentage of each pay check sent to the National Dairy Council to promote a better understanding of the value of the dairy products. I have sometimes thought that canvassers ought to be put out, the same as are put out by the farm bureaus, to solicit membership for the Council, and that may be necessary ultimately. It ought not to be. The creameries, the cheese factories, and the condenseries could reach practically all the producers of milk and arrange for an educational campaign. If the condenseries of the United States had perfected an organization and spent half the money in teaching the people the value of their product, that they have spent in trying to get the other fellow's customers, there would be no surplus of condensed milk in America. The dairymen, the



MONTGOMERY COUNTY, INDIANA, AYRSHIRE CLUB

Standing from left to right are: Harvey Cochran, Wm. Fry, Jr., Clayton Patterson, Howard Donica, and Charles Norman. Kneeling: Howard Harris, Worth Cochran, Virgil Thompson, and Stanley Miller. This club has twelve members who have purchased Ayrshire heifers, paying an average of $225. It is the first calf club for this breed which has been organized in the Middle West.



BEAUCOUP SIBYL SEGIS

An Illinois Holstein owned by Beaucoup Farm, which has made 25,170.9 lbs. milk, 848.26 lbs. fat, in a year. In 7-day test begun 323 days after freshening she made 445 lbs. milk, 16.17 lbs. fat, a state record.

condenseries, the creameries, and the cheesemakers ar lamenting conditions and want of demand, and never a one in all the years that have passed has ever thought it worth while to speak well even of the product he produced."

Southern Illinois Milk Producers Capitalize at $500,000

The Southern Illinois milk producers have formed a preliminary co-operative milk organization capitalized at $500,000 and each share having a par value of $100.

The Farm Advisers and County Farm Bureaus in the milk producing counties tributary to St. Louis, the Southern Illinois Milk Producers' Association, and the Illinois Agricultural Association are all working together with the view of making this co-operative milk marketing organization a real success.

The Illinois Agricultural Association has agreed: First, to furnish a



BYRON AND JOYCE PALMER AND ONE OF THEIR HOLSTEIN CALVES
Their father is an enthusiastic member of the East Troy Testing Association of Illinois.

legal adviser, make a local survey and study of milk producing territory, send a committee to learn in detail of the plans and operation of the Twin City Co-operative Milk Producers' Association, correlate the work of the county farm bureaus, and assist with effective publicity; second, to equip and maintain an office or headquarters in E. St. Louis during the stock selling campaign with the provision that the milk marketing company will take over all of the office equipment when the new marketing company secures a manager and begins operation, and also to furnish the services of the dairy marketing department as much as possible; and third, to furnish not less than the equivalent of ten men to sell stock and secure milk contracts for the new company.

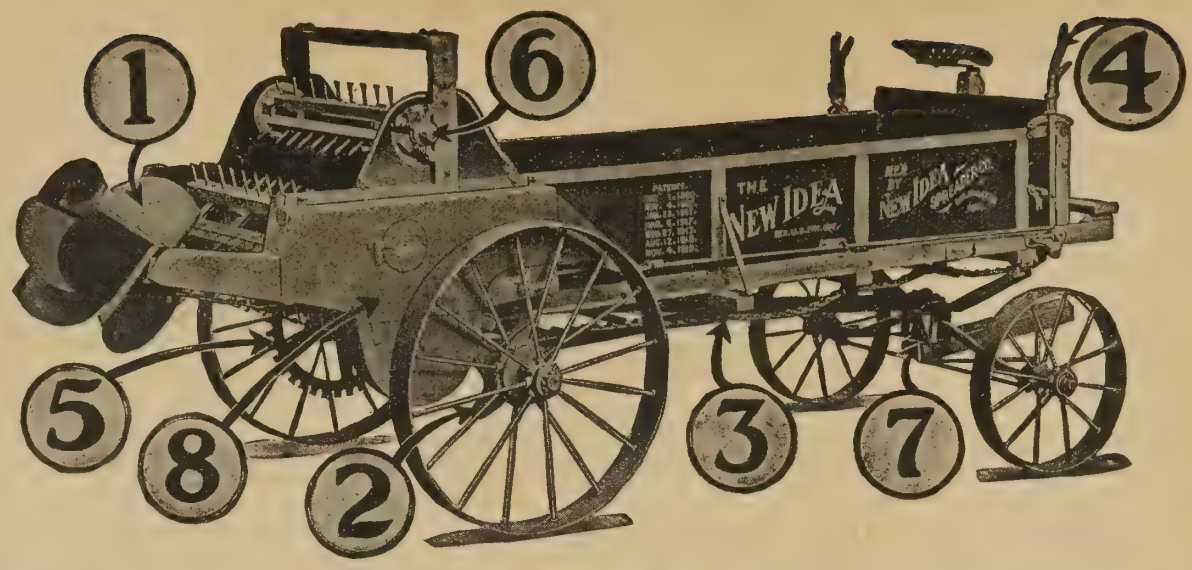
It now appears that ten men for one month are not going to be able to float the stock necessary to form a permanent organization under the co-operative laws of Illinois.

The Illinois Agricultural Association is not going to drop this work in the middle—it is going to see that it is completed and put on its feet before this matter of soliciting the required amount of stock is terminated. During the first week that solicitors were in the field, about $32,000 worth of stock was subscribed for. Practically all of the milk producers agreed to sell their milk to the marketing organization. It is not all who are able to subscribe for stock, but the fact that practically all signed up a milk contract to sell the milk to the organization for five years is a good indication that the milk producers have the right co-operative spirit, and that they believe in doing business with themselves and for themselves.

Illinois. C. LARSEN.

Missouri Better Bull Campaign Rules

Two thousand dollars in cash prizes will be given in Missouri to the County Farm Bureaus showing the greatest number of scrub bulls replaced by registered bulls in their respective counties, the first prize $1,000, the second $500, third $300, and fourth $200. These are offered by the Kansas City Chamber of Commerce. Any county which at any time during the year replaces all of its scrub bulls is entitled to first prize and if more than one should replace all such bulls, the prizes will be distributed in the order as the counties become "one hundred per cent". Not less than twenty counties must compete in this contest to make the prize money available and no county is eligible to a prize unless at least twenty-five scrubs are replaced.



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YOU will never be really satisfied with manure spreading results--you will never get fullest value from manure and highest production from soil--until you use these two machines.

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NEW IDEA
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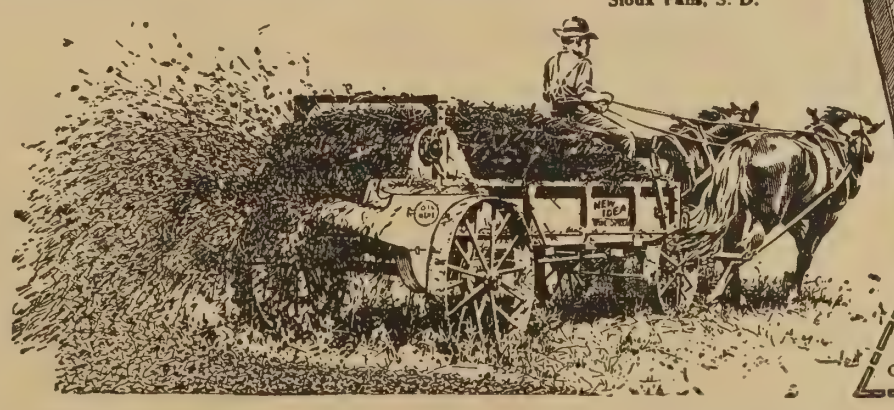
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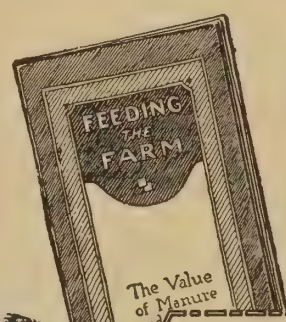
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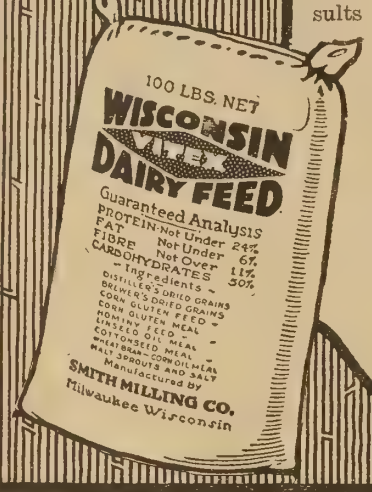
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Vitex increases the milk yield and builds the herd's vitality. Special mixing methods make every sack run uniform. You don't have to guess at the ration when you feed Vitex. Quantity is fixed and results are sure. That's why Vitex is regularly used by so many successful dairymen. Order Vitex today and feed it from now till grass.

It will put a bigger figure on your milk check.

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Ask Mr. Nordby—*He Knows*

Last August when Mr. C. R. Nordby, Barron, Wisconsin, wanted more cork brick for his dairy barn, he wrote as follows:

> "Your cork brick in my barn are as good now as when put in five years ago. I am satisfied with them."

Short but convincingly expressive. When a practical dairyman uses Circle A Cork Brick for five years and then comes back for more, it is pretty conclusive evidence that he *is* satisfied.

Circle A Cork Brick in your stall floors will just as certainly satisfy you.



An up-to-date dairy barn at Mansfield, Ohio, where Circle A Cork Brick are used.

"Better Stall Floors" is a 28-page illustrated book, th t will tell you just what Circle A Cork Brick are and what they are doing for thousands of progressive dairymen. Send in your name for it. There is no charge.

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ANTI-COW-KICKER

Save your temper, your cows, your milk. Does not excite the cow, nor disturb the flow of milk. Indispensible for breaking heifers, cows with sore teats, or vicious kickers. Cannot wear out. Put on or off in 15 seconds. Guaranteed to be an absolutely perfect anti-kicker, or put on loosely as hobble for cow, horse or mule. Price $1.15 Postage extra. Weight 2 lbs. Send for it **today**, when you need it you won't have time.

DAIRY EQUIPMENT CO.,
Dept. H. Topeka, Kansas.

Learn Auctioneering

at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog. **Jones Nat'l School of Auctioneering,** 38 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

Cow Waters Herself



with this wonderful new **Libbey Automatic Water Bowl.** Animal moves lever, opening water valve, when it starts to drink. Lever swings back, closing valve, when animal stops drinking.

15% More Milk

Milk is 87% water, and cows cannot give their greatest yield unless they have plenty of water constantly within reach. Farmers who use Libbey Bowls report an increase of 15% to 20%, which soon pays for the bowls.

Libbey Automatic Water Bowls

are the most sanitary and successful ever invented. Each bowl controls its own water supply, operated entirely by cow, and may be put at different heights, or in any stall or pen. No float tank required. Cannot overflow; cannot get out of order. Almost no water left in bowl to become stagnant. They save labor and feed and increase milk. Prevent spread of contagious diseases, as each cow has her own bowl and no water can pass from one to another, as with old-style bowls. Very simple and easy to install. Write for circular and prices, also FREE DAILY MILK AND FEED RECORD.

If interested in Stanchions, Stalls, Carriers, etc., ask for free General Catalog.

C. A. LIBBEY COMPANY
195 Marion Street Oshkosh, Wisconsin

What the Wisconsin Dairy Council Has Accomplished

The Wisconsin Dairy Council has been organized for two years, but not until 1920 did they have a paid secretary to look after the management and to solicit financial aid. In the last eight months $6,600 has been raised from 100 creameries, 50 cheese factories, 9 condenseries, 15 ice cream manufacturers, 42 milk distributors, 39 farmers, 3 barn equipment factories, 2 farm bureaus, 4 breed associations and others interested in the dairy business of Wisconsin. Over 300,000 circulars and 1,700 posters have been distributed. Fifty some picnics and meetings were attended by representatives of the Dairy Council, where the Wisconsin Dairy Council was explained to over 15,000 people, besides reaching many by publicity through articles in state and county papers. Over 40 articles were prepared by the Field Secretary and sent to breed publications, county papers, farm papers etc. Of course many county and state papers copied these articles or revised them to suit their needs. Consequently, the dairy industry has received considerable publicity, due to the fact that an organization in the state has pushed the dairy interests, not only from a selfish business interest but from a humanitarian standpoint. Of course such influence cannot be measured as accurately as many other things, nevertheless the people have begun to think about the food value of dairy products. This sort of work, followed by the proper kind of advertising, will do a wonderful lot of good for the dairy industry.

The posters and pamphlets were distributed by county agents, home demonstration agents, county nurses, school superintendents, school teachers, women's clubs, at county fairs, breed assocations' picnics and in many other ways. Over 40 county or community fairs were supplied with attractive colored posters and literature for distribution. Many breed association picnics were supplied with the same material.

Three large state exhibits were handled by the Dairy Council. The first one in June at the Bankers' Convention at North Lake where banners and signs were displayed in a large tent, provided for showing some of Waukesha County's prize pure-bred cattle. This exhibit consisted of colored posters and other advertising with a neat display, comparing the value of a quart of milk with other foods by red ribbons running from a quart of milk to a number of other foods. During the state fair the Dairy Council had one booth featuring its membership and the food value of all dairy products. Considerable literature was given away at this booth, calling the people's attention to the food value of dairy products. In addition, two food comparison exhibits, one on cheese and the other on milk, were placed in the large coolers in the Dairy Building, comparing the energy producing material obtained from a quart of milk to that obtained from three-fourths of a pound of steak, or 2 pounds of chicken, etc. Placards with appropriate sayings about butter and cheese were placed in the respective coolers with such quotations as: "There is no substitute for butter"; "Butter contains a substance essential for the growth of the child and health of the adult"; "Cheese, the muscle builder"; "Help solve the high cost of living by eating a cheese sandwich"; and many other suggestive sayings about butter and cheese.

The Council also supplied the Dairy and Food Commission with circulars on the food value of butter and

Quit Gambling

S. C. White Leghorn Hens

Never get too fat to be prolific layers. They are excellent foragers, picking up most of their living around the farm.

Where all the feed is supplied, the White Leghorn hen or pullet eats 10 pounds less per year than other breeds. This is a statement of fact based on experiments carried on at the Connecticut Agricultural College.

Don't gamble with poultry—don't use Ouiga Board methods. Learn more about the famous Oak Dale S. C. White Leghorns.

Write today for our free catalogue.

Oak Dale Farms
Austin, Minn.
Dept. R-4.





Warm in Winter Cool in Summer

the result of insulating air cells in

HOLLOW TILE

The Most Economical Form of Permanent Construction

Plans for this comfortable six-room farm house can be secured from your building material dealer for $10.00. They include working drawings, specifications, and a list of materials required. Ask for Design No. 1175.

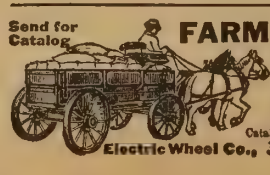
The large tile units, and the fire resistive, everlasting nature of the material results in economical building.

A "Hollow Tile Farm Building" book and a folder describing the above house will be sent free. Address Dept. 331

THE HOLLOW BUILDING TILE ASSOCIATION
Conway Building, Chicago

MASTERTILE The trade mark of The Hollow Building Tile Association and your guarantee of a product made in accordance with Association standards.

Send for Catalog



FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 31 Elm St., Quincy, Ill.

cheese, which accompanied most free samples of high grade cheese and first quality butter given away to visitors at the Wisconsin State Fair. In all over 50,000 of these circulars were distributed.

The third state exhibit was offered at the Milwaukee Food Show, where the two mottoes attracted considerable attention: "Milk Makes Other Foods Better" and "There is No Substitute For Butter." Two large milk bottles supported these signs, which loomed up well above all surrounding placards. In addition to passing out 20,000 leaflets about dairy products, a large number of dairy dish recipe books were given away. At this show, no less than six oleomargarine concerns were represented and gave away free samples of their product, which goes to illustrate that the dairymen will have to wake up and do likewise or their business will be slipping away from them. Coffee and tea companies were there in large numbers providing free samples of their product, and I dare say that the most of them were using the highest grade cream possible to give their coffee the desired flavor, yet the coffee got all the credit. More exhibits of this kind must be staged by the Dairy Council.

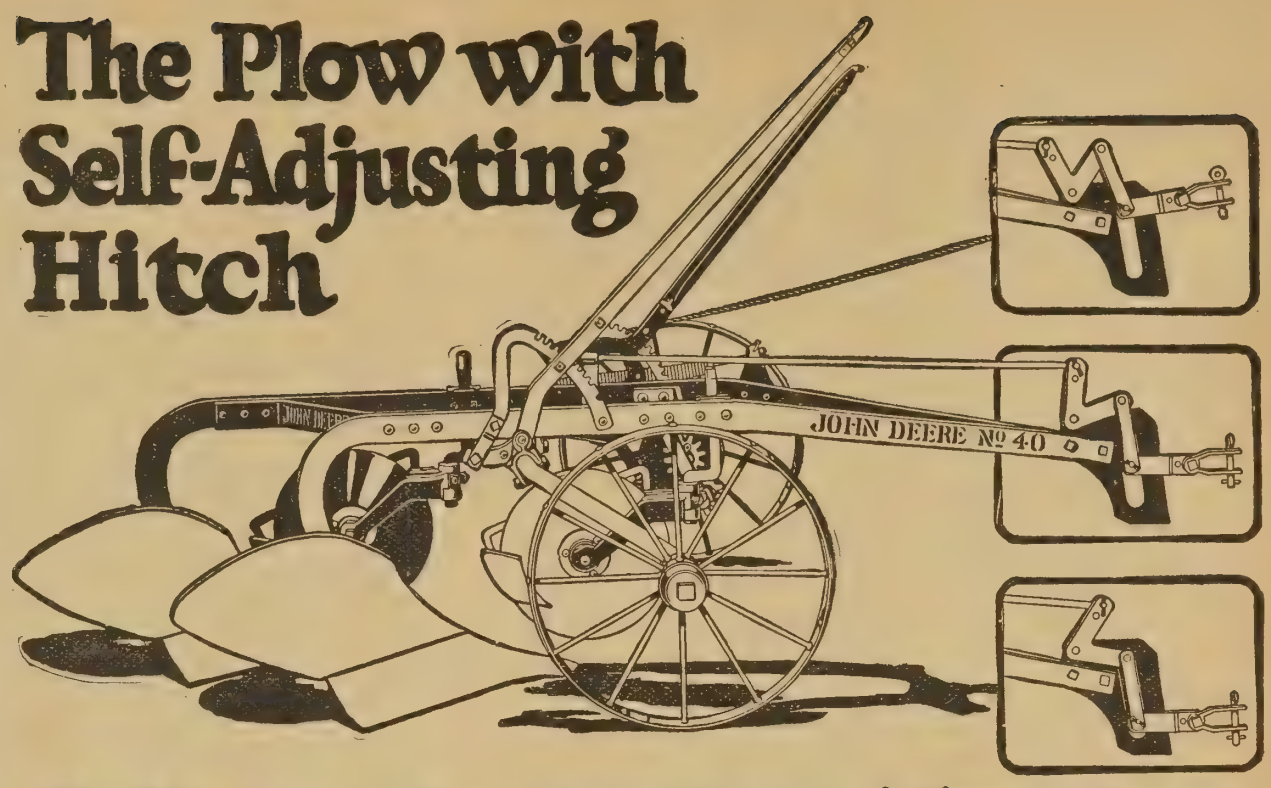
The farm bureaus of Waukesha and Rock Counties have decided to cooperate with the Dairy Council in putting on a campaign in their respective counties. Every school will be supplied with a complete set of attractive posters and an abundance of literature concerning milk and its products. The counties will be divided into three classes; Class 1: rural schools; Class 2: state graded schools; Class 3: city schools. The school children of each township will compete for prizes as follows: $2.50 for 1st, $1.50 second, and $1.00 for third, for the three best essays on food value of milk. The three best essays from each township and the three best from classes 2 and 3, will compete for a county prize. The Dairy Council would like to conduct a similar contest in every county in the state, but funds will not permit until the dairymen from these counties will respond with sufficient funds to carry on the work. Both Waukesha and Rock Counties will finance their own campaign. We expect other counties to do likewise.

Other schools in the state have been supplied with posters and literature upon request. All members have been supplied with posters, some of whom have had them framed and expect to display them about their town, in schools, stores, banks, etc. Literature has been supplied upon request to all desiring it.

Such are the results of the first year's work which are very small compared to what might be accomplished providing the dairymen would finance a campaign in a way worth while. Considering that most of the secretary's time has been spent in the field gathering up memberships, the Dairy Council feels well paid for its efforts, because, after all, the best results cannot be measured in dollars and cents. We are hearing more about the food value of dairy products. Not that the Dairy Council alone is active in promoting this interest but its influence has started the ball rolling and other organizations and individuals are assisting in carrying on the publicity.

The Dairy Council must first teach the child the value of milk, then teach the parents the food value of butter and cheese. There is plenty of material available to prove that there are no substitutes for dairy products but the average person does not take the time and trouble of finding out these facts, therefore, it is necessary for the dairymen to put these facts before the people in such a way that they cannot help understanding them.—J. F. THOMAS, Field Secretary.

The Plow with Self-Adjusting Hitch



Built for the Fordson Tractor

YOUR Fordson needs a plow with self-adjusting hitch. That's one of the original and important features of the No. 40—the plow that John Deere built for the Fordson. Because of this hitch, the No. 40 automatically maintains proper line of draft as depth is varied with the depth lever. Bottoms always have the proper suction—"no nosing in", no "hopping out", no "bumpy" furrows.

Any plow for use with the Fordson needs a self-adjusting hitch. Only the John Deere No. 40 has this hitch. Note the illustration above showing how the hitch of the No. 40 automatically adjusts itself to the proper line of draft as depth is varied with the depth lever.

JOHN DEERE No 40
The PLOW with the SELF-ADJUSTING HITCH

The self-adjusting hitch goes with unusual light weight and light draft plus great strength in making the John Deere No. 40, "the plow that fits the Fordson".

Built of John Deere New-Process Steel, the No. 40 is lighter than the average horse-drawn sulky; and it has tremendous strength to withstand severe plowing strains.

Beams are guaranteed not to bend or break.

Pulls extremely light—Because of proper line of draft at all times, the scouring qualities and general high grade construction of its genuine John Deere bottoms, light weight and the rigidity of its frame, the No. 40 is exceptionally light draft. It's a real fuel saver.

Simple, Positive, Power Lift—lifting parts move only when plow is being raised or lowered—practically no wear.

Does High Grade Work. The genuine John Deere bottoms insure good turning, scouring and pulverizing. They do the work the way you want it done. You can get your No. 40 equipped with John Deere bottoms of the shape and type to suit your soil.

Get Acquainted with the No. 40. You will find it is the plow your Fordson needs. Remember, the plow is the "business end" of the tractor plowing outfit. The tractor furnishes power; the plow applies that power in making the seed bed. Be sure to get a good plow for your Fordson. Write today for a folder describing the John Deere No. 40.



Get This Free Book

"Better Farm Implements"—114 pages—describes full line of high grade farm implements and machinery—gives valuable information on implement operation. Write for it today. Address John Deere, Moline, Ill. Ask for Package F-414.

JOHN DEERE

JOHN DEERE MOLINE, ILL

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Does Heavy Feeding of Concentrates Pay?

Testing tells the story and so the following analysis of feeding practices is reprinted from the annual report of the Richland—Buena Vista, Wisconsin, Cow Testing Association:

"This is still a live question among many of Wisconsin's dairymen, and for those who desire some practical information on this subject the 536 cows that completed the full year in the association were divided into six groups, and tabulated according to the cost of their concentrate ration.

No. of cows	Av. cost of concentrates per cow	Av. total feed cost per cow	Av. proportion per cow Fat	Av. value of product per cow	Profit per cow
38	$57.13	$120.05	306.6	$248.41	$128.36
32	43.29	106.47	282.7	233.66	127.19
123	33.29	94.88	263.1	217.22	122.34
180	25.31	82.93	228.0	188.19	105.26
109	15.56	72.54	199.7	162.79	90.25
54	6.21	57.91	172.8	138.16	80.25

"Some interesting comparisons are afforded between groups 3, 4, and 5. In comparing groups 4 and 5 it will be found that a $10 additional investment for feed returned $15.00 more net profit, or in other words 250 per cent on the investment. By comparing groups 3 and 4 it is again found that an investment of $12 in feed yielded $17 more profit, or 233 per cent on the investment.

"As these three groups constitute over 80 per cent of the cows tested, representing all types, and under various conditions, it is safe to assume that the amount of feed is one of the most important factors in economical production with the average cow.

"It has often been said by the least progressive neighbors of a man who is recognized as a liberal feeder, that "He puts more into his cows than he gets out of them." The association records do not seem to bear out this statement, and it is a fact that invariably the men who make this assertion are those who do not give their cows a chance to know what liberal feeding is."

Ruberoid Facts Worth Knowing

When buying ready roofing for a new roof or for repairing an old one, remember these facts regarding Ruberoid.

The experience and the reputation of the pioneer makers of ready roofing are back of every roll.

The felt, saturating and coating compounds used in Ruberoid are the very best attainable.

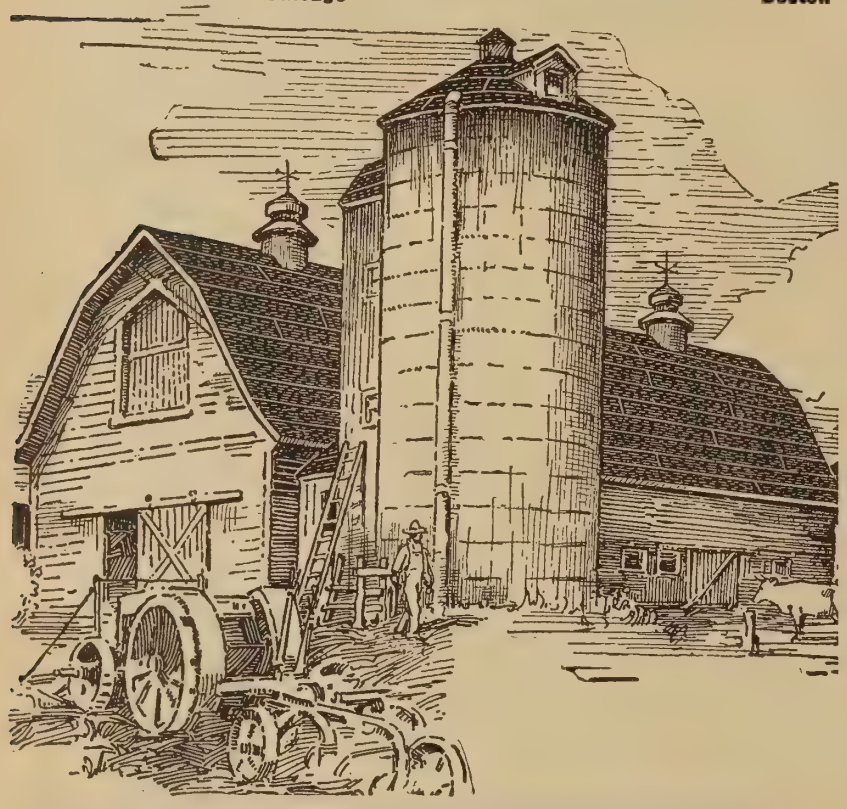
For over a quarter of a century Ruberoid has set the standard for quality in ready roofings.

On many roofs it has given over twenty years of service and the limit of its endurance is yet to be found.

There are many ready roofings on the market. There is only *one* to which all these facts apply. That one is Ruberoid.

When you need ready roofing go to the Ruberoid Dealer in your town.

THE STANDARD PAINT COMPANY
95 Madison Avenue, New York
Chicago Boston



RU-BER-OID roofing

SHINGLES FELTS ROLL ROOFINGS PAINTS BUILT-UP ROOFS VARNISHES BUILDING PAPERS PLASTICS

As Howard Sees It

I DON'T believe we want an exclusive agricultural policy. What we do want is a definite national policy in which agriculture properly articulates with all the rest of our national interests.

⚜

Marketing is one of the biggest things which any farm organization must consider in the immediate future. The farmer's business is primarily to produce.

⚜

We constitute one-third of the people of the country. It has been the business of the other two-thirds to take care of the transportation, the marketing, and the distribution. If they fail to do it with that degree of economy which will enable agriculture to fairly prosper, then perhaps the farmer himself will be compelled to venture farther than the field of production and take active interest in problems of marketing.

⚜

The farmer is going to have breakers ahead for the next five or six years. I don't look for any permanent readjustment very much earlier.

⚜

There are three outstanding things necessary at this time, and one of them is the credit situation of this country. The least which we can demand in asserting our rights is that we have a credit as farmers which will extend not over the productive year alone, but throughout the consumptive year in order that we may market our crops orderly.

⚜

We are going to have an increase in co-operative marketing in this country; not only is the farmer demanding it, but the best interests in our national life are sold on it.

What about the farmers? Well, a good many of them have already made their donations toward the prosperity of the future and as yet they are not gaining a bit. The farmer has stuck to his job and produced more this year than ever before in spite of scarcity of labor and the high price of machinery, fertilizer, feeds, and the necessities of life. "Jim" Howard is right again, "The farmer has continued to contribute an honest day's work and he has kept his head level and his feet on the ground. We must continue to look to him for our greatest stabilizing influence. We are facing an age in which industry and agriculture must move forward hand in hand—an era in which co-operation will be the keynote of all our activities—in which agriculture will be recognized as the foundation of the nation's strength. Those identified with other industries can not permanently better their condition without cultivating an understanding and a regard for agriculture.

And he is right again when he says: "The golden age for the minimum effort is forever passed. Industrial peace and agricultural prosperity will only be secured when the men whose labor feeds the world shall receive in exchange, products of industrial labor representing an equivalent in human effort. The safest, sanest, surest—in fact the only route to national prosperity, is through agriculture."

Wisconsin. A. W. HOPKINS.

[EDITOR'S NOTE:—J. R. Howard, President of the American Farm Bureau, will be one of the speakers at the Market Conference, February 1—10, at Madison, Wisconsin. E. T. Meredith, Secretary of Agriculture; Alonzo Taylor, world famed economist; C. P. Craig authority on the lakes to ocean waterway; and Congressman A. S. Lever of South Carolina are a few of the other speakers. We assure our readers that they will be highly delighted to hear these men first hand and to learn more of what they are doing for national agriculture. It is true that Wisconsin, because it does not have "all its eggs in one basket" like so many other states, is in a far better condition agriculturally than some of her neighbors, but that makes all the better reason why bankers, newspapermen, farmers, and dealers in agriculture should be present at the round table of the conference.]

Dairying in Colorado

HOARD'S DAIRYMAN:—It is so seldom we see a communication written by the breeders of pure-bred dairy cattle in Colorado that I often wonder whether the East really knows that we have some splendid herds here and that our dairymen and farmers are making good progress in the purchase of pure-bred sires. By buying sires and sons of sires of proven production, dairymen are creating a demand for our home-bred young bulls and an interest in the breeding of better quality and higher producing animals. The local cow testing associations are very beneficial in the upbuilding of our dairy herds and farmers and dairymen are getting much out of the practical work and demonstrations in feeds and feeding by testers in charge of the work.

Speaking mostly from a Guernsey standpoint, we are very much in arrears with association work, each breeder trying individually, as it were, to push his business to the limit of his capital and herd. While all have had the pleasure of selling their young bulls and surplus females, we do not seem to be making much headway in building up a breeders' community that would attract the attention of the dairy public. Any suggestions from our neighbor Guernsey organizations would be gladly received by your western neighbors and very much appreciated.

Colorado. A. L. HARSCH.

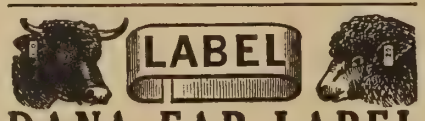
A simple device to warm the cows' drinking water isn't a fool idea, but pays in dollars and cents in increased production.

A good winter job, some day when it's not too cold, is to go over the fences and put them in proper shape.

McCormick of Montana
OFFERS
100 cars alfalfa hay. Good green hay cured without rain. Irrigated. Wire or write for price.
W. H. McCormick Seed House
Billings, Montana

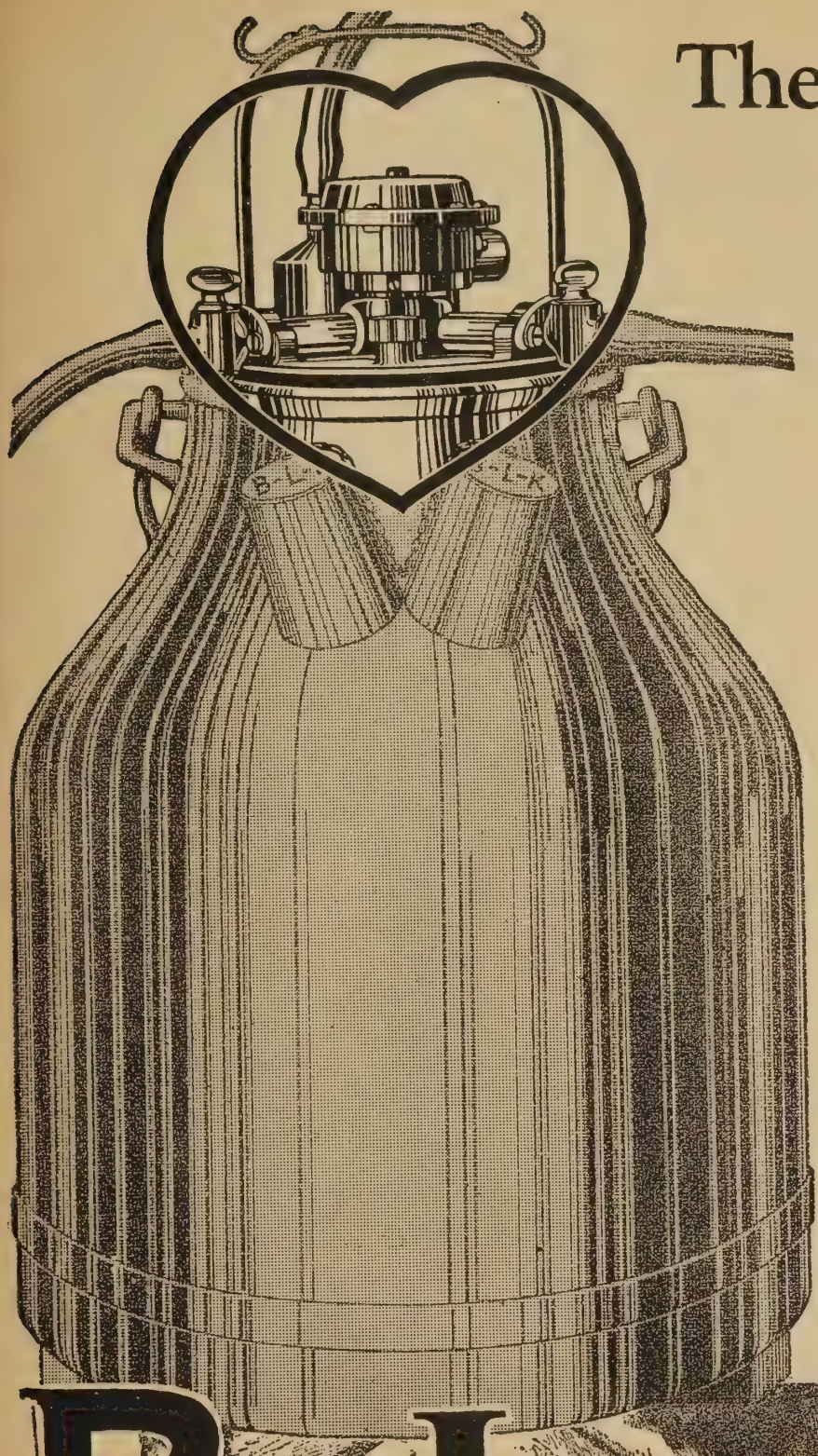
NULIFE
Pure Sugar Cane Stock Feeding
MOLASSES
Makes more milk. Puts more fat on steers, horses, sheep, and hogs in less time. Feed NULIFE pure sugar cane molasses with all your roughage and grain.
If your dealer can't supply you, send us his name and Order Direct, 55 gallon barrels — 23 cents per gallon — $12.65 per barrel, 10 barrels or more, 22c per gallon, $12.10 per barrel. Carlots, 21c per gallon, $11.55 per barrel. Net cash, sight draft bill of lading attached. F. O. B. Chicago. Pamphlet on Feeding Facts Free. Prompt shipment. Order Today.
OELERICH & BERRY COMPANY
864 Larrabee St., Dept. A., Chicago, Ill.

The Improved Humane Stanchion
is the handiest, strongest, and most practical Stanchion on the market. Write to Humane stanchion Works, Baraboo, Wis., for literature on a complete line of barn equipment.



DANA EAR LABEL
Stamped with owner's name or address and serial numbers. Send for free samples.
C. H. Dana Co., 55 Main St., W. Lebanon, N. H.

Keep Tab on Your Cows
Send 5c in stamps for samples and prices of our weekly and monthly Milk Record Sheets. Hoard's Dairyman, Fort Atkinson, Wis.



The Heart of the Milker

THE HEART of the Burrell Milker is its Positive Relief Pulsator, which produces sharp, well-defined, intermittent periods of suction and relief in the teat cups. The *complete intermittent* nature of these pulsations is absolutely essential to thorough and efficient milking.

Between each period of suction there is a period of complete relief from all suction, during which time air is admitted to the teat cups, and atmospheric pressure is instantly restored to normal. This permits natural circulation in the teats and prevents the congestion which would result from long periods of suction without relief.

The Burrell Positive Relief Pulsator is made of non-corrodible metal, free from cracks and crevices, and therefore easy to clean. The entire operating mechanism is quickly removed, and all portions of the pulsator which come in contact with the milk are easily cleansed and sterilized. The passages through the milk cocks, inspection glasses, and cylinders are large and of the same size throughout.

The Burrell Positive Relief Pulsator is *but one* of the distinctive features which make the Burrell Milker a success. There are also the Burrell Universal Teat Cup, which has no unsanitary rubber lining; the Burrell Moisture Trap, which prevents contamination of the milk from condensed vapor running back into the pail; the Burrell Automatic Controller, which has earned for the Burrell Milker the reputation that "*It Milks the Cows Clean.*"

Learn all about these and other Burrell features. Write today for booklet and complete information. Tell us the number of cows you have and why you are not already milking by machine. For convenience, use the coupon below.

D. H. BURRELL & CO. INC.

Little Falls New York

TRADE MARK

BURRELL

B - L - K

MILKER

"It Milks the Cows Clean"

(Clip Coupon Here)

D. H. BURRELL & CO. INC., LITTLE FALLS, N. Y.

Gentlemen: I have_____ (number) milking cows. I am not now milking by machine because_____

I want you to send me your booklet and complete information about the Burrell Milker and tell me why "*It Milks the Cows Clean.*" 10

Name_____ P. O._____ State_____

The State of California Makes You This Bargain Offer

The State Land Settlement Board of California will sell bona fide homeseekers an irrigated farm of 20 or 40 acres in San Joaquin Valley, with 36½ years time for deferred payments

These farms are in Farm Land Unit No. 3, consisting of 1540 acres in Merced County, the heart of the famous San Joaquin Valley, and will be offered to bona fide homeseekers.

These carefully selected lands were acquired by the State of California for settlement purposes. A complete irrigation system is being installed. Price per acre varies according to location. Five per cent of purchase price payable when deal is made; remainder in semi-annual installments, extending over a period of 36½ years, with interest at 5 per cent per annum.

When this unit is exhausted, other similar tracts will be opened up as rapidly as land can be prepared for the new settler.

An unusual opportunity to acquire a small ranch in winterless California, at a minimum cash outlay.

All deciduous fruits are profitably grown, and alfalfa is a paying crop. Ideal conditions for stock and poultry. You have benefits of established communities. Schools are ready, and fine roads. The various fruit associations have a remarkable marketing system. You raise the fruit; no bother about markets.

The Santa Fe operates five trains a day from Chicago and Kansas City to California. Two of them—the California Limited and the San Francisco Limited—are solid Pullman trains with dining cars all the way.

The Navajo, Scout, and Missionary carry standard and tourist sleepers and chair cars; meals in dining cars east of Kansas City and at station dining rooms west. Meal service for all trains by Fred Harvey. The California Limited and the Missionary have through sleepers by way of Grand Canyon of Arizona.

The Santa Fe tourist sleepers are comfortable and you save about half the berth rate. Station meals also are economical—a "square meal" for a dollar.

You Can Farm All Year in California

The State Board's booklet about these lands and plans for financing improvements, Santa Fe illustrated folders descriptive of San Joaquin Valley and the trip there, mailed on request.

Santa Fe

Let me help you plan your trip.

C. L. Seagraves, Superviser of Agriculture, Atchison, Topeka & Santa Fe Ry., 934 Railway Exchange, Chicago.



The Handiest Help

on the farm and a most important aid to increase the production of your livestock and poultry is that combined paint and disinfectant which brings sunshine and health into stables, pig pens, hen houses, dairies, cellars and outbuildings.

CARBOLA
The Disinfecting White Paint

gives more light and better sanitation than you can get by using whitewash and disinfectants, and it is applied in one operation instead of two, saving half the time and labor. It gives a snowy whiteness to walls and other surfaces, and at the same time, because of the strong disinfectant it contains, helps to keep your buildings free from lice and mites and destroys the germs of many of the contagious diseases that affect poultry, live stock and human beings.

Carbola comes in powder form and is ready to use as soon as mixed with water. No straining. No waiting. It does not clog sprayer. It does not flake, blister or peel off. Harmless to smallest chick or stock that licks a painted surface.

Use It Instead of Whitewash and Disinfectants

in every building on the farm and in the cellar of your home, in your garage, outbuildings, etc. Apply it with a brush or a spray pump to wood, brick, stone, cement or over whitewash. One gallon covers 200 square feet.

Your hardware, paint, drug or seed dealer has Carbola or can get it. If not, order direct. Prompt shipment by parcel post or express. Satisfaction, or money back.

10 lbs. (10 gals.) $1.25 and postage. 20 lbs. (20 gals.) $2.50 delivered. 50 lbs. (50 gals.) $5.00 delivered. Trial package and interesting booklet 30c postpaid. Add 25% for Texas and Rocky Mountain States.

CARBOLA CHEMICAL CO. INC.
Dept. H
7 East 42nd St., New York



Notable Canadian Holsteins

THESE photographs are from the Canadian herd of Holsteins owned by W. C. Houck and Sons of Ontario. In this herd large, straight topped animals of capacity and constitution are being developed. Most notable of its members is Jemima Johanna of Riverside, a 2,000-lb. cow which at 10 years made 30,373 lbs. of milk, 1,024 lbs. fat in 365 days. This cow with her daughter, granddaughter, and great granddaughters form a family group of remarkable uniformity and type. The upper cut shows the old cow, second from the right, with four of her daughters.

Below is Llenroc Lady Jemima, a four-year-old granddaughter of the old cow and a daughter of Johanna Jemima Posch, whose record is over 26,000 lbs. of milk, 972 lbs. fat. The four-year-old has recently completed a record of nearly 20,000 lbs. milk, 800 lbs. fat. This makes the three the first three generation "thousand-pound cows" in Canada, the second highest "three generation" butter cows in the world, and the fourth in milk. Five of the old cow's daughters on yearly test at this time are producing very heavily with good prospects that four will produce more than 800 lbs. fat each. Her own record and the performance of her progeny make Jemima Johanna of Riverside one of the greatest producing and reproducing cows living.



Boiler Explodes

HOARD'S DAIRYMAN:—Kindly call the attention of your readers who are interested in cheese factories and creameries to the importance of having their boilers inspected. This is the lesson of the recent tragedy at Stoughton, Wis., where the explosion on November 24, 1920, of a 20 H. P. boiler was responsible for five deaths and three other serious injuries.

This is the second tragedy of this kind in a creamery in Wisconsin. In 1919 a small 10 H. P. boiler exploded in a creamery at Loyal, completely wrecking the building and killing both the proprietor and his one employee.

Both these explosions involved boilers which had not been inspected and which were seriously defective. The Loyal boiler was in such a condition that any competent boiler inspector would have condemned it. In the Stoughton case a thin-shelled boiler which had been used for 16 years as a heating boiler carrying five to ten pounds of pressure was converted into a power boiler with over 40 lbs. of pressure.

There are many boiler owners who think that because their boiler has not yet exploded that it will never do so. But it is always "the last straw that breaks the camel's back". If a boiler is defective the defects will get worse and worse, unless promptly corrected and will finally result in loss of life and property. In a single year over 500 boiler explosions occurred in the United States. Inspections made by this commission show that one in every seven boilers is seriously defective and the percentage is even higher among the boilers used in creameries and cheese factories. Steam under pressure has greater explosive force than gunpowder.

The man who thinks he can inspect his own boiler, does not realize the foolish chance he is taking. The laws of the state require that boilers shall be inspected by boiler inspectors who have a certificate of competency from the Industrial Commission. Even a good mechanic or good boiler maker is not qualified to measure the tensile strength or determine what pressure a boiler can safely carry.

Under the laws of the state every boiler which is 10 H. P. or more and which carries a pressure of 15 lbs. or more must be inspected twice annually, once internally and once externally, except steam fire engines and boilers used exclusively for agricultural purposes. Owners who carry special boiler insurance policies get such inspection service from their insurance companies. Uninsured boilers are subject to direct inspection by the Industrial Commission and it is the duty of the owners of such boilers to notify the commission that they desire inspection. For each internal inspection the owner must pay a fee of $5, and for each external inspection of $2. This fee covers only a part of the cost of making these inspections and certainly is so small that no boiler owner can afford to violate the law.

WIS. INDUSTRIAL COMMISSION

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.



The Cotton Gin and the Milking Machine

As the cotton gin increased immeasurably the prosperity of the South, the milking machine is increasing the prosperity of the dairy farmer. *One man does the work of three men milking by hand.*

"Milk, More Milk and Better Milk!" is the cry. The health-giving qualities of milk have never been so widely advertised as they are today. As a beverage it is daily becoming more popular, and new products in which milk is used, or to which milk is an addition at the table, are constantly being added to the country's foods.

The dairy farmer will be able to sell at good prices every quart of milk he produces, and the better the quality of milk, the more he will get for it.

To assure himself that he is obtaining the milking machine that means the greatest cleanliness, the lightest weight and the longest life, the dairy farmer should see that the machine he buys is equipped with a

WEAR-EVER ALUMINUM TRADE MARK

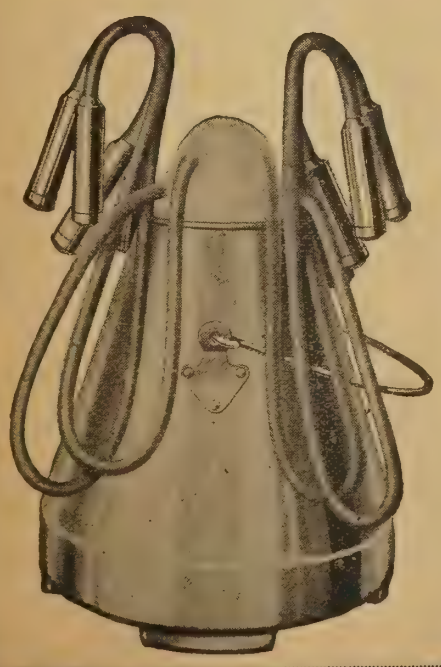
"Wear-Ever" Aluminum Milk Pail

WEAR-EVER ALUMINUM TRADE MARK

Made of solid aluminum; has NO JOINTS OR SEAMS in which bacteria may lodge. CANNOT RUST. The silver-like luster of **"Wear-Ever"**—so familiar to the housewife who has **"Wear-Ever"** utensils in her kitchen, seems to speak the words, "I am clean."

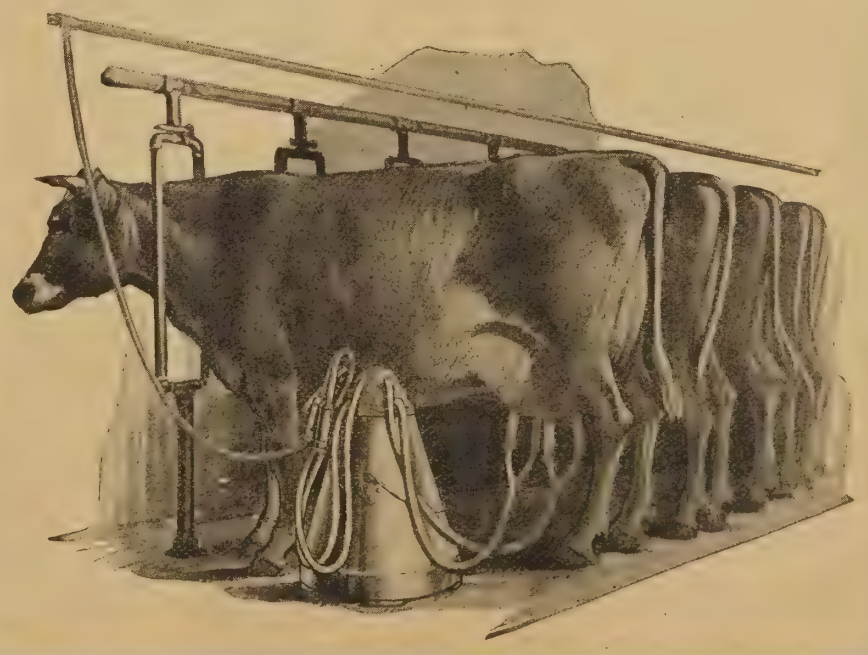
The Aluminum Cooking Utensil Company, New Kensington, Pa.

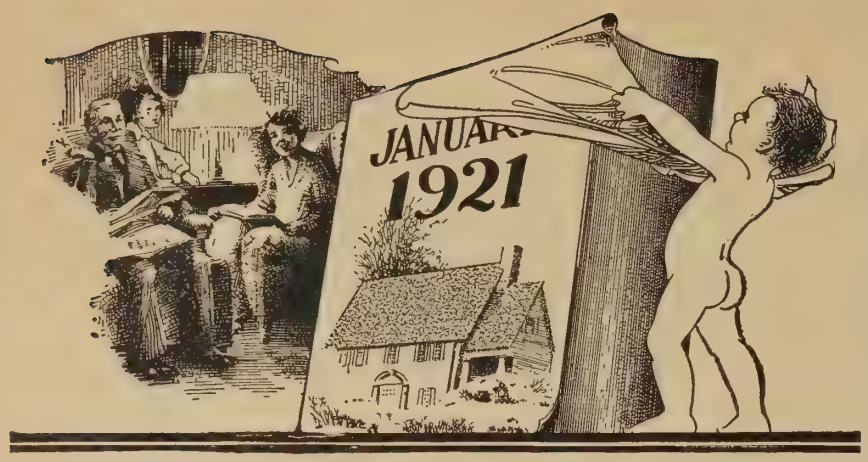
In Canada; Northern Aluminum Co., Limited, Toronto, Ontario





Note the extended bottom of the **"Wear-Ever"** Pail. This protects the bottom proper when pail is resting on ground. It is also a convenience when pouring. The extended edge is placed on the knee, and the leg and knee serve as a lifting device, making unnecessary a back or tilting handle.





Planning Time

THE beginning of the New Year is a good time to think about future betterments. Later on, when your farm duties command most of your attention, building operations are apt to be neglected, to the detriment of your property and welfare.

It is good judgment to know, well in advance of the Spring building season, just what repairing and building will be necessary to place your farm on the most efficient working basis.

It is also good judgment to include MULE-HIDE Roofing and Asphalt Shingles in your plans for better roofs.

"Not a Kick in a Million Feet"

is a record of service which MULE-HIDE has earned from its long life, durability and weather-resisting qualities.



The MULE-HIDE dealer in your locality will gladly demonstrate the superiority of MULE-HIDE Roofing and Shingles to your satisfaction. If you know of no MULE-HIDE dealer nearby, write us direct, mentioning the name of your lumber dealer.

MULE-HIDE Smooth Finish Roofing.
MULE-HIDE Slate-Kote Roofing.
MULE-HIDE Shingle-Craft Roofing.
MULE-HIDE Individual Asphalt Shingles in Standard and Double-Thick Weights.
MULE-HIDE Four-Unit Asphalt Shingles.
SEAL-SKIN and BLACK-BEAR Waterproof Building Papers.

THE LEHON COMPANY
MANUFACTURERS
44th to 45th on Oakley Ave., Chicago



Empire Oil-Burning Tank Heater

Greatest improvement ever made in tank heaters. Fits any tank. Burns from 14 to 16 hours on one gallon of kerosene. Any child can operate it with safety; no sparks, ashes or smoke. The heating chamber is entirely under water; no heat wasted. Guaranteed. Saves feed—pays for itself repeatedly.

Empire Non-FreezableHogWaterer

Made of heavy galvanized iron—large capacity (70 gal.); drinking trough on outside where hogs can reach it; oil burner directly under trough—guaranteed not to freeze. Keeps water warm at a small cost. An abundance of fresh, clean water at right temperature. Keeps hogs healthy, fatten faster on the same feed.



FARMER AGENTS

Special offer to farmers willing to show our Heater and Waterer to prospective buyers. Write at once for price and special offer. Buy direct from factory.

Empire Tank Heater Co.
109N. 7th Street
Washington Iowa

Dont Send 1 Penny

Just send your name and address, size and color and I will send this sweater to you. You don't pay one penny until it is delivered to your door by the postman.

$1.98 DELIVERY PAID



Army Navy

For Men or Women

This is a real heavy winter sweater, made of heavy mixed marino yarn. Slip-over style, with V neck and full length sleeves. Just like picture. Will give excellent wear. Sizes to fit Ladies or Men 34 to 46. Colors, khaki or navy blue.

$4.50 Reduced to $1.98

No one has ever reduced price to this extent. It is the biggest money-saving bargain ever offered. We will sell only two to a customer and will not sell to merchants or wholesalers.

Delivery Free Just send your name and address, no money. When the sweater is delivered at your door by the postman, pay him $1.98 for the sweater. We have paid the delivery charges. Wear it. If you don't find it all you expect, return it and we will cheerfully refund your money at once. Order by No. 72.

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DAIRY FEEDS
CLOSE PRICES — PROMPT SERVICE
THE GOLDWOOD—AMRINE CO.
St. Joseph, Mo. 312 Am. Nat'l Bk. Bldg.
Kansas City, Mo. 312 Victor Bldg.

Phosphoric Acid

Finely Ground Raw Rock Phosphate is the cheapest source. Your inquiries solicited.

M. H. Gray, Mt. Pleasant, Tennessee

When Writing to Advertisers, Mention Hoard's Dairyman

A New York Representative Agricultural Meeting

HOARD'S DAIRYMAN:—The number of organizations in New York State that have to do with various phases of agriculture is worthy of comment, further than that those organizations that have an interest in agricultural affairs are of large number. Thirty-eight of these organizations were invited to send representatives to a conference in Syracuse in December to discuss agricultural conditions. This was in accordance with a suggestion by Dean Mann at a meeting held in September. At this conference various dairy interests were represented. Committees were appointed soon after the members met and after some hours consultation all committees met and reported through their chairmen. Prior to the work of committees there was held an open meeting. President Dana of the Council explained that to best benefit agriculture all classes must be considered.

Commissioner Hogue still contends that many classes received benefits during the war that were not extended to agriculture. Industries have been built up at the expense of agriculture. For all that it is no time to retrench farming activities. At the same time to continue farming operations necessitates sufficient returns to ensure some profit. Marketing problems therefore are of interest to the whole people.

Dr. Porter finds that there have been an abundance of resolutions, but the farmer is as far from getting results as he ever has been. So far as doing business is concerned the state is far less efficient than the farmer. Municipal operation or control is to be regretted, but Dr. Porter thinks that some governmental regulation of certain marketing activities may be necessary. Co-operative sales associations may need a chain of stores, and certainly the need of grading and standardizing products cannot be overestimated. The small producer needs assistance. Wasteful competition is to be eliminated. It will be seen that Dr. Porter's ideas may well apply to the distribution of milk.

Dean Mann, every time, pleases his listeners. He, too, sees that marketing problems are paramount. We are seldom ready for what comes. There is need of preparation and of less drifting. We are committed to a policy of organization, and we agree in respect to underlying facts. Our national security depends upon the development of our farm land areas, not on new lands of doubtful value. It is important to remember that we cannot sell all we have at one time. Some should be stored for a later demand.

The finance committee did not approve the borrowing of funds from the merchant, but from the banks. Local banks are willing to make suitable loans, and it is usually the farmer who is backward about applying rather than the bank that is the cause of lack of credit. This seemed to be the general opinion of those present.

The committee on transportation seemed to have had differences. The use of motor trucks seems to be favored to a greater degree than they have before. Full loads for cars was agreed upon and a better service of refrigerator cars seems to be in full favor. It was suggested that there should be a transportation agent in the department of farms and markets.

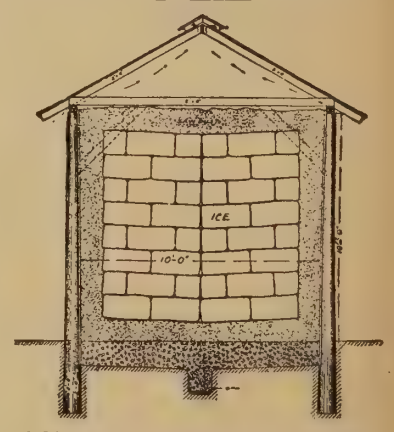
Co-operation has the center of the bill board. It was agreed that co-operative organizations are being formed as rapidly as is consistent. It is important to avoid duplication. Some packing houses and warehouses are needed. Certain associations should affiliate in order to do a larger business. Contracts need to be clearly defined, and pooling ought to be advanced.

Our hope, says Dr. Jordan, is in united action. We have spent twenty-five years in passing resolutions, most of them worthy. Now what are you going to do to make these effective? We have machinery but not a definite policy, and our various societies do not entirely co-ordinate. Let us go at the problem in the spirit of service. The state agricultural society can render the best service in enabling the various phases of the work to function. The state Grange is of necessity such as not to be readily adapted to it, and the farm bureaus are too close to government control. A very friendly discussion followed, one side trying to get this conference to turn its activities through the farm bureau and the other through the state agricultural society, with the result that it was decided to meet at the time of the state association in Albany in January.

The committee on production believes that production should be fully kept up next year. Our state production does not nearly keep up with our increase in population. Better drainage, more time and a better use of commercial fertilizers was urged, also the use of more clover. Green manure crops and the use of farm manures were recommended. The soil survey of the state ought to be continued. Better seed, variety tests, and a better control of diseases are economic needs. Fewer dairy cows and more home grown feeds were strongly urged. We may expect something more definite when the January meeting is held as to the means of bringing about all these good things and others.

New York. H. H. LYON.

Specifications for Ice House



POST ICE HOUSE, UNINSULATED

Floor:—Consists of 12 inches of coarse gravel tamped into place.

Walls:—Posts about 3 feet center to center are set up, extending 3 feet into the ground and capped by a plate made of two pieces of 2 by 4 inch material; the inside is sheathed with 1-inch boards. The posts and boards below the ground should be treated with some preserving compound.

Ceiling:—No ceiling is provided.

Doors:—A door may be provided by cutting out the boards between two posts in the end of the house and closing the opening by placing short boards across on the inside and packing sawdust against them to keep them in place.

Drainage:—Drainage is obtained by sloping the floor of the house so that the water will run to the center. A ditch should be dug as indicated, and filled with gravel and small stones. This ditch should empty outside at a point where there is sufficient fall to carry the water away. A 3-inch porous drain tile may be provided. It should be properly trapped to prevent the entrance of warm air. —Taken from Farmers' Bulletin 1078.

Washington, D. C., Weekly News

[SPECIAL TO HOARD'S DAIRYMAN]

Washington, Jan. 3—Officers and directors of the National Milk Producers' Federation met in Washington this week to take up a number of pressing matters of interest in their industry. This was the first session since the meetings held in Chicago during the National Dairy Show. President Campbell and representatives of the Chicago, Cleveland, St. Louis, Pittsburg, New York, Philadelphia, Baltimore, and Washington associations were present.

One of the chief items of business was a discussion of the forthcoming report of the Bureau of Farm Management of the Department of Agriculture on the costs of milk production in the New Orleans milk producing district. This report is not out officially as yet, but a press release is being prepared which will cover some of its more salient features. The importance of this is in the fact that the officials of the New Orleans Milk Producers' Association, which happens to be an inter-state association, have been indicted on charge of being a conspiracy in restraint of trade in that their work has been to unduly enhance the selling price of their commodity. This brings this case squarely under the anti-trust laws, and the result of the independent investigation of the department experts in showing cost of production there will be a big item in the defense of the indicted men, if it shows as it is expected to do, that even the advanced prices secured for milk in New Orleans did not pay a fair profit above cost of production. The National Milk Association is much interested in this case as it involves the legal points back of the entire controversy over collective bargaining. J. D. Miller of the Dairymen's League and a director in the National Federation has been retained as associate council in the defense of the New Orleans milk producers.

Another matter before the meeting was the price situation as brought about by declining demand for milk in the cities now suffering from the industrial depression. General reports received show that nowhere has there been a decline in milk prices based on anything but the actual development of a milk surplus. The work of the various organizations in holding prices close to the cost of production is proceeding in good shape.

A third matter up for action was the inclusion of dairy products in the emergency tariff bill. Manager Warber reported that he was gathering the data upon which to base an extended argument before the Senate Finance Committee, and that he was working in harmony with the National Dairy Union, and the National Grange and the American Farm Bureau Federation in seeking to have either a straight butter tariff or, still better, a tariff on butterfat as included in all dairy imports, included in the emergency schedule.

⚜

Hon. Sidney Anderson, chairman of the sub-committee on agricultural appropriations, has written the secretary of the National Dairy Union stating that his committee will see to it that the work of the Dairy Division of the Department of Agriculture in dairy research is provided with ample funds to carry on its fundamental research projects. The effort to get a thirty thousand dollar appropriation for the needed barns is thought to be included in the projects Representative Anderson will support.

⚜

The emergency tariff bill is in the hands of the Senate Finance committee. Senator Boise Penrose, chairman of this committee has returned to Washington after more than a year's absence due to illness, and has assumed charge. Senator McCumber, who was acting chairman, was favorably inclined to this bill, while it now appears that Senator Penrose is opposed. Sponsors for the butter tariff are making a strong drive to have this item included.

⚜

Secretary of Agriculture Meredith has been enjoined from enforcing the order entered some months ago forbidding live stock firms in various live stock markets from putting into effect proposed commission charges. This controversy arose over increased charges proposed to be charged for cars containing cattle of plural ownership, and was said to be a move to make co-operative shipping unprofitable. A hearing was held, followed by a sharp statement by the secretary, and then acting under the war-time powers conferred by the Lever Act, an order fixing the rates to be charged effective August 12. Commission men in Kansas City took the matter into court, securing a temporary injunction from which the secretary appealed. This appeal has now been decided against the appellant, and the injunction made permanent, according to advices received here. The secretary proposes to carry the matter to a higher court.

⚜

Health Officer Fowler made the first move this week on his effort to enforce the obsolete law found on the District of Columbia statute book, limiting the salt and moisture in butter to a point several per cent below the legal standards permitted by the U. S. Department of Agriculture and Internal Revenue office. The details of this were told in Hoard's Dairyman some time ago. Since that time, until last week, nothing had been done by the health officers here. Now it is a restaurant keeper who has been cited into police court. Announcement is made that butter has been sampled in numerous other places and that surplus of moisture will lead to prosecutions. In spite of the reported sale of oleomargarine in several restaurants, no arrests for this evasion of the law have been reported.

⚜

Agricultural interest centers in six special legislative matters now before congress, and in two general topics of legislation. This is a brief resume of the present situation:

War Finance Corporation reviver vetoed Jan. 3 by the President, passed by the senate over the veto by a vote of 52 to 5, without debate or discussion. House vote on veto expected soon.

Emergency tariff passed House, now in Senate Finance Committee.

Packer bill not yet introduced in House; Gronna bill temporarily laid aside in Senate; vote agreement on Jan. 24.

Co-operative bargaining bill passed both houses, but Senate amendments unsatisfactory to farmer co-operative leaders; held in conference committee.

Muscle Shoals air nitrate bill is unfinished in the Senate where debate is proceeding; not reported from House Military affairs committee, but up in general debate by reason of item of ten million dollars in Sundry Civil bill, for continuing work on the Muscle Shoals dam to make Tennessee river navigable and thereby make power available for operation of plant.

Wheat futures bill was introduced in Senate by Senator Capper, in House by Representative Tincher. Hearings to begin this week by House Committee on Agriculture.

General matters, general tariff, and general revenue bill will not be formally considered until special session, but tariff hearings were begun this week by Ways and Means Committee.

Cheese Prices for December

The daily quotations of the U. S. Bureau of Markets show the following average prices on American cheese (style Twins) for three large markets in December, 1919 and 1920:

	Average price Dec., 1920	Dec., 1919
	Cents	Cents
Wisconsin boards	21.86	30.61
Chicago	22.54	30.63
New York	25.14	31.06

This represents a decline of two cents from the November average. Longhorns averaged 24.27 cents a pound on the Wisconsin Board, which is also two cents under the November average.

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Seeing your friends and having them join in for a club of subscribers.

BELGIAN IMPORTED MELOTTE

DUTY FREE



Here Again

Jules Melotte—*"The Edison of Europe"*—has again placed his **Great Belgian Melotte Cream Separator** on the American market and is continuing his pre-war offer to the American farmer. *Free Trial—Small First Payment—Easy Terms—Duty Free.*

You, who have wanted the world's greatest separator, write for catalog right away. Find out why 500,000 Melotte Separators are in use today. Before buying any separator find out how the Melotte has won 264 Grand and International Prizes and every important European contest. Mail the coupon now for our great offer.

$10 After 30 Days Free Trial

You are not to send a cent until you have used this Great Belgian Melotte for 30 days on your own farm and thoroughly made up your mind that it is the separator you want to buy.

Easy Payments

After 30 days, when you are completely satisfied that the Belgian Imported Melotte is, by far, the best cream separator to be found any place in the world, then send only the small sum of $10.00. Settle the balance in small monthly payments. Mail coupon NOW—today.

Send this Coupon!

Fill out and mail the coupon for new Melotte catalog containing full description of this wonderful cream separator and the story of M. Jules Melotte, its inventor. Don't buy *any* separator until you have found out all you can about the Melotte and details of our 15-year guarantee. Sending coupon below does not place you under any obligation whatsoever. It brings you new Melotte catalog and full description and details of our Great Special Offer. Don't do another thing today until you have mailed coupon.

The Melotte Separator, *H. B. Babson, U. S. Mgr.*
Dept. 2851, 2843 West 19th Street, Chicago, Ill.

Self Balancing Bowl

Can't vibrate or get out of balance. Bowl chamber is porcelain lined. Easy to clean as a china plate. Can't rust. One half less tinware to clean. Bowl spins 25 minutes after you stop cranking unless you apply brake. No other separator needs a brake. Send for catalog showing details of the Melotte self-balancing bowl; also many other features.

The Melotte Separator, H. B. BABSON, U. S. Manager
Dept. 2851, 2843 W. 19th St., Chicago

Without cost to me or obligation in any way, please send me the Melotte Catalog which tells the full story of this wonderful separator and M. Jules Melotte, its inventor.

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HERE'S THE HANDIEST BOOK ON THE FARM AND IT'S FREE (85)

To Land Owners!

Don't fail to write for your copy of Ropp's New Calculator. It figures the value of land, crops, and live-stock—computes interest—gives capacity of bins and barns and answers thousands of other questions that arise on the farm. We send it free to any farm owner along with latest catalog on

Square Deal Fence

The famous long life fence that gives a Square Deal in service and economy on any farm for any purpose. Our new catalog tells all about the many exclusive features of SQUARE DEAL FENCE. Write today for the Square Deal catalog and get your copy of Ropp's Calculator Free. Remember, they're both Free and postpaid.

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7085 Industrial Street
PEORIA, ILL.

Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

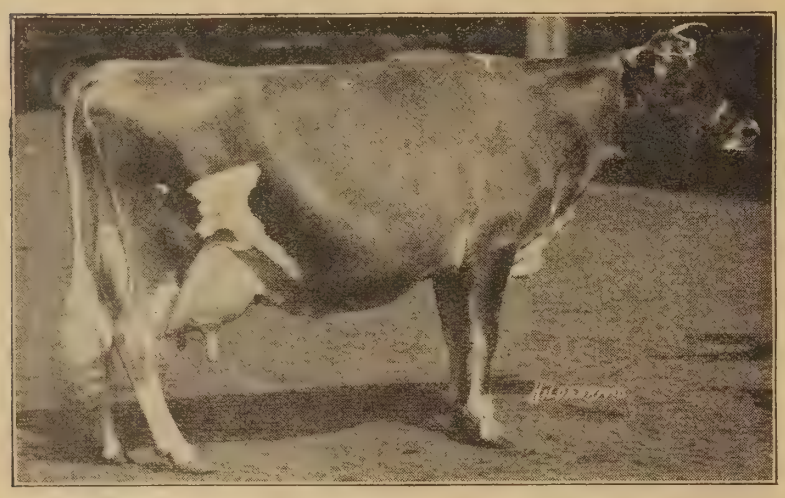
Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,
POUGHKEEPSIE, N. Y.

HOARDS DAIRYMAN JUNIORS

A DEPARTMENT FOR THE DAIRY FARM BOY

Points in Judging Cows



There are only a few points which must be kept in mind in order to discover as much as conformation indicates with reference to a cow's production. Study the six points given here and see how well your judgment lines up with the production made by cows in your herd.

Feed Capacity: Indicated by long, deep, and broad barrel in proportion to size of animal. Wide bases to side and top wedges indicate capacity. Wide forehead, long face, broad muzzle, and good sized mouth. Good spring of ribs. Ribs far apart.

Dairy Temperament: District triple wedge conformation. Sharp ends of wedges indicate temperament. Head and face and shoulders clean cut and fine quality. Bright, prominent, active eyes, and dished forehead. Fine, clean, long neck. Thighs thin and incurving. Backbone, hips, and pin bones prominent. Caution: Age, size, and stage of lactation period must be considered in judging temperament.

Constitution: Broad chest as indicated by broad base to front wedge. Large heart girth. Large, open nostrils. Oily condition of skin.

Back and Rump: Back long and straight. Rump long, straight, and level. Pin bones prominent and well apart. Hips prominent and wide apart—base of top wedge.

Milk Organs: Large, well balanced udder, quarters symmetrical and udder carried well forward and up behind. (well attached). Teats right size and far apart and symmetrical. Milk veins prominent and tortuous and large milk wells. Escutcheon high and wide.

Style and Quality: Features about head and face clean cut, oblique shoulders, comparatively bare of flesh and sharp withers, fine bone, pliable skin, hair fine and straight, secretions abundant in ear, on body and tail all indicate quality. Style as indicated by symmetry of development, making animal outstanding.

Judging Market Swine



Study the following outline for judging market swine. Become familiar with the various points and compare with the hog shown above, as far as possible. Then take this outline to the hog house and do some judging for yourself. You should be able to make intelligent judgment of the market value of the hogs in the herd.

Size and Smoothness: A long, wide, deep body approximating the parallelogram at top, side, and front. Compactly built, deep chested, and with good spring of rib and length. Arched top and straight bottom. Smoothly covered with firm flesh. Best market hog weighs 200 to 250 lbs.

Shoulders: Compact, smoothly covered, no creases or roughness, and level. Width at shoulders should be same as immediately back of them and at hips.

Back and Loin: Back well arched. Broad and with uniform width carried full length. Thickly covered with firm flesh. Broad and thick loin with hips wide and well covered. Ribs well sprung.

Feet and Legs: Stand square on strong, heavy boned, straight legs, with plenty of length. Strong pasterns with dew claws well off the ground (up on toes).

Rump and Hams: Width of hips carried back with little droop of rump. Hams wide and full to the hock, firmly fleshed.

Type or Dressing Percentage: In case of a class of swine of one breed, judge them according to the breed characteristics. Good quality indicates high dressing percentage (75-85%). Good quality as shown by fine hair lying close to the body, light and clean bone. Short and broad head. Fineness of parts. Coarseness indicates poor dressing percentage. Compactness of form, breadth of back, fullness of ham, trimness of middle, width between the eyes, and smoothness of fleshing all indicate high dressing percentage.

Junior Dairy Show at South St. Paul

THE first state Junior Dairy Show ever held in Minnesota was one of the centers of attraction at the Boys' and Girls' Junior Live Stock Show at South St. Paul recently. Quality was the feature of the show. Cold weather prevented many prospective prize winners from making the trip.

Entries in classes for yearlings and calves of all breeds except the Jerseys were received. Two yearling Holsteins were shown by Signe Bergerud and Irene Satern, first place going to Signe Bergerud, her calf showing a trifle more dairy temperament and more indication of quality throughout than that of her competitor although the latter was a remarkably smooth heifer of great constitution.

Eleven calves of the black and white breed were on exhibition and represented some very excellent breeding. First place went to Monica Zurn on a wonderfully straight topped heifer carrying a perfectly developed rump and a very good udder. Freeborn County was second with the entry of William Steele. This heifer lacked the lines and symmetry of the first entry, but showed more quality than the winner of third prize shown by Victor Anderson. This latter indi-

(Continued on page 1148)



VERNE STIEHL AND HIS CHAMPION GUERNSEY, LASSIE OF MAPLEWOOD



MONICA ZURN AND HER FIRST PRIZE HOLSTEIN



GEORGE MINETTE AND HIS CHAMPION BROWN SWISS

The "Human Hand" Planter is a Money Maker

WHY worry about *types* of corn planters. A system of planting that insures a big yield of corn is what you want. Whether the planter has two wheels or four wheels or a flat or edge drop is entirely beside the point.

Over 35 years of service have proved that the Hayes Human-Hand system positively increases crops—by overcoming the 7 causes of "bare spots." Usually the first year's increase pays for the Hayes Four-Wheel many times over.

Yet, you do not buy the Hayes upon its glorious record of mighty yields, alone. This famous planter is sold with the only *Big-Crop Guarantee* ever written on a farm implement.

This record smashing guarantee says that if the Hayes Four-Wheel does not produce a better stand of corn you may return it and the full purchase price will be refunded. Have you any other implement that literally guarantees you a bigger crop?

Go see the local Hayes dealer. Order your Hayes Four-Wheel *NOW*. Every year you put off buying a Hayes means loss. Get your Hayes now.

Hayes Pump & Planter Co., Dept. 14, Galva, Ill.

HAYES

FOUR-WHEEL PLANTER





WHAT Do *you* put in *there?*

FEED, yes. But—WHAT KIND is it?

At the fairs and dairy shows, many of the most successful dairymen tell us they get more dollars' worth of milk out of a dollar's worth of BUFFALO CORN GLUTEN FEED, fed mixed with wheat bran or millfeed, oats, etc., than any feed they know of.

They probably never had anybody offer a reason *why* BUFFALO CORN GLUTEN FEED makes milk the way it does. They did not care WHY so much, as long as they got the milk. But the *very high digestibility*, in large measure, *accounts for it.*

See that there is plenty of BUFFALO CORN GLUTEN FEED mixture in the feed trough in front of your cows—and you will understand *why* BUFFALO CORN GLUTEN FEED is so well thought of on thousands of real dairy farms.

FEED UP! Your dealer should have BUFFALO CORN GLUTEN FEED. If he does not, write us for literature and sample, giving us his name and address.

Corn Products Refining Co.
New York MANUFACTURERS OF Chicago
BUFFALO CORN GLUTEN FEED



The Wonderful Attractions of BRITISH COLUMBIA



Few countries possess all the conditions for happy, prosperous living as does British Columbia. The varieties of climate and soil offer inducements for almost every branch of agriculture. Whether in the warm interior valleys, the rich grazing table lands or the fruitful lowlands of the Coast or Vancouver Island, the advantages offered for

Dairying, Fruit Growing and Stock Raising

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Learn about this wonderful Province and share in its possibilities. It's industrial life—mining, lumbering, fishing, manufacturing, transportation—assures a ready market at good prices for all the farmer can produce. Schools, churches, railways, roads, telephones, all the conveniences of an old land await you in this new Province of Opportunity and Success. For illustrated literature, maps, etc., write Department of Immigration, Ottawa, Can., or

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December Condensery Prices

The following prices paid producers for one hundred pounds of 3.5% milk delivered at factories during November and December are based on reports made to the U. S. Bureau of Markets by condensed and evaporated milk firms:

Geographic sections	Nov. 1, 1920		Dec. 1, 1920	
	Case and bulk goods	Bulk goods only	Case and bulk goods	Bulk goods only
New England	$2.92	$3.91	$2.72	$3.95
Middle Atlantic	3.70	3.11	3.38	3.02
South Atlantic	3.30	2.74	3.02	2.43
E. North Central	2.43	2.97	2.24	2.95
W. North Central	2.47	2.87	2.40	2.59
Western (North)	2.03	2.99	1.93	2.94
Western (South)	2.43	3.27	2.27	
United States	2.61	3.17	2.44	2.99

The wholesale prices given below are for sales of the manufactured milk delivered to jobbers, wholesale grocers, and similar buyers at the manufacturer's distributing points on the basis of cash or short time credits:

Geographic	Sweetened condensed case of 14-oz. cans*		Unsweetened evaporated case of 16-oz. cans*	
	Oct.	Nov.	Oct.	Nov.
New England	$9.64	$9.59	$5.76	$5.32
Middle Atlantic	9.04	8.92	5.82	5.57
South Atlantic	9.87	9.92	5.85	5.79
E. North Central	9.79	9.83	5.53	5.51
W. North Central	9.67	9.70	5.78	5.66
South Central	9.69	9.83	5.89	5.84
Western (North)	9.67	9.70	5.76	5.68
Western (South)	9.60	9.63	5.65	5.71
United States	9.58	9.55	5.89	5.62

*Case contains 48 cans.

Market Slow and Draggy

The demand for condensed and evaporated milk during November and early December was very little better than previously reported. Manufacturers report that the jobbing and retail trade are purchasing according to current consumptive demands which in certain sections, especially the South, were greatly limited by the tight money situation and distressed agricultural conditions. Most manufacturers report a gradual decrease of their held stocks. There is very little if any active buying on a large scale, and some large exporters reported an 80% decrease in their export shipments. There has been some inquiry from France and Germany. A number of firms are handling the milk received, to the account of the producers, while others still have their factories closed.

Wide Range of Prices

The prices paid to producers show a rather wide range in different sections, and the average for the month of December is approximately 20c per hundredweight less than November. Stocks of condensed and evaporated milk in the hands of manufacturers on Dec. 1 had been scaled down somewhat from those on Nov. 1 but still are rather large, especially unsold stocks of bulk condensed milk which showed an increase on Dec. 1 of nearly 300 per cent over the stocks on Nov. 1.

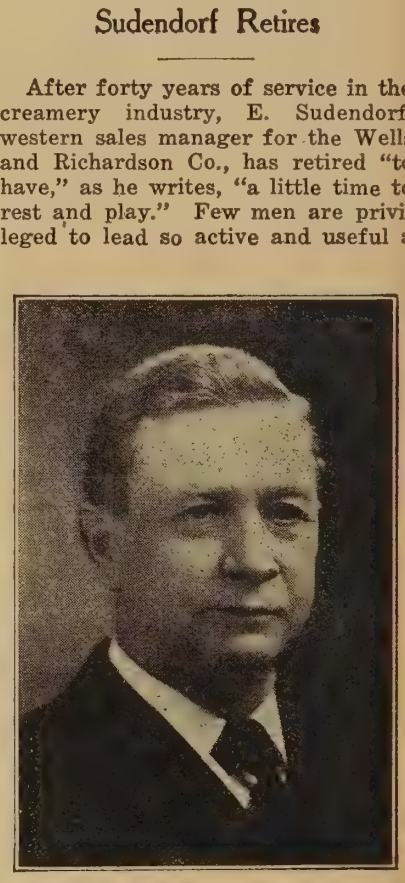
The price of sweetened condensed bulk skimmed milk was quoted as low as $6 per hundredweight in some sections, which barely covers costs of sugar, barrels, and factory operations, to say nothing of the cost of the skimmilk used. A wide range was given for the prices of sweetened condensed and unsweetened evaporated case goods, the higher prices applying to advertised brands, while in most instances lower prices were reported for unadvertised brands.

Those countries receiving export shipments of condensed milk of over 500,000 pounds during November were Germany, the United Kingdom, and Cuba. Those receiving shipments of unsweetened evaporated of over 500,000 pounds were Belgium and the United Kingdom. The slump in exports is attributed in part to the rate of exchange prevailing between the United States and most foreign countries.

It would be problematical to attempt to state when present conditions in the condensed and evaporated milk industry will again become normal. The prevailing limited extension of credit to jobbers and wholesale dealers has tended to restrict their purchase to smaller quantities, and the tendency of consumers generally to economize in purchases of all kinds has resulted in curtailed consumption of condensed and evaporated milk. These factors, together with the decrease in export demand, have resulted in an overstocked market from which the industry is now trying to relieve itself.—U. S. Bureau of Markets.

Sudendorf Retires

After forty years of service in the creamery industry, E. Sudendorf, western sales manager for the Wells and Richardson Co., has retired "to have," as he writes, "a little time to rest and play." Few men are privileged to lead so active and useful a



E. SUDENDORF

business life, and few have so well earned a peaceful rest. He has gained the sincere friendship of many men.

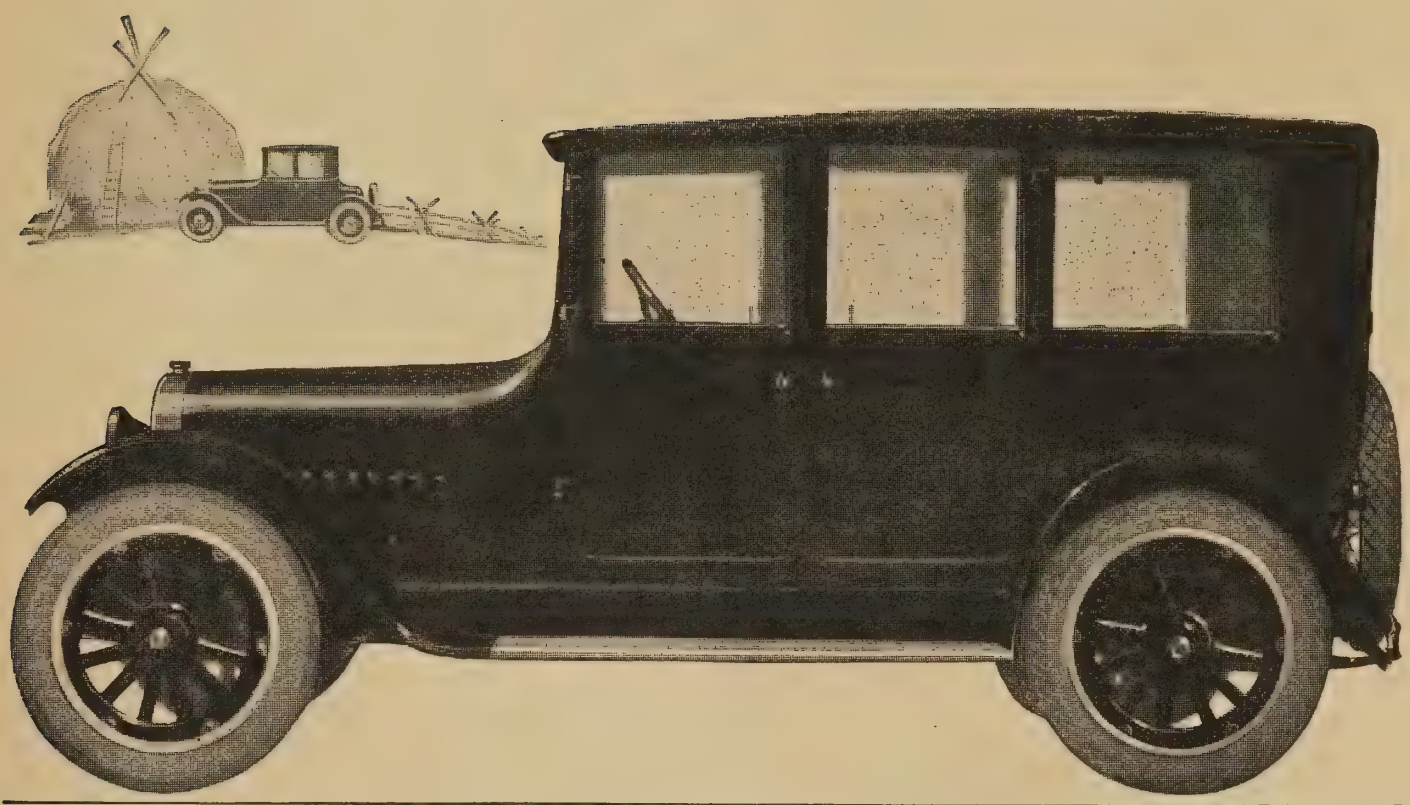
Besides serving his company well, Mr. Sudendorf has given much time to general dairy activities. He started the National Dairy Show. While superintendent of the dairy department of the World's Fair in St. Louis in 1904, he conceived the idea of an annual exposition devoted entirely to the dairy industry. With the Blue Valley Creamery Company he shared the financing of the first show in February 1906. So successful was the undertaking that the National Dairy Show Association was formed in 1907, from which has grown the present yearly national exhibition of the dairy industry.

Washington Offers Creamery Short Course

A two weeks' short course in dairy manufactures will be given by the Dairy Department of the State College of Washington at Pullman, February 28th to March 11th. This course presents the latest methods of handling cream and manufacturing butter, ice cream, and cheese. Only men with six months' previous manufacturing experience will be enrolled.

Oakland

OAKLAND OWNERS REPORT RETURNS OF FROM
18 TO 25 MILES PER GALLON OF GASOLINE
AND FROM 8,000 TO 12,000 MILES ON TIRES



THIS NEW OAKLAND SENSIBLE SIX FOUR DOOR SEDAN IS POWERED WITH THE FAMOUS 44-HORSEPOWER, OVERHEAD-VALVE OAKLAND ENGINE

WHAT does the possession of this new Oakland Sensible Six Sedan mean to the farmer who drives it? It means, first of all, reliable transportation of the highest order, at the minimum of attention and expense. It means the saving of his time, in his trips to market or about the countryside, and the saving of his energy as well. It means to his family greater comfort and convenience, and an increased opportunity for recreation. Sturdy as Oakland cars always have been, this new Oakland is yet more sturdy through an even stronger chassis of longer wheelbase. Powerful, thrifty and dependable—useful the whole year 'round—it offers a value not to be equaled in any other type of car.

OPEN CAR, $1395; ROADSTER, $1395; FOUR DOOR SEDAN, $2065; COUPE, $2065
F. O. B. PONTIAC, MICH. ADDITIONAL FOR WIRE WHEEL EQUIPMENT, $85

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SENSIBLE SIX

Concrete Roads and Safety First

You're safe on concrete—whether the surface is wet or dry, whether you are running in "high" or "low," uphill or down, on the straightaway or around a curve—the even, gritty surface of the concrete pavement makes you sure of car control.

You can depend on the Concrete Road—no other type gives so sure a grip for your tires, with so little tractive resistance. That's just ***one*** reason why you see Concrete Roads everywhere. It's not a sudden impulse. It's the crystallization of public opinion formed over a long period of time.

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"Try It Out Yourself"

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And you will find how much more satisfaction a little of this Real Tobacco gives you than you ever got from a big chew of the ordinary kind.

The good, rich, real tobacco taste lasts so long you don't need a fresh chew nearly as often. So it costs you less.

Any man who uses the Real Tobacco Chew will tell you that.

Put up in two styles

W-B CUT is a long fine-cut tobacco

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Grown From Select Stock—None Better—50 years selling seeds. Prices below all others. Buy and test. If not O. K. return and I will refund. Extra packets sent free in all orders I fill. Send address for **Big Catalogue** illustrated with over 700 pictures of vegetables and flowers of every variety.

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Water in the Stable a Necessity



THE "BUCKLEY" DEVICE

Is the leader. Why not use the best? Write to the manufacturers for a descriptive circular.

Poughkeepsie Foundry & Machine Co.,

POUGHKEEPSIE, N. Y.

December Milk Prices

The following table from the U. S. Bureau of Markets' report presents a comparison of the net prices received during December by producers for fresh milk (test 3.5%) f. o. b. local shipping points or milk plants operated by fluid milk dealers:

Sections	Range of Dec. prices per cwt.	Comparison of average prices 1920 Nov.	1920 Dec.	1919 Dec.
United States	$2.28—$5.82	$3.70	$3.41	$3.77
New England	3.50— 5.05	4.30	4.23	4.18
Middle Atlantic	2.71— 3.64	3.86	3.32	3.73
E. N. Central	2.28— 4.09	3.24	2.97	3.73
W. N. Central	2.36— 3.86	3.34	3.33	3.48
South Atlantic	2.71— 5.82	4.36	4.20	3.88
E. S. Central	2.85— 4.58	3.45	3.49	4.06
W. S. Central	2.93— 5.24	4.59	4.22	4.55
Mountain	2.45— 3.47	3.14	3.14	3.18
Pacific	2.49— 4.44	3.81	3.76	3.51

Producers' and Consumers' Prices

The following table shows for certain representative city markets the prices of standard grade milk (Grade B, test 3.5%) received by producers f. o. b. city and paid by consumers during the month of December:

	Producer receives per cwt.	Consumer pays per qt.	Butterfat allowance per lb.*
Birmingham, Ala.	$3.15	$.20–.25	.90
San Francisco, Cal.	4.51	.17	.29
San Diego, Cal.	4.71	.19	
Denver, Col.	2.98	.13	.85
New Haven, Conn.	4.85	.16–.17	.40
Washington, D. C.	5.10	.17–.18	.40
Jacksonville, Fla.	5.52	.20–.25	.58
Atlanta, Ga.	5.23		flat
Chicago, Ill.	3.13	.14	.40
Indianapolis, Ind.	2.89	.14	.75
Des Moines, Ia.	3.75	.16	.50
Kansas City, Kans.			
Louisville, Ky.	3.34	.16	.50
New Orleans, La.	4.20–5.35	.17–.19	.40
Portland, Me.			
Baltimore, Md.	3.66	.15	.58
Boston, Mass.	4.88	.18	
Detroit, Mich.	3.00	.14	.40
St. Paul, Minn.	3.66	.14	.50
Kansas City, Mo.	2.86	.15–.16	
St. Louis, Mo.	3.65	.16	.30
Butte, Mont.	3.41	.15	flat
Lincoln, Neb.			
Carson City, Nev.	4.07	.12	flat
Trenton, N. J.	3.48	.13	.40
New York, N. Y.	4.95	.17	.40
Ashville, N. C.	4.50	.18	.40
Fargo, N. D.	4.07	.17	flat
Cleveland, O.	3.72	.15	.50
Cincinnati, O.	3.90	.15	.40
Oklahoma City, Okla.	3.15	.17	.90
Portland, Ore.	3.40	.14½	.50
Pittsburg, Pa.	4.36	.16	.50
Philadelphia, Pa.	3.48	.13	.40
Providence, R. I.	4.88	.18	
Sioux Falls, S. D.	3.75	.14	flat
Memphis, Tenn.	4.65–5.23	.20	flat
Dallas, Tex.	3.85	.21	1.10
Salt Lake City, Utah	3.49	.12½	flat
Burlington, Vt.	3.50	.15	flat
Seattle, Wash.	2.90	.13	
Wheeling, West Va.	4.36	.18	flat
Milwaukee, Wis.	2.75	.11	flat

*In actual practice this allowance is made on the basis of a certain price per hundred of milk of a certain test, one-tenth of the price per pound fat being paid or deducted for each one-tenth per cent above or below the stipulated basic test. Where the word "flat" appears in this column, it means that no allowances are made for butterfat content but the milk must not be lower in test than legal requirement and must not be adulterated or skimmed.

The prices quoted for producers are for milk testing 3.5 per cent and delivered f. o. b. city, from which must be deducted the various transportation costs in order to get the actual price. In certain cities the prices given apply only to that portion which is considered as the producers' average production, the surplus being either handled by the producers' association or the dealers at somewhat lower prices.

The prices given are here reduced to the comparable basis of 3.5% fat, as different cities vary from 3% to 4% as the basic fat test. To reduce the prices per hundredweight to either a gallon or a quart basis divide by 11.63 or 46.33, respectively.

The prices paid by consumers are for average testing milk delivered in quart bottles. It is the grade of milk most generally sold in these cities and in most cases is for pasteurized milk.

Country Shipping Stations

Prices per cwt. paid at the dealers' country receiving stations or at producers' railway shipping plants are given as follows for December:

New Haven	$3.60	Rochester	$3.24
Washington	3.50–4.18	Newark	3.38
Jacksonville	3.67	Trenton	2.88–3.53
Chicago	2.60	Buffalo	3.22
Indianapolis	2.45	New York	3.38
Baltimore	2.92	Albany	3.42
Boston	4.09	Cleveland	3.20
Kansas City	2.36–3.45	Cincinnati	3.30
St. Louis	3.15	Pittsburg	3.50
Omaha	2.50	Philadelphia	2.88

Retail Prices

The following table gives for a few cities the retail prices of special milk, certified milk, cultured buttermilk, cottage cheese, and cream for December, 1920:

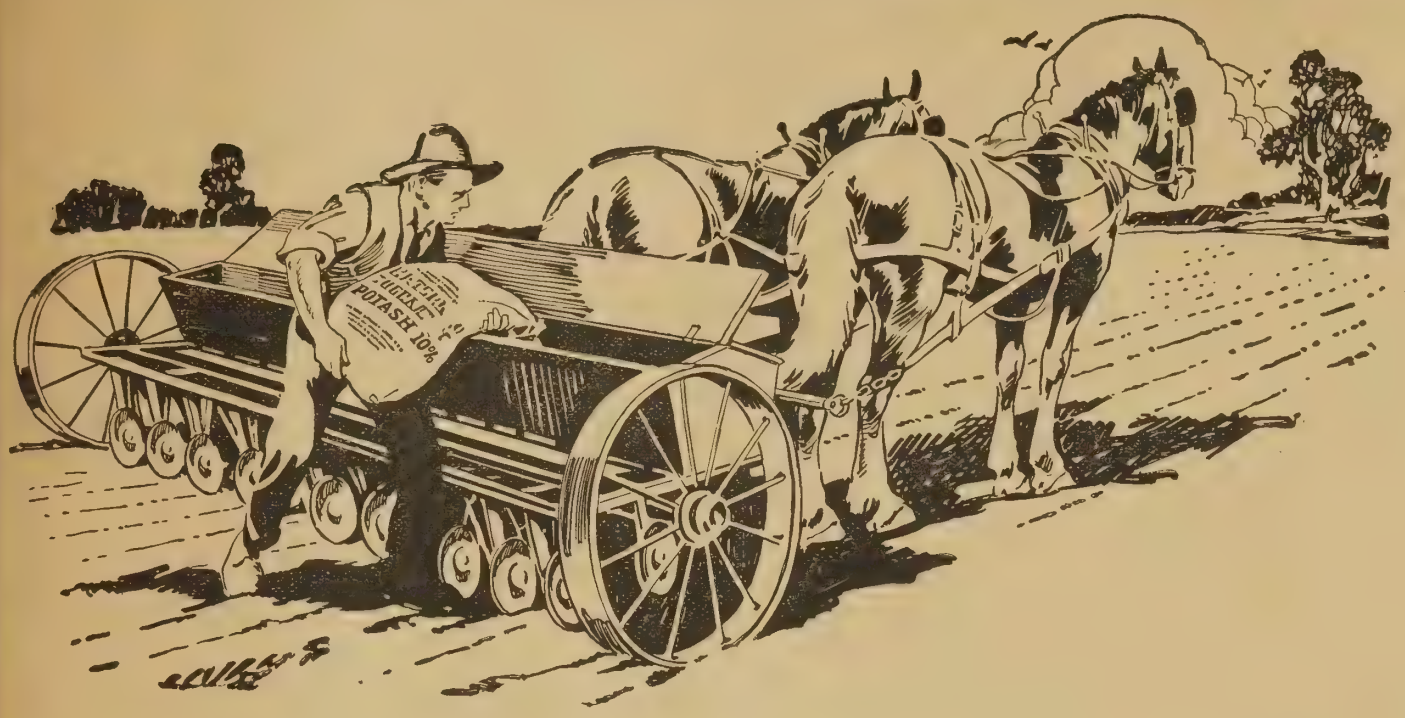
Cities	Special milk per qt.	Certified milk per qt.	Buttermilk per qt.	Cottage cheese per lb.	Light cream* per ½ pt.
	Cts.	Cts.	Cts.	Cts.	Cts.
Boston	21.25	28	22	26	16
New York	20	28	12		22
Buffalo	16	26	10	15	22
Philadelphia	15	28			16
Pittsburgh		25			19
Cleveland	20	32	15	18	20
Chicago	22	25	10–12	20.8	17
Milwaukee	14	25		16	15
Detroit	22	25	18	16	16
Minneapolis		22	15	16	16
St. Louis	20	22–25		18	17–18
Des Moines	17–18	25	10–12	20	16
Washington	18	30	14–18		18–20
Richmond	17		16		16
Jacksonville	30		12	30	
Baltimore	19		15		20
Louisville			16		16
Memphis		30	12		
New Orleans	20–22	25–30	15–17		18
Colo. Springs	15			12	13
Salt Lake City	15		7.5	20	15
Portland		21	14.5	15	17
Spokane			10–15	15	15
San Francisco		25	17	20	17

*Cream testing 18–20 butterfat.



WILDA LUCILLEA OF MARA ALVA

A Guernsey heifer owned by Thurman Miller, Ohio, which made an average production for April, May, and June of 1,024 lbs. milk, 43.21 lbs. fat. One of the future proprietors of the herd is holding her.



Restore the Potash

During the past few years farmers have been urged to bend every effort to produce maximum crops without giving much consideration to the effect on their soils. Established rotations were broken up and the very best parts of the farm put into the most needed crops, while the poorer parts were neglected.

In a way it was a return to the pioneer's method of mining the soil.

Today is the period of readjustment for the farmer as well as for the merchant and the manufacturer.

The farm labor situation and the uncertainty of future prices are such that prudence demands that the cost of producing a unit of crop be reduced as much as possible. This requires more crop units per acre and a return to the rotations known to be best for a given locality.

The great factor in reducing the cost of crop production is the right method of feeding the crops.

The composition of commercial plant foods has been profoundly changed during the period of Potash famine. Phosphoric Acid has replaced all or a part of the Potash in American fertilizer formulas, while just the opposite has taken place in Europe, where there was a shortage of phosphates.

Now is the time to get back to normal again and to return to the fertilizer formulas that were so profitable and satisfactory in the past. But this cannot be done without effort on the part of the farmer and without sufficient notice to the manufacturer to prepare for the change.

Therefore think the matter over carefully, and if your previous experience has shown you that

Potash Pays

notify your dealer that you wish to use fertilizers with 5 to 10 per cent. of Potash and a little more to make up for the drain on the soil during the Potash famine.

And do it right away, for it takes time for the manufacturer to import it and it is only fair that he should know what your demands will be.

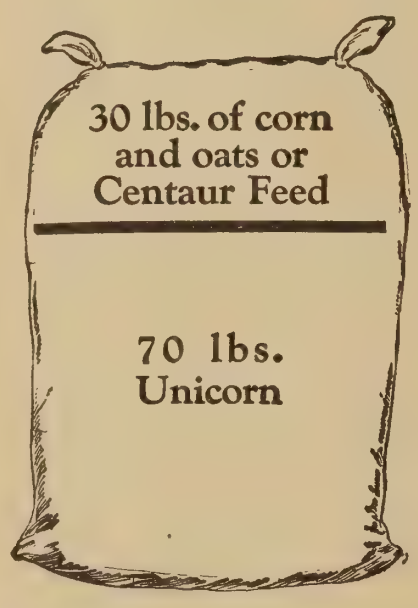
The price of Potash has fallen much faster than the prices of farm products so you may feel assured that you can again get a profit from its use. The main point is to insist that the right kind of fertilizer shall be ready for you when needed. In order to insure this, prompt action on your part is essential.

Take up the matter with your dealer at once. If we can help you write to us.

SOIL AND CROP SERVICE, POTASH SYNDICATE
H. A. HUSTON, Manager
42 Broadway **New York**

Feed Unicorn With Home-Grown Grains

Feed this way with clover hay



Centaur is a general purpose feed. Fine for young stuff and dry cows and just right for widening Unicorn.

You cannot produce milk profitably on home-grown grains alone, no matter what their price.

They will go farther and yield a real profit when fed with Unicorn Dairy Ration.

A seventy-thirty mixture is about right for most cows. It produces $4 worth of milk for each $1 worth of feed.

Don't deceive yourself. You can't mix your own grains with high-protein oil meals and beat Unicorn in final cost or results.

Feed Unicorn with home-grown grains for profit.

CHAPIN & COMPANY
Chicago
New England Office at Boston

monthly average price of 92-score butter at the four principal markets, as also the monthly average price of American cheese (style Twins). Believing a general review of the past year will be of interest and value, we have consolidated these reports in the following tables:

Table I—Butter Prices for 1920 on 92-Score Butter

	Chicago	New York	Boston	Philadelphia
	Cents	Cents	Cents	Cents
January	62.58	64.75	64.88	64.88
February	62.50	66.61	65.48	67.36
March	66.06	66.48	67.87	67.45
April	64.24	71.46	69.08	71.42
May	59.97	61.48	61.28	61.98
June	54.91	57.44	57.74	57.81
July	55.00	56.72	58.07	57.49
August	54.23	55.48	56.73	56.30
September	56.50	59.13	59.35	59.62
October	57.19	60.38	59.08	59.76
November	59.47	63.26	59.75	63.46
December	51.30	54.80	53.51	55.17
1920 Ave.	58.66	61.49	61.06	61.89
1919 Ave.	57.77	60.29	60.00	60.68

Table II—Receipt of Butter (tubs) for 1920

	Chicago	New York	Boston	Philadelphia
	Tubs	Tubs	Tubs	Tubs
January	134,204	157,259	42,879	43,517
February	125,945	149,346	42,348	46,937
March	151,976	172,960	71,571	45,311
April	137,914	104,598	49,449	39,523
May	207,858	163,610	77,384	49,092
June	358,297	284,234	167,714	87,133
July	355,749	283,110	183.941	76,000
August	282,024	246,712	124,793	65,642
September	206,072	198,853	90,156	62,641
October	152,222	161,055	58,293	50,284
November	127,045	139,145	31,710	40,129
December	117,297	133,893	32,987	42,205
1920 total	2,356,603	2,194,775	973,225	648,414
1919 total	2,298,984	2,836,015	930,924	630,729

Table III—Cheese Prices on "Twins" for 1920

	Wis. Boards	Chicago	New York
	Cents	Cents	Cents
January	30.84	30.13	31.00
February	27.82	29.30	30.16
March	28.07	27.83	29.00
April	29.01	28.14	29.00
May	27.42	27.69	29.68
June	24.96	25.28	27.88
July	24.61	24.67	26.78
August	24.62	24.45	26.62
September	26.39	25.78	27.00
October	24.62	24.36	27.20
November	24.47	24.52	26.68
December	21.85	22.54	25.14
1920 Average	26.22	26.22	28.02
1919 Average	30.04	29.80	31.47

Butter Prices for December

From the daily quotations of the U. S. Bureau of Markets, we have compiled the following table giving the monthly averages of the daily wholesale prices for December, 1919 and 1920, on 92-score butter (extras) in the four principal markets, together with the total receipts of butter at these markets:

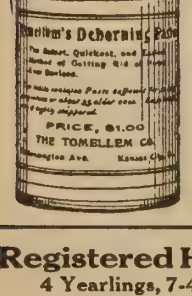
	Ave. price Dec. 1920	Ave. price Dec. 1919	Receipts Dec. 1920	Receipts Dec. 1919
	Cts.	Cts.	Tubs	Tubs
Chicago	51.30	67.78	117,297	100,916
New York	54.80	72.42	133,893	160,549
Boston	53.50	71.28	32,987	27,175
Philadelphia	55.20	72.68	42,205	39,910
Total receipts			326,382	328,550

Ninety-score butter averaged 44.48 cents for December on the Chicago market, with centralized butter at this market selling for 44.43 cents. Jobbers' prices on extras sold to retailers during December averaged 52.92 cents in Chicago and 57.8 cents in New York.

The farmer has spent a good many centuries learning how to raise crops; now he is beginning to take an interest in marketing them.

Uncle Ab says: He can't find any bolshevism among men who aim to do a well finished piece of work.

SEED **By Prepaid Express—Order NOW—Prices Going Up.** Our first quality, hardy northern-grown grass seed, famous for its frost and drought resisting qualities. High and strong in germination. Our price about two-thirds below last year, but now tending upward. Order EARLY. We pay all express or freight charges; bags free. Specials: Alsike and Timothy mixed $5.85 per bu.; Alfalfa $12.90 bu.; Medium Red Clover $13.50 bu.; Alsike $16 bu.; Timothy $3.95 bu.; Sweet Clover $4.50 bu.; Sudan Grass 8½c per lb. As seedsmen of many years experience we have carefully graded and tested these seeds. We guarantee them to be as represented, or your money back. You must be satisfied. We are not connected or associated with any other house selling direct to farmers. Order TODAY or send name for price list and full particulars. **World Seed Company,** 123 W. Madison St., Dept. P, Chicago, Ill.



Dehorning MADE EASY

Horned cattle are dangerous. Prevent horn growth by using TOMELLEM'S DEHORNING PASTE on calves up to two months old. Keeps indefinitely. One application enough. No bleeding, no sore heads, no scars. Easy and safe to apply.

Bottle Sufficient for 50 Calves, Postpaid, $1.00

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620 Kensington
KANSAS CITY, MO.
Sold also by
THE MOORE BROS., Albany, N. Y.
DAIRY & FARM SUPPLY CO.
Atlanta, Ga.

Cotton Seed Meal is our specialty

Service is our long suit
Quality is our pride
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46 Years In The Line

You are trading at **Headquarters** when you buy from us. Take the short route and write or wire us at our expense for prices.

F. W. BRODE & CO.
Memphis, Tenn.
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Registered Holstein Bulls
4 Yearlings, 7-4 to 6 months old
$100.00 and up if taken soon

All sired by 30-pound bulls. Out of A. R. O. dams with records made on the farm running from a 17-lb. two-year-old to 21-lb. two-year-old, and aged cows from 22 to 30 pounds. We have 13 granddaughters of King of the Pontiacs in our herd and one of his sons out of a 30-lb. dam. Also a grandson of Pontiac Korndyke out of 1,105-lb. dam, 30 pounds, 7 days.
C. A. PARKS, Mgr. **Assumption, Ill.**

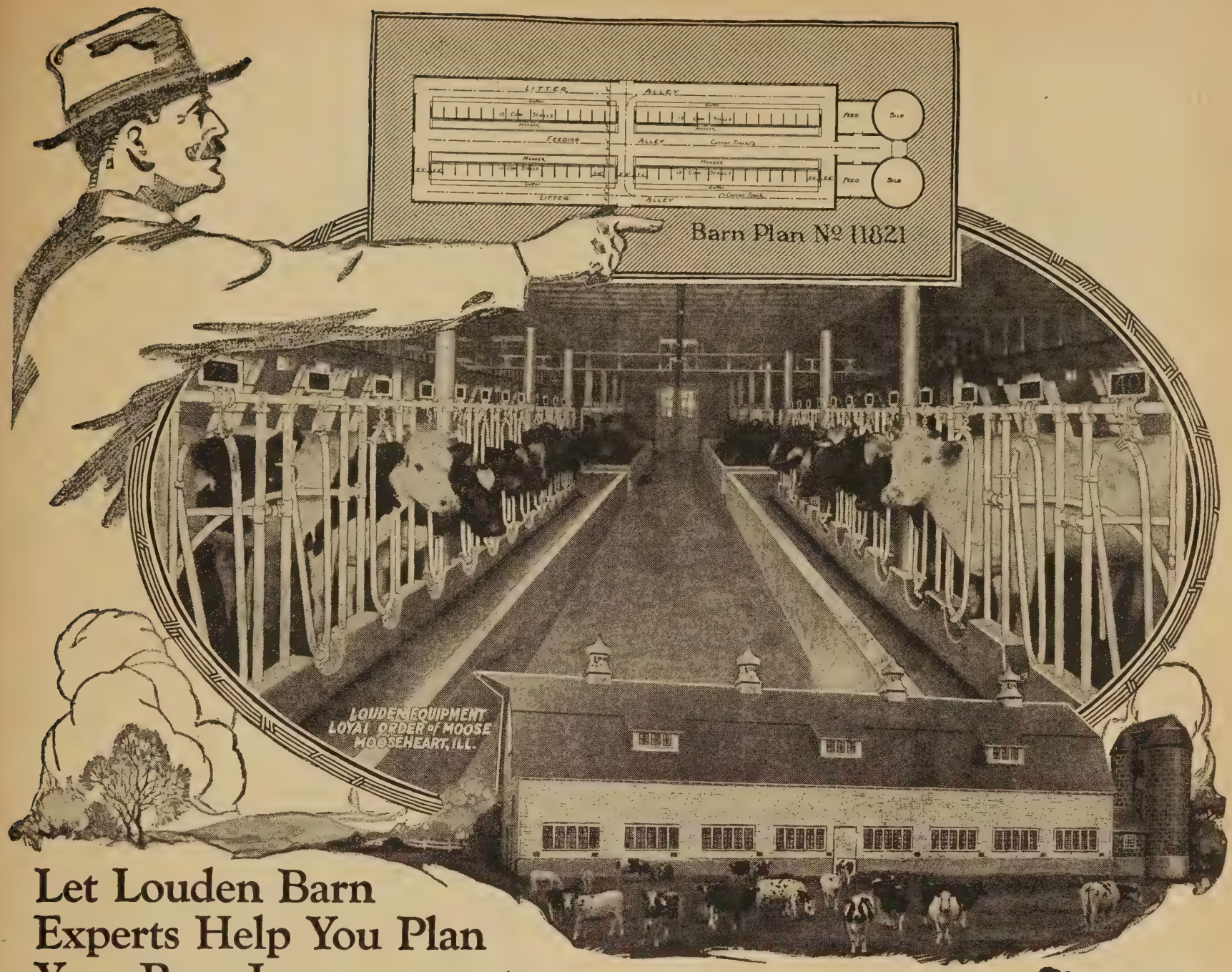
Prices for Butter and Cheese in 1920

Butter prices averaged one cent a pound higher in 1920 than in 1919, while cheese took a drop of about four cents. Butter took a lead of six cents in January, increased it to 13 cents in February, but from February on there was a decline until the September price showed about the same as for the previous year. The next three months were those of rapidly declining prices, averaging eleven cents a pound less than for the corresponding three months of 1919, with the December drop amounting to seventeen cents.

Cheese has not been quite so erratic in price, but it has shown a decline in practically every month and the December price is nine cents under that prevailing in January. Because of lowered supplies, the cheese market is presumed to be in somewhat better condition than a year ago. In the butter market receivers are predicting still lower prices and ask producers to be prepared for pre-war prices before the flush production season of 1921.

From month to month during the past year we have published the

Seventeen Nebraska counties have been canvassed for members in the Nebraska Farm Bureau Federation, the canvass ending December 18th. A total of 15,000 members had been signed to that date, the average per county being 852.

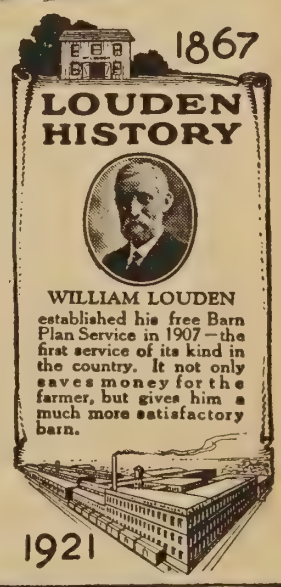


Let Louden Barn Experts Help You Plan Your Barn Improvements

Regardless of whether it is to be a small or large barn, a remodeled or new barn, you want to hold down the cost of material and labor to the lowest possible figure. At the same time you want to build so that your needs will be fully met for years to come. This is where Louden Barn Plan Service comes to your aid. It does away with costly and trouble-breeding guesswork. It gives you the benefit of the most advanced thought and practice in barn construction and arrangement—a well balanced barn in which every detail is made to contribute its full share toward the daily saving of chore work, convenience and the comfort and health of the stock.

We maintain the strongest organization of barn building specialists in America for the chief purpose of aiding dairymen and farmers in solving their barn building problems. Louden plans are not the "ready-made" kind, but are specially worked out to meet your own particular requirements. Write us what kind of barn you have in mind, the number and kind of livestock to be housed. Our barn experts will work out a plan with suggestions that will exactly fit your conditions and send you blueprints of it. No charge or obligation.

And after you have carefully considered the plan of constructing your barn, let us show you how Louden Labor Saving Barn Equipment will save you many a dollar in running it—for years to come.



Louden Equipment Saves Half the Barn Work

Louden Stalls and Stanchions save time and labor in handling cows morning and evening, besides giving the herd real pasture comfort in the barn. And with the Louden Built-Up Manger Curb you save many a pound of feed that would otherwise be wasted. Louden Litter Carriers make a boy's play out of an otherwise hard and disagreeable job—make barn cleaning a matter of minutes instead of hours. Louden Feed Carriers bring the feed for twenty cows at a single trip. Louden Detachable Water Bowls do away with that disagreeable chore of turning the cows out to water during bad weather, and, better yet, they increase the milk yield almost unbelievably.

Get These Two Helpful Books

The big Louden Catalog will show you the simplicity, strength, and durability that have made Louden Barn Equipment throughout all these years the preferred equipment among farmers the country over. This big book shows Stalls and Stanchions, Manger Divisions, Animal Pens, Feed and Litter Carriers, Water Bowls, Ventilators and Cupolas, Barn and Garage Door Hangers, Hay Tools, Power Hoists—"Everything for the Barn."

The Louden 112-page Barn Plan Book is chock full of information every barn builder should have. Plans and pictures of 74 different barns are shown. In addition, there are chapters on mixing and using concrete, roof construction, lighting, ventilation, barn arrangement, and hundreds of other points of vital interest to barn builders. If you are planning to build or remodel a barn within the next year, don't fail to get this book at once.



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A healthy Holstein, this. She is a 3-year-old junior champion, with a seven-day score of 581 pounds milk; 29.3 lbs. butter fat.

Keeping Tabs on Health Pays

THE whole scheme of profitable dairying leads back to the subject of health. No way of escaping it. A cow is profitable or not, according to the degree of vigor of her milk-making organs.

Watch the milk-yield closely; it's the barometer of health. Reduced milk-flow means the presence or approach of disease.

Each year more thousands of dairy farmers are learning the value of the simple Kow-Kare home treatment—both as a preventive and reliable aid in relieving diseases of the genital and digestive organs. Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches can be kept out of your dairy with the aid of this great cow medicine.

Give Kow-Kare a trial; feed dealers, druggists and general stores sell it—70c and $1.40 packages. Write for free book, "The Home Cow Doctor."

DAIRY ASSOCIATION COMPANY
Lyndonville, Vermont

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of both the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.







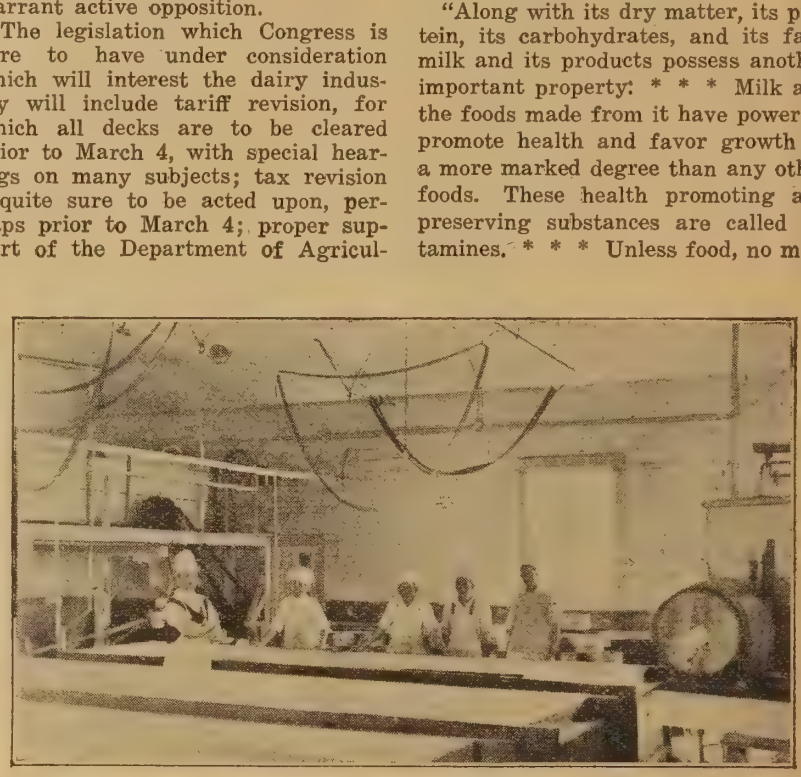
The National Dairy Union

(A Union of the Allied Dairy Interests)

With Congress again in session, to end March 4, and then resume in Special Session soon thereafter, dairy interests will need to exercise constant watchfulness against antagonistic legislation. Public statements which have been made by representatives of the margarine industry and bills now pending in the House indicate that efforts will be made if possible to modify the present safeguards against the illicit sale of margarine for butter. The Calder bill S-3011 providing for the supersedence of federal regulations covering the labeling of foods and drugs sold in packages in interstate trade over the laws of the states where final sale is made, is not approved by dairy officials in the chief dairy states, and seems to warrant active opposition.

The legislation which Congress is sure to have under consideration which will interest the dairy industry will include tariff revision, for which all decks are to be cleared prior to March 4, with special hearings on many subjects; tax revision —quite sure to be acted upon, perhaps prior to March 4; proper support of the Department of Agriculture, including special appropriations for the dairy division—all of which need support at this time, and also amendments to the pure food and drugs act, and special oleomargarine legislation proposed by friends of the oleo interests. A tariff on oriental oils is of special interest, and will be made up for special hearings in January or February.

In a recent circular, evidently designed to establish a basis upon which to ask for the repeal of the oleo color tax law, on the alleged ground that it harmed agricultural interests, J. S. Abbott, Secretary of the Institute of Margarine Manufacturers, says that if the margarine industry has been responsible for a decreasing consumption of butter it "deserves the thanks of humanitarians everywhere". Dairymen will need to think over this state of mind. Mr. Abbott also says that "The slogan 'Down with margarine', which has been the cry of a few hopelessly envious souls, is insane and without a sound economic or scientific basis", and that "it will be a boomerang to those who have used it as soon as the facts of margarine as a food are known". This is humorous, although Mr. Abbott probably did not so intend it. "Margarine as a food" has the exact value of beef fat, or pork fat, according to the scientists of the Office of Home Economics of the Department of Agriculture. Flavoring and coloring it to imitate butter, and calling it oleomargarine, in order to make it bring a butter price in the market from those who don't know the food value, is all there is to the problem. The National Dairy Union will glady enlist the services of Secretary Abbott to make the facts known—providing he will make all the facts known.



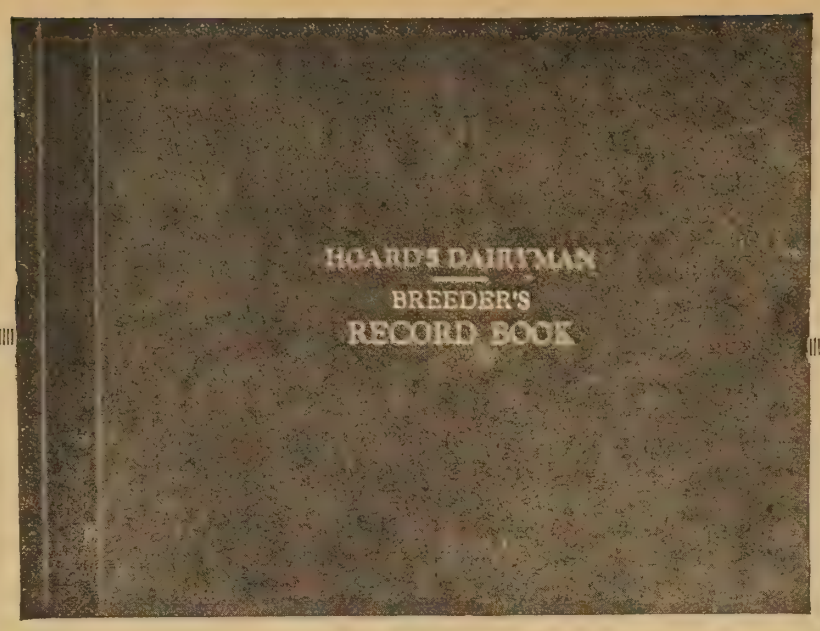
A TILLAMOOK CHEESERY

This shows the interior of one of the factories in the famous Tillamook cheese country, where co-operation to porduce quality succeeds. Last year the output of this factory was 719,683 lbs. cheese. The photograph was taken by Reed Ferris, one of the cheesemakers.

The Washington office of the National Dairy Union is continuing its study of the school and college text books, to determine those which tell the truth on this subject. No wonder oleomargarine is found on so many tables when the books which are used in the schools omit all reference to the great food principles included in butter, which must be sought in every diet. Occasionally, however, there comes a ray of light. For example, this from the new work, "Agriculture for Beginners", recently issued by Ginn & Company:

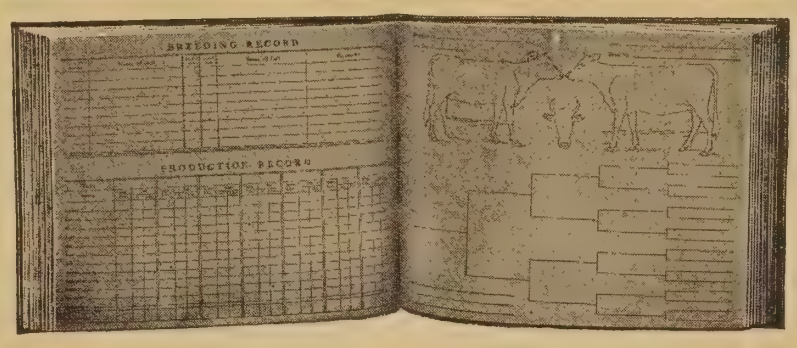
"Along with its dry matter, its protein, its carbohydrates, and its fats, milk and its products possess another important property: * * * Milk and the foods made from it have power to promote health and favor growth in a more marked degree than any other foods. These health promoting and preserving substances are called vitamines. * * * Unless food, no matter how good otherwise, contains these vitamines, it does not nourish the body nor preserve bodily health as it should. A complete lack of vitamines in our food would cause death. Since, then, milk and its products, butter, cheese, curds, are rich in vitamines, these health giving and health preserving foods should form a regular part of a person's diet."

The campaign for the adequate financial support of the work of the National Dairy Union is now going on, and is meeting with good success. A personal letter, telling briefly the activities under way and the work contemplated, has been sent to the individuals and concerns interested in ice cream, butter, and cheese making, and to others interested in the work, and the response is very encouraging. All financial support should be sent to George Caven, the treasurer of the National Dairy Union, 136 West Lake Street, Chicago, Ill. Suggestions as to the work being done, comments of any kind, and especially information as to the character of the text books being used in the schools, the literature being sent out by state institutions, false or misleading advertising appearing in the interest of substitutes for dairy products, will be gladly received by the Secretary, A. M. Loomis, 303 Seventh Street, N. W., Washington, D. C.—NATIONAL DAIRY UNION.



Yours without charge
for a little of your time

See offer below



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For breeders of pure-bred cattle

HERE is a book designed for your herd by the editors of HOARD'S DAIRYMAN. A pedigree book that will contain *all the records you need to keep, in a book you'll be glad to show.*

It has 96 pages of good bond paper, numbered and indexed, with space on each page for sketch, pedigree, breeding and production records. Nicely bound in a good cloth cover, lettered in gold as per picture.

The price of this book is $2.50—and it's worth every cent of it! *But we will gladly send it without charge to any reader who will send us just three subscriptions to HOARD'S DAIRYMAN.* They may be either "one year for $1.00" or "three years for $2.00"—new or renewal.

Your own renewal may be included in the club, but must be accompanied by at least two others.

USE THIS COUPON

HOARD'S DAIRYMAN, Fort Atkinson, Wisconsin.

In accordance with your offer, I enclose $——. Send Hoard's Dairyman for the time indicated to these three men, and send me one of the Hoard's Dairyman Breeders' Record Books.

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Subscriber's Name	R. D.	Post Office	State	Yearly or Three Yrs.
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The rate for advertising in this department is 10 cents per word. Count address. Remit in advance. Copy must reach us 8 days ahead of date of issue. Farm labor advertising 7c per word.

STOCK FOR SALE

Registered Holstein females, open heifers, bred heifers and nearby springers that have quality. Bred to good sires. Do not write but come and investigate. C S. MULKS & SON, Whitewater, Wis. 1*

If you are in need of pure-bred Holsteins of any age or grade Holsteins it would pay you to see me as I have from 1 to 3 carloads on hand all the time. If I do not have what you want, I will help you find them as I know where to go. R. D. LEE, Cazenovia, N. Y. 3*

Holstein heifer and bull calves. Pure-bred, registered and high grade. Splendid individuals and breedings. Delivered to you, $25 and up. Your inquiry will be given our best attention. BROWNCROFT FARMS, McGraw, N. Y. 5*

I have usually 100 head of registered and high grade Holsteins on hand for sale. Also registered and imported Percheron and Belgian horses. RALPH HUDSON, Milton Junction, Wis. 12*

For Sale—At Elmwood Stock Farm, high grade Holstein cows fresh and springers, by the carload. JOHN MURPHY, Mukwonago, Wis. 3*

"The Willows" offers fifty high grade Holstein cows for sale. S D SHAMBEAU, Waupaca, Wis. 12*

High Grade Holstein heifer calves, two to four weeks old, from tuberculin tested herds, $30 each, crated. Will ship C. O. D. WAUKESHA CO. HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, Waukesha, Wis. 9*

High Grade Holstein and Guernsey calves. $25 crated. Safe delivery guaranteed. BROWN & COLLINS Lima Center, Wis. 16*

For Sale—Ten very choice high grade Holstein heavy springing cows and a few choice 1 and 2-year-old heifers. These cattle are mostly bred to and sired by my 31-lb. bull. C. S. SIMMONS, Belmont, Wisconsin. 8*

Serviceable grandsons of Lola Segis Pontiac Homestead for sale, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Their dams are daughters of Joe Oak De Kol Fobes. Well grown, good individuals. Your choice, $150. R. W. MEAD, Stillwater Minnesota. 10*

High Grade Holstein calves 6 to 8 weeks old, $30.00 each. We pay express and ship C. O. D. SPREADING OAK FARM Whitewater, Wis. 11-tf.

Serviceable Holstein bulls—30-lb. son of 37th heads the herd. LAWRENCE F. MURPHY, Hartford, Wisconsin. 20*

12 high grade Holstein heifer calves, 60-lb. dams, yearly record sire. $27 crated. Shipped C O. D. ERNEST FERO. Route 5 Whitewater Wis. 23-4

For Sale—30 high grade Holstein milkers and springers Will sell one or all. FRED JOHNSON, Waupaca, Wisconsin. 23*

Closing out herd of grade Holsteins, $100.00 each. H. A. KUHTZ, Waukesha, Wisconsin. 24*

Registered Holstein bull calves, three to six weeks old, $35.00 each while they last, registered and transferred to you. PHILLIP KEISECOMB, (Herdsman), Assumption, Illinois. 24-3

Pure-bred Holstein bulls. Sire's 22 nearest dams average 31.10. H GARSIDE, Oostburg, Wis 24-3

Registered Holstein calves, either sex, also bulls of serviceable age, DIEHL, LANUS & WENTE, Monrose, Illinois. 25-3

Holstein bull, ready for service. 2 dams averaged 106 lbs. milk 1 day, 40.67 lbs. butter 7 days. $200. Terms. ROY HARRIMAN, Appleton, Wisconsin. 25-6

Registered Holstein heifer calves $75. 7 months old, $100 each. E A. FOTH Sparta, Wisconsin. 25-3

For Sale at bargain price, six registered Holstein cows. A. R. O. stuff and outstanding individuals. M. H. ALEXANDER, Carlinville, Illinois. 26-2

You take no chances when you order your Holstein heifer calves from me as I ship C. O. D. and pay express Also a few real producing cows cheap. E. F. THOMAS, Oconomowoc, Wisconsin. 26-8

Five registered Holstein heifers, one to two years old, and one yearling bull. ELWYN ROYCE, Marshfield, Wisconsin.

Pure-bred bull. Dam, granddaughter of King Segis. Exchange for Ford truck. ED. MOSS, Paris, Ill.

$250.00 buys a registered Holstein bull soon ready for service and a six-month-old heifer calf. Good prospect for a high record cow. Sure to please. A. H. ANDERSON, Goodhue, Minnesota. 26-2

Bull for Sale—14 months old, good individual, well grown, ready for service. Two nearest dams average 34.55. Bulls for sale by 37.45-, 1,127.85-lb. sire, tested and untested dams. Good individuals nearly ready for service. CLARENCE J. PESTER, Whitewater, Wisconsin. 26-3

For Sale—On account of fire which destroyed my barns, I am forced to sell six registered Holstein calves from six to ten months old and ten registered Holstein heifers from sixteen to twenty-four months old. They are priced for quick sale. Clean, tuberculin tested with sixty-day retest. JAMES MAGEE, New Castle, Pennsylvania.

Guernseys for Sale—Members of the Ohio Guernsey Breeders' Association own more than 2,000 registered females. Also some of the finest bulls of the breed. Think of the progeny that results each year. Write for sale list of males and females. OHIO GUERNSEY BREEDERS' ASSOCIATION, Box 602, Sylvania, Ohio 4*

Serviceable and younger grandsons of Beauty Eagle, 846 lbs. fat, and of Bonny Boy of Riverdale. Out of heavy producing cows. Farmers' prices. LA BELLE KNOLL FARM, Oconomowoc, Wisconsin. 14*

For Sale—At Tamarack Farm. Three registered Guernsey bulls, one three years old from imported cow; one two years old; one bull calf six months old from imported cow and Craigamoor's Beau Regal, whose dam has finished a test of 679.4 B. F. Also ten high grade Guernsey heifers. All have passed government tuberculin test. Address A. W. BROWN, Rhinelander, Wisconsin. 16*

For Sale—Guernsey bulls, some of serviceable age. Sired by May King's Vrangue of Ingleside and Cinderella's King of Mound City and from dams with good A. R. records. CHAS. A. WILKINS, Platteville, Wisconsin. 17*

Guernsey calves six weeks old, $30, delivered. THOMAS HAGERTY, Knapp, Wisconsin. 18*

My entire herd of grade Guernseys for sale. Also a few choice heifer calves at $30.00 delivered. SHADY HILL FARM, Whitewater, Wis. 23*

Guernsey heifer calves. Can ship you 10 at once about 4 weeks old. Calves out of my own herd, so know what I am shipping. $30 each crated. F. O. B. Waukesha. WERN FARMS, Waukesha, Wis. 18*

George-Washington Farms' Guernseys. Choice young bulls of serviceable age. GEORGE-WASHINGTON FARMS, Mankato, Minnesota. 19*

Guernsey bulls of May Rose breeding with records up to 700 lbs. fat in B. B. Beautiful heifers (grades) in calf, also few Holstein springers. H. A. KUHTZ, Waukesha, Wisconsin. 19*

STOCK FOR SALE

Guernseys—All ages, both registered and grade. H. A. MAIN Sec'y, Jefferson Co. Guernsey Breeders' Association, Fort Atkinson, Wisconsin. 20*

For bargains on May Rose bulls with type and production, write KUHTZ BROS., Waukesha, Wis. 21*

Registered Guernsey bull calves from 1 month to 1 year. Some from A. R. dams. OTIS A. MARKEN, Valders, Wisconsin. 22-5

100 head of pure-bred and grade Guernseys. A great bargain for someone who can handle that number. Address BOX 518, care Hoard's Dairyman. 23*

For Sale—Daniel Rilma 49395. a junior 4-year-old Guernsey bull of merit. Price $150. HARRY W. DOTY, Savanna, Illinois. 23*

Guernseys—High grade Guernsey calves, either sex, four to six weeks old, bred for production of milk and butter. Thirty dollars apiece delivered to any station, express charges paid here. Send orders or write. LAKE VIEW GUERNSEY PLACE, Whitewater, Wisconsin. 26-tf

Two serviceable Guernsey bulls for sale. Dams Advance Registry records average over 600 lbs. fat. HOMER RUNDELL. Livingston, Wis. 24*

For Sale—Registered Guernsey bull calves, good producing dams at farmers' price. OTTO KRUEGER, 427 East Broadway, Toledo, Ohio. 24*

For Sale—Registered Guernsey bulls and females, with Advanced Registry breeding, at moderate prices. Herd is Federally inspected. Write for list. HELENDALE FARM, Athens Wis. 17-spl

Guernsey females—Six pure-bred Guernsey cows. Good type, size and production. Fully guaranteed. Fine foundation stock. Come at once. FRISSDALE FARM, Hopkins, Minnesota. 25-4

For Guernsey bulls, eleven to fourteen months old, from dams with records to 501.6 lbs. fat, write HARVEY CHRYSLER, Osseo, Wisconsin. 25-2

Extra good bull calves—I have ten fine, well grown out bull calves for sale. This ad good for $25.00 for the first five men sending this ad to me and buying a bull. Tested dams and fully guaranteed. FRISSDALE FARM, Hopkins, Minnesota. 25-4

Four serviceable Guernsey bulls. Your choice at a bargain. H W GRISWOLD, West Salem, Wis. 25-2

Guernseys for Sale—From Federally Accredited herd. Bull calves, two bulls ready for service, sired by Clara's Sequel and out of high testing dams. Also ten pure-bred females. LLOYD RUNDELL, Roberts, St. Croix County, Wisconsin. 26*

For Sale—Going out of dairy business, offering herd sire, bull calf and 4 mature cows, all registered Guernseys. First check for $600 takes them. TROUTMERE FARM, Sanborn, Wisconsin. 26-2

For Sale—Two sons of Gentle Emblagaard Maid. Her sire, Sir Emblagaard Wayne. Dam's record 29.88. Sire of calf, Prilly King, dam 32.88. Guaranteed. O. WESTERHEIDE, New Douglas, Ill.

Registered Guernsey bull calves out of sire whose dam has A. R. record, 818.04 pounds butterfat as 3½-year-old. Farmers' prices. C. R. KISSINGER, Ottawa, Kansas 26-2

Jersey bulls—Pogis Oxford breeding. Tested dams. Clean priced to sell. F. O'DONNELL, Rock Creek, Minnesota. 26-2

Four fine high-grade Jersey cows, fresh and all have butterfat records. Last grades, going into registered Jerseys. Cows first-class, an unusual offering, considering quality and records at $100 each . BROOKSIDE JERSEY FARM, Arthur Zenz, Lancaster, Wis.

For Sale—A fine Jersey bull calf out of a cow that made 58 lbs. of fat in December on R. of M. test. Have a few choice heifers. MRS. PHILIP SMITH, Route 1, Box 18, Manitowoc, Wisconsin.

STOCK WANTED

Want to buy 50 head of Holstein heifers, 3-year-old close-up springers. Every one must be the right type and quality. G. J. THOMAS, Sioux Falls, South Dakota. 25*

Wanted to Buy—8 or 12 good, young registered Holstein cows, must produce 60 pounds of milk per day. CHAS. A. SARGENT, Route 4, Brazil, Indiana.

STOCK BUYER

Registered dairy cattle bought and sold. EDWARD A. WALTER, 111 Monroe St., Chicago. 18*

DOGS

German Shepherd, airedales, collies, and old English Shepherd dogs. Brood matrons, puppies, farm helpers. 10 cents for instructive list. W. R. WATSON, Box 520, Oakland, Iowa. 20*

POULTRY

Highest prices paid for live and dressed poultry, wild rabbits, pigeons, veal, hides, etc. Quick returns, fair treatment. C. E. McNEILL & CO., 325 W. So. Water St., Chicago. 24*

HORSES

For Sale—A pure-bred Percheron stallion, six years old. Best records can be obtained with horse. A good breeder, and will work. I will also exchange for either Holstein or Guernsey cattle. FRANK LAYKOVICH, Box 36, Willard, Wisconsin.

SWINE

Announcing the formation of Burnett Co. Pedigree Swine Ass'n. 75 breeders of Polands, Chesters and Durocs. We offer a choice lot of fall boar pigs at $25.00. V. K. SHERBURNE, Sec., Grantsburg, Wis.

Choicely bred registered Berkshire spring boars and bred gilts, reasonable prices. Also Highwood bred herd boar, fine individual, born March 1919, sure breeder, QUINEILO FARMS, 297 East Water, Milwaukee. 26-2

EXCHANGE

If you wish to dispose of your farm immediately and will accept some city property or country store, hotel, etc., as part payment. WALTER MILLER, 320 Brumder Bldg., Milwaukee, Wisconsin.

What have you to trade for my $7,500.00 equity in a good 180-acre Dodge County alfalfa farm? Price $25,000.00. $16,000.00 runs for 15 years from 1924 at 5%. Write R. T. RICHARDSON, Box 220, Chippewa Falls, Wisconsin.

One 60-ft. steel tower, tower ladder and tank ladder for sale or exchange for A. R. O. Holstein bull of serviceable age or young stock. JOHN T. WILSON, Route 2, Sparta, Illinois. 26-2

FARMS FOR SALE

For Sale— Choice dairy farms in the dairy center of the world. R. B. HELLEN, Jefferson, Wis. 1*

For Sale—Choice Ohio farms. All sizes and prices, some great bargains. Write for list. I. J. MILLER, JR., Conneaut, Ashtabula Co., Ohio. 22*

For Sale or Money Rent—186 acres at $225 per acre. 150 acres under cultivation. 30-cow dairy, gross sales $20,000. Will furnish statement showing net $10,000. Correspondence solicited. BOX 124, South Erie Station, Erie, Pa. 24-3

Farms, ask French if he has what you want. Write him and state your wants. Reference any bank here. J. R. FRENCH, Cortland, N. Y. 24-13

Landology special number just out, containing 1921 facts of clover land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of Landology. It is free on request. Address SKIDMORE-RIEHLE LAND CO., 47 Skidmore-Riehl Bldg., Marinette, Wisconsin. 25-12

Great Chance, men. Good land, easy terms, free list. BAKER A 76, St. Croix Falls, Wis. 7-spl.

Great Combinations—Best markets, best roads, highest prices for produce, cheapest farms, biggest profits in farming. NEW YORK FARM AGENCY, Westfield, New York. 18-spl

For Immediate Sale—294-acre dairy farm, in eastern New York, high state of cultivation, nearly all tillable, raises all crops; one mile to village on Boston and Main railroad; 20 miles by state road to Troy. Large colonial brick house, modern conveniences, never failing water to house and barns, ample buildings. Will sell with or without stock and tools. ROBERT A. HASWELL, Hoosick Falls, N. Y. 24-spl

Farm for Sale—172 acres in New York State, $85 per acre and will throw in for quick sale 30 head cattle, 2 good teams, and all tools, mostly new, now on farm. For patriculars address P. O. BOX 199, Sinclairville, New York.

For Sale—Several fine dairy farms, with or without stock, near Washington. Also farms to meet every want. N. R. HANES, Ashburn, Va.

For Sale—Stock and dairy farm, 157 acres, buildings, stock and machinery all in good condition, six miles north from Sheboygan, Wisconsin. For particulars write owner, OTTO GERBING, Route 1, Sheboygan, Wisconsin. 26-4

Rose Valley Farm—137 acres; 17 miles macadam roads to City Hall, Philadelphia; owner's residence, electric lights, hot water heat, open fireplaces; beautiful lawn and shade; extended view; large stable and carriage house; modern cow barn, 48 head; tenant houses; purest water in abundance; all necessary buildings; macadam roads each side and through farm; $50.000 less than cost of buildings. FARM 2024 N. 10TH ST., Philadelphia, Pa. 26*

Modern dairy farm on good road in Waukesha County. 200 acres, comfortable brick dwelling, furnace heat, running water, horse barn, two large connected modern dairy barns, two silos, tile milk house. Complete breeding establishment. Convenient to Waukesha and Milwaukee. Price reasonable. R. E. BENSON, Dousman, Wisconsin. 26-spl

For Sale—Fifty acres, twenty acres ready for plow, balance in timber and meadow pasture. No buildings. P. M. GEORGE, Tallahassee, Florida.

For Sale—Large dairy farm, 7 miles north of Syracuse, N. Y. 222½ acres, 150 tillable, balance pasture, at $100 per acre. Or will sell 130 acres, 100 tillable, at $150 per acre. Full set of buildings. With or without personal property. For full particulars write H. SINGLE, N. Syracuse, N. Y.

Roses now blooming on Orange Grove Bungalow farm. Bordering lake; only $2,250; on improved road near city; 20 acres fertile fields, part covered fine overhead irrigation system; 23 acres valuable timber land; 200 bearing orange trees; delightful bungalow, oak shade, overlooking lake; owner non-resident, sacrifices, easy terms. Details this and other Florida orange groves, farms, page 52 Strout's Illustrated Catalog 1200 Bargains. Postpaid free. STROUT FARM AGENCY, 1210 FB Graham Bldg., Jacksonville, Fla.

For Sale—Or will exchange for eastern dairy farm, 240-acre finely improved, irrigated farm with abundance of water. Located Colfax County, New Mexico. Price $125.00 per acre. W. S. HAYES, French, New Mexico. 26-2

For Sale—Dairy farm in Virginia. 200 acres, a splendid laying farm, up-to-date buildings, with all equipment; registered and grade cows, horses and all necessary implements for dairy and farm. Will sell right for a quick sale. Address BOX 556, care Hoard's Dairyman.

Free Wisconsin Bulletins, soil, climate, crops. IMMIGRATION BUREAU, Wisconsin Dept. of Agriculture, Capitol Drawer 125, Madison, Wisconsin. 26-13

Southern Michigan—Sixty acres, 2 miles from town, fertile clay loam, never rented, 50 acres under plow, balance timber and pasture, fine orchard, good buildings. Every respect a good farm and a fine home. $7,500, $1,500 down. MICHIGAN FARMS AGENCY, Box 928, East Lansing. 26-spl

FARMS FOR RENT

Dairy Farmer Wanted—To operate farm on shares. I furnish farm. You furnish horses, labor and machinery. Each furnish one-half cows, hogs, feeds, seeds, etc. Proceeds divided equally. 240 acres good, productive, level, black soil (no waste land). Fine house, new, modern dairy barn, hog house, etc. Located one mile from Sioux Falls, S. Dakota. Population about 30,000. Now getting $3.75 per 100 for milk, 23 cows produced $4,500 since March 1st. High class proposition in every respect. Should be big money-maker for right family, capable of handling 30 to 40 cows. Take possession March 1st. None but competent, reliable parties need apply. Give all particulars, references, etc., in first letter. This ad will appear but once. R. H. GEORGE, Monticello, Iowa.

A good opportunity for an experienced farmer who wants to farm for himself on shares. Have a high class, fertile farm that will produce an abundance of grain and feed and fine blue grass pasture. Tenant must furnish horses and implements and owner will furnish high class dairy cows. We have the horses and implements and if you are the right man and mean business, will sell them to you on liberal terms. State experience and references in your first letter. BOX 232, New Castle, Pennsylvania.

WANTED TO RENT

Wanted to Rent—A one-man farm in eastern Iowa or northern Illinois. Can exchange best of reference. Past 7 years farm manager on over 500 acres. 10 years with same man. Address ALBERT G. MAURER, Route 2, Cedar Rapids, Iowa.

PARTNER WANTED

Partner wanted to operate 200-acre farm on share plan. Must have own help and be capable. Holsteins or Guernseys. Fine location in city limits. Good buildings. Close to school, church and cheese factory. Address BOX 398, care Hoard's Dairyman. 13-*

Partner Wanted—Experienced dairyman with own help. Half and half basis. We furnish farm, horses, equipment, etc. You furnish labor and herd of cows. ROY SMITH, LeRoy, McLean Co., Illinois. 26-2

DAIRIES

For Sale—A fully equipped, old, established dairy, together with stock and all equipment, and will rent or sell farm. The winters are mild; feed is cheap; milk retailing at 25c per quart with customers for all we have to offer and eighty-two customers on our waiting list. If you are interested and in the market for a real business proposition, write to me for particulars and details and if you are not do not waste my time nor yours, by writing to satisfy curiosity. J. M. SPRINGER, Box 11, Tulsa, Oklahoma. 23-4

MACHINERY

For Sale—Two-unit Hinman Milker, complete, new, never used. $135.00. JOHN ROWE, Route 4, Box 177, Lincoln, Nebraska. 26-2

For Sale—1 New Empire Milker, two double-units, with style B pump and tank. Outfit never out of original crate Price $325.00 cash. C. F. BRAUNLICH & COMPANY, Wheeling, W. Va.

Want the cheapest, handiest belt power? Then ask me about my Little Twister Power Transmitter for Ford and Dodge cars. FRANK R. WEISGERBER, Salina, Kansas. 16*

For Sale Cheap—A small lot of standard make Swedish Cream Separators, 400 pounds capacity, $29.00, 500 pounds capacity, $34.00, 700 pounds capacity, $39.00. These are all new machines, wonderful bargains. THOMAS TAFFEE, Box 355, Lansing, Mich. 18*

For Sale—Less than wholesale 18-30 Monarch tractor. Creeping grip for soft ground. JAS. BRUNKAN, Dyersville, Iowa. 25-2

For Sale—La Crosse tractor with three bottom Oliver gang plow. Used part of two seasons. Business reasons for selling. L. R. HEAD, Madison, Wis. 25-2

New Independent Milking Machine, double-unit complete. This machine has never been used, cost $300.00. Will sell for cash or trade for pure-bred Guernsey bull ready for heavy service. Write me your proposition. MELVIN GUNDERSON, Colfax, Wis.

One Empire Double-unit Milker, good as new, $110.00 sent on approval. Satisfaction or money back. WALTER GERWIG, Forreston, Illinois. 26-2

HAY

Alfalfa Hay—100 cars good green hay cured without rain. Irrigated. Wire or write for price. W. H. McCORMICK SEED HOUSE, Billings, Montana. 26-8

Alfalfa and prairie hay for sale. Prompt shipments. Personally inspected loading. Wire or write GUNN HAY CO., Lexington, Nebr. Reference Lexington State Bank. 11*

Number one and choice alfalfa hay and seed ready for shipment. Address A. L. DAMON & COMPANY, Inc., Rapid City, South Dakota. 8*

Alfalfa Hay for Sale—Write or wire for delivered prices. ALBERT MILLER & COMPANY, 192 North Clark St., Chicago. 17*

Alfalfa. We handle nothing but the very best quality. Write or wire JAMES BROTHERS, Rapid City, S. D., for delivered prices. 20-10

Alfalfa hay direct from producer, Nebraska dry land grown. For quick shipment wire ROSENBERG BROS., Lexington, Nebr. 24-4

SEEDS

Want to Buy—Medium red clover, alsike, and timothy seed. DADMUN BROS., Whitewater, Wis. 23*

Pure Grass Seeds at ½ of last year's prices, also seed corn, soy beans, seed grains, etc. Bargain list free. BECKMAN'S SEED FARM, Cokato, Minn. 24-6

Alfalfa, $10.00 bu; timothy, $3.00; Kaffir, $1.25; Caneseed, $1.00; sweet clover, $11.00; Sudan, $6.50 cwt.; sacks free. Satisfaction or money back. RELIABLE SEED CO., Salina, Kansas. 26-3

No. 1 Alfalfa Seed—$11.00 bushel, sack lots, F. O. B. Jerome. WILLIAM VEAZIE, Jerome County Farm Bureau, Jerome, Idaho. 26-2

Farmers, ranchmen and dairymen. Order your Grimm and Cossack alfalfa seed direct from the grower. All seed recleaned and guaranteed. Ask for samples. WM. H. K. WILLIAMS, Triangle Ranch, Cottonwood, South Dakota. 26*

Sweet clover, white blossoms, scarified. Greatest hay, pasture, weed choker, fertilizer known. Guaranteed clean. Seed twenty cents per pound. MUTUAL LAND CO., Grand Forks, N. Dak. 26-2

"Holco" Blue Ridge Ensilage Seed Corn, grows tall, leafy and full ear. Write for prices. HOLMES-LETHERMAN, Canton, Ohio.

CREAMERIES

Wanted—Small creamery equipment, about 500-lb. butter capacity, 10-horse boiler, 150- or 200-gallon cream vat, or would buy complete used equipment if priced right. Address LOCK BOX 577, Cerro Gordo, Illinois.

MILK PLANTS

Opportunity to purchase or become interested in new milk plant with $100,000 business developed. Sells pasteurized milk, cream, butter, ice cream, etc. Only plant in Central Missouri town of 25,000. Dairy farming fast becoming leading industry of county and milk production large, with Holstein herds showing highest butterfat record in state. Address BOX 519, care Hoard's Dairyman. 23-4

SILOS

Silo, 12x24 Washington Fir Kalamazoo silo, 1 piece, complete hip roof. New. Never erected. Price reasonable. ALBERT C. WOLLIN, Johnson Creek, Wisconsin. 26-spl

AGENTS WANTED

Yes Sir, we have a special opportunity for you during spare time, an opportunity to do some good work in your neighborhood, for the betterment of dairy farming, that will pay you in cash for the effort you put forth. Write for our "Special Opportunity Getting Together" folder. Address HOARD'S DAIRYMAN, Fort Atkinson, Wis. 2-tf

TOBACCO

Tobacco—Kentucky's Best Natural Leaf, chewing or smoking, "The Tobacco of Real He-men," 3 pounds, $1.50; 7 pounds, $3.00; postpaid. JOHN BUCHANAN & CO., Morganfield, Ky. 23-4

PRINTING

Hoard's Dairyman Art Department designs your letter head free. Just tell us your breeds of stock. Book of 5,000 Farm, Ranch and Cottage names 25 cents. Ask for samples of letter heads, envelopes, shipping tags, cards, milk tickets, etc. Poor stationery is more of a damage than a help. Be sure and give correct post office address, including state. Address HOARD'S DAIRYMAN, Art Dept., Fort Atkinson, Wisconsin. 8-tf

HONEY AND CHEESE

Honey and cheese of superior quality in family size packages. Price list free. I. B. ROSA, Monroe, Wis. 21*

Clover honey. Ten-pound pail $3.00 postpaid. Larger sizes, write for prices. SCHULTZ APIARIES, Ripon, Wisconsin. 25-3

FEEDS

Buy your condensed buttermilk for hogs and poultry at FRED C. MANSFIELD COMPANY, Johnson Creek, Wisconsin. 26-4

TANNING

Let us tan your hide: Cow, horse, or calf skins for coat or robe. Catalog on request. THE CROSBY FRISIAN FUR CO., Rochester, N. Y. 1-52

MISCELLANEOUS

Firemen, Brakemen, railroads everywhere, beginners $200, later $300. RAILWAY ASSOCIATION, Desk W5, Brooklyn, New York. 26-3



Advertising in this department is 7c per word. Remit in advance.

POSITIONS WANTED

Position Wanted—By a single, reliable, energetic young man as herdsman. Life time experience, familiar with A. R. work, good calf raiser, best of references. Write JAMES SHORTLE, 5907 Francis Ave., Cleveland, Ohio. 24-3

Farm Superintendent—Scientific, practical, energetic, desires position on large modern farm or estate and will put same on paying basis. Experienced in Advanced Registry, pure-bred stock, modern farming, tractors, orcharding, road and building construction. Married, no family. Excellent references. Address BOX 544, care Hoard's Dairyman. 25-4

Position wanted as farm manager. Single, agricultural college training, lifetime experience with live stock and crop production, up-to-date with farm implement and tractors, 10 years in managerial capacity, best of references. Address BOX 509, care Hoard's Dairyman. 22-8

Single man, age thirty, wishes position as working foreman on farm. Fully understand modern farming in its various branches, an expert on all up-to-date farm machinery. Lifetime experience, best of references from last employer. ROY E. GARDNER, North East, Md. 25-2

Dairy manager—Married, six years' experience running dairy farm with most profitable results. Best references. Right man to make your dairy pay. Write offer. GASTON RIGAUX, General Delivery, Moline Illinois. 25*

Man and wife with four boys, oldest 21, want place on farm by the month or on shares. Address BOX 550, care Hoard's Dairyman.

Position wanted as a superintendent or farm manager on dairy or stock farm. Years of experience on up-to-date farms. Excellent references. Address BOX 549 care Hoard's Dairyman.

Herdsman, single, capable of managing pure-bred herd successfully. Long experience, A. R. O. work. Best references. BOX 98, Barnegat, N. J. 26-2

For Sale—Two Sharples single-unit milkers, complete with one extra pail; used only nine months, $150.00, or one-unit complete, $75.00. Remit with order. If sold, money will be returned. SUN RISE DAIRY Tazewell, Virginia.

Position wanted in dairy by young man who has several years practical experience and helped develop two class leaders last year. Best reference. Address BOX 552 care Hoard's Dairyman.

Position Wanted—Graduate veterinarian desires a position on stock farm as veterinarian or foreman. Experienced stockman, age 30, married. Reply BOX 553, care Hoard's Dairyman.

Position Wanted—Young married man, good dry hand milker and handy around ranch, wishes position on dairy ranch. W. H. MAHNKE, Los Altos, Calif.

Young married man wishes a position in a dairy barn or milk room about February 15. No children. Six years' experience with cattle. Mechanical milker. Certified work. State wages and particulars in first letter. W. V. SMITH, Akron, Ohio.

Position wanted by married couple, age 30, one boy four years old. Familiar with all kinds of farm stock and machinery. Best of references. Open for engagement April 1. Address BOX 551, care Hoard's Dairyman.

Two persons want positions on dairy farm in Wisconsin, ages 44 and 18. Address BOX 557, care Hoard's Dairyman.

Wanted—Farm, dairy or poultry work. Single, experienced. M. KREAMER, 2171 East 18th St., Cleveland, Ohio.

Job wanted—By experienced herdsman and farmer, successful calf raiser. A .R. O. feeder. Experienced with all kinds farm machinery, including tractors. Address BOX 558, care Hoard's Dairyman. 26-2

Herdsman wants position. College training, life experience with pure-bred cattle, can feed and test for production. Married, no children, age 32. State wages first letter. PAUL DEXTER, Caledonia, N. Y.

Wanted—Position as herdsman by agricultural college graduate. Practical experience in all phases of dairying. Married, one child. Available March 1, 1921. HAROLD D. HARDY, Andover, New York.

Working manager on dairy farm. Agricultural college training and life experience. Swedish descent. Married. Salary or shares. Address BOX 567, care Hoard's Dairyman.

POSITIONS WANTED

What have you to offer an energetic married man who has had life-time experience in dairy farming? Have just sold joint interest in large dairy farm which I have managed for past nine years where we retailed entire product. Can handle men and know cows, feeds, and get results if I have something to work on. Can handle most farm machinery including electric motors, trucks and small tractors. Am an Eastern man, would prefer Middle West, but would go anywhere on first-class proposition where congenial and good living conditions, schools, etc., are to be found. Don't answer unless you have these to offer. After March first. Address BOX 555, care Hoard's Dairyman.

Do you want herdsmen, dairymen, poultry men, farm assistants, greenhouse men, farm foremen or other farm help? We have a few well trained men available on March 1st. BERNHARD OSTROLENK, National Farm School, Farm School, Pa. 26-3

Position wanted by young single man, clean and experienced in dairy work. Best references. Illinois preferred. $55 and board. Address BOX 560, care Hoard's Dairyman. 26-2

Position wanted by single man on modern dairy farm. First-class dry hand milker and experienced with test cows. Address BOX 559, care Hoard's Dairyman.

Experienced herdsman wants position with Holstein or Guernsey herd doing A. R. work. Reference. HECTOR L. HANSON, Rice Lake, Wisconsin.

Farmer—Wants position. Understands lawns, crops, and all kinds stock. Married A-1 reference. Address BOX 255, Highland Falls, N. Y.

HELP WANTED

Wanted by March first. Single man to work with herd of A. R. O. Holsteins. Must be willing to help take care of cows on test as well as all other work in barn. Prefer young man with clean habits who is a hustler. Give references and salary expected in first letter. KILPATRICK BROS. CO., Beatrice, Nebr. 19*

Wanted—Railway mail clerks, $135 month. Vacancy list free. Write. FRANKLIN INSTITUTE, Dept. G 118, Rochester, N. Y. 25-5

Wanted—Middle aged herdsman to take charge of modern dairy barn. Prefer married man with no children. G. J. THOMAS, Sioux Falls, South Dakota. 25*

Wanted—Single man for milk room and creamery work. Give references and wages expected. SPRING GROVE FARM, Fort Wayne, Indiana. 25-2

Wanted—Good man or man and wife. Swede or German preferred, on Georgia farm owned by Wisconsin man. Excellent chance for ambitious party. Wages and bonus first year. Wire S. T. KIDDER, Thomasville, Ga., at once giving references.

Wanted—Herdsman to take charge of a herd of Holsteins. We are building modern barns, everything will be convenient; on paved roads 4 miles from city of 100,000. Prefer single, could use married man, someone who has done A. R. O. work, well qualified and recommended. State wages in first letter. J. K. HINES, Alsuma, Oklahoma.

Wanted at once—Experienced stockman, one who understands feeding cows for A. R. O. work and show and a good calf feeder, a man with plenty of experience who knows the game thoroughly, a man with executive ability. We furnish room, board and washing. State wages in first letter and give reference. Only a man who wants a permanent position need apply, and one who does not use cigarettes. Address R. H. POSTON, New Richmond, Wisconsin.

Wanted—A dairyman who can make a dairy pay. If you can, this is a splendid opportunity. Give complete experience and references in first letter. Address BOX 126, Badin, N. C.

Wanted—An experienced dairyman, well recommended, married, no children. A. S. ROSENZWEIG, Shepherd, Tenn. 26-2

A position open at once for a good married general farm man. Permanent place for right man. Farm near Chicago. Give nationality, age, reference, wages, etc., in first letter. Address BOX 554, care Hoard's Dairyman. 26*

Wanted—Good, reliable, single man experienced on dairy farm. Milker used. State wages wanted. FRANK HINKAMP, Lyons, Wisconsin.

Wanted—Man and wife without children as caretakers for small farm in Northern Wisconsin. Address W. A. HANCE, Freeport, Illinois. 26-4

Wanted—Married man for general farm work and caring for stock, very little milking; wife to board one extra man; position open March 1st. Good wages, permanent position. A. C. RAMSEYER, Smithville, Wayne Co., Ohio. 26-3

Wanted—Married farmer who thoroughly understands general farming and modern equipment. Excellent living conditions and steady year round position to right man. Reply, state wages, references and experience. BOX 232, New Castle, Pennsylvania.

British Milk Questions

HOARD'S DAIRYMAN:—At each of its annual gatherings one of the most popular sections of the Royal Agricultural Society's show is the working dairy. The spectacular aspect, however, is a secondary consideration, and much useful work is undertaken apart from its primary function of doing what is needful in connection with the milking trials and butter tests. The report of the steward of dairying accordingly generally contains some interesting information apart from the details and summary of these tests.

Mr. Mathews, in his report of the work at the Darlington show, gives particulars of interesting experiments dealing with factors affecting the quality of milk. These experiments do not bring to light anything that is new, but they emphasize points that dairymen must keep in mind if they are to escape trouble. In the first experiment two churns were filled with milk, which was allowed to stand for four hours, when samples were taken by a sampling tube from the bottom of the churns, from the middle, from the top, and from the whole of the milk in each churn.

The fat contents in the bottom samples were 1.4 per cent and 2.5 per cent, in the samples from the middle 3.55 per cent and 2.75 per cent, in the top samples too much to be read on the Gerber tester used, while the whole churns tested 5.55 per cent and 4.925 per cent respectively. This shows the danger of drawing milk off the bottom of a churn, as by a tap, without using a plunger thoroughly to mix the milk, a danger that may equally well arise by drawing off from the top of a churn without adopting similar precautions, and leaving the impoverished milk at the bottom for subsequent delivery.

The second experiment dealt with the first and last milk drawn from cows at the same milking. A Shorthorn and two Channel Island cows were used in the experiment. In the case of the Shorthorn the first drawn milk contained only .06 per cent of butterfat, but the last drawn had too much fat to be read, while the mixed samples contained 5.60 per cent. In the first Channel Island cow the first drawn milk contained 1 per cent of fat, the last drawn too much to be read, and the mixed samples 6.35 per cent. In the case of the second Channel Island cow the last drawn milk again contained more fat than could be read on the Gerber tester, the first 1.30 per cent and the mixed samples 5.50 per cent.

This emphasizes the importance of clean milking to maintain the quality of milk. It is pointed out that the milk in the cow's udder is in much the same position as in the milk churn that has been standing for a time drawing the first of the milk to sell and leaving the rest for a calf and drawing milk from the bottom of a churn are equally prejudicial to the purchaser unless the milk has been well mixed. In the churn this can be accomplished by the use of a plunger, but in the case of a cow a fair sample can only be obtained by clean milking.

When trouble arises with milk the cause is frequently difficult to detect. It may arise from the water supply, from the utensils, or when the milk of a herd is mixed, as it generally is, abnormal milk from one cow will destroy the value of that from the whole herd. In investigating trouble, unless there is some general cause that seems to be indicated, the first step is to discover whether it arises from the milk of any particular individual in the herd. In the case of ropy or stringy milk, for instance, this ordinarily takes a considerable time, for developments must be awaited in samples taken and set aside. By the brom-cresol purple test, which is very easy to apply, abnormal milk can be detected quickly, and may be traced not only to a cow but to a particular quarter of her udder.

At Darlington Captain John Golding, of the Dairy Research Institute, conducted a series of tests with the object of discovering any variations that might appear in the reactions of freshly-drawn milk from different breeds of cows. The test, as probably readers of Hoard's Dairyman may be aware, consists in adding 3 cubic centimeters of milk to one drop of a saturated solution of brom-cresol purple in water placed in a small tube. With normal milk a bluish-grey color is produced, and if the color varies appreciably from this an abnormal milk is indicated. Trials have indicated the value of the method of detecting abnormal milks, and the colors do something to indicate the nature of the trouble. In the investigations at Darlington the limits of variation, apart from three samples, fell within the normal variation, and the causes of these extreme variations could not be traced in the showyard. The test evidently has considerable possibilities and may prove of great value to the cheesemaker. Abnormal milk in the cheesemaking dairy may ruin the produce for weeks or months—indeed, until the trouble is located and removed. Minor milk troubles, often difficult to detect, may, without holding up cheesemaking, depreciate the value of the produce, and anything that can indicate quickly and simply an abnormal condition of milk is likely to interest all dairymen, and especially cheesemakers.

In the milking trials only two cows were disqualified for giving milk containing less than 3 per cent of fat on the average of the two milkings, although if the fat percentage had been taken on each milking it is pointed out that 27 cows would have been ruled out. The average results from the various breeds show that South Devons did best with 72.59 points, but only two of this breed competed. The eleven Lincoln Red Shorthorns had an average of 70 points, and Shorthorns with 76.98, and Friesians with 67.23 were close up. Small breeds follow in the Ayrshire with 66.18 points, the average for three, and the seventeen Jerseys averaged 66.13, a remarkably good performance for a breed more famed for butter than for milk. The average butterfat content, 4.89 per cent, did much to give them their position.

The best yield of butter was from two Ayrshires competing in the butter tests, which averaged 2 lbs. 3¼ ozs., but the twelve Jerseys in the section over 900 lbs. live weight gave considerably the best average of points gained with 38.40. It took 22.30 lbs. of this Jersey milk to make one pound of butter, and other breeds exceeding 900 lbs. varied up to 31.10 lbs. milk to a pound of butter. The six Jerseys under 900 lbs. averaged a pound of butter from 20.74 pounds of milk, which is nearer the ratio that might be expected from this Channel Island variety.

England. THOS. REECE.

Permanganate Solution

How strong should a solution of potassium permanganate be used for flushing purposes? Could there be any evil results in using the solution too strong and what would the results be? What is the best form of potassium permanganate to buy for flushing purposes?

Gladwin, Mich. H. G. B.

We recommend a very mild, non-irritating solution of 30 grains of permanganate of potash per gallon. A strong solution may cause severe irritation, indicated by straining. Buy crystals of permanganate of potash in preference to the powdered drug.

MARKETS

CHICAGO, Jan. 6—Butter—Creamery extra, 52c; standards, 48c; dairy, firsts, 37@49c; seconds, 33@36c.

Eggs—Ordinary, 58@63c; firsts, 66@67c.

Cheese—Twins, 22c.

MILWAUKEE, Wis., Jan. 6—Butter—Creamery tubs, 53c; prints, 54c; extra firsts, 50@51c; firsts, 46@48c.

Eggs—Current receipts, country candled, cases returned, 54@60c; checks, 40@42c; dirties, 42@45c; refrigerators (April or Mays), not recandled for city trade, 58@60c.

Cheese—Twins, 22c; Daisies, 23@23½c; Longhorns, 25c; fancy Brick, 21½c; Limburger, 1 lb., 22c; 2 lbs., 23c.

NEW YORK, Jan. 6—Cheese—Quiet; state milk; common to specials, 20@28c; skims, common to specials, 10@20c.

Butter—Steady; receipts, 5,776 tubs; creamery, extras, 57c; state dairy, tubs, 30@35c; imitation creamery prints, nominal.

Eggs—Steady; receipts, 14,086 cases.; nearby white fancy 76@78c; nearby mixed fancy, 64@73c; fresh firsts, 67@71c.

Have You A Little Spare Time?

Have you a car—or a horse and buggy?

HOARD'S DAIRYMAN would like to offer you a proposition to look after our subscription interests in your community during your spare time.

It would be light, pleasant work among your old neighbors; and we can make it really profitable, too.

Write and tell us about the territory around you and how much you could take care of, and we'll make you a proposition.

Hoard's Dairyman, Fort Atkinson, Wis.

Reduce Concrete Costs

Concrete adds to the value and appearance of your farm. It is easy to put in your own concrete improvements with the Wynn Barrel Mixer. It saves money for you and ends the back-breaking task of mixing by hand. The Wynn is made for farmers use. Simple, strong and easy to move. Mixes 2½ cu. ft. at a batch—as good a mix as any high priced big contractor's machine. One man can run it—will keep 6 men busy. Easily attached to any 1 or 1½ H. P. engine. Will save its cost on the first jobs. Write for description.



BARREL MIXER CO.

640 Williamson St. MADISON, WIS.

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

For Barrenness in Cows, Mares and Sows, Use Hood Farm Breeding Powder

Astonishing Success in Making Barren Animals Breed — Indispensable After Abortion — Invaluable Where Cows do not Clean — Profitable to use on Every Cow After Calving.

Read what they say:
Hood Farm Breeding Powder is great and has been a God-send to me. I cannot be without it.
SULZER BROTHERS,
R. F. D. No. 2, Box 42, Hillsdale, Ore.

I have been using your Breeding Powder for eight years, when needed, and am well pleased with it.
HENRY C. STRIEKER,
R. F. D. No. 1, Germantown, Ill.

Prices of Hood Farm Breeding Powder prepaid, $1.15, $2.75 and $5.00. Price of Hood Farm Flexible Injection Tube by mail, 90c., or with a $5.00 order 75c. Please mention this paper.

C. I. HOOD CO., Lowell, Mass.

DON'T LET YOUR COWS ABORT

Take no chances of losing calves, cows and milk profits from Contagious Abortion. If it has attacked your herd, get rid of it at once. If you have escaped so far—KEEP IT OUT.

ABORNO

THE GUARANTEED REMEDY FOR CONTAGIOUS ABORTION

Treats this disease scientifically through injections into the blood which kill the abortion germs and immunize healthy animals against them. Can't harm the cow. Has wonderful record of success. Prompt and positive in action—reasonable in cost.



Write for free booklet with guarantee and letters from farmers and dairymen

ABORNO LABORATORY
28 Jeff St. Lancaster, Wis.

Don't Wear a Truss



Brooks' Appliance, the modern scientific invention, the wonderful new discovery that relieves rupture, will be sent on trial. No obnoxious springs or pads.

Mr. C. E. Brooks

Brooks' Rupture Appliance

Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. Sent on trial to prove it. Protected by U. S. patents. Catalog and measure blanks mailed free. Send name and address today.

Brooks Appliance Co., 467 B State St., Marshall, Mich.

Bone Spavin

Even established cases yield to Fleming's Spavin and Ringbone Paste, or money back. $2.08 a bottle postpaid. Send for FREE Vest-Pocket Veterinary Adviser. Describes Spavins and 200 other horse and cattle ailments.

FLEMING BROTHERS, 255 Union Stock Yards, Chicago



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The Corn Belt Silo Company
Evanston, Illinois Brazil, Ind.

DON'T PUT OFF

Seeing your friends and having them join in for a club of subscribers.

VETERINARY

Advice is given free in this department. Inquires must be signed by the writer, and should pertain to veterinary Matters only. Where an immediate reply and prescription are desired by mail, the inquiry must be accompanied by a fee of one dollar. In every instance it will be necessary to give a full description of the symptoms present.

Contagious Abortion

Premature expulsion of a dead or live fetus almost invariably is caused by a specific micro-organism known as the bacillus abortus of Bang. This germ causes an infectious disease, the result of which is abortion and to the same cause may be attributed retention of the afterbirth, "shy breeding", barrenness, and systemic debility of some new born calves that fail to survive or thrive. All of these, therefore, correctly may be embraced in the general term "abortion disease". Some of them occasionally may be due to some other cause, but usually the bacillus abortus is the cause. White scours or "calf cholera" and pneumo-enteritis are closely associated with the abortion disease.

When the bacillus gains access to the womb it grows apace, causing an abnormal or diseased condition in the cavities or crypts of the cotyledons or buttons of the womb through which nutriment goes to the fetus. The result is that the fetus suffers more or less. If separation takes place between the maternal and fetal membranes the fetus dies and is expelled, or it may be retained and mummify in the womb. Oxygen is another necessity of the fetus derived from the dam's blood by way of the cotyledons. Lack of it and nourishment cause death; inadequate supplies may partially starve or poison the fetus, but not cause death. Where that occurs the calf is born weak, readily succumbs from debility, or as readily contracts navel infection, leading to abscesses (pyemic arthritis), infectious dysentery or white scours, or pneumonia and bowel disease (pneumo-enteritis). Retention of the afterbirth is due to adhesions between the villi or projections of the placental membrane and the cavities or crypts, of the cotyledons, or wedging there, due to engorgement with blood. Sterility or barrenness results from the germ infection inducing an unhealthy condition of the lining membrane of the womb, (endometritis) while pus forms following retention of the afterbirth and constitutes pyometra. That, however, may also be due to other sources of infection.

Every case of contagious abortion disease is due to a previously existing one which furnishes the germs or "seed" of the malady. An affected cow is, therefore, the source of germs. They are present in her discharges and these contaminate feed or water which communicate the infection when consumed by clean or susceptible cows or heifers.

The disease may also be communicated by a bull after service of an affected cow, or a cow may infect her vagina with the germs by lying upon a floor or ground contaminated by the discharges of an affected cow and possibly by switching such discharges from the floor or gutter onto her external genitals. When this occurs the womb in time becomes infected, and the infection may spread to the Fallopian tubes and ovaries.

The bull is less often a communicator of abortion disease than is generally supposed, but the possibility of infection from him must be taken into account and prevented. There is some evidence to show that the milk of an infected cow, containing virulent germs of the disease, may communicate it to calves fed on such milk. That, too, must be kept in mind when carrying prevention measures into effect.

Obstructed Teat

I have a Jersey cow with third calf two weeks old and her left front teat has almost grown shut. It is hard to get any milk out of it.
Marshall, N. C. P. V. R.

Sterilized dilators should be used to increase the caliber of the duct of the teat. A dilator of the glove-stretcher pattern is most useful. Your veterinarian may have one on hand. If such a dilator inserted and opened over and over again several times a day does not suffice it will be necessary to slit down through the obstructions in four different directions, by means of a teat bistoury, and then strip away a little milk frequently during the healing process.

Lump on Jaw

I have a young Holstein calf that has developed a lump on the side of his jaw. It grew very rapidly and is now about two inches round and an inch thick. Could this come from the teeth? The calf eats nice and is doing well.
Jefferson, Wis. R. N.

The teeth should be examined, but it seems unlikely that they are the cause. In cases of this sort we sometimes find a wad of feed lodged between the teeth and cheek and that is easily removed. A bruise would be a likely cause, if no foreign body is found present and if so it would be well to paint the lump with tincture of iodine twice daily. If it softens, open it to liberate pus and then apply iodine now and then until healing is complete.

Prolific Cow

I have a grade Jersey cow that had 4 calves in 11 months during the year 1920. She dropped two January 18th; came back with two December 5th. Isn't this something unusual?
Clifton, S. C. L. E. W.

In the first place it is unusual for a cow to have twins and to have two lots of them in one year is phenomenal. The heifer twinned with a bull usually is barren and is termed a "free martin". Twin bulls and twin heifers are fertile. The bull twinned with a heifer is also fertile. The barren free martin heifer is hermaphroditic.

Abortion Disease

Kindly advise me if there is any form of contagious abortion that keeps cows from getting with calf. We have a number of cows that we cannot get with calf. They calved last spring and not one of them has ever lost a calf.

We had a cow lose a calf about 7 months old, and then raised her next one, and then lost the third. Since then she will not get with calf. Could it be possible that she has some disease which has spread through nearly all the herd?
Hamilton, Mont. D. C. G.

The contagious abortion disease is the commonest cause of shy breeding and barrenness as it is of premature expulsion of a live or dead calf and retention of the afterbirth. A cow tends to become individually immune after aborting several times but remains infected although she carries a calf the full time and so infects other cows or heifers. The bull serving such a cow may communicate the disease to other cows he serves, unless his sheath is well disinfected before and after each service. This is done by injecting into the sheath lukewarm water containing permanganate of potash or some other mild antiseptic prescribed by a veterinarian. A like solution is used to flush out the vagina of a cow that has aborted and to disinfect the vagina of each cow or heifer that is to be bred. After abortion the womb of the cow should be perfectly cleansed and disinfected by a trained veterinarian and he will also treat the ovaries of cows that fail to come in heat or conceive when bred. See other recent answers on the subject.

Contagious Keratitis

Kindly tell what is the matter with my yearling bull. His left eye had a small white spot in the pupil and which spread nearly all over the eye. I blew the eye full of fine salt and now it is getting a little better and the sight in that eye is coming back, but now the right eye is going the same way.
Clyde, Tex. W. H. A.

This disease usually is called "pink eye" and being due to germs is infectious and often quickly infects all cattle in the herd. Keep the affected animal isolated. Treat by bathing eye with a saturated solution of boric acid twice daily and once daily putting a little bit of one per cent yellow oxide of mercury ointment between the eyelids, then closing them and massaging to spread the salve. If there is much discharge from the affected eyes it is better to put a drop of 25 per cent solution of argyrol in the eye every three or four hours and then use the ointment when discharge has subsided.

Bulletins of the Week

Incubation of Hens' Eggs, by H. M. Lamon. Farmers' Bulletin 1106, U. S. Dept. of Agr., Washington, D. C.

Hail Insurance on Farm Crops in the U. S. Bulletin 912, U. S. Dept. of Agr., Washington, D. C.

Essentials of Animal Breeding, by Geo. M Rommel. Farmers' Bulletin 1167, U. S. Dept. of Agr., Washington, D. C.

Preserving Eggs, by J. W. Kinghorne. Farmers' Bulletin 1109, U. S. Dept. of Agr., Washington, D. C.

Some of the Effects of the War Upon Fertilizers, by L. L. Van Slyke. Bulletin 471, New York Experiment Station, Geneva, New York.

Alsike Clover, by A. J. Pieters. Farmers' Bulletin 1151, U. S. Dept. of Agr., Washington, D. C.

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT, REGULAR BREEDERS BY

STERILOID



STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK**, It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. A. 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

Sale Announcements

Jan. 28—Holsteins. Pennsylvania State Sale at Harrisburg, Pa. S. F. Zook, Mgr.
Jan. 29—Holsteins. Northern Illinois Live Stock Breeders' Ass'n. Sale at Rockford, Ill.
Feb. 1, 1921—Holsteins. Watertown Holstein Bull Sale at Watertown, Wis. Francis Darcey, Sale Manager.
Feb. 26—Holsteins. John Wuethrich's Holstein Sale at Greenwood, Wis.
Mar. 29-30, 1921—Holsteins. Watertown Holstein Sales Co., Watertown, Wis. F. Darcey, Sec.
Mar. 31-April 1—Holsteins. H. J. Goelzer's Sixth Sale at Plymouth, Wis. E. E. Goelzer, Mgr.
April 7, 1921—Holsteins. Central Wisconsin Holstein Breeders' Ass'n. 13th Semi-annual Consignment Sale at Marshfield Sales Pavilion, Marshfield, Wis. R. A. Peterson, Wisconsin Rapids, Wis., Sale Mgr.
April 25-26—Holsteins. Waukesha County Holstein-Friesian Association Sale at Waukesha, Wis. W. L. Baird, Sec'y.
May 2—Holsteins. Walworth County Holstein Breeders' Association Eighth Semi-annual Sale at Elkhorn, Wis. Ben Bachhuber, Mgr.
May 3—Holsteins. Clark County Quality Sale at Owen, Wis. J. Wuethrich, Sale Mgr.
May 9, 1921—Holsteins. Brown County Holstein Breeders' Sale at De Pere, Wisconsin.
May 12—Holsteins. Jefferson County Holstein-Friesian Breeders' Ass'n. second consignment sale. A. F. Gafke, Sec'y.
May 12—Holsteins. Marathon Co. Holstein Breeders' Association Sale at Wausau, Wis. Francis Darcey, Watertown, Wis., Mgr.
May 17, 1921—Holsteins. Wisconsin Holstein Breeders' Sale, West Allis, Wis.
May 18—Jerseys. Monroe County Jersey Breeders' Consignment Sale at Tomah, Wis.
May 25—Guernseys. Portage County Guernsey Breeders' Ass'n. Sale of pure-bred cattle at Stevens Point, Wis. R. K. McDonald, Sec'y.

Lubricating the Tractor in Cold Weather

(Continued from page 1110)

brication; that is, there are different methods of delivering oil to the various moving parts of the tractor, truck, and automobile engine. These systems also have a direct bearing on the question of the type of oil which is best suited to a particular engine. Take, for example, the splash system of lubrication in which the oil is thrown to the various parts of the motor by moving parts such as the fly-wheel and the bottom end of the connecting rods as they revolve. This type of lubricating system requires a somewhat thinner grade of oil than could be used with the full force feed system where the oil is forced by a pump through channels under fifteen to thirty pounds pressure to the various bearings of the motor. In the light of these facts it is highly desirable for anyone to look into the matter of lubrication thoroughly. It does not cost any more for correct lubrication than for incorrect lubrication. Those motors which use a full force feed system of lubrication usually have the piston fitting a little tighter in the cylinder than those using some other type of lubricating system; therefore, the use of an oil which is too thin in this type of motor might cause too much oil to work by the piston into the combustion chamber and foul the spark plugs, thus causing delays and no end of trouble. The tractor manufacturers do not hesitate to say that incorrect lubrication is one of the greatest difficulties in the maintenance of their tractors.

Bettering Spartanburg With Butter

HOARD'S DAIRYMAN:—A survey of Spartanburg, S. C., shows that 500 to 700 pounds of creamery butter is consumed in and around the city every week. The survey also shows that very little country butter was being made to supply this demand and even that little was of inferior quality.

Miss Elizabeth Forney, state agent in dairying for the home demonstration force, being a woman and therefore naturally inquisitive, asked, "Why can't we improve the quantity and the quality of our country butter so as to help meet this big demand?" The outcome was a "butter contest", in which the women of the community showed very marked alertness and responded remarkably well.

Starting out with a series of instructive articles in the local newspapers to give publicity to the idea and to present the food value of butter, the contest was begun May 1st to be continued six months in order that the period of the contest might embrace spring and summer and fall. The contest was begun with 16 demonstrations in better butter making by Miss Forney. Over 400 women and girls attended these demonstrations.

Through the liberality of local banks and interested individuals, prizes totaling $275 in value were offered. Ninety-four women entered the contest, which meant that they would send to the office of the Home Demonstration Agent once each month for six months one pound of butter made to be scored by a dairy specialist. At the first judging of butter the average score was 91½ and the judge pronounced it as fine a lot of butter as he had ever tasted. As the scoring of the butter progressed at this first judging, the women sought information by questions on feeding and other matters of importance in their work. To aid in the "dairy education" of the contestants there were on display various dairy utensils showing contrast between old and new and emphasizing efficient methods and improved processes.

At the second judging late in June the number of contestants sending in butter was even greater, and the highest score was 96. An evidence of the outside interest aroused even at these first two judgings is the fact that all of the contest butter was sold for a fancy price. One contestant told of a customer to whom she had sold butter for several years, voluntarily offering her 10c more on the pound. One of the demonstration clubs supplied the summer school at Converse College with 12 to 18 pounds a week.

The final judging, the climax of the contest in interest and enthusiasm, was held at the Spartanburg County Fair November 1st, and even though the last period of the contest is considered the beginning of the off season for butter in this territory, the highest score was 93. This butter contest and the educational exhibits accompanying it constituted a special feature of the county fair which attracted very wide interest. The exhibit showed, among other things, the comparative value of dairy products and included four groups of foods having as their center milk, butter, cheese, and cream with their equivalent value in other foods. The display was arranged in a long show case and was viewed by probably 50,000 people.

Final figures of the scoring of the contest showed the highest single score 96, the lowest 82; the highest total score 559.10, and the lowest 533.5; and the highest average score 93.16. The winner of the first prize in the contest was Mrs. R. W. Foster, the prize consisting of a registered Jersey heifer. Mrs. Foster, in expressing her appreciation of the privilege of having been one of the contestants, summed up the value of the contest, at least so far as the individuals are concerned, when she said: "If no prizes at all had been won, the work of the contest was unlimited in its beneficial results."

At the conclusion of the contest Miss Forney remarked: "We certainly have buttered Spartanburg County." She might with equal force have remarked: "We certainly have bettered Spartanburg County."

South Carolina. A. B. BRYAN.



The Healthy Cow, the Hungry Cow is the Business Cow

She's the cow that will convert her feed of grain and fodder into pails of milk.

Remember, the better the appetite, the greater the food consumption, the greater the milk production. Hence, good health, a strong appetite and good digestion are the absolute essentials of a big milker.

Dr. Hess Stock Tonic

Keeps cows healthy. It makes cows hungry.

It contains Nux Vomica, that greatest of all nerve tonics. It whets the appetite, brightens the eye, invigorates the system. It contains Quassia, that bitter Stomachic tonic that produces appetite. It contains Iron that helps to replenish rich red blood, so essential to a cow in milk.

Lastly, but just as important is it—it contains Laxatives and Diuretics that cause the kidneys to filtrate and the bowels to operate regularly, so as to throw off and carry off the waste material. There is no clogging of the system where Dr. Hess Stock Tonic is fed.



Good alike for cattle, horses, hogs and sheep. It keeps animals healthy, the whole herd thrifty. It expels worms. Always condition your cows for calving with a course of Dr. Hess Stock Tonic before freshing.

Dr. Hess Stock Tonic is compounded strictly on scientific lines. You buy it according to the size of your herd. Tell your dealer how many cows you have. He has a package to suit. We guarantee good results in the milk pail.

25 lb. Pail, $2.50 **100 lb. Drum, $8.50**

Except in the far West, South and Canada. Smaller packages in proportion.

DR. HESS & CLARK **Ashland, Ohio**

Dr. Hess Dip and Disinfectant

Keeps the Dairy and Stables Healthful and Clean Smelling

Junior Dairy Show at South St. Paul

(Continued from page 1134)

vidual is almost faultless back to her rump, but is a trifle high at the tail setting. Contendors were: Geo. Hannay, Leighton Vermilyea, Clarence Troug, Robert Boneham, Pearl Smith, Geo. Dunn, Floyd Vermilyea, and Eddie Anderson.

The Guernseys were next out and Verne Stiehl was not t be denied first place on his Lassie of Maplewood. This beautiful heifer stood 5th in a class of thirty entries at the National Dairy Show. Possessing wonderful breed type and straight lines and carrying an abundance of constitution and ruggedness with quality she was later made the grand champion of the Show. Second place went to Ruby Conklin on a granddaughter of Ladysmith's Cherub, a very typy calf showing lots of quality, but not quite the ruggedness of the Stiehl heifer. Third was awarded to Einar Larson, fourth to Pearl Conklin, fifth to Robert Frissell, and 6th to Verne Reese of Park Rapids. The placings in this class were close with only the winner a trifle outstanding. Only two grade Guernsey calves were shown, first going to a beautiful heifer shown by Donald Brooks and second to Helen Davis.

One Brown Swiss entry was made by George Minnette of Sauk Center. This animal was one of the best fitted individuals of the show. In the championship class the Brown Swiss entry, Monica Zurn's first prize Holstein, and Verne Stiehl's Guernsey fought it out for championship honors. Quality, fitting, and breed type characteristics were sufficient to put the fawn and white a trifle ahead of her competitors.

Minnesota. L. V. WILSON.

Junior Letters

Hoard's Dairyman Juniors:—I am 11 years old and in the 7th grade at school. I have about 10 Bantam chickens and about 15 rabbits. I milk two cows night and morning. I like to milk cows.

If any of the juniors wish to write to me my address is R. F. D. No. 2, Rupert, Ida.

Merrill Baker.

Hoard's Dairyman Juniors:—We have 17 cows and 5 calves, including two pure-bred Guernseys, one Holstein, and two other calves.

My father is president of the Guernsey Club of Tillamook, Ore., and before we lived on the farm he was county clerk of Tillamook County.

I am 12 years old and in the 7th grade and soon will be in the 8th grade.

We run a milk route in town and deliver about 120 quarts and about 25 pints of milk and we go every day at 4 o'clock.

I wish some of the juniors would write to me. My address is Box J. Tillamook, Ore.

James Harrison.

Hoard's Dairyman Juniors:—I am 14 years old and out of school. I left school last June. I live on a farm of 125 acres. We had two acres of potatoes and about five of corn. We keep around thirty head of cattle the year around. We are milking 8 cows now. One cow freshened about a week ago. There are just two of us to run the farm. We have a silo that is 12x28 feet.

I would like to hear from some of the juniors. I will answer all letters received. My address is Cavenlish, Vt.

Delbert T. Kingsbury.

Hoard's Dairyman Juniors:—I live on a 180-acre farm. We milk 16 cows and we also have 12 heifers.

Wishing the juniors good luck.

If any of the juniors wish to write to me my address is R. F. D. 3, Remsen, N. Y.

Margaret Jones.

Hoard's Dairyman Juniors:—I live on a 272-acre farm. It is all under cultivation except forty acres of woods and pasture. We raise pure-bred Holstein-Friesian cattle. We started with the pure-breds three years ago and we like it fine. Before we started we had 30 milking scrubs.

My father gave me a heifer calf in January. I feed it ground oats, corn, oil meal, and hay. We took two calves and three cows to the County Fair and got four first prize ribbons, one second, and two third.

I raise Flemish Giant rabbits and have some for sale that are two months old.

We have two tractors and one is for sale. We also have six horses.

I am fourteen years old and in 1st High.

Minnesota. Fred Uitdenbogerd.

Hoard's Dairyman Juniors:—I received the fob, creed, and button and think they are fine. I am 12 years old and live on a 170-acre farm. My father and I are all alone as my mother has gone away. We are milking 16 cows and I milk six. I go to school and I am in the 7th grade. I am the best scholar in school. I was in the 5th grade last year. Wish some of the juniors would write to me. My address is Bloomville, P. O. Box 11, New York.

Walter Warmuth.

SWINE



A Typical BERTLEY FARM litter of Durocs

Sows & Gilts

that will produce litters like this are bound to be profitable. We are offering such sows at bargain prices, bred for spring litters to our great herd boars **Masterpiece, Model Sensation, Bertley Orion Cherry King** and **Panama Special 15th.** Let us sell you one on our guarantee to satisfy.

BERTLEY FARMS, P. O. Box 1
GLENWOOD, ILL.
JUST OUT OF CHICAGO

Pure-bred Duroc Jersey Gilts and Boars

We are now offering for private sale some good young boars and gilts. These are priced to sell. All of our stock is immune from cholera.
H. W. and Wm. Watts, Leland, Illinois

Cedar Crest Farms
have never possessed a finer lot of
BERKSHIRES
than at present. Let us name you prices on fall and spring boars and young gilts.
J. K. Dering, Owner, Lake Villa, Ill.

BROWN SWISS



BETTY OF LAKE VIEW

Breed Brown Swiss Cattle

As producers they are worth every cent you pay for them. Cows are easily sold at reasonable prices. Their earning power has not been capitalized. Brown Swiss meet the ideals of working farmers.

BROWN SWISS CATTLE BREEDERS' ASS'N
IRA INMAN, Secretary, Beloit, Wis.
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JUBILEE FARM
Brown Swiss Cattle
Young stock for sale. Individuals of Quality. The best producing blood lines of the breed.
BOX 747, PEORIA, ILL.

Brown Swiss Cattle For Sale
Male and Female
We solicit correspondence.
Dahlem & Schmidt, Box 85, El Dorado, Kans.

JERSEYS

Raleigh Bulls For Sale

2 are ready for heavy service, others younger, all from Register of Merit cows with one exception. Also a 2-year-old heifer just fresh and some Register of Merit cows with records from 400 to 500 lbs. butterfat.
P. G. Warmington, Honey Creek, Wis.

JERSEYS—DUROCS
TWO YOUNG BULLS. Splendid individuals. Out of splendid cows—sired by splendid sires. $100 to $150. Also some bred heifers and heifer calves.
F. R. Constance & Sons, Waupaca, Wis.

Hillcrest Jerseys
Bull calf born March, 1920. Sired by Imp. grandson of Golden Fern's Noble. Priced right for quick sale. Write
ROLLIE VANDERVORT, TOMAH, WIS.

Register Merit Jersey Herd
At Head, Mona's Jacoba Premier grandson: Pogis 99th of Hood Farm. Dam, Mona's Jacoba, record 806 lbs. butter: Granddaughter Jacoba Irene, young stock; St. Lambert breeding for sale. R. C. Green & Son, Albion, Wis.

Valley Farm is Offering
Several bulls, 6 to 12 months old, from R. M. cows. Sired by Golden Maid's Viscount and Kilda's Royal Majesty, two of the best Island bred bulls living. At prices to sell. Write
FRED STUBLEY, Black Earth, Wis.

Dunn and St. Croix Counties Jersey Breeders' Ass'n
have a few choice bulls and several pure-bred and grade cows and heifers for sale.
S. A. B. AUSMAN, Secy. Elk Mound, Wis.

Serviceable Bulls From R. M. Dams
We have a few very good individuals 6 to 13 months of Majesty and Raleigh breeding. A tuberculosis free herd. Every animal guaranteed right.
Your inquiry promptly answered.
E. E. HILL & SONS, Tomah, Wis.

Six Splendid Jersey Bulls
FOR SALE. Good type, well bred and well grown, 1 to 8 mos. old, from dams in R. of M. or on test. Rich in the blood of H. F. Torono, Figgis, H. F. Pogis 9th, Pedro, Loretta D, King Sappho King and Golden Maid's Prince.
J. Q. EMERY & SON. - Edgerton, Wisconsin

POLLED JERSEYS
Breeders' names and Spillman's "Inheritance of the Poll Character in Cattle" mailed free.
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Interested Prince 2d 95708

Sire of 27 Register of Merit cows, including Interested Jap's Santa, 15,569 lbs. milk, 1,007 lbs. 85% butter.

His pedigree blends the blood of those conspicuously prepotent cows, Interest and Sayda.

He has 50% the same blood as five Gold Medal cows in the Meridale Herd. A few of his sons are for sale, out of excellent Register of Merit cows.

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JERSEYS The Profit Breed
"The Key to Dairy Profits" and *"Jersey Facts"*—two important books, telling how farmers are making real profit today with Jerseys—how anyone can do it anywhere. Whether you are interested in one cow or a hundred, these books will show you how to make money.
Free—Write today
American Jersey Cattle Club, 324-E W. 23 St. New York

Bulls—JERSEY—Bulls
A splendid lot of Majesty bulls out of Register of Merit dams for sale at very low prices. We must sell to make room for our winter and spring calves. These bulls are from three months to two years old and sell with full guarantee to be breeders. We have a Federal Accredited Herd. For pedigrees, descriptions and prices, write Thos. T. Bacheller, Jr., Mgr.
ELMS JERSEY FARM
M. D. Munn Forest Lake, Minnesota

For Better Jerseys
We do not retain in our herd any cow which under favorable conditions will not produce 500 lbs. of butterfat (600 lbs. butter) in 1 yr. on official test.
We have a few young bulls for sale.
THORNBURY FARM
LIBERTYVILLE, ILLINOIS
W. A. BREWERTON, Owner L. A. BENT, Mgr.

Montpelier Jerseys
Three young bulls ready for service. Trace three times to Oxford Lad. Fine typy individuals. Right in every way.
Montpelier Manor Farms, Laurel, Md.

Jersey Bull Calves and Heifers
Herd Bulls: Champion Torono's Son
Whose Son sold at auction $7,500
Owl's-Over-the-Top and Golden Maid's Victors Jolly
100 head—no reactors
ULSTERDORP FARMS Highland, N. Y.

Bull Clubs
We are in excellent shape to furnish several very high class Jersey bulls ready for service.
These bulls are out of Register of Merit dams with excellent records, sired by bulls backed with the largest production of the breed.
The World's Champion producing blood in these bulls insures their siring large cows of correct type and big profitable producers.
If you are in need of one bull or several bulls, we would appreciate your writing us about the quality and priced animal you need, and this will save time, money and correspondence.
AYREDALE STOCK FARM
F. W. Ayer, Prop., Bangor, Maine

World's Champion
For Production and Progeny
Successful Queen
four years' R. O. M. Class AA records 59,907 lbs. milk, 3,072.2 lbs. fat.
We offer Bull calf No. 286, dropped April 5, 1920.
Sire, a Son of Pogis 99th of Hood Farm, Champion A. J. C. C. Gold Medal Bull, Champion sire, sire of 82 in R. O. M.
Dam, Trudie's Queen of Hood Farm (full sister of Successful Queen) R. O. M. record in seven and one-half months, 8,749 lbs. milk, 502 lbs. fat.
The calf is a very fine individual.
Price $350.00
HOOD FARMS, Inc.
Lowell - - Mass.

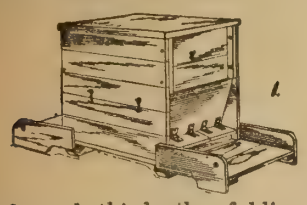


For Sale—Eight New Milk Cows
These cows have type, breeding and are real producers. Guaranteed right in every way. If you are looking for good cows, come and see them or write for particulars.
W. M. KNIGHT, OAK GROVE JERSEY FARM
U. S. Accredited Herd. Eagle, Waukesha Co., Wisconsin.

Inventions and Appliances of Interest to Agriculture

Self Feeder

The special features of this feeder are: first, the hopper fronts, which can be adjusted in or out to regulate the flow of feed; second, the trough covers, which the hogs must lift to

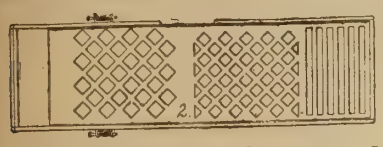


feed; and third, the folding steps, which prevent waste of feed.

(Charles Burnett Washington, Ohio, U. S. Patent, 1,344,789.)

Potato Grader

The potatoes start at the right of this grader, and move to the left when it is agitated. The very small potatoes and dirt drop through first, then the larger and larger potatoes,

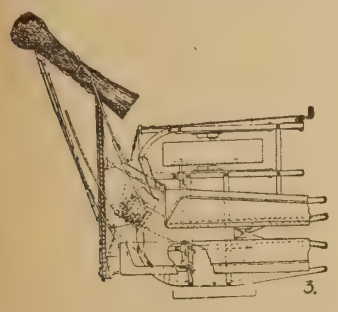


and finally the largest drop from the left end.

(Charles Jenkins, Delavan, N. Y. U. S. Patent, 1,345,858.)

Harvester

The improvement on this corn harvester is in the discharge mechanism. This has a conveyor chain which discharges the bundles in a position parallel to the line of draft, and so far from the harvester that the horses

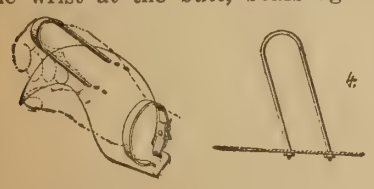


do not trample them on the next round.

(International Harvester Co., Chicago, Ill. U. S. Patent, 1,319,488.)

Corn Knife

This knife is designed for topping and cutting corn. It is strapped to the wrist at the butt, bears against

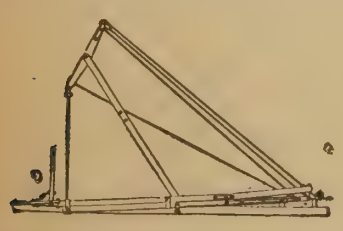


the side of the palm, and is held by means of the loop handle as shown.

(Roy Walker, Hardingsburg, Ky. U. S. Patent, 1,279,047.)

Hay Stacker

The new feature of this stacker is that the frame holding the fork is short when the fork is down, but gradually lengthens as the fork is raised. The shorter frame at the be-



ginning of the lift decreases the power needed to lift the hay to a given height.

(Dain Mfg. Co., Ottumwa, Iowa, U. S. Patent, 1,318,789.)

Hens Need Fresh Air for Winter Health

"More chickens are lost each winter from over-crowding and poor ventilation than from any other cause with the exception of some contagious diseases," says J. B. Hayes of the poultry department of the University of Wisconsin.

"Most people have the impression that all doors and windows must be closed in winter to keep the chickens warm but this is a mistake.

"A draft nine times out of ten will cause a chicken to catch cold, but fresh air alone never will. Their feathers were made to keep them warm. To avoid a direct draft muslin cloth should be placed in the open windows. This prevents the wind from blowing directly into the chicken house," says Mr. Hayes.

"The muslin windows should be placed above the level of the hens so that no possible draft can reach them from below.

"A well designed house should have one square foot of muslin for 15 square feet of floor space and one square foot of glass for each 10 square feet of floor space. Each chicken should be allowed about four square feet of floor area.

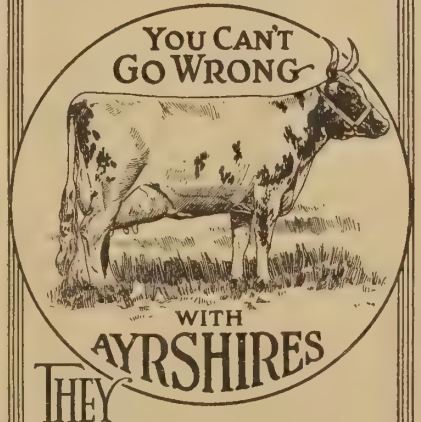
"There are ventilating systems on the market, but they have no marked advantage over the muslin cloth system which is very inexpensive," says Mr. Hayes.

"By facing the house to the south it can be kept very comfortable in winter. The roof may be as low as seven feet in the front and slant to the rear leaving no excess space to be heated."

When you see some of the unattractive farm houses on otherwise up-to-date farms, you hardly wonder that the boys and girls have gone to the city.

Uncle Ab says: "One of the best reasons for makin' a good farm is to rouse a spirit of competition in the fellows on the other side of your line fence."

AYRSHIRES



THEY "STAND UP" AT THE PAIL
"STAND OUT" IN THE SHOW RING
AND
"STAND APART" FROM THE OTHER DAIRY BREEDS

AYRSHIRE BREEDERS ASSOCIATION
BRANDON ..... VERMONT

Pure-bred Ayrshire Cattle For Sale

Best of breeding. Calves sired by a Grandson of Brown Kate, record 1,080 lbs. butter in year.
Wm. Nisbet & Sons, Richland Center, Wis.

Lippitt Farm Ayrshires

For the first time we offer females for sale. They are producers with type.
Write for prices to Hope, R. I.

Bensalem Ayrshires

For Sale:—Bull Calves from our best A. R. Dams, and sired by "Queen's Favorite", whose Dam, "Bloomer's Queen", holds the World's Record as an Ayrshire Four-year-old with 21,820 lbs. milk, 1,009 lbs. butter. Grandam of Sire, Auchenbrain Brown Kate, Ex-world's Champion, 23,022 lbs. milk, 1,080 lbs. butter.
FRIENDS HOSPITAL, Frankford, Phila., Penn.

Aldebaran Farms
Racine, Wis.
AYRSHIRES

BLACKBURN FARM
HOME OF
Addington's Champion
Grandfathers—Nox'emall and Finlayston
Father—Rena's Champion, 17 A. R. Daughters
Mother—Addington Queen 3d, two Mature Records each over 19,000 lbs.

For Sale —
4-year-old cow—Fresh Dec. 12, 1920
2-year-old heifer—Fresh Jan. 16, 1921
Also Young Stock
Tuberculin Free Herd
Sewickley, Pennsylvania

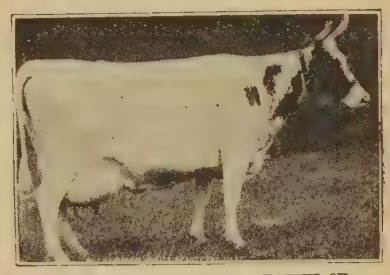
Weymouth Farms
"Ayrshires of Quality"
All cows on Advanced Registry Test. Herd Tuberculin Tested.
We can supply you a herd sire of choicest breeding.
MARTIN A. TOWLE, Mgr.
NORTH WEYMOUTH, MASS.

6 Registered Ayrshires $600
The first New York draft for $600 buys 6 registered Ayrshires—5 cows and a good bull coming 2 years old, not related. Cows are in calf to Hobsland Masterpiece 2nd. They are right in every way. T. B. tested.
Carman Eyre, Harlem, Ont., Canada.



Special Offering of
Ayrshire Bull Calves
Imported — Home Bred
which we believe to be the greatest lot of Ayrshire Youngsters ever offered by any breeding establishment in America.
Write for Sale List
Animals of all ages for sale. Over 200 head in the Herd. New Importation direct from Scotland to arrive August 1, 1920.
ALTA CREST FARMS,
Arthur H. Sagendorph William Hunter
SPENCER, MASSACHUSETTS

World's Champion Ayrshires
Fully Accredited Tuberculosis Free
— 200 Head in Herd

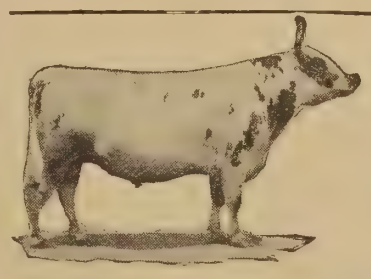


AUCHENBRAIN WHITE BEAUTY 2D
A. R. 14,721 lbs. milk, 4.33%
In 13 years, 112,486 lbs. milk and 13 calves
110 animals in herd are descended from this cow

The 1st, 2nd, 6th and 7th highest records were made here. Four cows average 22,823 lbs. milk, 1,046 lbs. butter. 100 A. R. records made here average 13,246 lbs. milk. Choice stock of all ages for sale at pre-war prices. Special—Young bulls line bred to Auchenbrain White Beauty 2d.
PENSHURST FARM, Narberth, Pa.
(7 miles from Philadelphia)

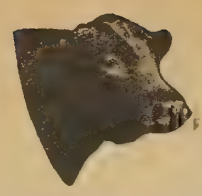
Delchester Farms Ayrshires
Tell us your wants and we can supply them at prices you can afford to pay.
Aged cows, bred to Glenury, an A. R. son of Finlayston.
Aged cows, bred to Rena's Baron of Highland, an outstanding son of Baron's Best of Bargenoch.
Heifers, bred to these two great sires.
Young heifers.
Bull calves.
All the above stock carries some of the best producing blood of the breed with A. R. ancestry on both sides.
Herd free from tuberculosis
DELCHESTER FARMS
Edgemont, Del. Co., Penn. - Thomas W. Clark, Supt.

Ayrshire Stock
of all ages for sale. Satisfaction guaranteed
L. W. McCONNELL, Wellington, Ohio



We Have For Sale
the well bred Ayrshire bull, Bargenoch "Drexel" (18474) Imported. Bred by John Logan, Bargenoch, Scotland. Born Feb. 2nd, 1919. Color white and red. Sire, Bargenoch Magnificent (9579). Sire of Bargenoch "Royal Champion" sold at Bargenoch sale, 1919, for $7,267.00.
Dam, Bargenoch Victoria (37003). Scotch record: 9,221 lbs. milk, 4.23% fat in 43 weeks; 11,070 lbs. milk, 4.50% fat in 47 weeks.
BARCLAY FARMS, John Cochrane, Manager, ROSEMONT, PENNSYLVANIA

Middlesex Meadows Ayrshires
NANCY WHITEHALL, World's Jr. 4-yr.-old Champion Ayrshire, has just completed another record of 22,075 lbs. milk, 858 lbs. butterfat. Her bull calf, *NANCY'S CHANCELLOR OF MIDDLESEX*, born September, 1919, by a show ring champion with great milk production behind him, is a winner in the show ring this year, and is now being used on all the Middlesex Meadows Farm heifers. He is offered for sale for immediate delivery. Guaranteed a breeder and right in every way. Price $2,000.
A. Henry Higginson
South Lincoln, Mass.



Economy in Production ← GUERNSEYS → Quality of Products



Advanced Registry tests on Guernsey cows increased by almost 50% in 1920 over 1919. The increase in testing resulted in the discovery of more high producing Guernseys than has been discovered in any preceding year. For more than 100 years, production has been consistently bred into the breed, until to-day each Guernsey cow can not help but be a big producer. Write for our free literature.

THE AMERICAN GUERNSEY CATTLE CLUB, Box H20, Peterboro, N H.

Guernsey Cows

I am offering for sale several head of Registered Guernsey cows of excellent breeding. They are the natural increase of my herd. Also have young bulls sired by Pencoyd's Secret Premier No. 49474. These bulls are splendid individuals, showing type and production.

Herd under Federal Inspection

OTTO W. POST, ENSENOR, N. Y.
R. R. Station, Owasco Lake

Harbor Hill Guernseys

Masher's Galore 8572 A. R.

Increased the Average Production Credit of 12 A. R. daughters out of A. R. dams by 181 lbs. We offer his double grandson out of another daughter also making a better record than her dam.

C. H. Hechler, Superintendent
Box 30, Roslyn New York

Forestdale Farm

3 Bully Baby Bulls 8 Handsome Healthy Heifers — 2 to 18 months

from Superior Standard Sires, also a few A. R. matrons. May Rose Breeding. Tuberculin tested. $250 lowest price.

R. D. DeForest, Amsterdam, N. Y.

Guernsey Bulls For Sale

Polly's Anchor No. 42845, born August 24, 1916, and Imp. Bluebird of Lakeside No. 45329, born June 15, 1917. Good, straight bulls, very gentle and sure breeders.

For Sale by
RADISSON FARM, ANOKA, MINN.

Falcon's Grenadier (65834)

Dropped Feb. 12, 1920

Sire: *Falcon's Proud Warrior* (*47559*). Pronounced by many experts as "the greatest son of Langwater Warrior".

Dam: *Stockbridge Olive* (*30883*), from a noted family of high producers. Olive has an A. R. record of 11,503.2 lbs. milk, 617.36 lbs. fat and dropped two calves during the year.

Grenadier is a high class, well grown bull; priced very conservatively at $600 f. o. b., Litchfield.

Write about him today.

Falcon's Flight Farms, Litchfield, Conn.

GRASSLAND FARMS GUERNSEYS

Choicely bred males and females for sale. (The natural increase of the herd.)

Herd federal tested for tuberculosis. Send for sales list. Satisfaction guaranteed.

Taconic, Conn., Litchfield Co., (C. N. E. R. R.)

FOR SALE

Some Fine Bull Calves from heavy producing dams, and sired by Langwater Cyclop whose brother, Langwater Steadfast, sold for $25,000. Priced low for quick sale.

M. V. Finch, Mgr., Glen Gable Farms, Wyebrooke, Pa.

Major Oliver S. Johnson

The Dairy Auctioneer

Tipton, Ia.

National Dairy Union Finances

Balance on hand Nov. 1, 1920	$3,547.67
Total receipts	11.95
	$3,559.62
Total disbursements	319.80
Balance on hand Dec. 1, 1920	$3,239.82

Dec. 30th, 1920.

This is to certify, I have today audited the books for Geo. Caven, treasurer of the National Dairy Union, and find the receipts from Nov. 1, 1920, to Nov. 30, 1920, to be $11.95, and the amount paid out for which he holds vouchers, the sum of $319.80, leaving a balance on hand Dec. 1, 1920, of $3,239.82.

F. P. COLLYER, Auditor.

Koshkonong Place Guernseys

Herd Bull: ANTON'S KING CECIL
(6 May Rose crosses),

BULL CALVES 6 mos. to 1 yr. old from A. R. daughters of

Jury and Gilt-Edge of K. P.

Herd on Federal Accredited list.

A. R. HOARD, - Fort Atkinson, Wis.

MAPLE HILL FARMS

May Rose bulls for sale from 2 to 16 months old with A. R. backing.

Fruit Bros., - Waukesha, Wis.

Wern Farm Guernseys

I am offering for sale 20 head of choice Grade Guernsey springers coming with first and second calf. Also have two bulls highly bred along May Rose lines just ready for service, that I will sell. For full particulars, write, wire, or come and see the stock.

Wern Farm, Waukesha, Wis.

SARNIA FARM GUERNSEYS

We are offering several very high class bull calves, 1 to 10 months old, nearly all out of A. R. cows. Send for sale list and circular giving pedigrees and pictures of the herd sires. Place your order now for bred heifers from 1920 importations.

Charles L. Hill & Son, - Rosendale, Wis.

CityViewFarm GUERNSEYS

FOR SALE: Typy May Rose bulls out of A. R. cows or cows on test with records up to 615 lbs. fat AA Sired by Bell Buoy of Linda Vista, 17 A. R. daughters, and Langwater Good News. Some of these bulls trace 18 times to May Rose II and are priced to sell.

O. R. SCHWALEN, Roberts, Wis.

GORDONDALE

Guernsey bulls of serviceable age offered for sale, also younger ones. They carry May Rose breeding, are from A. R. dams and have splendid A. R. backing Ask us about them.

Herd under Federal Supervision.

L. E. GORDON, JR.,
Nelsonville, Portage Co., Wisconsin.

Fond du Lac Guernseys

Send for County Sale List. Several high class bull calves, some heifers. 50 good grades can be had now.

B. F. SHERIDAN, Secretary, Fond du Lac Wis.

Hillswold Farm

Shrewbury, Mass.

Registered Guernsey bull calves for sale. Dams in Advanced Registry and tuberculin tested. Prices right, and animals guaranteed to suit. W. A. Cloues, Mgr.

Do You Want A Guernsey Bull

Closely related to Pergue's Crescent A. R. with a record of 13,316.9 lbs. milk and over 582 lbs. fat in Class EE and dropping two calves within the year, entitling her to second place in her class? Some excellent young bulls closely related to Pergue's Crescent ready to head your herd. Write for descriptive circular, or come and see them.

Ernest W. Sass, Box H, Streator, La Salle County, Illinois.

Guernsey Bulls

Our last 9 official records average over 510 lbs. fat, including all ages. Our herd sire has 8 A. R. daughters, including one with 572 lbs. fat in Class GG. His three nearest dams average 822 lbs. fat. Send for pedigrees and prices on young bulls with this backing.

Folly Farm, Box 587, Libertyville, Ill.

Barry Farm

Offers for sale a bull calf born July 2, 1920, by Langwater Raider and out of a cow on A. R. test. Also a few heifer calves.

Herd under Federal Supervision.

Far Hills, Somerset Co., N. J.

Meadowland Guernseys

Sixty-five females, priced conservatively, are offered from which to make selections.

MEADOWLAND FARM, Litchfield, Conn.

Bull Buying Factors

The life of a bull in any herd is limited because of the hesitancy of inbreeding.

No matter why you want to buy a bull at the present time the following two conditions concern you above all others in making your purchase.

1. **You want to follow certain blood lines.**
2. **You want the best you can get in these lines for the amount you are going to spend.**

THE HOARD'S DAIRYMAN FARM is now offering for sale four bull calves, all of serviceable age. These calves are of May Rose descent. **Anton's King Confidence 43517** is their sire. He traces **six times** to the foundation cow of the **May Rose** family. His ancestors represent a select few of the best animals of the Guernsey breed. His individuality is of the "carry on" type and he stamps his offspring in a remarkable manner. The dams of these bull calves are some of the best cows in the herd and the kind we delight in showing our visitors.

The prices of these calves range from $275 to $350, easily within the reach of the dairy farmer who realizes the value of good breeding and outstanding individuality.

If you are interested write us about these young fellows.

Hoard's Dairyman Farm
Fort Atkinson - - Wisconsin

Just What You Want!

An 8 months old bull calf. Partly white, light fawn, very fine individual.

SIRE—Cream Cup's King Regent of Allenwood 33889, by Allenwood King Regent 23641 and Allenwood Cream Cup 41291 who has a record of 436.89 lbs. fat Class G.

DAM—King Regent's Fanny of Allenwood 2d 73637, now on test in Class FF and will finish between 500 and 600 lbs. fat and has milked as high as 49 lbs. in one day. She is a daughter of Noble Regent 31691 and King Regent's Fanny of Allenwood 58290 who has a record of 347.64 lbs. fat at 2 years.

CORIUM FARM, F. J. Rueping, Owner, Fond Du Lac, Wisconsin.

We Offer For Sale

Simplicity's Winner of Iowanola (54404)

Born August 25, 1918. A show bull. First prize in class and member 2nd prize get of sire, Waterloo Dairy Congress, 1920.

Sire, Cherub's Winner (34180). The sire of all the animals that won all of the cups and trophies awarded at the N. D. S., 1920.

Dam, Simplicity of Haddon (47876), A. R. 7607. Record: 9,042.9 lbs. milk, 434.17 lbs. fat. A big, strong, typy cow, a very easy milker and a good breeder.

Write for further information. We have a few younger bulls.

Mountain Bros., Carrier 403, Des Moines, Ia.

ISLAND FARMS

May King No. 59478. Dropped May 20, '19

Sire—Beda's May King 11893. The greatest living proven May Rose sire today.

Dam—Imp. Garenne's Dairy VI No. 79814, a half sister to Imp. Princess Bergere and Imp. Bella 2nd du Grand Fort.

This is a show bull and guaranteed right in every way.

Price $500.00 f. o. b. Island.

Address
ISLAND FARM,
Floodwood, Minnesota

Shorewood Farm Offers

Sons of Ladysmith's Cherub, three times National grand champion. One of his first daughters to finish made 591 lbs. fat in Class G. Others equally as promising now on test.

These bull calves are from 3 months to serviceable age out of dams with records up to 777 lbs. fat. They combine size, and type with persistent production.

SHOREWOOD FARM, Crystal Bay, Minn.

Guernseys

Best May Rose breeding. Both sexes and all ages from an Accredited Herd. Write your wants and send for lists.

E. S. Person, Minot, N. D.

Young Bulls For Sale From A. R. Dams

I am offering several young sons of Golden Noble of Craigmoor A. R. He is a son of Langwater Raritan A. R. and from Imp. Daisy Moon 4th (639 lbs. fat).

These bulls are from A. R. dams with records up to 648 lbs. fat.

They are from 3 months to a year old. For prices and pedigrees call or write

Maple Heights Guernsey Farm
Frank E. Swan, Wauwatosa, Wis.
Federal Accredited Herd.

Tilden Farms Guernseys

FOR SALE: Several typy, May Rose bulls out of A. R. cows and sired by Hope's May Rose of Maple Hill (35903), whose dam is a class leader with 776 pounds of butterfat at 3 years. Also several choice pure-bred females and a few excellent grade cows. Herd on Federal Accredited list.

TILDEN FARMS
James H. Murphy, Mgr. Delavan, Wisconsin

Tratt Guernsey Herd

Herd headed by Bob Rilma's Monogram whose dam and grandam have A. R. records averaging 887.5 lbs. fat.

Bull calves for sale by him out of cows with good A. R. records.

Write for pedigrees and prices.

RALPH TRATT, WHITEWATER, WIS.

Homestead Farm

Offers a number of good cows. All safe in calf, mostly with A. R. records. Also thirteen young bulls, from one month up to sixteen months of age. Some of these are very choice. Write for sale list.

W. G. JAMISON & SONS, Appleton, Wis.

Here's Your Opportunity!

Good Grade Cows in car lots. Pure-bred Males, Females with type and good producing ability. Investigate.

Fox River Valley Guernsey Breeders' Association
Harry Leppla, Sec'y, Appleton, Wis.

Handling Milk Utensils

"While the solution of the problem of producing milk of low germ content," say Professors Prucha and Harding of the Illinois College of Agriculture in Bulletin 230, "lies largely within the province of the milk plant operator, the fact remains that under present conditions, a large part of the cans returned to the producer from the milk plant are in a moist condition. Accordingly it is important to know what the milk producer can do with these moist, high germ content cans in order to prepare them for receiving milk. Moreover, the problem of the most effective and at the same time the most practical method of handling pails and similar utensils is one constantly present on all farms.

"The mechanical washing of pails and cans is both simple and ordinarily so well done as to need little comment. Following this washing, there is much divergence of practice with regard to subsequent rinsing of the washed utensils. A large part of the effect of such rinsing upon the germ life has been found to result from the mechanical removal of the germs by the rinse water. Experimental treatment of a considerable number of well washed eight-gallon cans suggests that the treatment is capable of removing from a can more than two billion germs.

"A somewhat larger number of germs as mechanically removed by using warm rinse water but as the temperature of the rinse water increased, the measurement of the germs actually removed was complicated by the destructive action of the hot water upon the germs. The destructive effect of hot rinse water upon germ life was found to be much less than is commonly supposed, owing to the rapid cooling of the rinse water through the transfer of its heat to the utensil. Thus, when an eight gallon can at 72°F. is rinsed with a quart of water at 150°F., the temperature of the rinse water falls about 40° within 60 seconds. As the amount of rinse water per can is increased, the drop in temperature is correspondingly reduced. When 4 quarts of water at 150 degrees F. are added to a can, the temperature drops only about 20 degrees.

"When boiling water was applied to the utensils in these experiments the destruction of germ life was pronounced, particularly when more than two quarts of rinse water were used per can. Under such circumstances the combined effect of the mechanical removal and the destruction of germ life was such that if the cans had been immediately filled with sterile milk, the germs remaining in such scalded cans would commonly have increased the germ content of the milk only about 100 bacteria per cc. Accordingly the fairly common practice of applying boiling water to freshly washed utensils or to moist, washed cans returned from the milk plant is to be commended. It should be noted, however, that the pouring of this rinse water from one can to another greatly reduces the effectiveness of the practice, both because the rinse water promptly becomes too cool to exert much killing effect, and because it quickly becomes contaminated by the germ life which it mechanically removes from the utensils.

"As a method of treating the moist washed cans which arrive at the farm shortly before they are needed, nothing better is available ordinarily than the thorough rinsing of the cans with boiling water. However, when any considerable interval is to elapse before the cans are filled with milk, it is of prime importance that they be promptly and thoroughly dried.

"Observations were made upon the effect of inverting washed and rinsed cans on a rack in the sun. When the sun was hot and the air dry, the cans dried quickly and the germ life in them was promptly reduced. Cans which were only fairly well rinsed, when thus dried and kept dry were ordinarily in a condition to add not more than 100 bacteria per cc. to the milk with which they might have been filled. However, during damp or rainy weather, when moisture remained in the cans, the germ content held its own or even multiplied considerably.

"A further series of observations were made in the laboratory by adding to sterile cans 10 cc. of water from a vat of rinse or wash water, and holding the cans for twenty-four hours, one-half of the cans with their covers on and the other half with the covers removed. In the cans on which the covers were retained, the germ life increased between 20 and 3,000 fold. In the cans from which the covers were removed, and conditions permitted rapid drying, the germ content fell promptly, but when the drying was retarded the amount of germ life remained constant or even increased.

"A thorough drying of the cans before they leave the milk plant will exert a profound influence upon the germ content of the milk later returned to the plant in these cans; but when the cans are returned to the producer in moist condition, he may put them into acceptable condition by thoroughly rinsing them with boiling water, and then promptly and thoroughly drying them if they are not to be used immediately."

HOLSTEINS

Edinboro Lake Farm

Show Type **HOLSTEINS** Production

Six state yearly record champions 1918-19.

We offer bull calves by Sir Paul Veeman Hengerveld and Sir Ormsby Skylark Fredericka, out of yearly record dams with type.

Edinboro, Pa.

ORIGIN FARM

HORNLESS HOLSTEINS, Registered and A. R. O. Animals, all ages, for sale. Federally Tested.
GEO. E. STEVENSON, Scranton, Penna.

$75—SPECIAL—$150

Our entire list of bulls at half price for one month only. Sire, Joh Segis (15 nearest dams av. 30 lbs.). Dams, A. R. O. cows up to 26 lbs. Ages up to 13 months. Federally tested.
Henry J. Karpinski, R. 7, Oswego, N. Y.

Fairhurst Herd

On the Accredited List

We offer young bulls, fine individuals and well grown. Sired by 33-lb. bull and from dams with records up to 30 lbs. Write for pedigree and price.
KITTLE BROS., Holland, Ohio.

Lord Netherland Rag Apple

Son of Ex-Champion 4-yr.-old Heads Our Herd

Five of his six nearest sires have 40-lb. daughters. Four of his six nearest dams have 31-lb. daughters. His two nearest dams average over 40-lbs.

We have his first sons for sale.
LAWRENCE PAUMIER, - - (Stark Co.) - - Louisville, Ohio

HOLSTEIN CATTLE

E. W. McNitt, Route 9, Grand Rapids, Michigan, writes:

"We bought our first registered females in 1906, and now we have over one hundred head of females and several good sires, and we think we owe our success mostly to the Holstein breed. We can sell them faster than we can raise them."

Send for Free Booklets

The Holstein-Friesian Association of America
101 American Building Brattleboro, Vermont

Here's Your Opportunity to Buy

A YEARLY RECORD BULL

Our 85 Yearly Record Cows and Heifers Average 753.49 Lbs. Butter and 17,525 Lbs. Milk

We can quote you on young bulls out of cows with good seven-day records and with semi-official records of from 600 to 1,000 lbs. Our prices range from $400 to $3,500.

These Calves are Sired By —

—King of the Ormsbys His dam, his dam's dam, and his full sister all have semi-official records above 1,000 lbs. His own dam has four records above 30 lbs. in 7 days and three above 1,000 lbs. in 365 days.

—King of the Sadie Vales His dam is a 38-lb. cow and both of his grandams are 41-lb. cows. His three, four, six, nine, and twelve nearest dams average over 31 lbs. in 7 days.

—Johanna King Segis His sire is a yearly record son of King Segis, and his dam is a 40-lb. cow — the first cow to produce over 500 lbs. butter in 120 days.

—Sir Inka Prilly Segis He is a 30-lb. son of King Segis. He has 20 daughters with semi-official records, and 15 are now on test.

If a saving of from $100 to $500 on a bull means anything to you, then write for our new price list which shows pedigrees of the bulls we have for sale.

(Federal Accredited Herd)

Winterthur Farms
Winterthur - - - Delaware

Young Bulls
FOR SALE

No. 1—Bull calf 1½ months old. Dam, a two-year-old heifer untested, sired by Isabelle Hengerveld Lad 207795. More light than black.
No. 2—Bull 1 month old. Dam, Topsy Vinske Posch No. 488263, 7 days' record at 1 year, 11 months, 21 days, 13.031 lbs. butter from 336.8 lbs. milk. Sire, Isabelle Hengerveld Lad 207795. More black than white. Photo and pedigrees on application.
Isabelle Hengerveld Lad 207795, sired by King Colantha Clothilde 60403. He by Colantha Johanna Lad 32481, he by Sarcastic Lad 23971. Dam, Isabelle Hengerveld 104456, butter 7 days 30.43. She by Judge Hengerveld De Kol 43964, he by Hengerveld De Kol 23102.

GOLDEN KNOB FARM,
M. B. Weaver, Cary, Ill.

BULL CALF FOR SALE

Sire is a 27-lb. son of Johanna McKinley Segis, the 40-lb. bull that sold for $25,000. Dam is a granddaughter of Pearl of the Dairy's Joe De Kol with 78 A. R. O. daughters. Marking ⅞ white.
Long Distance Phone 389.
DUETT ROBINSON, R. 3, Capron Ill.

Woodell Farm
Offers a Few Serviceable Bulls

Sired by a son of King Segis Pontiac Superior and out of A. R. O. dams. They are good ones, priced reasonable. Write us today about them. We will answer you promptly.
Harry M. Wood, Prop., Delavan, Ill.
F. E. Washbon, Herdsman.

Buffalo Creek Farm Holsteins

This yearly record bull calf for sale, born Nov. 28, 1919.
Name, King Lavera Ormsby No. 297926. Sire: King Pietertje Homestead Ormsby No. 221488. Dam: Lavera Hortensia Bawn 2d, No. 124734, with a record of 26,010.2 lbs. of milk and 1,050.55 lbs. of butter in a year. Write for price and pedigree. This calf won 5th premium at the Dairy Show.
Herd under Federal Supervision.
H. L. BINGHAM, Supt., Arlington Heights, Ill.

57 BULLS

From four to eighteen months of age. All pure-bred, registered Holsteins carrying the blood lines, close up, of some of the greatest families of the breed. Send for new bull catalog just out giving description, pedigree, and price. If interested in females, ask for female catalog. Over 600 head in our herds.
WOODLAWN FARM, STERLING, ILL.

Whitehurst Farms

BULLS FOR SALE FROM SEMI-OFFICIAL DAMS. Priced Right.
A. F. Randolph, Prop., Canton, Ill.

BULL CALF

Sire's dam, butter, 1 yr., 848 lbs.; her daughter, 1,055 lbs. Grandsire's dam, 987 lbs. at 11 yrs.; her full sister, 1,344 lbs.; another, same dam, 1,322 lbs. Dam, Miss Pietertje Alexina 3d, sister to Miss Pietertje Alexina 2d, 1,290.91 lbs. A dandy calf, priced right. Write quick to
McKAY BROS., - - CADDOA, COL

Son of Colantha Johanna Champion

a 3-year-old herd sire having several young daughters promising to do well in the future. Dam is a 21½-lb. 9-year-old. Have a 34-lb. daughter, world champion on yearly production besides others with fine records.
Will sell cheap. Tuberculin tested. Prices and Pedigree on request.
ONTONAGON COUNTY FARM,
Dr. J. S. Nitterauer, Secretary, Ontonagon, Thos. G. Roberts, Herdsman, Michigan.

THE TRAVERSE HERD

We have what you want in
BULL CALVES

the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dams' records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.
Traverse City State Hospital, - Traverse City, Michigan

The Pontiac Herd
"Where the Champions come from"

Offer Bull Calves sired by sons of *Pontiac Korndyke, Hengerveld De Kol, Pontiac Dutchland, or Admiral Walker Pietertje.*
Do you want a Pontiac in your herd?
PONTIAC STATE HOSPITAL, Pontiac, Mich

VERY HIGHLY BRED YOUNG Holstein-Friesian BULLS

and two heifer calves are offered for sale cheap. All are registered, tuberculin tested and sound. Write or see "LIVE FAIR" VIEW, Waverly, Iowa. Otto Brandenburg, Mgr.

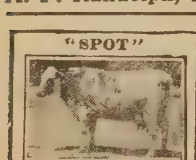
Son of a 37-Lb. Ormsby Bull

Dam: three-fourths sister to an 870-lb. junior 2-year-old. Mostly white, $150. Herd under Federal Supervision.
BLUEBELL FARM, RICEVILLE, IOWA.

4 Holstein Bulls for Sale

All by King Segis Pontiac Cor-Will, 190512, whose sire is King Segis Pontiac, 44444, and whose dam is an A. R. O. daughter of Pontiac Korndyke. Also two fine young registered cows, one a granddaughter of Pontiac Korndyke. Wm. N. Osborn, Wanatah, Ind.

When writing advertisers please mention Hoard's Dairyman.



Eli Aaggie Fayne Johanna
Milk 27949 lbs.
Butter 1001 lbs.

Breeders of Holstein Cattle

2 WORLD } RECORD COWS IN OUR HERD
4 STATE }
Holstein Bull Calves For Sale
A Few Exceptional Individuals Ready for Service
Write for Bull Sale List. LISLE FARMS CO., LISLE, ILL.

MR. CATTLE BUYER

We can supply you with good, healthy registered Holstein cows and heifers, singly or in car lots.
We always have some very desirable young bulls for sale.
It will pay you to look into our high class listings.
LENAWEE CO. HOLSTEIN BREEDERS' ASS'N, ADRIAN, MICH.
L. W. Harwood, Sales Mgr. R. C. Curtis, Sec.

$225 Buys a Registered Holstein Bull — 14 Months Old

A good individual, large sized, perfect top line and about ⅞ white. His dam is one of my largest and best cows, with a large square udder and exceptionally straight top line.
She has just completed a 7-day Official test, making 24.2 lbs. butter and 505.3 lbs. milk.
His sire is a 29-lb. bull of good breeding and individuality.
A Bargain for Someone
I have also some very choice bull calves of excellent breeding from dams with A. R. O. records of 20, 23, 24 and 26 lbs. of butter in 7 days.
I. M. SHORMAN, Route 4, Fowlerville, Michigan

A Real Yearly Record Bull For Sale

His 3 Nearest Dams Average 1038.54 Lbs. Butter

King Pietertje Ormsby Piebe 24th was born July 2, '20, a show calf if there ever was one.
He is by King Pietertje Ormsby Piebe, that famous son of Queen Piebe Mercedes, world record daughter of S. P. O. M.
His dam, Rose King Mutual, a daughter of King Mutual Korndyke, made 22.3 lbs. in 7 days and 681 lbs. in a year at 24 months. Her dam, a 1,045-lb. 4-year-old.
His 3 nearest dams average 1,038 lbs. butter in a year, 2 as 4-year-olds, his dam as a 2-year-old.
We offer him on easy terms of payment


KING PIETERTJE ORMSBY PIEBE 24th

Hargrove & Arnold Norwalk, Iowa
Herd Under Federal Supervision

If you think the height of the Holstein industry has been reached

You're Wrong

It is Yet to Come

Did you know that only two per cent of the dairy cattle in the United States are pure-breds?
It is astounding when you think of it and have these figures before you:
The average cow here in Minnesota produces about 4,000 lbs. of milk in a year (the same average would no doubt apply to the entire United States).
We have thirty cows in our herd that have averaged over 20,000 lbs. of milk per year for the past three years, or an income of over $100.00 per month, for every one of these cows.
Why keep the scrub? It costs just as much, and you will never have the same interest in your herd, that you will have in pure-breds.
Take a paper and pencil and figure it out for yourself.
This is the buyers' market — there never was a time when you could fill your barns as advantageously as now—why don't you do it?
A few months from now, prices will be soaring — and a bird in the hand is worth two in the bush.
If men in other lines of business had as much to brag about as we have — they would do limitless advertising and boosting.
We believe in boosting. Do you?

J. M. HACKNEY

Grandsons of "Count" and "Piebe"

I have just purchased from the University of Nebraska, which owns the highest record son of PIEBE from BEAUTY GIRL PONTIAC SEGIS, the World's Record Daughter of COUNT,

Eight Young Bulls

from six to eighteen months old, all from good A. R. O. dams. Individuality faultless. Beautifully marked.
Most Popular Combination of Breeding of the Day
They Won't Last Long Write Me At Once For Prices

J. M. HACKNEY

ARDEN FARMS, 602 Merchants Bank Bldg., St. Paul, Minn.

SIR JOHANNA FAYNE


42147

now has 9 daughters 20,000 pounds or over. All of his yearly tested daughters, 3½ years old or over average 21,465.1 pounds milk and 831.45 pounds butter. 17 daughters average 20,000 pounds. A few young sons left at reasonable prices. Herd under Federal Supervision.

IOWANA FARMS
DAVENPORT, IOWA

HOME FARM HOLSTEIN FRIESIANS

Light Colored—Ready For Service

Born November, 1919, a son of King Korndyke Sadie Vale 24th. Dam—18 lbs butter at 4 years, from 3 quarters, her full sister with 638 lbs. butter in a year ¾ sister with 740 lbs. at 3 years. This bull has a perfect rump, is well grown out, has strong official backing.
W. B. BARNEY & SONS - - CHAPIN, IOWA

ZEHRINGHURST HOLSTEIN FRIESIANS

A Few Splendid Young Bulls

for sale that have show ring type, that are backed by 7-day and yearly records and by the best productive breeding in Ohio. They are from an accredited herd, are guaranteed right and are priced to sell.
Zehringhurst Farm, Germantown, O. Oscar O. Zehring, Prop

Minnesota Holstein Breeders' Association

Be sure that you buy Minnesota Holsteins from state association members. They are responsible. For list of members and other information address

THE SECRETARY, 406 MARKET BANK BUILDING, MINNEAPOLIS, MINN.

FOR SALE — A Few Splendid Cows Bred to —



These Famous Sires

SIR PIETERTJE ORMSBY MERCEDES 37TH

He already has two 1,000-lb. three-year-olds and a 900-lb. junior two.
A full sister has twice made over 1,000 lbs. in 305 days.
Dam:—Spring Brook Bess Burke 2d. 1,290.91. Two other records above 1,000 lbs.

SIR PIETERTJE ORMSBY MERCEDES 41ST

His daughters are real producers and show ring winners. One of his daughters was grand champion at the Dairy Cattle Congress, defeating the National Champion.
Dam:—Spring Brook Bess Burke 1,094.16, "Greatest Mother of the Breed".

And You Know Their Sire —

SIR PIETERTJE ORMSBY MERCEDES, the world's greatest sire of show ring winners and yearly producers. Thirteen of his daughters have made above 1,000 lbs. Twenty have made over 20,000 lbs. milk in a year.

We are offering a few splendid cows—not culls—bred to these bulls at prices that will move them quickly. Come and look them over.

E. C. SCHROEDER FARMS *(Fully Accredited Herd)* **Moorhead, Minnesota**

His 7 Nearest Dams

Average 29.895 Lbs.

We are offering this splendid 10-month-old youngster to any breeder looking for a first-class herd sire prospect.
His dam is a 16-lb. 2-year-old daughter of a 34-lb. cow.
His sire is a 33-lb. grandson of College Belle Wayne.
Write or wire today for price, pedigree, etc.

BROWN BROS. **Hartford, S. D.**

HOLSTEINS AT AUCTION



Send for information about the sales of healthy, reliable, registered cattle, held at **Brattleboro, Vermont, the First Tuesday and Wednesday of every other month,** Feb. 1-2, Apr. 5-6, June 7-8, 1921. *Come to Brattleboro, the Holstein-Friesian Capital of America.* Address

The Purebred Live Stock Sales Company

Yearling Bull Ready For Service

His sire is a son of the world famous "IT" whose dam held the world's record for a year. His dam is a double granddaughter of Pontiac Aaggie Korndyke, the famous sire of long distance champions. Price $150.

G. G. Burlingame, **Cazenovia, New York.**

High Grade Holstein Calves

This is the ideal time of year to start them and have them ready for pasture next spring. ⅞ pure-bred Holstein calves, $20 and $25 each. Ship C. O. D. if you wish. Safe arrival and satisfaction guaranteed. Everything in the line of registered heifers. Write your wants.

ELM GROVE STOCK FARM,
Box 253. **Cortland, N. Y.**

HOLSTEIN BULLS

Bull calves and service bulls. From good producing A. R. O. dams. Sired by King of the Changelings 180491, a 33-lb. son of King of the Pontiacs. They are good individuals and priced reasonable.

BRAEDOON FARM
Harry W. Petzold, **Oswego, Tioga Co., N. Y.**

Minnesota Holsteins



Miss Korndyke Akkrummer, Ormsoy 30-lb. 4-year-old. 39.67 lbs. butter at full age. Owned and developed by J. B. Irwin.

For Your Next Herd Sire

get a son of Sir Ormsby Banostine Champion, son of Duchess Skylark Ormsby, world record cow. We have some good ones for sale from dams with good 7-day and year records.

Woodlake & Clover Farms,
John B. Irwin, Station F, Minneapolis, Minnesota.
"The Home o the Ormsbys."

6 Good Cows For Sale

THE MINNESOTA KIND

They are all by a 36-lb. sire, are bred to a son of King Korndyke Colantha Ormsby, and are due to freshen this fall and winter. They are from 3 to 5 years old and absolutely straight and right. Lack of barn room forces us to sell.
Write or come and see them.

E. J. Brosious, - **Stillwater, Minn.**

Baby Bull For Sale

Grandson of Sir Ormsby Hengerveld Korndyke. Dam, a 16-lb. four-year-old. Price for immediate sale $100.

V. R. Holmes, Anoka, Minn.

Mankato Holstein Farms

Offer a Son of

King Colantha Ormsby Bess, A Sir Pietertje Bess Burke combination. Nine dams average over 1,000 lbs.
Dam is going at better than 800 lbs. butter for the year. Has over 25 lbs. butter in 7 days.
This calf was Grand Champion over all bulls at a Southern Minnesota district fair.
Several bulls at prices warranting their use in grade herds.

Write or better still come and see them
(A Federal Accredited Herd)

Marlow & Randall, Mankato, Minn.

HER YEARLING SON—$200

Ready For Service



ELMWOOD MARIE NETHERLAND

Put straight rumps, good udders, size and type in your herd, that the breeding back of this bull will transmit. Good A. R. O. records all the way back — a junior two-year-old sister just finished with 20,184 lbs. milk in a year.

Just the bull to improve your grade herd. He is nicely marked and a good individual. Send for pedigree and photo.

A. J. Lashbrook, Northfield, Minn.
Federal Accredited Herd

MONEY

Is Hard to Get, So Are the Right Kind of Bulls!

We have both. Don't go without the bull you need just because money is tight. LET US HELP YOU. We also have a few females. WRITE FOR OUR BARGAIN LIST AND PAYMENT PLAN. Every milking animal in our herd has an official record. We need the barn room. Take advantage of this opportunity. SATISFACTION GUARANTEED.

GRAHAMHOLM FARMS, Holstein-Friesians
Federally Accredited.
H. R. Searles, Mgr., **Rochester, Minn.**

RICHLY BRED

HOLSTEIN BULL CALVES

out of A. R. dams and sired by our two richly bred herd sires — **King Piebe Ormsby Mercedes,** a 35-lb. son of Sir Korndyke Bess and every dam in pedigree over 22 lbs. and **King Pietertje Mercedes Ormsby,** a son of Sir Pietertje Ormsby Mercedes and out of a 19-lb. senior two-year-old dam.
Herd tuberculin tested. Write for information or visit herd.

P. FROST SPAULDING FARM CO.
C. L. Spaulding, Mgr., **Warren, Minn.**

For Sale

A Few Good Females

Several High Class Young Bulls

I have a few good ones left. Write me at once if you are in the market for a herd sire or a few foundation females.

CHAS. OBY, **Maple Lake, Minn.**

Grandsons of "Piebe"

We have for sale a few 5-8 months old sons of Lola Segis Pontiac Homestead, he a 34-lb., 1,000-lb. son of Piebe Laura Ollie Homestead King. Most of them are from good producing daughters of Joe Oak De Kol Fobes, a grandson of Homestead Junior De Kol. Price $125 to $250.

Write us at once if you want one.

RANDALL BROS. **Lakeland, Minn**

Sir Korndyke Ormsby De Kol 15th—21 Months Old

His sire is a son of Sir Korndyke Hengerveld De Kol; 51 A. R. O. daughters, one of whom has a 7-day record of 39.56 lbs. and several above 1000 lbs.
His dam has a record of 23.778 lbs. and now on yearly test.

Geo. H. Elwell, - **Minneapolis, Minn.**

TYPE

King Segis Pontiac Fayne Star is "The best individual King Segis Pontiac Count ever sired." His sons are like him. They rae listed in our bull circular. Yours, with no obligations. But you will have to send for it.

Flecks Farms. **Faribault, Minn.**



Lola Segis Pontiac Homestead

the highest record bull in southern Minnesota, heads our herd. His sire, Piebe Laura Ollie Homestead King, has more daughters that as 2-yr.-olds have produced 20,000 lbs. milk in a year than any other. His dam, a 34-lb. 4-year-old daughter of King Segis Pontiac Count, has 3 records averaging 33 lbs. and has made over 1,000 lbs. in 1 year. We have a few serviceable bulls and younger from A. R. O. dams for sale.

Clover Lea Farm, W. W. Walker, Owner. Austin, Minnesota

Have you talked with your neighbors about subscribing for Hoard's Dairyman? Why not do it now? Make up as large a club of subscribers as you can and send them in.

Bull Calves of Ormsby Breeding

from A. R. O. dams for sale, 2 to 8 months old. Prices $200 to $1,000. We can also offer several good, typy cows bred to a good Ormsby bull. Write or come and see us.

MINERAL SPRINGS STOCK FARM, - - SAVAGE, MINNESOTA
Stuart—McIntyre—Hansen, Owners.
Address correspondence to Axel Hansen, formerly with John B. Irwin.

Grandsons of

Duchess Skylark Ormsby and of S. P. O. M. 38th.

for sale. These youngsters are from A. R. O. dams that are now making good yearly records. Write today for further information.

POPLAR HOLLOW STOCK FARM,
Bertram D. Scott, Prop., **Hotel Hastings**
Minneapolis, Minn.

Grandsons of Sir Pietertje Ormsby Mercedes

The sire is Sir Pietertje Ormsby Mercedes 22d, a son of Minnesota's first 1000-lb. cow. These bulls are all nicely marked, straight top lines. Very good individuals from good A. R. O. dams.
For pedigrees and prices, write

O. J. GROVER, - **GLYNDON, MINN.**

Lake Shore Holsteins

40 pure-bred heifer calves, 6 months to one year, $150 to $200 this month. Good type, good backing.

E. J. Oppliger, **Forest Lake, Minn.**

COME TO BISCAY

for your next purchase of pure-bred or grade Holstein cattle, mature or young stock. Large selection, also a few select male calves to offer. Located near station.

BISCAY SALES CO., **BISCAY, MINN**

Waukesha County

Contains more tuberculin tested cattle than any other county in the world. There is more attention paid to official records than in any other county in the world.

When in the market for foundation stock, grades or pure-breds of all ages, write or wire for information to

Waukesha County Holstein-Friesian Breeders' Association

Office—254 Broadway, Waukesha, Wis.

A Federal and State Accredited Herd Offers—

two serviceable sons of M. M. Rag Apple Oak Denver, a grandson of the 36-lb. cow, Dutchland Colantha Denver (1,315 lbs. butter, 25,431 lbs. milk in a year).

No. 1—Born Oct. 7, '19. Dam's record 16.04 lbs. as a heifer; second dam 24.79 lbs.; third dam 28.88 lbs. Bull mostly white, very good individual. Price $250.

No. 2—Born Nov. 5, '19. Dam's record 19.75 lbs.; second dam 18.75 lbs.; third dam 21.45 lbs. Half white. A show bull. Price $200.

For complete information and pedigree write

A. M. Anderson, Whitewater, Wis.

Your Herd Sire

Helps you toward success. We have young sons of Iowana Sir Ollie, sire of world's youngest 1,000-lb. 2-year-old, good individuals from tested dams, some with yearly records. These calves grow into profitable sires. Write

WALCOWIS FARMS

Lake Geneva, Wisconsin

Cows and Heifers

A Few Good Bulls

Because I am overstocked, I am offering some very good registered females for sale. They either have A. R. O. records or are from A. R. O. dams.

Can also offer some excellent young bulls by a 33-lb. sire and from A. R. O. dams with records up to 28 lbs.

Every animal sold is guaranteed to be as represented.

Write or come and see for yourself.

J. D. McDonald West Salem, Wis.



Mr. Dairyman—

This bull calf sired by "Carnation Prince Elba", our 31-lb. sire, from Beauty Pietertje Prince with 43 A. R. O. dams. Dropped by a fine, large, typy cow with a 19.85-lb. butter record, who was sired by a proven son of "Sir Ormsby Hengerveld De Kol", who had 69 A. R. O. daughters, 5 over 30 lbs. We have several other young bulls as good. Send for price and pedigree.

NORRIS FARM AND CAMP, Mukwonago, Wis.
D. W. Norris, Owner, E. Loehndorf, Herdsman

$100 to $200

buys a good bull. Sired by very typy, 26-lb. bull and from tested dams up to 25.46 lbs. butter in seven days.

Tuberculin Tested

H. W. Crawford, R. 5, Campbellsport, Wis.

Three Holstein Bulls

fit for service, sired by sons of King Segis Pontiac. Pure-bred and grade females, any age, in carload lots for sale.

W. R. GATES, Fort Atkinson, Wis.

Mr. Holstein Breeder—

You are Invited to

Pinehurst Farms

at any and all times. Come if you want a herd sire or foundation females. Come if you don't want to buy. We believe you will be interested in Sir Ormsby Beauty Pontiac Segis and his get and in our herd of producing females, many of them now doing very well on 7-day and year test.

You will be welcome and remember if you should buy from us, we stand back of every animal sold.

Pinehurst Farms Co., Sheboygan Falls, Wis.

Cedar Lawn Farms

Headed by

General Ormsby Colantha

Both grandams of this young bull made above 1,235 lbs. butter in 1 yr. 6 dams made above 30 lbs. butter in 7 days. 5 dams above 33 lbs. butter in 7 days. 7 nearest dams average 30.19 lbs. butter in 7 days. 15 nearest dams average 27.44 lbs. butter in 7 days. He is a direct descendant of Miss Korndyke Maid Ormsby, Bess Pietertje Ormsby Mercedes, Spring Brook Bess Burke, Colantha 4th's Johanna and Pietertje Maid Ormsby. Sons of this bull out of A. R. O. dams up to 30 lbs. for sale.

C. A. Schroeder & Son, West Bend, Wis.

Wayside Stock Farm

OFFERS

4 Serviceable Bulls

ONE is from a 28.30-lb. cow and by a 38-lb. sire.

TWO is from a 27.25-lb. Jr. 3-year-old and by a 36-lb. son of Champion Echo Sylvia Pontiac

THREE is from a 19.40-lb. 2-year-old and by a 33-lb. son of King of the Sadie Vales.

FOUR is from a 15-lb. 2-year-old daughter of a 27-lb. 3-year-old and by the 36-lb. grandson of May Echo Sylvia. Three of them have 5 nearest dams averaging over 30 lbs.

Be quick if you want one.

A. L. Williams Estate, Fond du Lac, Wis.

5-10 WELL BRED HEIFERS

SEVERAL GOOD YOUNG BULLS

are what we are offering just now. The heifers are registered two-year-olds, bred to freshen this fall. The bulls, old enough for service, are from A. R. O. dams and by Sir Ormsby Homestead Butter Boy, a 35-lb. bull. One is by a 42-lb. grandson of S. P. O. M. Come and see them.

ANDREW FRANK, FOX LAKE, WIS.

Serviceable Bulls For Sale

Sired by Pabst Pontiac Hengerveld, a son of King Pontiac Champion from Pabst Hengerveld Colanthus (31.5 lbs. butter in 7 days, 1,057 lbs. in a year.

These are nicely marked, well grown youngsters out of good producing dams. Several are ready for service, others are younger.

Write today.

John Alexander, Baraboo, Wis.

Bull Nearly Ready For Service

Sired by our 32-lb. bull whose 10 nearest dams average over 29 lbs. Dam, 14-lb. Jr. 2-yr.-old daughter of King Segis Pontiac Polkadot; next dam, 23-lb. 4-yr.-old.

Nicely marked and straight as a line. Priced to sell.

Halsey J. Sedgwick, Limeridge, Wis.

Bull For Sale — Born January 2, 1920

Dam:—A 22.62-lb. granddaughter of Johanna McKinley Segis. She has several good daughters in the herd with records up to 33.48 lbs. butter in 7 days and 112 lbs. milk in one day.

Sire:—A son of Molly Johanna Korndyke, former world's record 2-year-old with 30.62 lbs. butter in 7 days. Write for pedigree and price.

W. J. McROBERT, Waupun, Wis.

ORMSBY BULL Born Feb. 28, 1919

Sire, King Ormsby Pontiac De Nijlander, whose two nearest dams average over 30 lbs.

Dam, Aaltje Hengerveld Tritomia Segis. A. R. O. 17 lbs. at 3 yrs., next dam 29.68 in 7 days. Color light, fine individual. Ready for service. Price $300.

Fairview Stock Farm Whitewater, Wis., W. G. Marshall, Prop.

Ask us about a Son of—

Sir Pietertje Ormsby Mercedes 41st

that great son of S. P. O. M. and Spring Brook Bess Burke or of

King Pontiac Artis Sadie Vale

he a 34-lb. son of the great K. K. S. V. from A 7-Day and Yearly Record Dam

We have several mighty good ones, from a few weeks to a year old, that we are pricing to sell.

Remember, every animal sold from Hollyhock Farms *must* be right.

Gustave Pabst's Hollyhock Farms

Fred J. Southcott, Manager Dousman, Wisconsin

4 Serviceable Bulls

ALL SONS OF THE 1235-LB. YEARLY SIRE

Sir Korndyke Bess

The Dams' yearly records all over 800 lbs.

R. E. Benson - - Dousman, Wisconsin



Yearly Records

Choice Young Bulls

from one to fourteen months old for sale. Sired by Cloverlawn Johanna Piebe whose five nearest dams average 1,070 lbs. of butter, 23,809 lbs. of milk a year. Herd numbers 140 head, forty cows with yearly records. State exactly what you want.

JOHN PULS, - HARTFORD, WISCONSIN

Holsteins For Sale

PURE-BREDS	78 Cows 88 Heifers 18 Heifer Calves 250 Young Bulls	**GRADES**	67 Heifer Calves 112 Heifers 245 Cows

Other Live Stock: Breeders are listing with us other dairy cattle, beef cattle, horses, sheep, and swine. Write us if you want stock. We will answer promptly.

BANKER FARMER EXCHANGE

D. H. Otis. Director, 1822 Chadbourne, Ave., Madison, Wis.

A. R. O. BULLS—2 Weeks to a Year Old

At Bargain Prices

They are sons of Rag Apple Pontiac, a 30-lb. grandson of King of the Pontiacs, from well bred dams with records up to 27 lbs. in 7 days. Write today for prices and pedigrees. I'll answer your inquiry promptly.

W. W. Quackenbush, - West Salem, Wis.

HOLSTEIN BULLS AND HEIFERS!!

To make room in our barn we offer a dozen or more heifers from 1 month to 3 years of age. They are backed by some of the best families of the breed. Also a few bulls sired by King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days. Come and see them or write to

WISCONSIN STAR STOCK FARM, ED. M. SHULTZ, HARTFORD, WIS.

1000---HERD---1000

Quality Holsteins

GRADES AND PURE-BREDS

Just now we have a splendid lot of grade heifers. Write for our pure-bred bull list.

Jefferson County Holstein-Friesian Breeders' Association,
A. F. Gafke, Secretary, Jefferson, Wis.

A 20-Mo.-Old Service Sire

out of a 26-lb. daughter of King Korndyke Veeman Wayne and sired by a 26-lb. son of King Segis Pontiac. A fine individual—Well grown—Well marked—Well bred. A few younger bulls out of record dams and priced right. Herd tuberculin tested. Come and see these at any time.

RIDGEHURST STOCK FARM.

Glen C. Ramsey. Ft. Atkinson, Wis.

Wayside Lawn Farms

offer

Three A. R. O. cows and two 2-year-old heifers all bred to our 33—1000-lb. bull, King Mutual Korndyke 11th, whose two nearest dams average: Butter, 7 days, 34.90; butter, one year, 1,137.02. Bulls ready for service from tested dams. Herd under federal supervision.

Walter Sorge, Reedsburg, Wis.

Sons of a 36-lb.—1315-lb. Sire

They are sons of Dutchland Creamelle Denver Prince. His sire is a 30-lb. 1,028-lb. grandson of Colantha Johanna Lad and his dam, the highest record daughter of the same sire, with 36 lbs. in 7 days, 1,315 lbs. in a year.

They are from tested (records up to 20 lbs.) and untested dams — Good producers rich in the blood of Moote Mutual De Kol and King Segis Pontiac.

The calves are from 2 to 8 months old. Priced right.

Jefferson County Asylum, Jefferson, Wis.
W. E. Voigt, Supt.

WAUPACA COUNTY HOLSTEINS

The Home of Healthy Holsteins

More Federal Accredited Herds than any other County in Wisconsin

200 Grades and Pure-breds ready for immediate shipment

WAUPACA COUNTY HOLSTEIN-FRIESIAN BREEDERS' ASSOCIATION, A. B. Rowe, Secretary, Waupaca, Wis.

"Palatable"—says Dr. Crabb.



1st Dam: Colantha Maida Changer — Butter 7 days — Milk 7 days — 391.03

2d Dam: Contess Yeeman Pontiac — Nettie (2 Yr.) Butter 7 days — Milk 7 days — 30.36 — 532.10

3d Dam: Halls Maida — Butter 7 days — Milk 7 days — 41.06 — 687.09

4th Dam: Sadie Vale Concordia, 4th — Butter 7 days — Milk 7 days

Fort Worth, Texas, 7-24-20

Mr. H. E. Ritchey,
Purina Mills,
Ft. Worth, Texas.

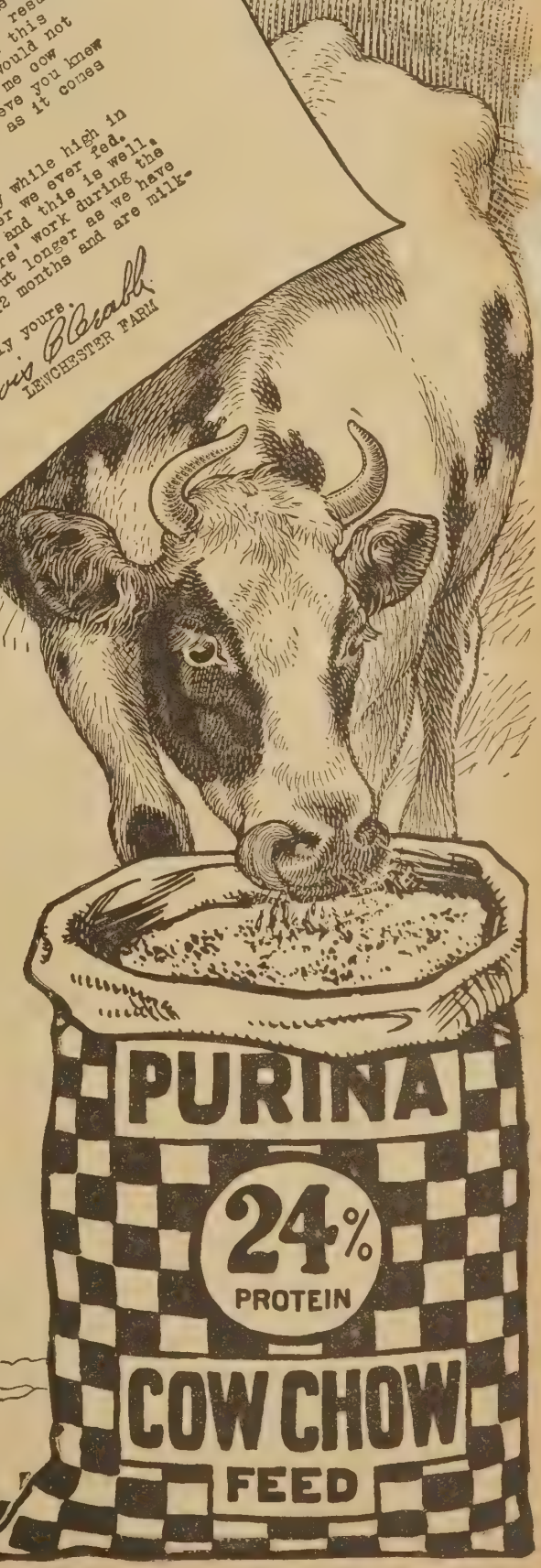
Dear Mr. Ritchey:

You might be interested to know that to date, I have made every state record, held by Holstein cattle in Texas, and have the distinctive honor of owning a cow that has produced 100 lbs. of milk a day for 100 days and made the first and only 30-lb. record ever made in the state, and your great cow ohow did it.

At first I tried to mix my own ration using other grains with it but this did not give me the results I felt that I should have, and the feeding question caused me to lose considerable sleep and finally was becoming somewhat despondent, when a man of quite a varied experience in feeding told me, "Lewis find what the cow likes and feed her that." The country was safe then for me for I felt that I knew that the cow likes a 30-lb. record right off the reel, and had I done this earlier in the testing season the 30-lb. record would not have been alone now. So I now know as you told me ohow is made right in the mills and now I believe you knew whether you ever fed a cow or not. I feed it as it comes from the mills from this time on.

As a regular ration I will say while high in price I find it the cheapest milk producer we ever fed. Our cows are making around 40 lbs. each and this is well at least 10 lbs. over their former years' work during the month of July, and they are holding out longer as we have some that are now in milk for over 12 months and are milking over 40 lbs.

Very truly yours,
Lewis C. Crabb
LEWCHESTER FARM



When he remembered that cows like Cow Chow

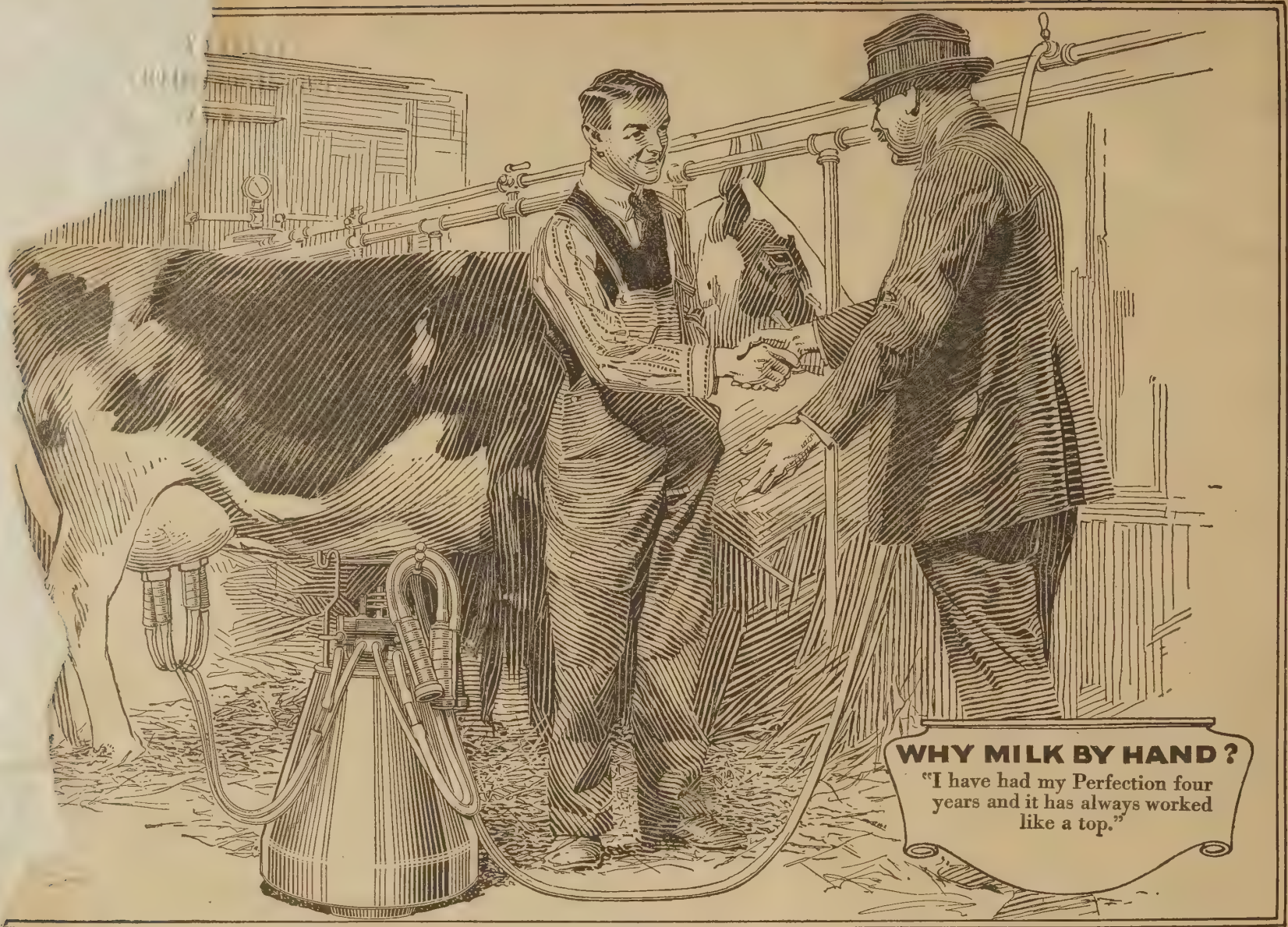
he recalled the first essential of a good dairy ration. But, it must be remembered also, that the palatability of Purina Cow Chow comes from putting into it, pure Cuban molasses, sprayed hot on the correct balance of elements that properly nourish the cow. Cows never tire of Cow Chow because they like best this palatable ration that supplies them with *the materials they need* for bodily maintenance and milk production.

Whether you sell milk or record-breaking milk cows, you should feed Purina Cow Chow. See your dealer.

RALSTON PURINA CO., St. Louis, Mo.
Ft. Worth, Tex. Nashville, Tenn. Buffalo, N. Y.

Sold in checkerboard bags only

Purina Cow Chow



"I was the first one to install a Perfection Milker in this vicinity and now I understand there are 115 Perfections around here." —EDGAR L. CLASON.

You'll Always Be Glad You Got A Perfection

YOU'LL wonder how you ever got along without it, and wouldn't dream of going back to hand milking. That is what any Perfection owner will tell you when he congratulates you on your choice of the Perfection Milker.

There are many reasons why you will be delighted with your Perfection. It wins your cows from the start. Cows like the Perfection because it is nature's way of milking. The gentle suction followed by a downward squeeze, followed by a period of rest is just like the calf's way of milking.

Dairymen who have used the Perfection for years have found it pays for itself in less than a year in savings on wages. They are delighted in relief from drudgery. Thev know the Perfection gets more milk.

Just such satisfied owners as they have made possible 115 Perfections in one neighborhood—a tribute to a better way of milking. Get a Perfection and you will always be satisfied with your choice.

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We have a copy of the book, "What the Dairyman Wants to Know" waiting your name and address. Write today! We'll also send the names and addresses of Perfection owners near you. Why Milk By Hand? Users unanimously endorse Perfection.

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